Appendix 5 - INSURANCE STATEMENT

This site is potentially eligible to receive state monies to assist you in site rehabilitation, if required. Before eligibility for State Underground Petroleum Environmental Response Bank (SUPERB) funds can be determined, written confirmation of the existence or non-existence of an environmental insurance policy for this site is required. Please complete the following information:

I do not have any insurance that would cover releases from underground storage tanks.
I have an insurance policy that covers releases from underground storage tanks.
My policy provider is: The policy deductible is: The policy limit is: If you have this type of insurance, please include a copy of the policy with this report.
Signature:
Date: $9.26-91$
The La Converted 11 Notes D 11
To be Completed by Notary Public:
Sworn before me this 26th day of september, 1995.
Aprila D. Hollidan
(Name)
Notary Public for the state of bouth Carolina. RECENTION
My commission expires 7-17-96.

TIST DOCKET 33 T



> Mr. Dan McEachin 726 Dogwood Drive Garden City, SC 29576

> > Re: Coastal 76 Truck Stop

Site ID: #03538, Cost Proposal #04852

Release/Assessment Report received September 27, 1995

Florence County

Dear Mr. McEachin:

The Division of Underground Storage Tank (UST) Management of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced Assessment. The referenced report indicates concentration of chemicals of concern in the soil at the former UST basin on the west side of the store. To determine what risk the release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of the scope of work as outlined in the enclosed Initial Ground-Water Assessment (IGWA) document is necessary. Since the above scope of work is detailed in the IGWA document, a separate plan is not required.

.IIIN 22 1998

According to our records, the release was reported to the SCDHEC subsequent to the early detection incentive program. Therefore, in accordance with Section 44-2-40(B) of the Act, you are responsible for the first \$25,000 for site rehabilitation. To insure that any expenditures you make apply to this \$25,000 deductible, should the release become qualified to receive SUPERB funds, it is prudent for this agency to preapprove such costs along with your technical plan of action. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. Eligible costs exceeding the \$25,000 deductible can be compensated from the SUPERB Account.

To proceed with the qualification process for the State Underground Petroleum Environmental Response Bank (SUPERB) Act, the following information is required:

Written confirmation of the existence or non-existence of an environmental insurance policy for this site. This information must be signed by the responsible party and a notary public. For your convenience, an insurance statement form has been enclosed. If an environmental insurance policy existed at the time of the release, a copy of the policy with all endorsements must be submitted with the insurance statement. Please complete and return the enclosed insurance information form within 14 days from the date of this letter.

Please note that the maximum approvable amount for the IGWA is \$1,320.00. Upon receipt of the signed IGWA Invoice, IGWA Report, and a copy of your canceled check (front and back) or a notarized statement from the contractor verifying payment for this scope of work, up to \$1,320.00 may be applied toward your deductible. Please complete and return the enclosed Owner/Operator Information Sheet within 14 days from the date of this letter (note that all rehabilitation activities associated with a UST release must be performed by a SCDHEC certified site rehabilitation contractor as required by R.61-98). Cost proposal #04852 has been established to track the allowable costs associated with this IGWA. Please include the cost proposal number when submitting your invoice.

STATE OF BOTTER BERTHORIENT OF HEAT THAN DENVIRONMENTAL CONTRO

Implementation of the IGWA should proceed upon receipt of this correspondence. The required monitoring well approval is enclosed. The report should be submitted within 90 days from the date of this letter. The Division grants preapproval for the transportation of the investigative derived waste (virgin petroleum contaminated soil and groundwater) from the referenced site to a permitted treatment facility. All investigative derived waste must be properly stored in labeled containers or covered with plastic as appropriate. All contaminated investigated derived waste must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest and approval letter from the receiving facility must be included as an appendix to the final report. If the levels of petroleum contamination based on laboratory analysis are below treatment levels, please contact the project manager for approval to dispose of the investigative waste on site. The SUPERB Account will not compensate for transportation or treatment of clean soil and/or ground water. The SCDHEC reserves the authority to only apply costs to your deductible for work properly performed and/or technically justified in accordance with established criteria. The SCDHEC reserves the authority to only apply costs to your deductible for work properly performed and/or technically justified in accordance with established criteria.

On all correspondence regarding this site and scope of work, please reference Site ID #03538 and cost proposal #04852. If you have any questions concerning this correspondence, please contact John Wright at (803) 734-5626.

Sincerely,

State Lead and Field Services Section
Assessment and Corrective Action Branch
Division of Underground Storage Tank Management

John Wright, Hydrogeologist

Christopher S. Doll, P.G., Manager

enc: Monitoring Well Approval

Information Sheet

Initial Ground-Water Assessment Document

Insurance Information Form

cc: Technical File (Copy of Monitoring Well Approval)

Financial File (without enclosures)

SCDHEC/UST/SLFSS/jww/060998



Monitoring Well Installation Approval Form

Date of Issue: June 9, 1998 Approval No.: 9521

Approval is hereby granted to: Dan McEachin

Site ID: #03538 County: Florence

This approval is for the construction of one shallow monitoring well in accordance with the South Carolina Well Standards and Regulations. The well is to be constructed within the surficial aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

- 1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well will be submitted with the technical report.
- 2. Each well will be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate will provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #.
- 3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.
- 4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to John Wright at (803) 734-5626 or Wrightjw@columb26.dhec.state.sc.us.
- 5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) and associated measurements (i.e., in-situ field measurements) to me with the technical report.
- 6. Monitoring wells and temporary monitoring wells will be installed by or under the direct supervision of a licensed well driller certified by the State of South Carolina.
- 7. Monitoring wells and temporary monitoring wells will be abandoned by or under the direct supervision of a licensed well driller certified by the State of South Carolina. Temporary monitoring wells shall not remain in place for longer than 30 days from the date of installation. Monitoring wells may be abandoned only upon concurrence by this Division.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71. Please remember to have a copy of this approval on the site during well installation.

Approved by:

John Wright, Hydrogeologist

State Lead and Field Services Section

Division of UST Management

cc: Pee Dee District EQC

50

RE.

DAN M. M. FACHIN

SITE H OSS 38

COST PROPOSALH B4852

RELEASE/ASSIESSMENT

REPORT RECEIVED

9-27-95

INSURANCE STATEMENT FORM

Site ID #03538 is potentially eligible to receive state monies to assist you in site rehabilitation, if required. Before eligibility for State Underground Petroleum Environmental Response Bank (SUPERB) funds can be determined, written confirmation of the existence or non-existence of an environmental insurance policy for this site is required. Please complete the following information:

I do not have any insurance that would cover releases from underground storage tanks.
I have an insurance policy that covers releases from underground storage tanks.
My policy provider is: The policy deductible is: The policy limit is: If you have this type of insurance, please include a copy of the policy with this report. Signature: Date: 6-19-98
To be Completed by Notary Public:
Sworn before me this day of 10, 19 76. (Name)
Notary Public for the state of
My commission expires $2 - 21 - 2005$.

Please affix State Seal if you are commissioned outside South Carolina.

726 S. DOGWOOD DA GARDEN CITY S.C. SOUTH LAROUND Y STATE LEAD + FIELD SERVICES SEC ASSESSMENT & CORRECTIVE ACTION BR DIV. OF UNDER GROUND STORAGE TANK MAN.

RECEIVEL

Facility Name: Coastal 76 Truck Stop DIVISION OF TANK STORAGE TANK UST Owner or Operator's Name: Mr. Dan McEachin Address: 726 Dogwood Drive, Garden City, South Carolina 29576 Phone Number: (843) 651–8835 Contractor: Southeastern Environmental, Inc. Cert. # 82 Address: 323 Main Street, Conway, South Carolina 29526 Phone Number: (843) 248–3533 Well Driller: Bruce G. Newell Cert. # 880 Receptor and Site Data Please place a check in the appropriate answer block for each question: Receptor Survey Questions Is there a drinking water supply well (public or private) or surface water supply intake within 1000 feet of the UST? Are there other potential receptors (i.e., utilities, surface waters, wetlands) less than 500 feet from the UST? X	INIT	IAL GROUND-WATER ASSESSIVENT	REPURI	NNV	2 199
UST Owner or Operator's Name: Mr. Dan McEachin Address: 726 Dogwood Drive, Garden City, South Carolina 29576 Phone Number: (843) 651–8835 Contractor: Southeastern Environmental, Inc. Cert. # 82 Address: 323 Main Street, Conway, South Carolina 29526 Phone Number: (843) 248–3533 Weil Driller: Bruce G. Newell Cert. # 880 Receptor and Site Data Please place a check in the appropriate answer block for each question: Receptor Survey Questions No Yes * Is there a drinking water supply well (public or private) or surface water supply intake within 1000 feet of the UST? Are irrigation or other non-drinking water wells located within 1000 feet of the UST? Are there other potential receptors (i.e., utilities, surface	acility Name:	Coastal 76 Truck Stop	DIVISION OF	TINDED	
Address:	Site ID Number:_	- ONAGE	TANK M		
Phone Number:					
Address:	Address: 726 [Dogwood Drive, Garden City, South Carolina 29576			
Address: 323 Main Street, Conway, South Carolina 29526 Phone Number: (843) 248–3533 Well Driller: Bruce G. Newell Cert. # 880 Receptor and Site Data Please place a check in the appropriate answer block for each question: Receptor Survey Questions No Yes * Is there a drinking water supply well (public or private) or surface water supply intake within 1000 feet of the UST? Are irrigation or other non-drinking water wells located within 1000 feet of the UST? Are there other potential receptors (i.e., utilities, surface	Phone Number: _	(843) 651-8835	 		_
Phone Number:	Contractor:	82	_		
Recaptor and Site Data Please place a check in the appropriate answer block for each question: Receptor Survey Questions Is there a drinking water supply well (public or private) or surface water supply intake within 1000 feet of the UST? Are irrigation or other non-drinking water wells located within 1000 feet of the UST? Are there other potential receptors (i.e., utilities, surface	Address: 323	Main Street, Conway, South Carolina 29526			
Receptor and Site Data Please place a check in the appropriate answer block for each question: Receptor Survey Questions Is there a drinking water supply well (public or private) or surface water supply intake within 1000 feet of the UST? Are irrigation or other non-drinking water wells located within 1000 feet of the UST? Are there other potential receptors (i.e., utilities, surface	hone Number: _	(843) 248-3533			_
Receptor and Site Data Please place a check in the appropriate answer block for each question: Receptor Survey Questions Is there a drinking water supply well (public or private) or surface water supply intake within 1000 feet of the UST? Are irrigation or other non-drinking water wells located within 1000 feet of the UST? Are there other potential receptors (i.e., utilities, surface	Veil Driller:	Bruce G. Newell	Cert. #_	880	
Are irrigation or other non-drinking water wells located within 1000 feet of the UST? Are there other potential receptors (i.e., utilities, surface	Is there a drink	ing water supply well (public or private) or		Yes *	
Are there other potential receptors (i.e.,utilities, surface		r other non-drinking water wells located	^		
Are there other potential receptors (i.e., utilities, surface waters, wetlands) less than 500 feet from the UST?			X	<u> </u>	-
	Are there other waters, wetlan	potential receptors (i.e., utilities, surface ds) less than 500 feet from the UST?		X	
	,				
* If "yes" provide additional information:					
					_
X	Were any water	wells within 250 ft radius sampled?	_ Yes	No	

See Appendix F for Chain of Custody Form and Laboratory Data.

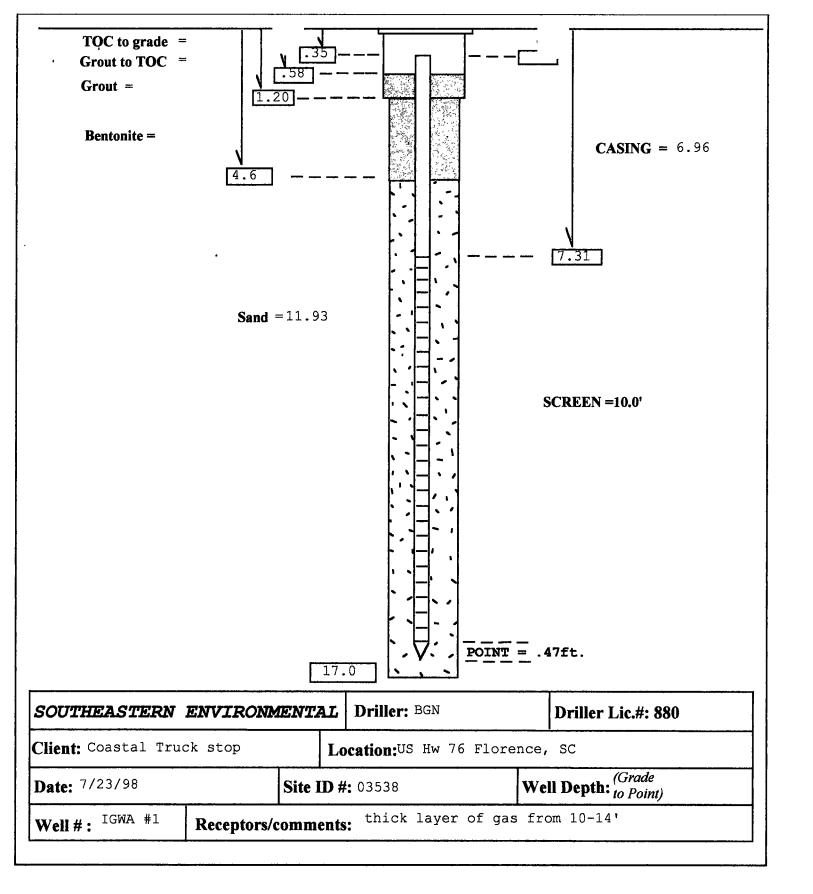
Initial Ground-Water Assessment Report SCDHEC Site ID# 03538 Page 2

is the current agricultural or	t use of the si industrial?	ite and surroundir	ng properties cor	mmerciai, residentiai,						
Site:	commercial	cent Properties:_	commercial							
Soil and Monitoring Well Data										
Primary Soil T	ype:ta	n clay								
Well Installation	on Method and	Date:	98 rotary auger							
Development Method:surge_block										
Soil Sample obtained atfeet.										
		SOIL ANALYTIC	AL DATA							
Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Xylenes (ug/kg)	Naphthaiene (ug/kg)						
6.2	78.6	622	403	BDL						
Benzo(a)- anthracene	Benzo(b)- fluoranthene	Benzo(k)- fluoranthene (ug/kg)	Chrysene (ug/kg)	Dibenz(a,h) anthracene (ug/kg)						
(ug/kg) BDL	(ug/kg) BDL	BDL BDL	BDL	BDL						
Ground-Water Data Depth to Ground Water:										
Well Purging/Sampling Method: N/A										
Date Sampled	i:	free product found								
Free Product	Thickness:	3/8"								
Soil/Water Di	sposal Method:	1 55-gallon dr	um of soil stored on	site. Arrangements are						

(signature)

Page 3

	GRO	UND-WATER	ANAL	YTICA	AL DATA				
Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xyle: (ug/l		MTBE (ug/l)	Naphthalene (ug/l)			
Benzo(a)- anthracene	Benzo(b)- fluoranthene	Benzo(k)- fluoranthene		Chrysene (ug/l)		Dibenz(a,h) anthracene			
(ug/l)	(ug/l)	(ug/l)				(ug/l)			
Appendices The appendices required for this report are as follows:									
Appendix A.	Weil Constru	ction Log							
Appendix B. Laboratory Data									
Appendix C. Topographic map with site location marked.									
Appendix D. Site Base Map									
	Disposal Mai								
Appendix F.	Additional Da	ata (Sampling	Resu	its of	Existing Gr	ound-Water Wells)			
Appendix G.	_	SUPERB par		1		_			
Report Comp	leted By:	Tuce G		Vene	<u>ll</u>	Cert.# <u></u>			



Davis & Brown

PO Box 15038 Quinby, SC 29506 (803) 665-6746 FAX: (803) 629-1444

Certificate of Analysis

Client:

SOUTHEASTERN ENVIRONMENTAL, INC.

South Carolina Certification Number: 21117

323 MAIN STREET

CONWAY, SC 29526

Client #:
Contact:

991

BRUCE NEWELL

Receipt Date: 23-Jul-98

Report Date: 10-Aug-98

Sample Date:

23-Jul-98

SDG #:

SDG-006421

Lab Sample ID: LSID-015110

Sample ID:

COASTAL TRUCK STOP

Approved By:

Van Ward

Lab Director

1:

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Polynuclear Aromatic Hydc.	BDL	1	ppm	3550\8270C	S11	7/29/98	15:06	MC
Benzene	0.0062	0.005	ppm	5030\8021B	S11	7/3·1/98	11:25	PD
BTEX, Total (Soils)	1.175	0.025	ppm	5030\8021B		7/31/98		SF
Ethylbenzene	0.622	0.005	ppm	5030\8021B	S11	7/31/98	11:25	PD
Toluene	0.0786	0.005	ppm	5030\8021B	S11	7/31/98	11:25	PD
Xylene, Total	0.468	0.01	ppm	5030\8021B	S11	7/31/98	11:25	PD
Napthalene	< 0.005	0.005	ppm	8020	S11	7/31/98	11:25	PD

Proj. Manager Davis & Brown 124 West McIver Road

Florence, SC 29501

Site Location/Project South Carolina Soil Analysis

Page 7
July 31, 1998
Report # 9807001252
Order # 80054253
South Carolina Cert ID# 96023

Sample I.D.: 15110 Collected: 07/23/98 Received: 07/25/98

14:47 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY		ANALYST
Percent Solids	85	%	160.3	0.01	07/28/9	8 07/28/	9820:52	2MC
8260B BTEX w/Naph+MTBE in Soils by GO	C-MS(S.C.) LL		MEDF	1				
Benzene	6.2	ug/Kg	5035/8260B	5.000	07/31/98	07/31/98	11:25	PMD
Toluene	78.6	ug/Kg	5035/8260B	5.000	07/31/98	07/31/98	11:25	PMD
Ethylbenzene	622	ug/Kg	5035/8260B	5.000	07/31/98	07/31/98	11:25	PMD
m & p-Xylene	65	ug/Kg	5035/8260B	5.000	07/31/98	07/31/98	11:25	PMD
o-Xylene	403	ug/Kg	5035/8260B	5.000	07/31/98	07/31/98	11:25	PMD
Naphthalene	BDL	ug/Kg	5035/8260B	5.000	07/31/98	07/31/98	11:25	PMD
SURROGATE: Toluene-D8	103.50%							
SURROGATE: 1,-DCB-D4	108.00%							
SURROGATE: Dibromofluoromethane	100.75%							
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1				
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	3 07/29/98	15:06	MEC
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	3 07/29/98	15:06	MEC
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/28/98	3 07/29/98	15:06	MEC

Proj. Manager Davis & Brown 124 West McIver Road

Florence, SC 29501

Site Location/Project South Carolina Soil Analysis

Page July 31, 1998 Report # 9807001252 Order # 80054253 South Carolina Cert ID# 96023

Sample I.D.: 15110

07/23/98 14:47 Collected: 09:30 Received: 07/25/98

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY	·	ANALYST
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/28/98	07/29/98	15:06	MEC
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/28/98	07/29/98	15:06	MEC
Dibenzo(a,h)anthracene		***5/ *=5						
SURROGATE: D5-Nitrobenzene	63.60%							
SURROGATE: 2-Fluorobiphenyl	68.30%							
SURROGATE: 4-Terphenyl-D14	73.80%							

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. = #41180, Ct. = #PH0217, Ks. = #E270 + E1245, Ky. = #90087, La. = #9601, Md. = #271, Ma. = #M-FL535

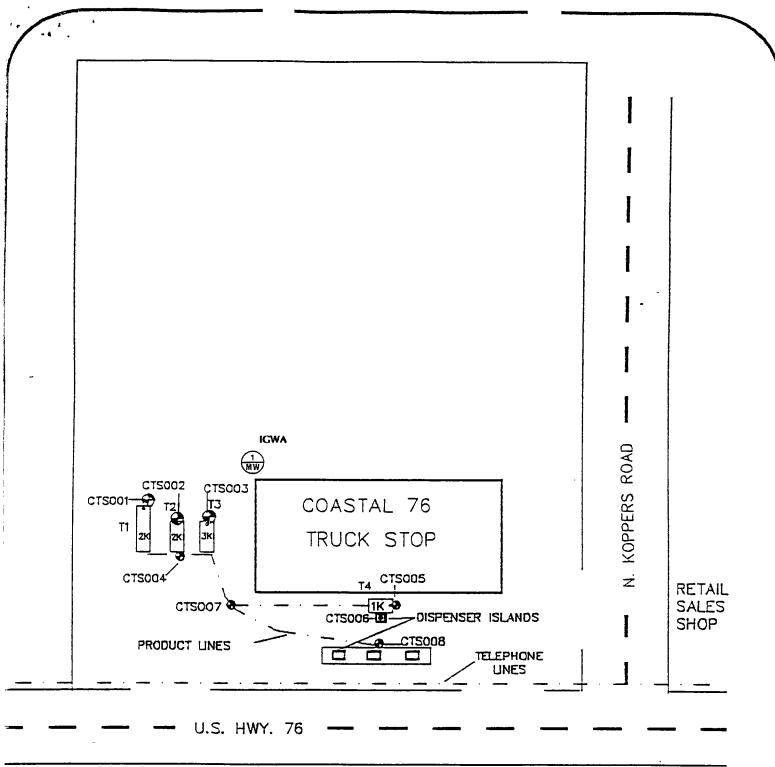
NC. = #539, ND. = #R163, OK. = #9523, SC. = #96023, Tn. = #TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements

with all methodology requirements.

				·					
POST OF	BROWN, INC. FICE BOX 15038 SOUTH CAROLINA 2950	06	UST C	CHAIN OF C	CUSTODY		coc#		
	ostal Truck Stop	SAMPLER	SIGNATU	JRE: fue	∕€'			DATE: 7/23/95	
SAMPLE	LOCATION	JAR#	DEPTH	WEIGHT	SOIL	LIQ	TIME	ANALYSIS	LAB ID#
SAMPLE 1	COUSTAL TMEK STP) ; =	11/1.	5.0Z	~		1441	BTEX, PAH, NAPTHALENE	15/10
_ <u></u> 2	(00) 141 /MCR 5111		T	5.06				<u> </u>	
3									<u> </u>
4									<u> </u>
5									
6	1								
7									
8		,							
9									
10									<u></u>
11									
12									
13			<u> </u>						<u> </u>
14									
1	UISHED BY:	DATE/TI	ME	RECEIVE	'D BY:	net /n		DATE/TIME	ICED?
31.	Du fue	712319	98	Ston	rm W. 1. 7/23/98	MINCL 1505		(YES NO

Sub las sa

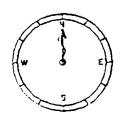


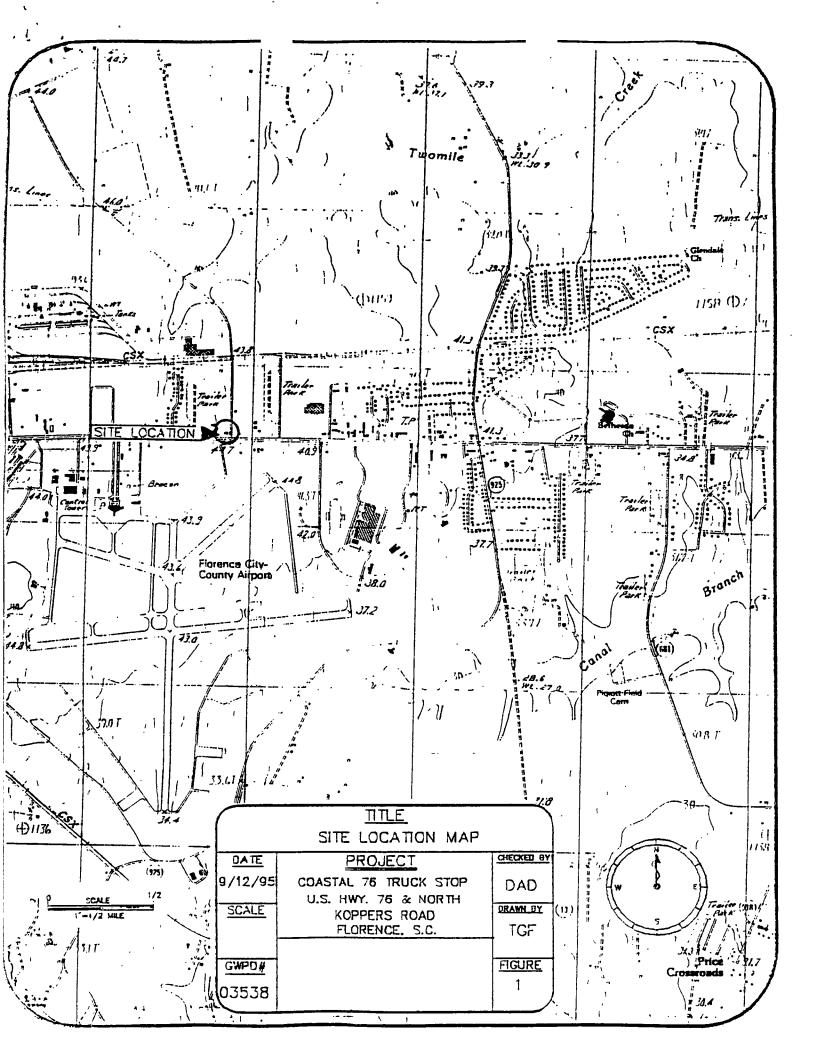
● = SOIL SAMPLE LOCATIONS

= UNDERGROUND STORAGE TANKS

T1 = TANK #

	TITLE	
	SITE LOCATION MAP	
DATE	PROJECT	CHECKED BY
9/11/95	COASTAL 76 TRUCK STOP U.S. HWY. 76 & N.	DAD
SCALE	KOPPERS RD.	DRAWN BY
APPX 1"=40"	FLORENCE, S.C.	_ TGF
1 = 40		
GWPD#		FIGURE
03538		2
		<u> </u>









> Mr. Dan McEachin 726 Dogwood Drive Garden City, SC 29576

> > Re:

Coastal Truck Stop, Facility ID #03538

Initial Ground-Water Assessment received November 2, 1998

Florence County

Dear Mr. McEachin:

The Division of Underground Storage Tank (UST) Management of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced Assessment Report. The assessment indicates free product (3/8") at the former tank basin.

To determine what risk the release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of the scope of work as outlined in the enclosed Rapid Assessment (RA) document is necessary. Please have your contractor complete and submit an Assessment Component Cost Proposal form and Rapid Assessment Plan forms within thirty days of the date of this letter. Please complete and return the enclosed Owner/Operator Information Sheet within 14 days from the date of this letter (note that all rehabilitation activities associated with a UST release must be performed by a SCDHEC certified site rehabilitation contractor as required by R.61-98). This scope of work must be completed by a Class 1 site rehabilitation contractor.

On all correspondence regarding this site, please reference Site ID #03538. Please be sure to include the requested information so that the appropriate approvals can be issued. Note: approval from the Department must be issued before work begins. Please feel free to call John Wright, at (803) 734-5626 if you have questions or need additional information.

Sincerely.

State Lead and Field Services Section
Assessment and Corrective Action Branch

Division of Underground Storage Tank Management

John Wright, Hydrogeologist

Christopher S. Doll, P.G., Manager

enc: Rapid Assessment Document

Onwer/Operator Information Sheet

cc: Bruce Newell, Southeastern Environmental, Inc., 323 Main Street, Conway, SC 29526

Technical File

SCDHEC/UST/SLFSS/jww/110298

ST DOCKE 37 T



UNDERGROUND STORAGE TANK (UST) OWNER/OPERATOR PLESION OF UNDERGROUND 1. CONTRACTOR OF THE CONTRACTOR

1. CONTRACTOR OF CHOICE

As the UST Owner/Operator of Facility ID #03538, I would like to use the contractor or person(s) listed below and request	
that they represent me for: Rapid Assessment.	
□ All future assessment scopes.	
Name of Contractor/Person(s) SOUTHEASTER ENVIRONMENTAL I	THC.
Address BRUCE G HEWELL	
3 a3 MAIN ST	
CONWAY S.C. 29526	
Telephone Number \$43 a 48 - 3533	
Note: After September 20, 1997, rehabilitation activities must be performed by a SC Certified Site Rehabilitation Contractor.	
indicate if the person listed is your own employee	
if you would like the contractor to perform all future assessment activities at this and/or other UST sites that have confirmed releases, please provide a list of all sites on your letterhead and provide the information requested in items 2 and 3 below within the context of the letter.	
2. FINANCIAL OR FAMILIAL RELATIONSHIP	
Does a financial or familial relationship, as defined below, exist between you and the contractor/person that you listed above? Yes No (please initial)	
Financial Relationship: A connection or association through a material interest of sources of income which exceed five percent of annual gross income from a business entity.	
<u>Familial Relationship</u> : A connection or association by family or relatives, in which a family member or relative has a material interest. Family or relatives include: father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, grandchild, great grandchild, step grandparent, step grandchild, step grandchild, or fiancee.	
3. PAYMENT	
The first \$25,000.00 in eligible site rehabilitation costs will be applied against the applicable SUPERB deductible, upon submittal of the canceled check (front and back) or a notarized statement from the contractor verifying payment.	
For eligible costs exceeding the \$25,000.00 deductible, you can pay the contractor and, upon the submittal of the canceled check (front and back) or a notarized statement from the contractor verifying payment, be compensated from the SUPERB Account, or have payment issued directly from the SUPERB Account to the contractor. (check one)	
For eligible costs exceeding the deductible, I request that payment be made to me after I have paid the contractor.	
For eligible costs exceeding the deductible, I request that payment be made directly to the contractor.	
Note: all costs must receive prior financial approval from the Department regardless of payment option.)	
Underground Storage Tank Owner/Operator Signature	
Date	
T DOCKE 38 T	

Dan Matachin 1997 Wenweith Florence, SC 29501

S.C. DHEC





2600 BULL ST. COLUMBIA, S.C.29201 BREAD OF UST MANDEMENT ATTN. MR. ZATANIA - Indillational Illiania Handland II. alliania Illiania Illiania Illiania Illiania Illiania Illiania Illiania I

RAPID ASSESSMENT PLAN

RECEIVED

SOUTH CAROLINA

DEC 1 6 1998

Department of Health and Environmental Control

DIVISION OF UNDERGROUND STORAGE TANK MGMT.

Bureau of Underground Storage Tank Management

Site ID # 03538 County Florence Facility	ity Name Coastal Truck Stop
Facility Address US Hwy 76 & N Koppers Rd	
Responsible party Dan McEachin Address	
No. USTs 4 removed? Aug. 30, 1995 repla	ced? N/A
(date)	(date)
Current use of facility/property	
- Mr Dan McEachin	C C 295/6
Current property owner address 626 Dogwood Drive,	Garden City, S.C. 29576
Field Screening Methodology Specify the field screening methodology to be used. The use optimize the number and location of permanent wells is required. Soil samples will be screened using a OVA. boring will be sent for laboratory analysis. Permanent monitoring wells will be installed. Water samples will be taken from each monitor to the laboratory for analysis.	Worst case from each
Permanent Monitoring wells (Estimate number and total	i completed depth)
# of shallow wells total depth	20'
# of deep wells total depth	40' (If necessary)
Comments, if warranted	
16 ea. for PAH 1 TPH 3550	ated number. 16 ea. for BTEX, Napth, Mtbe 16 ea. for PAH 16 ea. for Lead 16 ea. for EDB
l for grain size/ hydrometer	16 ea. for Nitrate
l for total orgain carben	16 ea. for Sultrate
	16 ea. for Ferrous Iron
	16 ea. for 8 RCRA Metals
Implementation Schedule Start up date Completion date Report submittal date	

ET DOCKET 39 T

CERT

04852 25,000

RAPID ASSESSMENT PLAN

SOUTH CAROLINA

Department of Health and Environmental Control
Bureau of Underground Storage Tank Management
Site ID# 03538 Facility Name Coastal Truck Stop
Site Maps 1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:
North Arrow Legend with facility name and address, Site ID number, date, and a bar scale Location of property lines Location of buildings Location of buildings Paved areas on or adjacent to site Previous soil sampling locations Location of any other potential receptor
Aquifer Characterization (Check one and provide explanation for choice) Pump Test Slug Tests X Slug test will be performed on the three permanent monitoring wells to define the aquifer characteristics for the site. Comparison to the laboratory hydrometer/grain size test will be make.
Small Volume Disposal Type and Method Soil Soil will be stored in 55 gallon drums and removed to the proper location after laboratory analysis is received.
Purge Water Any ground water collected from the monitoring wells will be stored in 55 gallon drums on site while arrangements for disposal.
Additional Comments 17B Free product - if required
Additional Comments

ASSESSMENT COMPONENT INVOICE Proposa

SOUTH CAROLINA

Department of Health and Environmental Control

Division of Underground Storage Tank Management State Underground Petroleum Environmental Response Bank Account				
Facility Name: Coastal Truc	K Stoo			
Facility ID#: 03538	CP#			
ITEM	QUANTITY UNIT	UNIT PRICE	TOTAL	
1. Plan Preparation*	x	\$100.00	\$ 100.00	
2. Receptor Survey*	l x	\$500.00	\$ 500.00	
3. Comprehensive Survey		\$1,000.00	\$ 1000.00	
4. Mob/Demob (List component #)				
A. Equipment 6, 9, H	2 x	\$500.00	\$ 1,000.00	
B. Personnel 6,9,11	2 x	\$250,00	s <u>500.00</u>	
5. Soil Borings (hand auger)*	600 feet	x \$14.00	\$ <u>8400.00</u>	
6. Soil Borings (drilled)	(includes collection	and quantification)		
and Field Screening*	feet >	\$17.00	\$	
7. Soil Leachability Model	x	\$200.00	\$	
8. Abandonment	600 feet x	\$4.00	s <u>2400.00</u>	
9. Well installation*	(includes drilling co	sts)		
A. Water Table (hand auger)	feet x	\$20.00	\$	
B. Water Table (drilled)	300 feet x	\$38.00	\$ 11,400.00	
C. Telescoping	40 feet x	\$58.00	\$ 2,320.00	
D. Rock Drilling	feet x	\$58,00	\$	
10. Sample Collection *	·			
Water or Vapor /7	16 sample	s x \$55.00 !	880.00	
11. Analyses-Groundwater	(See RA Guidance for site specific analyses)			
A. BTEX+Napth.+MTBE /7	16 sample	s x \$100.00	\$ 1600.00	
B. BTEX+Napth.+MTBE+	sample	x \$135.00	\$	
Trimethylbenzene				
C. PAH's 17	16 sample:	x \$120,00	s <u>1920.00</u>	
D. Lead /7	#6_ samples		\$ <u>320.00</u>	
E. 208 /7	16 samples	x \$55.00	\$ <u>880.00</u>	
F. 8 RCRA Metals NO	to samples	x \$140.00 S	2240.00	
G. TPH (9070)	samples	x \$55.00 \$		
H. pH	samples		·	
I. BOD	samples			
J. Nitrate	16 samples		320.00	
K. Sulfate 17	<u> </u>		320.00	
L. Ferrous Iron / 7	16 samples	x \$20.00 \$	320.00	

Continue on back of page

ASSESSMENT	COMPONE	NT COST PRO	POSAL	
11. Analyses – Soil			•	•
I. BTEX + Napth.	+6	samples x	\$100.00	\$ 1600.00
J. PAH's	1 1	samples x	\$120.00	\$ 1920.00
K. B RCRA Metals		samples x	\$150.00	\$
L. TPH (9071)		samples x	\$60.00	\$
M. TPH (3550)		samples x.	\$65.00	\$ 65.00
N. Grain size / hydrometer	1	samples x	\$63.00	\$ 63.00
O. Total Organic Carbon		samples x	\$35.00	\$ <u>35.00</u>
12. Aquifer Characterization*				
A. Pumping Test		hours x	\$120.00	\$:
B. Slug test	3	tests x	\$150.00	\$ 450.00
13. Free Product Recovery Rate Test*		tests x	\$120.00	\$
14. Fate/Transport Modeling			·· ·	
A. Mathematical Model		models x	\$300.00	\$
B. Computer Model		models x	\$500.00	\$ 500.00
15. Risk Evaluation			· - - , - · ·	
A. Tier I		x	\$300.00	\$
B. Tier II		x	\$500.00	\$ 500.00
16. Subsequent Survey*		x	\$260.00	\$
17. Disposal				
A. Wastewater				
1. Purging/Sampling	2	drums x	\$90.00	\$ 180.00
2. Pumping test		gallons x	\$0.60	\$
B. Free Product		drums x	\$110.00	\$
C. Soil (Treatment/Disposal)*		tons x	\$50.00	\$
	4	drums x	\$50.00	\$ 200.00
18. Miscellaneous				
·		· x		\$
		` x		\$
		x		\$
·	<u> </u>	x		\$
19. Report/Project Management			(SUBTOTAL)	43.433.00
and Coordination	0.15	x	\$0.00	\$ 6514.95
20. Total				s <u>49,947.95</u>

KECKIVEL DEC 2 1

Option 1

DIVISION OF UNDERGROUND

STORAGE TANK MGMT.

UNDERGROUND STORAGE TANK (UST) OWNER/OPERATOR LEAD

INFORMATION SHEET

SITE ID# 03538

2600 Bull Street Jane Color

l.	CHOICE	OF	CONTRA	CTOR

i. Choice of Contract	OR .
	r of Site ID# 03538, 1 would like to proceed with the using the contractor or person(s) listed below.
Name of Contractor/Person(s)	Southeastern Environmental, Inc. (Bruce G. Newell)
Address	323 Main Street
	Conway, 5C 29526
Telephone Number	843-248-3533
indicate if the person listed is your own	ı employee
2. FINANCIAL OR FAMILIA	AL RELATIONSHIP
	onship, as defined below, exist between you and the contractor/person that Yes No
Financial Relationship: A co percent of annual gross incom	nnection or association though a material interest of sources of income which exceed five a from a business entity.
interest. Family or relatives inc husband, wife, father-in-law, stepbrother, stepsister, half b	tion or association by family or relatives, in which a family member or relative has a material lude: father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, mother-in-law, son-in-law, daughter-in-law, stepfather, stepmother, stepson, stepdaughter, prother, half sister, grandparent, grandchild, great grandchild, step grandparent, step great step great grandchild, or fiancee.
3. PAYMENT	
	pon the submittal of the cancelled check (or a notarized statement from the m the SUPERB Account, or have payment issued directly from us to the
I request that payment be made to	o me after I have paid the contractor. Yes No
I request that payment be made d	lirectly to the contractor. Yes No
Underground Storage Tank Own	Date 12 - 10 - 98
DHEC/UST/ACAD/OO/sm/970307	

FDOCKE



JAN 0 8 1999

Mr. Dan McEachin 726 Dogwood Drive Garden City, SC 29576

Re:

Coastal Truck Stop

Facility ID #03538, Cost Proposal #06889

Assessment Plan/Cost Proposal received December 16, 1998

Florence County

Dear Mr. McEachin:

The Division of Underground Storage Tank Management has approved a cost proposal for the implementation of the Assessment Plan and preparation of an associated report of findings. The cost proposal has been approved for up to \$44,726.95 and assigned #06889 to track the allowable costs associated with this assessment. The following adjustments were made to the cost proposal:

- \$500.00 more for personnel mob/demob to include slug/free product recovery rate tests and disposal.
- \$2,240.00 less for analyses of groundwater as sampling for the 8 RCRA Metals is not required.
- \$240.00 more for two free product recovery rate tests if required.
- \$1,760.00 less for soil analyses as field screening boring samples do not require laboratory analyses. Eight soil samples for BTEX+Napth.+PAH's have been approved and should be used to delineate soil contamination at the source area.

Upon receipt of the signed Assessment Component Invoice, Assessment Report, and a copy of your canceled check (front and back) or a notarized statement from the contractor verifying payment for this scope of work, eligible costs will be applied toward your deductible and any eligible costs exceeding the deductible will be paid directly to Southeastern Environmental.

According to our records, Initial Ground-Water Assessment (IGWA) Invoice (cost proposal #04852) with copies of your canceled check (front and back) or a notarized statement from the contractor verifying payment has not been submitted. These must be submitted within thirty days for the associated costs, up to \$1,320.00 for the IGWA, to be applied toward your deductible.

Implementation of the Assessment may proceed upon receipt of this correspondence. The required monitoring well approval has been issued to your environmental contractor and a copy is enclosed for your records. The report should be submitted within 90 days from the date of this letter. The Division grants preapproval for the transportation of the investigative derived waste (virgin petroleum contaminated soil and groundwater) from the referenced site to a permitted treatment facility. All investigative derived waste must be properly stored in labeled containers or covered with plastic as appropriate. All contaminated investigated derived waste must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest and approval letter from the receiving facility must be included as an appendix to the final report. If the levels of petroleum contamination based on laboratory analysis are below treatment levels, please contact the project manager for approval to dispose of the investigative waste on site. The SUPERB Account will not compensate for transportation or treatment of clean soil and/or ground water.

On all correspondence regarding this site and scope of work, please reference Facility ID #03538 and cost proposal #06889. Please include the cost proposal number when submitting your invoice. If you have any questions concerning this correspondence, please contact John Wright at (803) 898-4367.

Sincerely,
State Lead and Field Services Section
Assessment and Corrective Action Branch
Division of Underground Storage Tank Management

John Wright, Hydrogeologist

Christopher S. Doll, P.G., Manager

enc: Copy of Monitoring Well Approval

Assessment Component Invoice

Approved Assessment Cost Proposal

cc: Bruce Newell, Southeastern Environmental, 323 Main Street, Conway, SC 29526 (with Original

Monitoring Well Approval and Approved Assessment Component Cost Proposal)

Technical File (Copy of Monitoring Well Approval)

Financial File (Approved Assessment Component Cost Proposal)

Read File (without enclosures)

SCDHEC/UST/SLFSS/jww/123198



Monitoring Well Installation Approval Form

Date of Issue: December 31, 1998

Approval No.: 10729

Approval is hereby granted: Southeastern Environmental (On behave of): Mr. Dan McEachin (Coastal Truck Stop)

Facility ID: #03538 County: Florence

This approval is for the construction of up to fifteen shallow monitoring wells and one telescoping monitoring well in accordance with the South Carolina Well Standards and Regulations. The wells are to be constructed within the surficial aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

- 1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well will be submitted with the technical report.
- 2. Each well will be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate will provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #.
- 3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.
- 4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to John Wright at (803) 734-5626 or Wrightiw@columb26.dhec.state.sc.us.
- 5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) and associated measurements (i.e., in-situ field measurements) to me with the technical report.
- 6. Monitoring wells and temporary monitoring wells will be installed by or under the direct supervision of a licensed well driller certified by the State of South Carolina.
- 7. Monitoring wells and temporary monitoring wells will be abandoned by or under the direct supervision of a licensed well driller certified by the State of South Carolina. Temporary monitoring wells shall not remain in place for longer than 30 days from the date of installation. Monitoring wells may be abandoned only upon concurrence by this Division.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71. Please remember to have a copy of this approval on the site during well installation.

Approved by:

John Wright, Hydrogeologist

State Lead and Field Services Section

Division of UST Management

cc: Pee Dee District EQC

Technical File

Dan McEachin, 726 Dogwood Drive, Garden City, SC 29576 T DOCKE



Monitoring Well Installation Approval Form

Date of Issue: March 18, 1999 Approval No.: 11179

Approval is hereby granted to: Southeastern Facility ID #: 03538

County: Florence

MAR 18 1999

This approval is for the construction of 300 feet of temporary monitoring well(s) in accordance with the South Carolina Well Standards and Regulations. The well(s) are to be constructed within the shallow aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

- 1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built)construction details for each well will be submitted with the technical report.
- 2. Each well will be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate will provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #.
- 3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.
- 4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to Chuck Williams at (803) 898-4339 or Williacj@columb26.dhec.state.sc.us.
- 5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) and associated measurements (i.e., in-situ field measurements) to me with the technical report.
- 6. Monitoring wells will be installed by or under the direct supervision of a licensed well driller certified by the State of South Carolina.
- 7. Monitoring wells will be abandoned, when no longer required, by or under the direct supervision of a licensed well driller certified by the State of South Carolina.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71. Please remember to have a copy of this approval on the site during well installation.

Approved by: (

Charles J. Williams, III, Hydrogeologist State Lead and Field Services Section Assessment and Corrective Action Branch

Division of UST Management

cc: Pee Dee District EQC

Mr. James Parker, 726 S. Dogwood Dr., Garden City, SC 29576

Southeastern Env., 323 Main St., Conway, SC 29526

Technical File

ST DOCKET 42T



DIVISION OF UNDERGROUND STORAGE TANK MANAGEMENT

Phone (803) 898-4350 Fax (803) 898-4330

APR 26 1999

Coastal 76 Truck Stop Mr. Dan McEachin 1007 Wentworth Drive Florence, SC 29501-5751

Re: Coastal 76 Truck Stop

Permit #03538, Cost Proposal #06889; Release #1 Rapid Assessment Plan received December 16, 1998

Bamberg County

Dear Mr. McEachin:

The Division of Underground Storage Tank (UST) Management of the South Carolina Department of Health and Environmental Control (SCDHEC) reviewed and approved the referenced Rapid Assessment Plan and associated costs on December 31, 1998.

According to our records, the release was reported to the SCDHEC subsequent to the early detection incentive program. Therefore, in accordance with Section 44-2-40(B) of the State Underground Petroleum Environmental Response Bank (SUPERB) Act, you are responsible for the first \$25,000 for site rehabilitation. To insure that any expenditures you make apply to this \$25,000 deductible, it is prudent for this agency to preapprove such costs along with your technical plan of action. By law, the SUPERB account cannot compensate any costs that are not pre-approved. Eligible costs exceeding the \$25,000 deductible can be compensated from the SUPERB Account.

The SCDHEC reserves the authority to only apply costs to your deductible for work properly performed and/or technically justified in accordance with established criteria. Upon receipt of the signed Assessment Component Invoice and a copy of your canceled check (front and back) or a notarized statement from the contractor verifying payment for this scope of work, eligible costs will be applied toward your deductible.

On all correspondence regarding this site and scope of work, please reference Facility ID #03538 and cost proposal #06889. If you have any questions concerning this correspondence, please contact me at (803) 898-4366 or 1-800-826-5435.

Sincerely,

State Lead and Field Services Section
Assessment and Corrective Action Branch

Division of Underground Storage Tank Management

Christopher S. Doll, P.G., Manager

cc: Technical File Financial File

ST DOCKE 43 T

SCDHEC/UST/SLFS/CSD/990426

Southeastern Environmental, Inc. 323 Main Street Conway, SC 29526 (643) 248-3533 Phone (843) 248-5034 Fax

Southeastern Environmental, Inc.

Attn. Christopher Ball

RE	CEI	VE]	
	•	-	

JUL 0 6 1999

DIVISION OF HAIDED STORAGE HADE

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To: 5 C	DHEC		From:	South for less	Fauttomental .
Faxe 805			Pages	3	
Phones 901	·		Date:	7 - 6 - 99	
Res Constal	Irvel Stop	10 4 03538	CC:	· · · · · · · · · · · · · · · · · · ·	
☐ Urgent	For Review	☐ Please Con	rment	Please Reply	☐ Please Recycle

JOHN A.

3T DOCKE 44

Southeastern Environmental

323 Main Street, Conway, S.C. 29526 • (843)248-3533 • (800)257-3533 • Fax (843)248-5034

SC DHEC

Attention: Christopher Doil

Site ID #: 03538

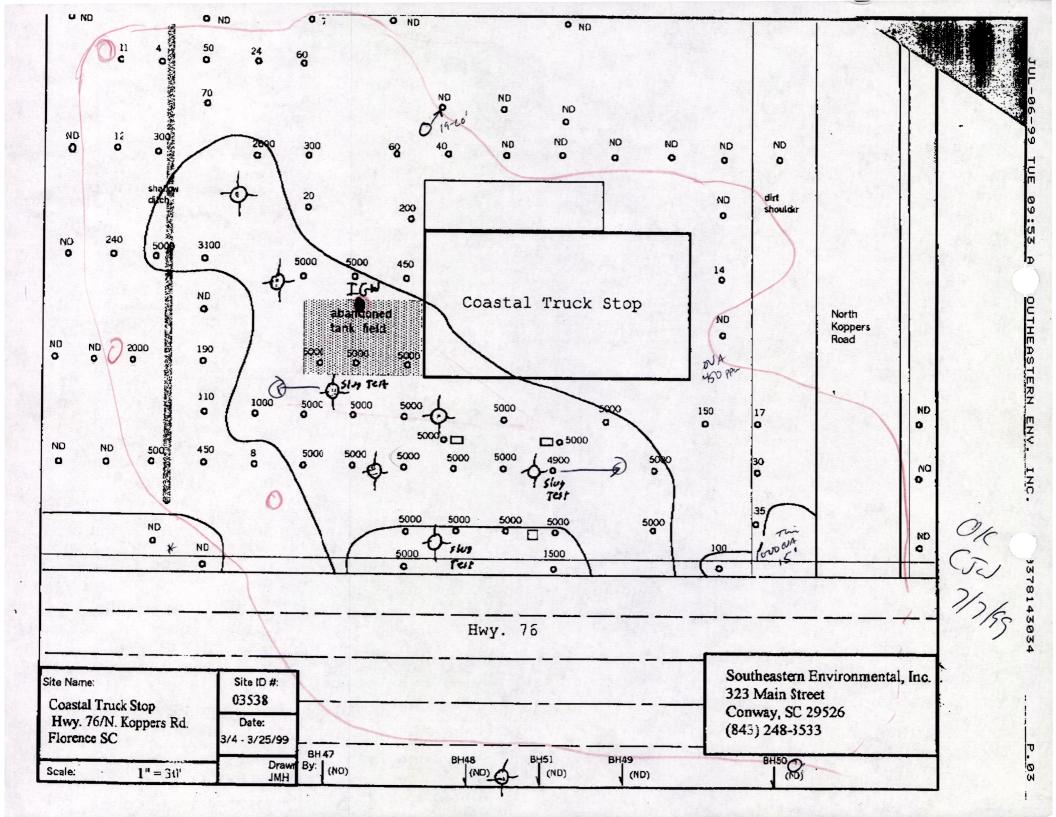
July/6/1999

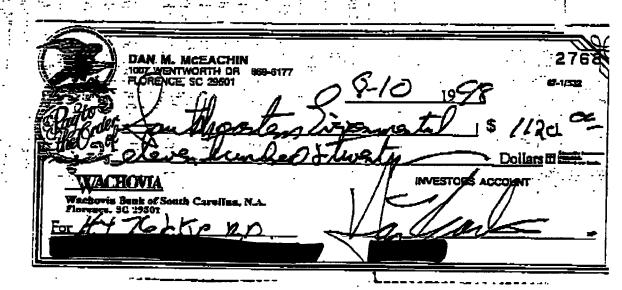
Mr. Doil,

Attached is a copy of the site map for Coastal Truck Stop. On this map are the locations for the monitoring wells as proposed by our new Geologist. We were allotted fifteen 20' wells not including the telescoping well. Please review this map and give your input on the location of these wells. Please call or fax us the information as soon as possible, as we are planing to start drilling as of tomorrow, 7/6/99.

Thank You

Anthony Bell





payment toward IGWA

13T DOCKE 45T

Invoice

DATE	INVOICE#
3/23/99	1404

Mr. Dan McEachin
726 Dogwood Drive
Garden City, SC 29576

P,Q. NO.	TERMS	PROJECT
180399	Due on receipt	- '

			•
	Abandon soil borings	4.00	2,400.00
	Mob/Demob (personnel) Soil borings (hand auger)	250.00 14.00	250.00 8, 400.00
1	Mob/Demob (drilling/field screen. equip.)	500.00	500.00
	Standard Limited/Rapid Assessment RAP and SLA for recetor survey	100.00 500.00	100.00 500.00
QUANTITY	DESCRIPTION	RATÉ	AMOUNT

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RECEIVE

JUL 0 9 1999

ENTERON OF UNDERGE.

DAN M. MCEACHIN

1007 WENTWORTH-OR SERVIT

PLORENCE SC 29501

PLORENCE

SOUTHEASTERN ENVIRONMENTAL, INC 323 MAIN STREET CONWAY, SOUTH CAROLINA 29526

	MILE TRANSMITTAL SHEET
John Abernauly	FROM: Jared Hendrik Date:
PHONE NUMBER: (803) 818 - 4330	sender's reference number:
Coastal Truck Stop	Your reference number:
	please comment
NOTES/COMMENTS: 7 Pages	
John,	
These are	the remains proposed well (7)
locations by our	the remains proposed well (7) geologist. Please review these
and get back t	to us ASAP (we will be drilling
today [tursday]). T	hanks.
•	Jares

CONFIDENTIALITY NOTICE:

The information contained in this transmission is privileged and confidential. It is intended only for the use of the individual or entity named above. If you are not the intended recipient or an authorized agent or employee of the intended recipient who has been authorized to deliver this facsimile, you are berely notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone, and arrangements will be made to return the message. Thank you!

RECEIVED

AUG 0 3 1999

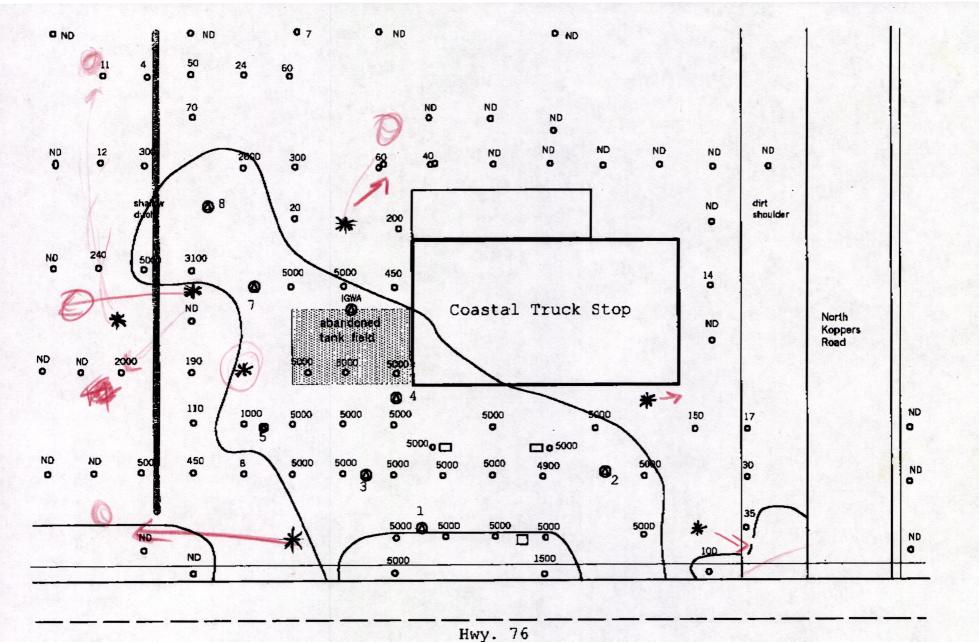
DIVISION OF UNDERGROUND STORAGE TRANKINGMT.

PHONE: (803) 248-3533

PAX: (803) 248-5034

13T DOCKE: 46 T





Southeastern Environmental, Inc. Site ID #: Site Name: 323 Main Street 03538 Conway, SC 29526 Coastal Truck Stop (843) 248-3533 Hwy. 76/N. Koppers Rd. Date: Florence SC 3/4 - 3/25/99 BH48 (ND) 6 BH50 BH 47 BH49 BHS1 By: (ND) Orawi JMH (ND) (ND) (ND) 1" = 30" Scale:

Southeastern Environmental

323 Main Street, Conway, S.C. 29526 • (843)248-3533 • (800)257-3533 • Fax (843)248-5034

August 17, 1999



CHISION OF UNDERGROUND STORAGE TRANK MIGMIT.

Ms. Kristen Hein SC DHEC

2600 Bull Street Columbia, SC 29201 Bureau of UST Management

Re:

Coastal Truck Stop

UST # 03538

Ms. Hein:

This letter is to confirm that Southeastern Environmental, Inc. will need an additional 120 feet for soil borings to define the plume. Please fax me a letter regarding this matter at your earliest convenience. If you should have any questions, please contact our office.

Thank you,

Kim Garrett

Southeastern Environmental, Inc.

T DOCKE



2600 Bull Street Columbia, SC 29201-1708

> Kim Garrett Southeastern Environmental, Inc. 323 Main Street Conway, South Carolina 29526

Re: Coastal Truck Stop

UST Permit #03536, Cost Proposal #06889 Approval for additional field screening footage

Dear Ms. Garrett:

The Division has reviewed your request for additional field screening footage. Additional costs totaling \$3,013.00 (to include 120 feet for field screening and abandonment and two drums for disposal) have been technically approved. A Cost Proposal Addendum is currently in finance awaiting financial approval.

If you have any further questions regarding this site, please do not hesitate to call at (800) 826-5435 (within South Carolina only) or (803) 898-4343. Please reference UST Permit #03536 and Cost Proposal #06889.

Sincerely,

Kristen Hein

SOUTHEASTERN ENVIRONMENTAL, INC 323 MAIN STREET CONWAY, SOUTH CAROLINA 29526

	FACSIMILE TRANSMITTAL SHEET
Knisten Frone number:	Hein Garrett B/31/99 SENDER'S REFERENCE NUMBER:
RE: Coastal	Truck Stoo 10 # 03538
D	or review
NOTES/COMMENTS: Knohen I h. You. A	ty questions - please call

RECEIVED

AUG 3 1 1999

DIVISION OF UNDERGROUND STORAGE TANK MGMT.

CONFIDENTIALITY NOTICE:

The information contained in this transmission is privileged and confidential. It is intended only for the use of the individual or entity named above. If you are not the intended recipient or an authorized agent or employee of the intended recipient who has been authorized to deliver this facsimile, you are hereby notified that any dissemination, distribution or copying of this communication is strictly probabited. If you have received this communication in error, please notify us immediately by telephone, and arrangements will be made to return the message. Thank you!

PHONE: (803) 248-3533

FAX: (803) 248-5034

ST DOCKET 48 T

726 S. Dogwood or murrells Enlet, sc

29576

end of the sept thouse till may.

Inied to call 8/31 10 Am 130 pm 9/2 9:00AM

Southeastern Environmental

323 Main Street, Conway, S.C. 29526 • (843)248-3533 • (800)257-3533 • Fax (843)248-5034

Site 10 # 03538

August 19, 1999

Mr. Dan McEachin Coastal Truck Stop 1007 Wentworth Drive Florence, SC 29501

RE:

Invoice #1442

\$25,000,00 Deductible

Dear Mr. McEachin:

Enclosed please find the invoice for the additional soil borings, abandonment and drilling of monitoring wells.

The amount is \$14,978.12; you are only required to pay \$11,730.00. SC DHEC will pay the balance since the amount of \$11,730.00 will satisfy your \$25,000.00 deductible.

Please remit a check in the amount of \$11,730.00.

Please call me should you have any questions.

We thank you for your business.

Sincerely,

Lori J. Grainger Southeastern Environmental, Inc.

LJG/s

Enclosure

RECEIVED

AUG 3 1 1999

DIVISION OF UNDERGROUND STORAGE TANK MGMT.

Invoice

SOUTHEASTERN ENVIRONMENTAL, INC.

323 MAIN STREET CONWAY, SC 29526 (843) 248-3533

DATE	INVOICE #
8/11/9 9	1442

BILL_TO:

Mr. Dan McEachin 726 Dogwood Drive Garden City, SC 29576

P O. NUMBER	TERMS	PROJECT

180399 Due on receipt

Tally Tay	OSCCHIRTION	HATE	TAUDMA
YTITMAUD	DESCRIPTION	HATC	
1	Mob/Demob (drilling/field screen. equip.)	500.00	500.00
	Mob/Demob (personnel)	250.00	500.00
	Soil borings (hand auger)	14.00	4,200.00
	Abandon soil borings	4.00	1,200.00
	Monitoring well	38,00	8,578.12



Columbia, SC 29201-1708

PROMOTE PROTECT PROSPER 2600 Bull Street

DIVISION OF UNDERGROUND STORAGE TANK MANAGEMENT

Phone (803) 898-4350 Fax (803) 898-4330

September 10, 1999

Mr. Mallory McEachin PO Box 337 Florence, SC 29503

Re: Coastal Truck Stop

UST Permit #03538

Correspondence received August 4, 1999

Florence County

Dear Mr. McEachin:

In response to your request, a copy of the tank closure report by Duncan Environmental and a copy of the Initial Ground-Water Assessment Report by Southeratern Environmental, Incorporated is enclosed for your information. Additionally, a copy of a letter to your father from Kristen Hein, the UST Program project manager, is enclosed for your information.

If you have any questions, please feel free to contact me at (803) 898-4354.

Sincerely,

Arthur Shrader, Director

Assessment and Corrective Action Branch

Division of Underground Storage Tank Management

enc.: Tank Closure Report

Initial Ground-Water Assessment Report SCDHEC Letter dated September 10, 1999

cc: Kristen Hein

Technical File

UST DOCKET 49T



DIVISION OF UNDERGROUND STORAGE TANK MANAGEMENT

Phone (800) 826-5435 Fax (803) 898-4330

2600 Bull Street Columbia, SC 29201-1708

> Mr. Dan McEachin 726 South Dogwood Drive Murrells Inlet, South Carolina 29576

SEP 10 1999

Re:

Coastal Truck Stop 76 UST Permit # 03538 Florence County

Dear Mr. McEachin:

The Division of Underground Storage Tank Management of the South Carolina Department of Health and Environmental Control has been requested to provide you with information regarding costs associated with the Rapid Assessment which is currently being conducted by Southeastern Environmental at the referenced facility.

Upon review of the Departmental file, our records indicate that the Rapid Assessment Plan was approved in December 1998. All costs associated with this scope of work were pre-approved by the Department. A copy of the approved costs is enclosed.

In August 1999, the Division received a copy of the bill sent to you by Southeastern Environmental. It appears that the amount charged concurs with the pre-approved costs. Upon review of the final report, these reapproved costs may be applied to your \$25,000 deductible.

Should you have any further questions or comments, please contact me at (800) 826-5435 (within South Carolina only) or (803) 898-4343.

Sincerely.

Kristen A. Hein, Hydrogeologist Owner/Operator Assistance Section Assessment and Corrective Action Branch

Division of Underground Storage Tank Management

Enc: SCDHEC correspondence dated April 20, 1999

SCDHEC correspondence dated January 8, 1999

Read/Technical Files (without enclosures) cc:

SCDHEC/UST/091099

13T DOCKET 50 T



DIVISION OF UNDERGROUND STORAGE TANK MANAGEMENT

SEP 27 1999

2600 Bull Street Columbia, SC 29201-1708

> Mr. Dan McEachin 1007 Wentworth Drive Florence, South Carolina 29501-5751

> > Re: Coastal Truck Stop UST Permit #03538 State Lead Permission Form

> > > Telephone conversation on September 27, 1999

Florence County

Dear Mr. McEachin:

During the referenced conversation, you indicated to Art Shrader that you prefer to utilize the State Lead option to procure site rehabilitation on your behalf for any necessary activities following the submittal of the Rapid Assessment which is currently being prepared by Southeastern Environmental. Therefore, your signature is required on the enclosed Permission Form before work using the State Lead option can begin at this facility. The work will be funded by the SUPERB Account and there will be no out of pocket cost to you up to the one million dollar coverage limit. Please sign the enclosed Permission Form and return it to this office as soon as possible.

On all correspondence or inquiries regarding this project, please reference UST Permit #03538. If you have any questions, please feel free to contact Kristen Hein at (803) 898-4343 or 1-800-826-5435 (within South Carolina only). Thank you for your time and cooperation in this matter.

Sincerely

Kristen A. Hein, Hydrogeologist Owner/Operator Assistance Section Assessment and Corrective Action Branch

Division of Underground Storage Tank Management

Enc: State Lead Permission Form

Technical File (n/enc) cc:

Read File

DHEC/UST/092799

BT DOCKET 5

O UST +03538



2 5 1999

MS. KRISTEN HEIN DHEC UNDERGROUND STORAGE TANK DIV. DIVISION OF 'NDERGROUND' STORAGE TANK MGMT.

DEAR MADAM:

ENCLOSED PLEASE FIND STATE LEAD FORM SIGNED BY ME. I WISH IT CLEARLY UNDERSTOOD

THAT UPON THE CONCLUSION OF THE RAPID ASSESSMENT OF SIGHT NO. O3538 THAT SOUTHEASTERN ENVIRONMENTAL WILL HAVE NO RELATIONSHIP WITH ME WHATSOEVER, CONTRACTIVAL OR OTHERWISE.

OCTOBER 22, 1999

DAN MCEACHIN

TOOCKE 52 T





JAN 1 1 2000

DIVISIC DEF STORAGE TANK MGMT.

RAPID ASSESSMENT REPORT

COASTAL TRUCK STOP (ID# 03538) FLORENCE, SOUTH CAROLINA

PREPARED FOR: SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

20 DECEMBER, 1999

NO. 2101 TO CONTROL OF THE CAROLOGICAL CONTROL OF THE CAROLOGICA CONTROL OF THE CAROLOGICA CONTROL OF THE CAROLOGICA CONTROL OF THE CAROLOGICA CONTROL OF TH Chris L. Boggs. P.G. Southeastern Environmental, Inc.

1 Introduction and Site History

The Coastal 76 Truck Stop facility (ID# 03538) is located on Highway 76/301 east of Florence, South Carolina (see Figure 1). Results of the investigation conducted at the time of UST removal and the Initial Groundwater Assessment conducted by Southeastern Environmental, Inc. at the facility indicated the presence of organic compounds commonly associated with petroleum releases in soil and groundwater at the facility. Additionally, free phase hydrocarbons were also noted on groundwater during the installation of the well for the IGWA.

2 Receptor Survey

No potential receptors were identified within 1000 feet of the facility. Utility lines run parallel to Highway 76/301 but appear to be shallower than the impacted area. (See Figure 2). Water is currently supplied to the property and adjacent properties by the city of Florence.

3 Geology and Hydrogeology

The site is located in an area underlain by marine sediments of Pleistocene Age. Shallow groundwater occurs in this area as a water table aquifer. Based on observations made during monitoring well installation at the site soils are sands and sandy to clayey loams. Groundwater was encountered at a depth of approximately fourteen feet below ground surface at the site.

4 Scope of Work

Additional assessment was conducted to further investigate the extent of soil and groundwater impact at the facility. These actions included collection and OVA screening of soil samples from 90 locations on the property (See Figure 3) and the installation of 12 additional Type II monitoring wells (MW-1 through MW-11 and MW-14) and one Type III monitoring well (TW) on the property. A surveyed site plan indicating the locations of all wells and other relevant features at the site is included as Figure 4. Boring logs and well construction information for the additional monitoring wells are included as Appendix A. A summary of the results of OVA screening is included as Table 1.

5 Soil Investigation

Soil samples for laboratory analysis were obtained from a depth of 8.5 to 11 feet below ground surface during the installation of monitoring wells. Soil samples were submitted for laboratory analysis in accordance with SCDHEC guidelines for gasoline releases.

6 Ground Water Investigation

6.1 Ground Water Sample Collection

Groundwater samples were obtained from monitoring wells MW-1 through MW-8 on July 19 and 20, 1999 from monitoring wells MW-9, MW-10, MW-11, and MW-14 on August 5, 1999, and from the telescoping well (TW) on August 26, 1999. Field measurements taken during groundwater sample collection are included in Table 2. Depth to

groundwater measurements from September 29, 1999 was used to construct the potentiometric map included as Figure 5. Groundwater measurements and water table elevations are summarized in Table 3. It should be noted that free phase hydrocarbons were observed on groundwater in the IGWA well on the site during groundwater sample collection. The observed thickness of the free phase hydrocarbons was 0.21 feet (2.5 inches) on September 29,1999.

6.2 Hydraulic Conductivity Testing

Hydraulic conductivity tests (rising head tests) were performed at monitoring wells MW-1, MW-2 and MW-5 on July 20, 1999 to determine the approximate average horizontal hydraulic conductivity of the surficial hydrogeologic unit. The tests involved observing the recovery of the water level toward the static level after a quantity of water had been removed from the well casing of each well. The test results indicated approximate horizontal hydraulic conductivity values of 2.88 feet per day (ft./day) for monitoring well MW-1, 0.57 ft./day for monitoring well MW-2, and 1.8 ft./day for monitoring well MW-5. Using these values the approximate average hydraulic conductivity for the site is estimated to be 1.75 ft./day. Data and calculations for the tests are included in Appendix B.

6.3 Ground Water Seepage Velocity

An approximate average horizontal hydraulic gradient of 0.0062 foot per foot (ft./ft.), an approximate horizontal hydraulic conductivity of 3.357 ft./day, and an estimated effective porosity of 0.25 (based on soil descriptions) have been assigned to the shallow hydrogeologic unit. The approximate rate of ground water flow (seepage velocity) in the surficial hydrogeologic unit has been calculated by modifying Darcy's Law to account for plume movement with respect to time:

v = Ki/n

Where:

v = estimated seepage velocity of ground water

K = approximate average horizontal hydraulic conductivity

= approximate horizontal hydraulic gradient

n = estimated effective porosity

Based on the above values, the linear seepage velocity for ground water flow in the shallow hydrogeologic unit is approximately 0.1227 ft./day, or about 48 ft./year. Actual velocities are likely to vary throughout the unit due to heterogeneities within the unit.

7 Analytical Results

7.1 Soil

Results of laboratory analysis for the soil samples collected during monitoring well installation indicate the presence of Benzene Toluene, Ethylbenzene, Xylenes and Naphthalene in concentrations in excess of the RBSLs for sandy soil in the soil sample obtained from several locations on the site. In addition, 1-Methylnaphthalene and 2-Methylnaphthalene were detected in the soil sample obtained from MW-1 at concentrations of 2370 and 1200 μ g/kg, respectively. Analytical results for soil samples are summarized in Table 4. Copies of the analytical reports for soil samples are contained in Appendix C. Isoconcentration maps for the compounds detected in soil samples are included as Figures 6 through 10.

7.2 Ground Water

Results of analysis of ground water samples are presented in Table 5. As indicated in this table, concentrations of Benzene, Toluene, Ethylbenzene, Xylenes, Naphthalene, and Methyl tert Butyl Ether (MTBE) in excess of the RBSLs for groundwater were detected in groundwater samples obtained from monitoring wells on the site. In addition, 1,3,5 Trimethylbenzene, 1,2,4 Trimethylbenzene, 1-Methylnaphthalene, and 2-Methylnaphthalene were detected in groundwater samples obtained from several monitoring wells at the site. Copies of the analytical reports for groundwater samples obtained on are included in Appendix D. Horizontal distribution of individual COCs detected in excess of the RBSLs are indicated in Figures 11through 16. Vertical distributions of the COC and site lithology are depicted in cross-sections included as Figures 18 and 19. Cross section locations are indicated in Figure 17.

8 Fate and Transport Modeling

The EPA Bioscreen model was used in order to approximate the fate and transport of the COCs in groundwater. This model simulates solute transport in three ways: transport with no decay, solute transport with first order decay, and solute transport with instantaneous biodegradation. Input data and results for the simulation are included in Appendix E. Due to unknown age of the release, a value of 10 years was used as a default age for calibration purposes and the model was calibrated to site specific values. Subsequent to calibration to site parameters, the simulation was run for a time period of 20 years to determine if there would be significant migration of COCs. Results of this simulation indicate an increase in contaminant concentrations downgradient of the source. This suggests that the contaminant plume has not reached a stable condition and may continue to expand in a downgradient direction. Input parameters and results for fate and transport modeling are included as Appendix E.

9 Risk Evaluation

9.1 Tier I Evaluation

A site conceptual exposure model was completed for current and future potential land use at the site. Based on the results of the model, no significant potential exposure pathways were identified for the site. The only potential receptors identified for the site are the utility lines that parallel US 76/301 on the southern margin of the site. These lines are not located in an area of significant soil contamination and are not in contact with impacted groundwater. The site conceptual model forms for the site are included as Appendix F.

9.2 Tier II Evaluation

The following Site Specific Target Levels (SSTLs) for each COC in groundwater were established using empirical site data:

Benzene:

C(source-MW-1) = 19,900 ppb C(well-MW-11) = 10.1 ppb CRF = 1970.3 SSTL = 9851 ppb

Toluene:

$$C(source-MW-4) = 34,300 \text{ ppb}$$

$$C(well-MW-11) = 1.63 ppb$$

$$CRF = 21,042$$

Ethylbenzene:

$$C(source-MW-4) = 4,630 \text{ ppb}$$

$$C(well-MW-11) = 19.9 ppb$$

$$CRF = 232.7$$

Xylenes:

$$C(source-MW-4) = 21,500 \text{ ppb}$$

$$C(well-MW-11) = 11.18 ppb$$

$$CRF = 1923$$

Naphthalene:

$$C(source-MW-4) = 800 ppb$$

$$C(well-MW-11) = 8.4 ppb$$

$$CRF = 95$$

MTBE

$$C(source-MW-2) = 10,500 \text{ ppb}$$

$$C(well-MW-11) = 8.68 ppb$$

$$CRF = 1,209$$

8 Conclusions

Previous investigations at the site indicate that there has been a petroleum release. This release is apparently related to the UST system removed by Duncan Environmental

Associate, Inc. in 1995. The initial Groundwater Assessment conducted by Southeastern Environmental, Inc. revealed the existence of free phase hydrocarbons on groundwater.

Results of soil analysis indicate the presence of benzene, toluene, ethylbenzene, and naphthalene in soil at concentrations in excess of the RBSLs for sandy soils for these compounds. In addition 1- methylnaphthalene and 2-methylnaphthalene were detected in soil samples collected from MW-1. The area of impacted soil appears to be limited to the immediate vicinity of the former UST and dispenser locations.

Results of groundwater analysis indicate the presence of benzene toluene, ethylbenzene, xylenes, naphthalene, and MTBE at concentrations in excess of the RBSLs. With the exception of benzene in samples collected from monitoring wells MW-1, MW-2, and MW-4, all of the detected concentrations are below the SSTLs for these compounds as determined from site data.

Ground water level data and the results of hydraulic conductivity testing indicate that groundwater is flowing across the site from northeast to southwest at a rate of approximately 48 feet per year.

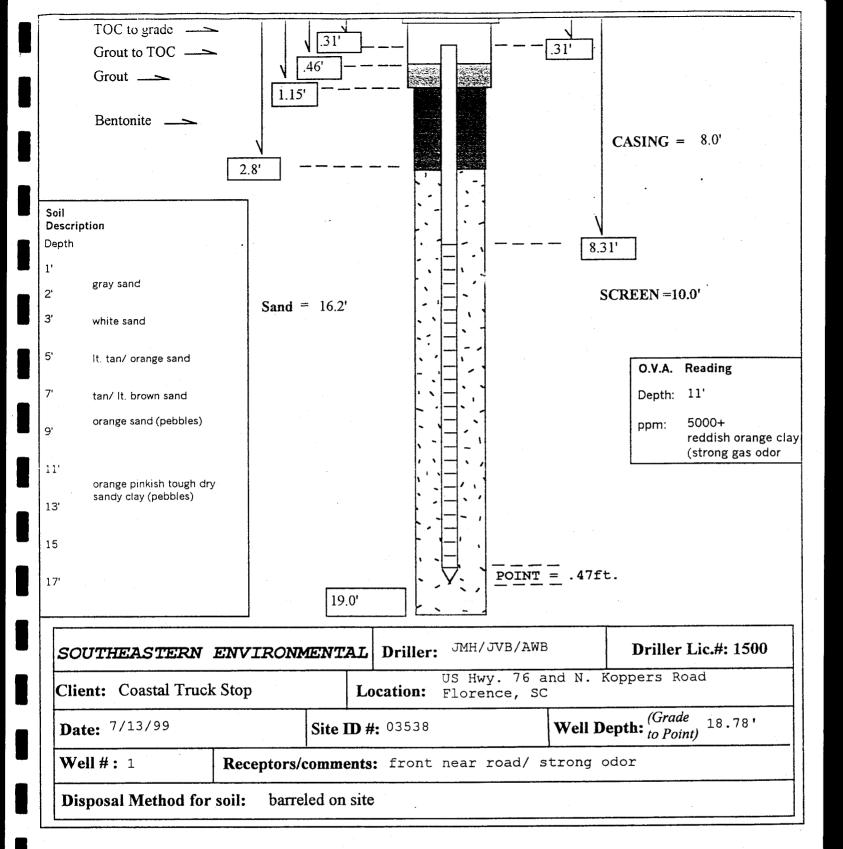
Fate and transport modeling using the EPA Bioscreen model suggests that the contaminant plume is not in a stable state.

7. Recommendations

Based on the results of the soil and groundwater investigation, the vertical and horizontal extent of contaminants in soil and groundwater has been defined at this site. Site Specific Target levels for COCs determined from empirical data for the site are higher than the majority of the concentrations of COCs detected in groundwater at the site. In order to eliminate the source for additional groundwater contaminants, we recommend that free phase hydrocarbons be recovered from the IGWA well and that impacted soil be removed from the vicinity of the former dispenser island location. In addition, we recommend that a compliance monitoring program be initiated at the site.

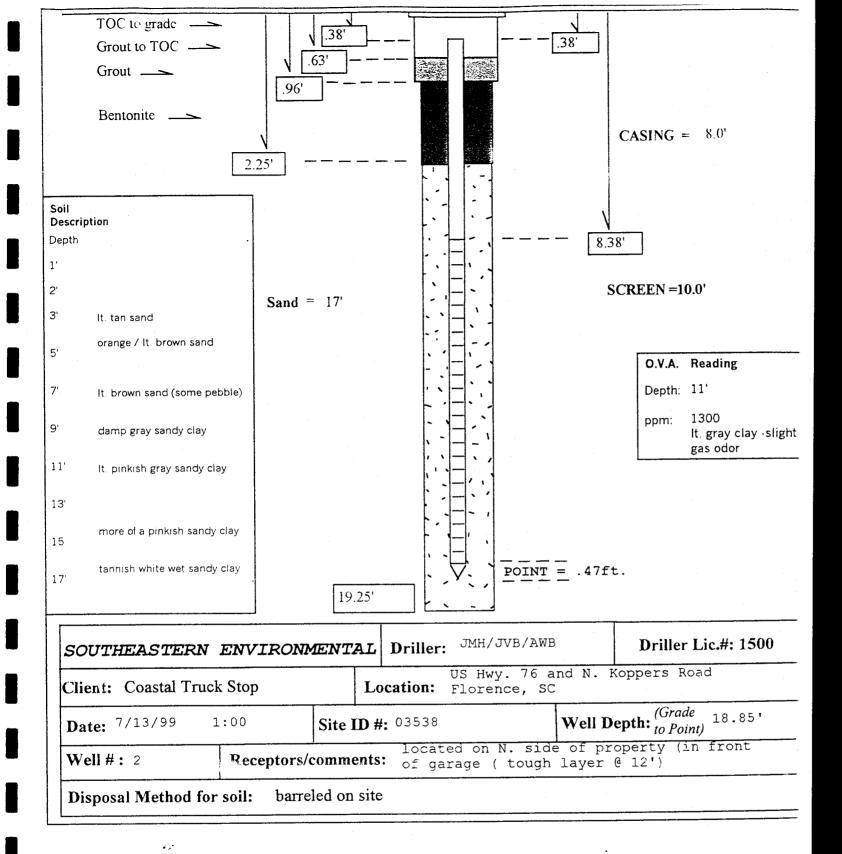
APPENDIX A

Well Construction Information



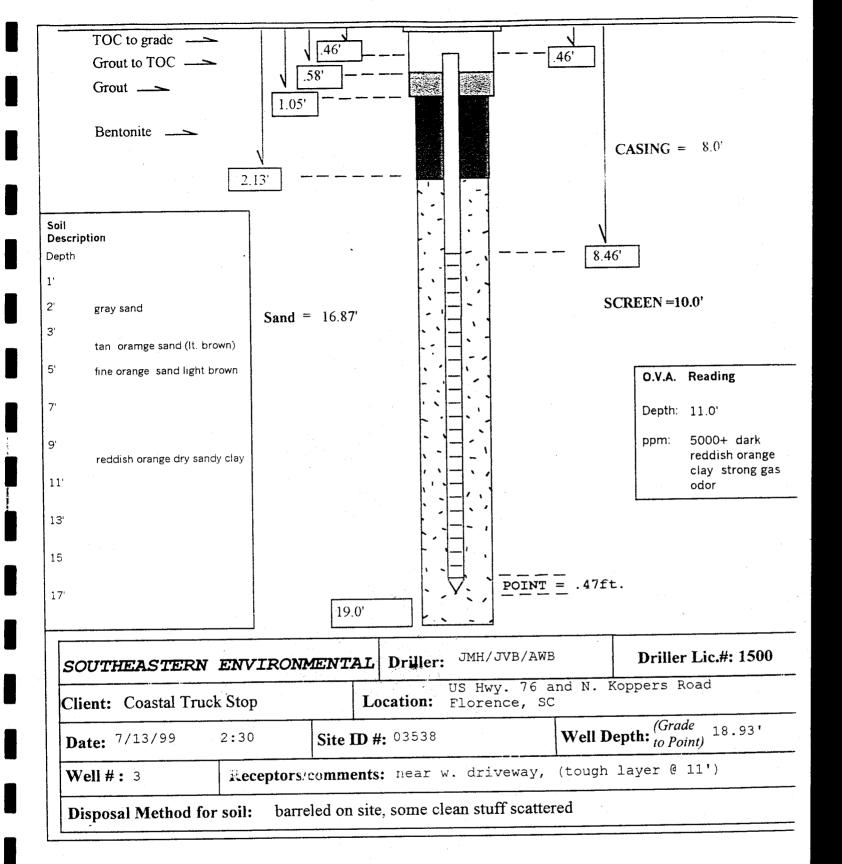


PROMOTE PROTECT PROSPER		
1. LOCATION OF WELL:	MW# 1.	4. OWNER OF WELL: Dan Mic Eachin
County: Florence System	Name: C005to-	Address: 1007 Wentworth Drive
Tru	ck Stop	Flurence, SC 2950
D*	03538	Telephone No.: 843 - (069 - 0177
Latitude: Longitud		Engineer Bruce G. Newell
Distance and Direction from Road Inte		Address: 323 Main Street
13	i	CONWAY, SC 29526 Telephone No.: 843-248-3533
see attached		5. WELL DEPTH (completed) Date Started: 7-13-99
Street Address & City of Well Location	1,	17.78 tt. Date Completed: 7-13-99
Sketch Map:		The State of
		G. ☐ Mud Hotary ☐ Setted ☐ Boled ☐ Other ☐ Cable tool ☐ Other
I see attached sh	uets	7 USE:
		☐ Domestic ☐ Public Supply—Permit No ☐ Industry
		☐ Irrigation ☐ Air Conditioning ☐ Commercial
		☐ Test Well ☐ Monitor Well ☐ ☐
		8. CASING: Threaded Weided Diam: 2" Height: Above/Below
		tt l
2. CUTTING SAMPLES: Yes	□ No	I lybe: W PVC Li Galvainzed Guitago
Z CUTTING SAMIFLES. LI TES		□ Steel □ Other Weight lb./ft. O.31 in. to \$1.31 it. depth Drive Shoe? □ Yes □ No
Geophysical Logs: 🔲 Yes (ple	ease enclose) 🗆 No	in. toit. depth
Geophysical cogs res (pic	*Thickness Depth to	9. SCREEN 11
Formation Description	of Bottom of	Type: PVC Diam.; 2
, 5	Stratum Stratum	Slot/Gauge: (), U/O Length:
	1'-2.5'	Set Between: \(\frac{\dagger}{3} \) it. and \(\frac{\dagger}{18} \). 31 it. NOTE: MULTIPLE SCREENS It and \(\frac{\tagger}{18} \). USE SECOND SHEET
gray sand	1-7.5	ft. andit. USE SECOND SHEET Sieve Analysis
	3-4.5	
white sand	3-4.5	10. STATIC WATER LEVEL 14.17 ft. below land surface after 24 hours
/	L' , E'	11. PUMPING LEVEL Below Land Surface.
It. tan orange sano	5-6.9	ft. afterhrs. Pumping G.P.M.
	7- 7.5	Pumping Test: Yes (please enclose) No
tan /H. brown sand		··•]
	8'-11'	Yield:
brange sand (nebbles)		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
orange pinkish tough	11.5-19	Please enclose lab results.
dry sandy clay	11.2 1,	13. ARTIFICIAL FILTER (gravel pack) ☑Yes □No
		Installed fromft.
		Effective sizeUniformity Coefficient
•		
		West Cament Sand Cement Concrete Other Dentonite
•		Depth: Fromft. toft.
		15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: 11 GROSSIBLE CONTAMINATION: 11 11 11 11 11 11 11 11 11 11 11 11 11 11
,		Type well disinfected
		upon completion No Amount:
		16 PLIMP: Date installed: Not installed W
		Mfr : lame: Model No.:
•		Length of drop ploeft. Capacitygpm
	:	Type: Tisupmersible Tiget (shallow) Turbine
		Reciprocating Centrifugal
	<u></u>	17 MATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
*Indicate Water Bearing Zones		my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)		Registered Business Name: Southeastern Enulronmentate:
3. REMARKS:		Address: 303 Main St. Churcy
		Signed:
		Authorized Representative



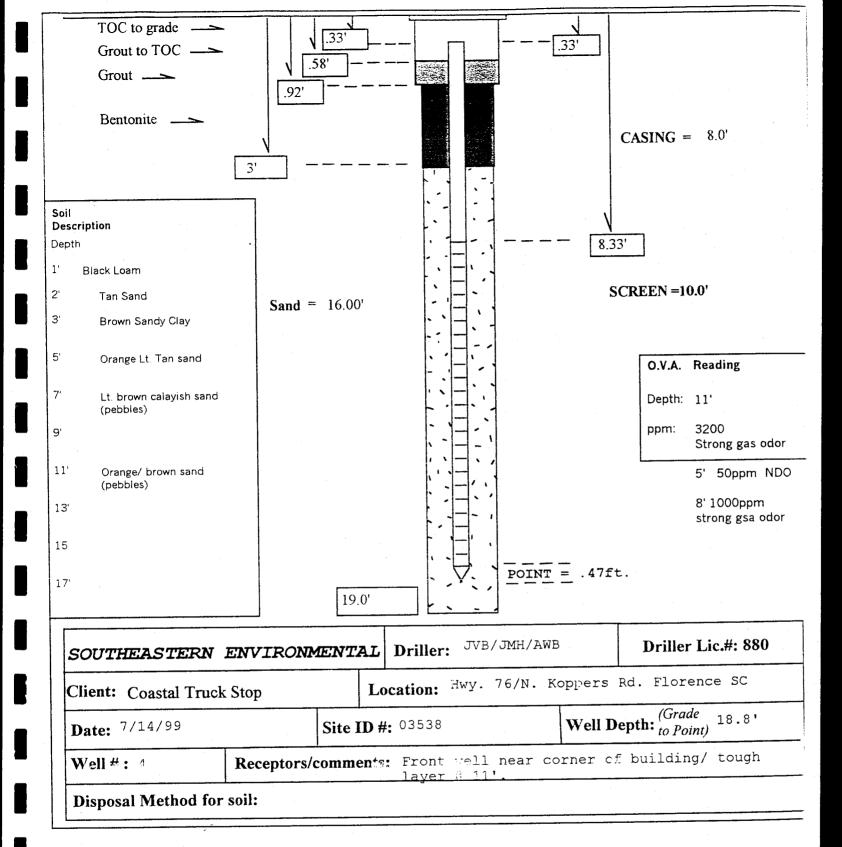


PROMOTE PROTECT PROSPER		The state of the s
1. LOCATION OF WELL:	nw#2	4. OWNER OF WELL: Dan Mice achin
Country CI System N	lame: COQ5tal	Address: 1007 Wentworth Drive
• • • • • • • • • • • • • • • • • • • •	ck Stop	Flurence, SC 2950
	03538	Telephone No.: 843- (pt/9-tyl77
l opoitud	6 :	Engineer Bruce G. Newell
Distance and Direction from Road Inte		Address: 323 Main Street
	i	cmway, sc 29526
see attached	sheets	Telephone No.: 843 - 248 - 3533
		5. WELL DEPTH (completed) Date Started: 7-13-99
Street Address & City of Well Location		18.85 tt. Date Completed: 7-13-99
Sketch Map:		
		6. Millia rotary 12 contact
See attached sh	00+5	L All holdry
Ja unadrea si	2017	7. USE:
		Commercial 1
		I imgation
		8. CASING: Threaded Welded
		Diam.
	T No.	I lype: MYPVC Li Galvariized Soriado
2. CUTTING SAMPLES: Yes	□ No	□ Steel □ Other Weight □ Ib./ft. □ 38 in. to 8.38 it. depth □ Drive Shoe? □ Yes □ No
		in. to ft. depth
Geophysical Logs: 🔲 Yes (ple	ease enclose) No	
	*Thickness Depth to	
Formation Description	of Bottom of	Type: PVC Diam.: 2
	Stratum Stratum	SlovGauge: 0.010 Length: 10 Set Between: 8.38 ft. and 18.38 ft. NOTE: MULTIPLE SCREENS
	1-3.5	Set Between: 6. 3 tt. and 10. 3 tt. USE SECOND SHEET
It. tan sand	1 - 5.5	Sieve Analysis
	11/	
orange/It. brown sand	4-6.5	10. STATIC WATER LEVEL
0.01.7		13,58 ft. below land surface after 24 hours
It brown sand	7-8.5	11. PUMPING LEVEL Below Land Surface.
IT. OFDERT SOLICE	, ,	ft. after hrs. Pumping G.P.M.
la conductou	9'-10.5	Pumping Test: ☐ Yes (please enclose) ☑ No
damp gray sandy day		Yield:
	N-13.5	12 WATER OUALITY
sandy clay	VI VOID	Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ❷ No
more of a pinkish	14-16	Please enclose lab results.
sandy clay	17 10	Tiedde eliciose lab results.
tannish white wet	16.5'-19.25'	13. ARTIFICIAL FILTER (gravel pack) 2 Yes No Installed from ft. to ft.
sandy clay	U 0 111	Installed from it. to
		Effective size Uniformity Coefficient
		14. WEIL GROUTED? D'es No Neat Cement Sand Cement Concrete Other Bentonite
		Neat Cement Sand Cement Concrete Other Structure
		Depth: Fromft. toft.
		15 NEAREST SOURCE OF POSSIBLE CONTAMINATION: II UIFCUOT
 		Type well disinfected
		upon completion No Amount:
		16. PUMP: Date installed: Not installed 🖾
		Mfr. Name: Model No.:
		Mir. Name: None land of grap one if Capacity inm
	i	H.PVoltsLength of drop pipett. Capacityjpm
		TYPE: ☐ Submersible ☐ Jet (shatlow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
		☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
0 7		17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
*Indicate Water Bearing Zones		my direction and this report is true to the best of my knowledge and belief.
(Han a final throat if product)		Registered Business Name: Southenstern Enulronmentalite:
(Use a 2nd sheet if needed)		1 10gm 100 - 1 Cl A O- 1 - 1
3. REMARKS:		1 Address: 323 PTOID 502 (DROUGH)
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
•	•	Signed: Cart. No 2
		: AUDIOUS DEPENDANT



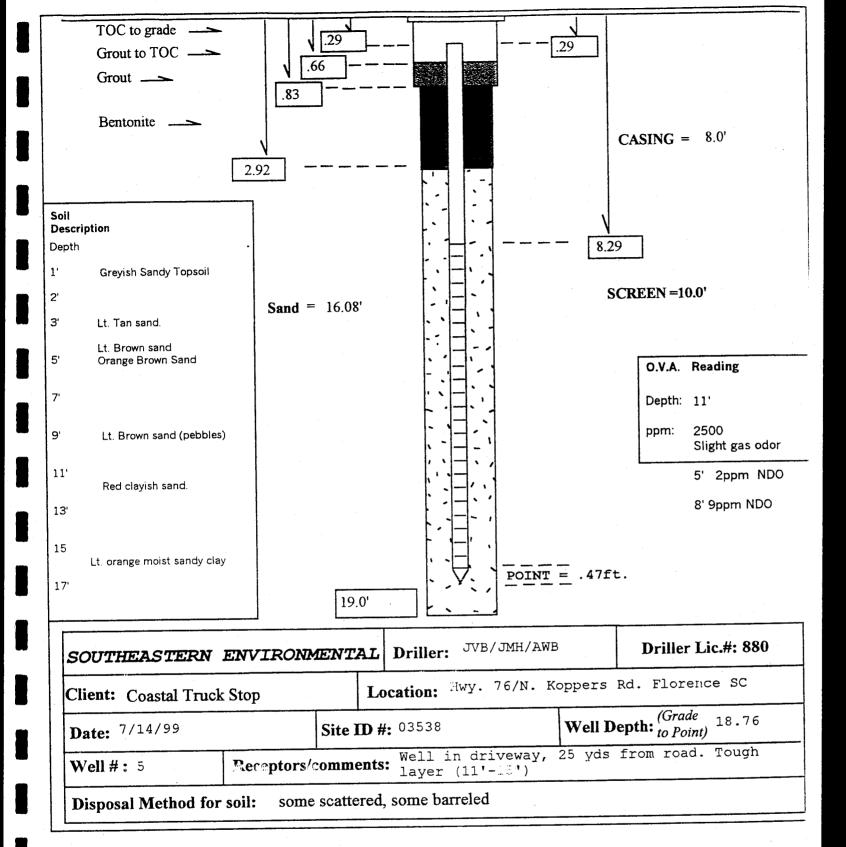


1. LOCATION OF WELL:	mw#	<u>3</u> .	4 OWNER OF WELL Dan MCEachin
County: Florence System I Tru	Vame: C 00.5	to:	Address: 100 F WT TWO TO THE
	ск 5юр		Telephone No.: 843 (pt/9 - (p177
Ψ.	U3538.		Engineer: Bruce G. Newell
Latitude: Longitud	le: 🎉 🐪	A. C. M.	Address: 323 Main Street
Distance and Direction from Road Inte	rsections:		29520 Stranger
see attached	sheets		Telephone No.: 843-248-3533
Street Address & City of Well Location	n:		5. 1722 bit (100111)
Sketch Map:			
			6. Mud Rotary Detteo Server Dug Air Potani Driven Dable tool Dother
See attached sh	eets		Li Air Rotary Li Dilven
3-3-3-10-1-1			7. USE: ☐ Domestic ☐ Public Supply—Permit No. ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☑ Monitor Well ☐ ☐
			8. CASING: ☑ Threaded ☐ Welded Diam 2" Height: Above/Below
			5
2 CUTTING SAMPLES: Yes	□ No		
		™ No	Steel
Geophysical Logs: 🔲 Yes (ple	*Thickness	Depth to	
Formation Description	of	Bottom of	Type: PVC Diam.: d
, 5	Stratum	Stratum	
aray sand	1-2		ft. andft. USE SECOND SHEET
tan orange sand/	2 - 115		Sieve Analysis 🗆 Yes (please enclose) 🗀 No
1t. brown	3.5-45		10. STATIC WATER LEVEL 13.79 ft. below land surface after 24 hours
fine orange sand/	5 -9		11 PLIMPING LEVEL Below Land Surface.
reddish orange dry	9.5-19		ft. after hrs. Pumping G.P.M.
sandy clay	7.5-11		Pumping Test: ☐ Yes (please enclose) ☑ No
•			Yield:
	+		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
			Please enclose lab results.
			13. ARTIFICIAL FILTER (gravel pack)
			Installed fromft. toft.
			Effective sizeUniformity Coefficient
-			14. WELL GROUTED? ☑Yes ☐ No ☐Neat Cement ☐ Sand Cement ☐ Concrete ☑ Other Bentonite
			Depth: Fromft. toft.
			15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type well disinfected Yes Type:
			upon completion No Amount:
			16. PUMP: Date installed: Not installed to
			Mfr Name: Model No.:
			H.P. Volts Length of drop pipeft. Capacitygpm
	- 1		TYPE: ☐ Supmersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
*Indicate Water Bearing Zones		· · · · · · · · · · · · · · · · · · ·	17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)			Registered Business Name: Southenstern Emplronmentolate:
3. REMARKS:	<u> </u>		Address: 323 Main St? (Discou
			1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 × 1 ×
			Signed:Cerr. NoCerr. No





PROMOTE PROTECT PROSPER			The state of the s
1. LOCATION OF WELL:	mw#	. 44	4. OWNER OF WELL: Dan McEachin
County: Florence System Name: C005tall Truck Stop			Address: 1007 Wentworth Drive
Tru	ck Stop		Flurence Sc 2950
D.	D3528		Telephone No.: 843 - (069 - (0177
			Engineer Bruce G. Newell
Latitude: Longitud	10:	4.18 N. 19 N	Address: 323 Main Street
Distance and Direction from Road Inte	rsections:		commy, 5c 29526
see attached	5 h no + 5		Telephone No.: 843-248-3533
SEC anached	Shear		5. WELL DEPTH (completed) Date Started: 7-14-99
Street Address & City of Well Location	n:		
Sketch Mao:			18.8 tt. Date Completed: 7-14-99
ORCION THESE			6. ☐ Mud Rotary ☐ Jetted ☑ Bored ☐ Dug
	,		☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
See attached sh	uets		7. USE:
			□ Domestic □ Public Supply-Permit No. □ Industry
			☐ Irrigation ☐ Air Conditioning ☐ Commercial
			☐ Test Wejl ☑ Monitor Well ☐
			8. CASING: Threaded Weldec.
			Diam.: 2" Height: Above/Below
			Type: NZPVC C Galvanized Surfaceft.
2. CUTTING SAMPLES:	□ No		Steel Other Weightlb./ft.
			0.33 in. to 8.33 ft. depth Drive Shoe? ☐ Yes ☐ No
Geophysical Logs: Yes (ple	ease enclose)	□ No	in. to ft. depth
Geophysical Logs. 2 100 (p.)	*Thickness	Depth to	9. SCREEN //
Formation Description	of	Bottom of	9. SCREEN Type: PVC Diam.: 2 Slot/Gauge: 0 010 Length: 10
Formation Description	Stratum	Stratum	Stat/Gauge: 0.010 Length: 10
			Slot/Gauge: 0.010 Length: 10 Set Between: 8.33 ft. and 18.33 ft. NOTE: MULTIPLE SCREENS
Inlack loam	1-1.5		ft. andft. USE SECOND SHEET
black loam			Sieve Analysis ☐ Yes (please enclose) ☐ No
1 - 0 - 0 - 1	2-2.5		10. STATIC WATER LEVEL
tan sand	0 4.5		13. 87 tt. below land surface after 24 hours
	3-45		
brown sandy clay	3-4.5		11. PUMPING LEVEL Below Land Surface.
	1		ft. afterhrs. Pumping G.P.M.
orange H. tan sand	5'-6.5'		Pumping Test: ☐ Yes (please enclose) ☑ No
It. brown clayish	, ,		Yield:
Sand (pebbles)	7-10.5		12. WATER QUALITY
(pebbles)	1 1		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
orange/brown sand	11:19		Please enclose lab results.
Oranger brown saile		<u> </u>	13. ARTIFICIAL FILTER (gravel pack) ☑Yes □ No
			Installed fromft.
	!		
·			14. WELL GROUTED? EYES [No
			14. WELL GROUTED? 27 185 11 NO Neat Cement Sand Cement Concrete Other Bentonite
		·	Depth: Fromft. toft.
			15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type well disinfected Yes Type:
			upon completion No Amount:
			16. PUMP: Date installed: Not installed ₩
	<u> </u>		Mfr. Name: Model No.:
			H.PVoltsLength of drop pipe it. Capacitygpm
	: -	1	
	1		The Committee of the Co
*Indicate Water Bearing Zones		1	17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
indicate water bearing zones			my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)			Registered Business Name: Southeastern Enulronment date:
		1	Trogramme of the state of the s
3. REMARKS:			Address: 323 Main St. & DWey /
	:		1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	•		Signed: Cert. No L
'			ABBINITIES (TENESSES INDICE

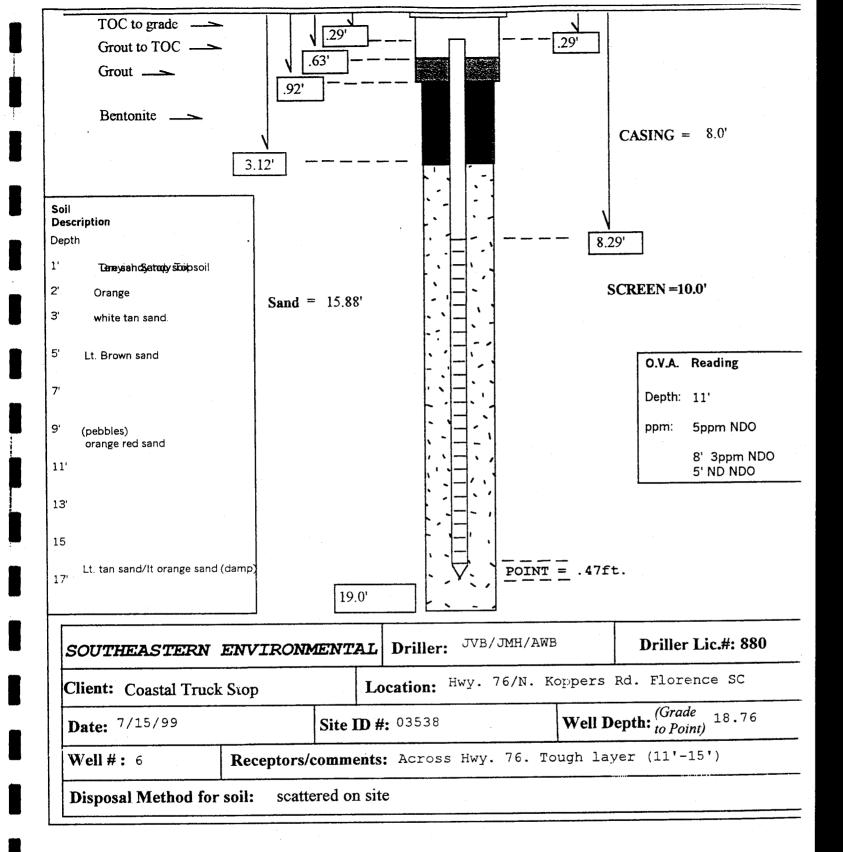




DHEC 1903 (10/96)

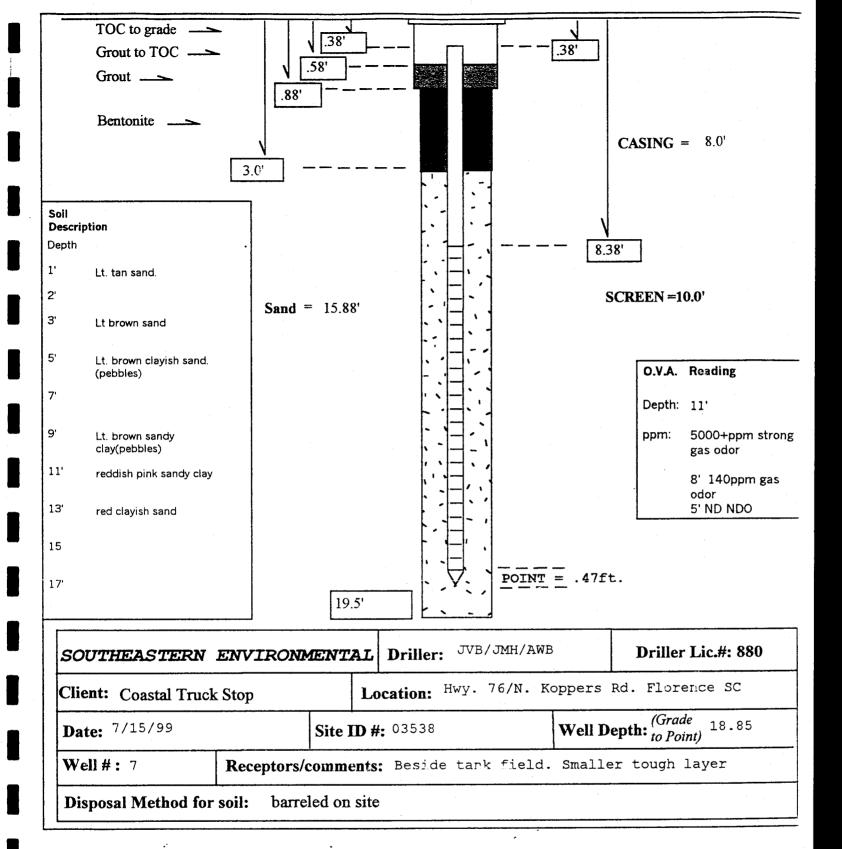
Water Well Record Bureau of Water

PROMOTE PROTECT PROSPER		
1. LOCATION OF WELL:	mw#5.	4. OWNER OF WELL: Dan McEachin Address: 1007 Wentworth Drive
County: Florence System Name: C005tall Truck Stop		
in the second of	03538	Telephone No.: 843 - (p69 - 6177
		Engineer Druce G. Newer
Latitude: Longitu Distance and Direction from Road Int	ersections:	Address: 323 Main Street
		Conuxy, 5C 2952U
see attached		Telephone No.: 843-248-3533 5. WELL DEPTH (completed) Date Started: 7-14-99
Street Address & City of Well Location	on:	10 71
Sketch Map:		
		6. Mud Rotary Jetted Bored Dug Air Rotary Driven Cable tool Other
sec attached st	reets	7 USE
		☐ Domestic ☐ Public Supply—Permit No ☐ Industry
		☐ Imgation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☑ Monitor Well ☐ ☐
•		8. CASING: Threaded Welded
		Diam.: 2" Height: Above/Below
		Type: REPVC Galvanized Surfaceft.
2 CUTTING SAMPLES:	□ No	Steel _ Qther Weight lb./ft.
		O. 29 in. to 8.29 tt. depth Drive Shoe? Yes No
Geophysical Logs: Yes (p	lease enclose). No	
	*Thickness Depth to	9. SCREEN Type: PVC Diam.: 3"
Formation Description	of Bottom of Stratum	Stat/Gauge: () () () Length:
		Set Between: 8, 29 ft. and 18, 29 ft. NOTE: MULTIPLE SCREENS
greyish sandy topsoi	11-2.5	ft. andft. USE SECOND SHEET
3. 34.		Sieve Analysis 🗀 Yes (please enclose) 🗀 No
It tan sand	3-3.5	10. STATIC WATER LEVEL 13, 28 ft. below land surface after 24 hours
	4-4.5	11. PUMPING LEVEL Below Land Surface.
It. brown sand		11. PUMPING LEVEL Below Land Surface. ft. after hrs. Pumping G.P.M.
	5-8.5	Pumping Test: ☐ Yes (please enclose) ☑ No
orange brown san		Yield:
It. brown sand Gebbl		12. WATER QUALITY
IF. Drown Sund people		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
red clayish sand	11.5-15	Please enclose lab results.
11 ovance moist		13. ARTIFICIAL FILTER (gravel pack) ✓ Yes No tt
It. orange moist sandy clay	15.5'-19'	Installed fromft.
)		Effective size Uniformity Coefficient
		14. WELL GROUTED? EYes No Wheat Cement Sand Cement Concrete Cother Bentonite
		Depth: Fromft.
		15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
		Type well disinfected
		upon completion No Amount:
		16 PLIMP: Date installed: Not installed \(\overline{\pi} \)
		Mfr Name: Model No.:
		H.PVolts Length of drop pipeit. Capacitygpm
		TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
		Jet (deep) Reciprocating Centrifugal 17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
*Indicate Water Bearing Zones		I was a second of my knowledge and belief.
(Use a 2nd sheet if needed)		my direction and this report is true to the dest of my knowledge
3. REMARKS:	· !	Address: 303 Main St. 1 musey
O. I SQUED SESS SOM	7	Address: Standard Cert. No.: 880
		Signed:
		Authorized Representative





PROMOTE PROTECT PROSPER	VOL VIII.		4. OWNER OF WELL: Dan Michaelm
1. LOCATION OF WELL: MW# 4			Address: 1007 Wentworth Prive
County: Clarence System Name: C005to			Florence SC 2950
County: Florence System Name: C005tall Truck Stop 1D \$203538			CALL OF STATE OF STAT
D*	03538	AND THE RESERVE	Telephone No.: 843 - (pt/9 - (pt/77
Longitude:	the second of the second of the second		Engineer: Bruce G. Newell
		1	Address: 323 Main Street
Distance and Direction from Road Inter			Cmm 5c. 29526
see attached	sheets		Telephone No.: 843-248-3533
			5. WELL DEPTH (completed) Date Started: 7-15-99
Street Address & City of Well Location	:		
Sketch Map:			
			6. ☐ Mud Rotary ☐ Jetted ☑ Bored ☐ Dug
	. 1		☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
see attached sh	eers		7. USE:
			☐ Domestic ☐ Public Supply—Permit No. ☐ Industry
			☐ Irrigation ☐ Air Conditioning ☐ Commercial
			☐ Test Well ☑ Monitor Well ☐
			8. CASING: ☐ Threaded ☐ Welded
			Diam.: 2" Height: Above/Below
			Type: 52 PVC 🗆 Galvanized Surfacett.
2. CUTTING SAMPLES: Yes	⊒ No		☐ Steel ☐ Other Weight Ib./ft. O.29 in. to 9.39 ft. depth
			0.29 in. to 8.29 ft. depth Drive Shoe? Tyes No
Geophysical Logs: Yes (ple	ase enclose)	□ No	in. to ft. depth
Goophysical Logs	*Thickness	Depth to	9. SCREEN
Formation Description	of	Bottom of	9. SCREEN Type: PVC Diam.: 2
Formation Description	Stratum	Stratum	Slot/Gauge: 0.010 Length: 10
	-1		Set Between: 9.29 ft. and 17.29 ft. NOTE: MULTIPLE SCHEENS
ton sand, tonsail	1-1.5		ft. andtt. USE SECOND SHEET
tan sandy topsoil	1		Sieve Analysis 🖂 Yes (please enclose) 🖂 No
	2-2.5		10. STATIC WATER LEVEL
orange			ft. below land surface after 24 hours
	3-4.5		11. PUMPING LEVEL Below Land Surface.
white tan sand			ft. afterhrs. Pumping G.P.M.
	5-8.5		π. arterns. r driping
It brown sand	15-8.5		Pumping Test: ☐ Yes (please enclose) ☑ No
(Debble)	9-15.5	i	Yield:
orange red sand	9 - 15.5		12. WATER QUALITY
H. tan sand/It. orange	1 .0'		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
sand damp	16-19		Please enclose lab results.
Sana damp			13. ARTIFICIAL FILIER (gravel pack) ☑Yes □ No
		İ	installed fromft. toft.
			The state of the control of the state of the
,	1		56 514
			14. WELL GROUTED? D'Yes □ No Wheat Cement □ Sand Cement □ Concrete D'Other Bentonite
			Neat Cement Sand Cement Concrete Wolfler Concrete Wolfler
			Deoth: From
			15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type well disinfected
	T	1	upon completion ☐ No Amount:
			16. PUMP: Date installed: Not installed &
		 	Mfr. Name: Model No.:
			H.PVoltsLength of drop pipe ft. Capacitygpm
		1	
	1	i	TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
<u> </u>	ř ì	1	Jet (deep) necipiocating certified under
*Indicate Water Bearing Zones			17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
mulcate vyater bearing Zones			my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)			Registered Business Name Southenstern Environmentalise:
	1	1	200 1000 01 00000
3. REMARKS:			Address: 303 July DV/ Church
			Signed: Cert. No.: 880
	•		Signed:
. •			Authorized Prepresentative

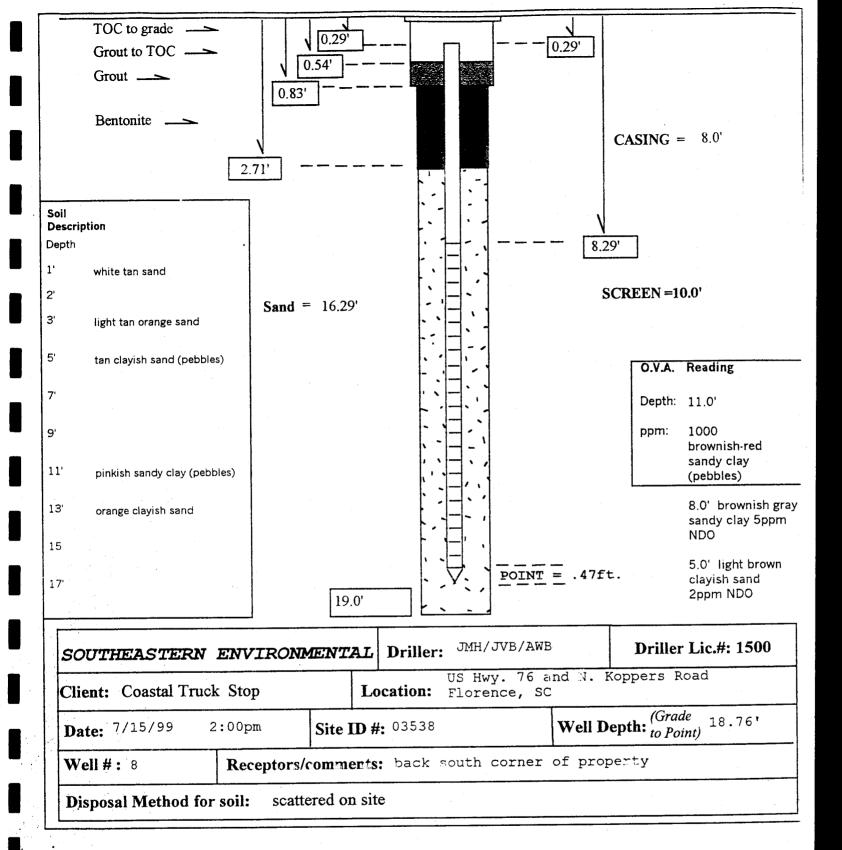




DHEC 1903 (10/96)

Water Well Record Bureau of Water

PROMOTE PROTECT PROSPER	100. 3.45	7	4 OWNER OF WELL: Dan McEachin
1. LOCATION OF WELL:	mw#		Address: 1007 Wentworth Drive
County: Florence System	Name: C 00.	i Lotte	Address: 100 1 Work of 100 110
	ick Stop		Flurence, SC 2950
ID 🕏	03538		Telephone No.: 843 - 069 - 0177
Latitude: Longitud			Engineer: Bruce G. Newell
Distance and Direction from Road Inte		- sampagin m. P. Call	Address: 323 Main Street
see attached	sheets		Telephone No.: 843-248-3533
			5. WELL DEPTH (completed) Date Started: 7-15-99
Street Address & City of Well Location	1: 		18.85 tt. Date Completed: 7-15-99
Skerch Mao:			
			6. ☐ Mud Rotary ☐ Jetted ☑ Bored ☐ Dug
See attached sh	an te		☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
sec unautea si	4013		7. USE:
			☐ Domestic ☐ Public Supply—Permit No ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial
			L inigation
			8. CASING: Threaded Welded
			_ <i>ii</i>
			ORBITAL
2. CUTTING SAMPLES: Yes	□ No		
2 CUTTING SAMPLES. U Tes	□ ivo		☐ Steel ☐ Other Weight lb./ft. O.3 % in, to % .3 % ft. depth Drive Shoe? ☐ Yes ☐ No
		C No	in. to ft. depth
Geophysical Logs: Yes (ple	ease enclose)		
	*Thickness	Depth to	9. SCREEN Type: PVC Diam.: 2"
Formation Description	of Stratum	Bottom of Stratum	Type: Diam.: 0
	Stratum	Suatum	Slot/Gauge: 0.010 Length: 10 Set Between: 8.38 ft. and 18.38 ft. NOTE: MULTIPLE SCREENS
	1-2.5		tt. andtt. USE SECOND SHEET
It tan sand	1-0.5		Sieve Analysis
11 1	3-45		
It. brown sand	 		10. STATIC WATER LEVEL 12. 93 tt. below land surface after 24 hours
It. brown clayion sand (pebbles)	5-8.5		
sand (pebbles)	5-0.2		11. PUMPING LEVEL Below Land Surface.
It. brown sandy	9-10.5		ft. after hrs. Pumping G.P.M.
clay (pebbles)	9-10.5		Pumping Test: ☐ Yes (please enclose) ☑ No
reddish pink	1 1		Yield:
sandy clay	11-125		12. WATER QUALITY
red clayish sand	101	:	Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
ि एक टावपार्ग उक्तार	13-19.5		Please enclose lab results.
			13. ARTIFICIAL FILTER (gravel pack)
			Installed fromft. toft.
			Effective size Uniformity Coefficient
			THE COUNTY OF THE
	1		West Cement □ Sand Cement □ Concrete ☑ Other Bentanite
			Depth: Fromft. toft.
	1		15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
	1		Type well disinfected Yes Type:
-			upon completion No Amount:
			Not installed 17
	<u> </u>	-	16. PUMP: Date installed:Not installed 🐼
		!	Mfr. 'ame: Model No.:
		!	H.PVoltsLength of drop pipe t. Capacitypm
)	1	TYPE: Submersible Jet (shallow) Turbine
	-1	<u> </u>	☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
*Indicate Water Bearing Zones	1		17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
indicate Water Dearing Zones	. 1		my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)			Registered Business Name: Southenstern Environmentolate:
3. REMARKS:		<u></u>	and Water of Arman
J. DEIVINOS.	-:		Address: 303 Main St. Conung
	•		Signed: Cert. No.: ??D
			Signed: Cen. No Cen. No

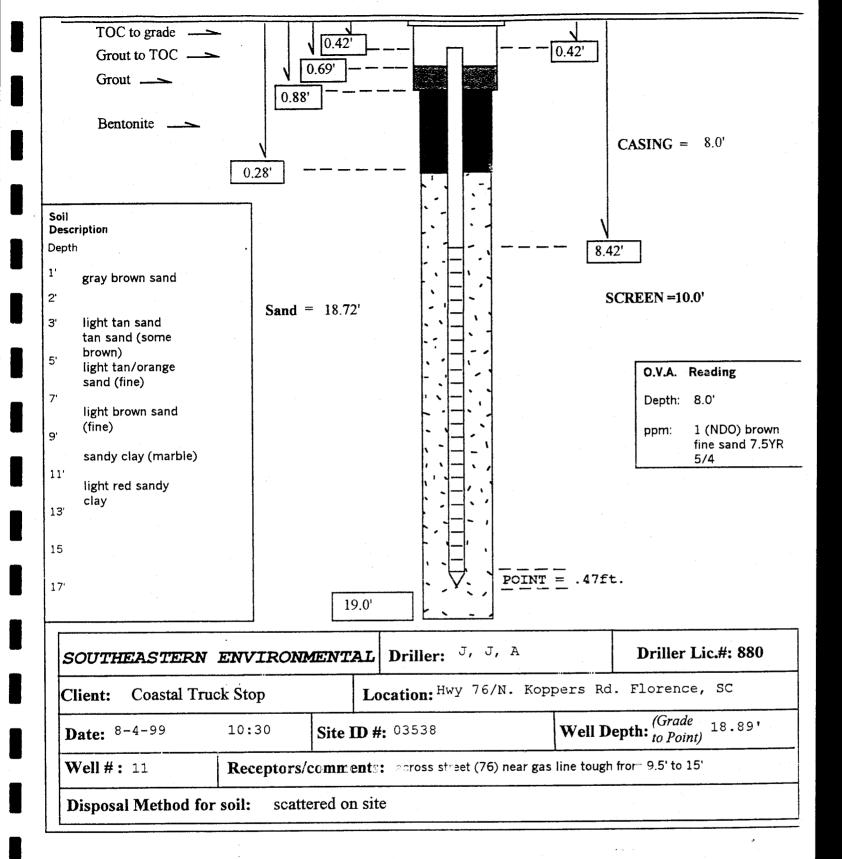




PROMOTE PROTECT PROSPER	2000 20	4 OWNER OF WELL: Dan Mic Eachin
1 LOCATION OF WELL	mw#8	Address: 1007 Wentworth Drive
County: Florence System	Name: C005tal	Address: 100 Purchage SC 2950
county. Florence Tru	ck 5top	Line of the control o
	03538	Telephone No.: 843- (069- (177
Control Contro	6.5% A	Engineer Bruce G. Newell
Latitude: Longitude:		Address 222 Wath Tree
Distance and Direction from Road Inte	rsections:	
See attached sheets		
		5. WELL DEPTH (completed) Date Started: 7-15-99
Street Address & City of Well Location:		7 15 00
See attached sheets		6. Mud Rotary Jetted
		☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
		7. USE:
		Domestic Public Supplies
		Imigation
		8. CASING: Threaded Welded Norm: 2" Height: Above/Below
•		Diamtt.
2. CUTTING SAMPLES: Yes	□ No	O.29 in. to 8.29 it. depth Drive Shoe? Yes No
		in, toft. depth
Geophysical Logs: Yes (p	lease enclose) 🗆 No	"
	*Thickness Depth to	
Formation Description	of Bottom of	() () () ADOID' ()
	Stratum Stratum	R 20 H and W 29H. NOTE: MULTIPLE SCREENS
	1051	Set Between:ft. andft. USE SECOND SHEET
white tan sand	1-2.5'	Sieve Analysis
light tan orange	11	
sand	3-4.5	10. STATIC WATER LEVEL Al. 19 ft. below land surface after 24 hours
tan clayish sand	1	
(bebble)	5'-10.5	11. PUMPING LEVEL Below Land Surface.
pinkish sandy day	, ,	tt. afterits. Fullplug
pinkish salang and	11-12.5	Pumping Test: ☐ Yes (please enclose) ☑ No
(pebbles)		Yield:
la viola som	13'-19'	12. WATER QUALITY
brange clayish sand		12. WATER QUALITY Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
		Please enclose lab results.
		13. ARTIFICIAL FILTER (gravel pack) ☑Yes ☐Noft.
		1. 10
		Effective sizeUniformity Coefficient
		14. WELL GROUTED? RYES INO
		Sand Cement Concrete Li Otter La
		Π. (0
		- VELDECT COURCE OF POSSIBLE CONTAMINATION "
		15. NEAREST SOURCE OF TOSSISEE OF Yes Type:
		was completion No Amount.
		Not installed 🔐
		Mfr. Name:
		H.P. Volts Length of thop bloc I in Type: Supmersible I Jet (shallow) I Turbine
		TYPE: Submersible Jet (shallow) Furbine
		☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
		17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
*Indicate Water Bearing Zones		my direction and this report is true to the best of the state of the s
		my direction and this report is true to the best of my knowledge Tric. Registered Business Name: Southenstern Environmentalite:
(Use a 2nd sheet if needed)		and was st Com. Was
3. REMARKS:		Address: 323 Main St. Conus
^		Address: Sept. No.: 880
•		Signed: Authorized Regressmative
		- CONTROL SHURDONMENTAL CONTROL SODRESS SOVE)
		The second section of the second section is the second section of the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the section is the second section in the section is the section in the section in the section in the section is the section in the section is the section in the section in the section is the section in the section in the section is the section in the section is the section in the section in the section in the section is the section in the section is the section in the section in the



PROMOTE PROTECT PROSPER			Da Wara da a
1. LOCATION OF WELL:	_mw#		4. OWNER OF WELL: Dan Mic Eachin
. Lineuce Tu	Name: COQ:	stal	Address: 1007 Wentworth Drive Flurence, SC 2950
DO **	03538		Telephone No.: 843 - 669 - 6177
	*		Engineer: Bruce G. Newell
Distance and Direction from Road In	_		Address: 323 Main Street
			Conway, 5C 29526
See attached sheets			Telephone No.: 843-248-3533 5. WELL DEPTH (completed) Date Started: 7-13-99
Street Address & City of Well Location	on:		18.8ft. Date Completed: 7-13-99
Sketch Map:			S to the S Period Dug
			6.
Sec attached sheets			7. USE:
			☐ Domestic ☐ Public Supply-Permit No ☐ Industry
			☐ Irrigation ☐ Air Conditioning ☐ Commercial
			Li Test Well E Wolfmor Well
			8. CASING: Threaded Welded Diam: 2" Height: Above/Below
			Diam.: Height: Above/Below Type: ☑ PVC ☐ Galvanized Surface ft.
2 CUTTING SAMPLES: Yes	□ No		
			□ Steel □ Other Weight □ Ib./ft. □ .33 in. to 8.33 it. depth □ Drive Shoe? □ Yes □ No
Geophysical Logs: Yes (p	iease enclose)	□ No	in. to ft. depth
<u> </u>	*Thickness	Depth to	9. SCREEN OUG
Formation Description	of	Bottom of	Type: PVC Diam.: 2
	Stratum	Stratum	Stot/Gauge: (), O/O Length: 10
It tan sandy	1-4.5		ft. andft. USE SECOND SHEET
It. brown sandy			Sieve Analysis
10am	5-6.5		10. STATIC WATER LEVEL
orange brown	7-7.5		13.48 ft. below land surface after 24 hours
Sandy loam			11. PUMPING LEVEL Below Land Surface.
orangé brown	7.5-13		ft. after hrs. Pumping G.P.M.
sandy day			Pumping Test: ☐ Yes (please enclose) ☑ No
tan/orange wet	13.5-19.5	,	Yield:
sandy clay	110.5.1 1.]	12. WATER QUALITY Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
			,
		<u> </u>	Piease enclose lab results. 13. ARTIFICIAL FILTER (gravel pack)
			Installed fromft.
		1	Effective size Uniformity Coefficient
į.			
		<u> </u>	West Cement Sand Cement Concrete Wother bentonite
			Depth: Fromft. toft.
	1	1	15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type well disinfected
	- 	 	upon completion ☐ No Amount:
		!	16. PUMP: Date installed: Not installed 12
	 	-	Mfr. Name: Model No.:
			H.P. Volts Length of drop pipe it. Capacity gpm
	:		TYPE: Submersible Set (shallow) Turbine
		1	☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
*Indicate Water Bearing Zones			17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)			Registered Business Name: Southeastern Environmentodate:
3. REMARKS:			Address: 323 Main St. Bluxy 17
			Address: Signed: Cert. No.: 830
i			Signed.
1			Authorized Representative



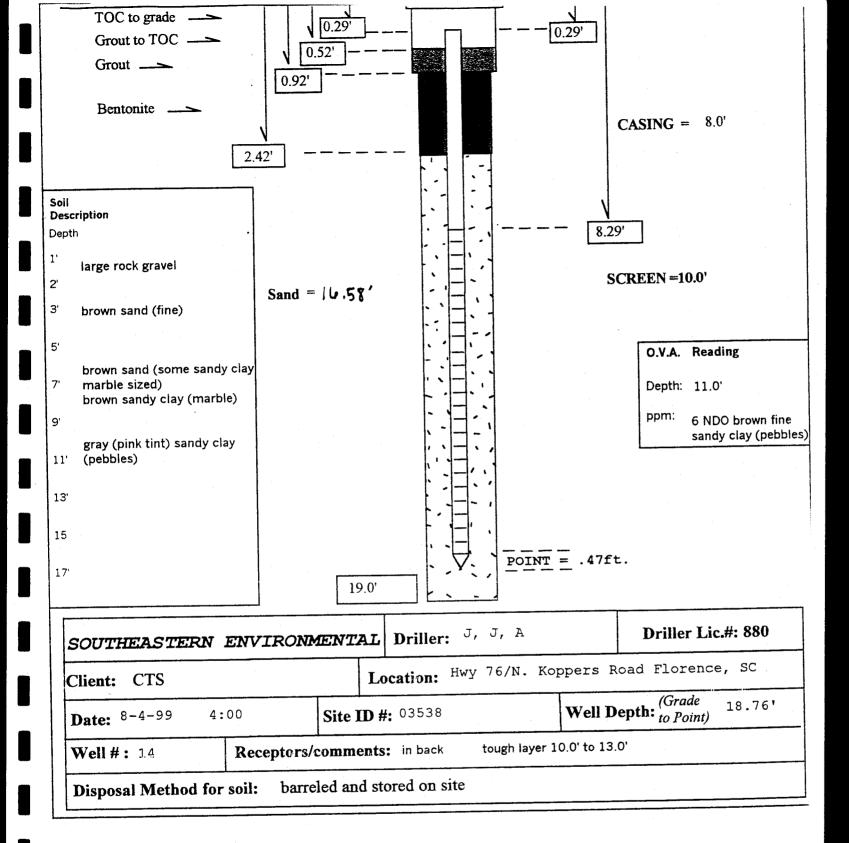


DHEC 1903 (19/96)

Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

PROMOTE PROTECT PROSPER	NO. 144	- 11	4. OWNER OF WELL: Dan MicEachin
1. LOCATION OF WELL:	mw#	11	Address: 1007 Wentworth Drive
County: Florence System	Name: COO)TOCI	Florence, SC 2950
County: Florence System Tru	dosc w		Telephone No.: 843-(069-(0177
	U253 8		Engineer: Bruce G. Newell
Latitude: Longitud	le:		
Distance and Direction from Road Inte			Address: 323 Main Sweet
see attached	6100010		Conway, 5C 29526 Telephone No.: 843-248-3533
set anached	onters		5. WELL DEPTH (completed) Date Started: %-4-99
Street Address & City of Well Location	n:		3. NEEE 50. N. (65.11)
Sketch Map:			18.89tt. Date Completed: 8-4-99
			6. ☐ Mud Rotary ☐ Jetted ☑ Bored ☐ Dug
See attached sh	no te		☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
Jec Witachea sh	KC13		7. USE:
			Domestic Public Supply-Permit No. Industry Air Conditioning Commercial
			☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ Monitor Well ☐ ☐
			8. CASING: Threaded D Welded
•			Diam.: 2" Height: Above/Below
			Type: NO Galvanized Surfacett.
2. CUTTING SAMPLES:	□ No		Steel Other Weight!b./ft.
			0.42 in. to 8.42 ft. depth Drive Shoe? Tyes No
Geophysical Logs:	ease enclose)	□ No	in, toft. depth
	*Thickness	Depth to	9. SCREEN DVC
Formation Description	of	Bottom of	Type: PVC Diam.: 2
	Stratum	Stratum	Slot/Gauge: 0.010 Length: 10 Set Benyeen: 1.42 tt and 18.42 ft. NOTE: MULTIPLE SCREENS
1	1-1.5		Set Between: 8.42 ft. and 18.42 ft. NOTE: MULTIPLE SCREENS tt. andft. USE SECOND SHEET
gray brown sand	1-11-7		Sieve Analysis
It tan sand	a'- 2.5'		10. STATIC WATER LEVEL
tour sand some	1 / / /		15.03 ft. below land surface after 24 hours
Language Com	3-4.5		11. PUMPING LEVEL Below Land Surface.
fine It. tan/orang	e_1_1		tt. after hrs. Pumping G.P.M.
sand	5 - 1		Pumping Test: ☐ Yes (please enclose) ☑ No
fine It. brown	اء ماء		Yield:
sand	7.5-95		12. WATER QUALITY
	, ,		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
Sandy day (marble)	10-11		Please enclose lab results.
12 red sondu	1 10'		13. ARTIFICIAL FILTER (gravel pack) 2 Yes No
It red sandy	11.5'-19		Installed fromft.
			Effective sizeUniformity Coefficient
			14. WELL GROUTED? D'Yes \(\text{No} \)
			14. WELL GROUTED? Layes \(\text{No} \) Neat Cement \(\text{ Sand Cement } \(\text{ Concrete } \) Other Bentonite
			Depth: From
			15. NEAREST SOURCE OF POSSIBLE CONTAMINATION II GROSSIST
			Type well disinfected
			upon completion No Amount:
			16. PUMP: Date installed:Not installed 🔽
			Mfr. Name: Model No.:
	·		H.PVoltsLength of drop pipeft. Capacitygpm
			TYPE: Supmersible Jet (shallow) Turbine
		!	☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
*Indicate Water Bearing Zones			17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
			Registered Business Name: Southenstern Environmentate:
(Use a 2nd sheet if needed)	<u> </u>	1	Hegistered Business Name.
3. REMARKS:			Address: 323 Main St. Conway
			Signed:
			Signed: Authorized Representative





Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

1. LOCATION OF WELL:	mw # 1-		4. OWNER OF WELL Dan 111C to Com
County: Florence System	vame: C00.5ta	4	Address: 1007 Wentworth Drive
	ск 5+ор	gri jibare et Lainnaalismi	Flurence, SC 2950 Telephone No.: 843 - 1269 - 1277
D*	03538.		Telephone No.: 8+3 - Quy - 31 (1)
Latitude: Longitud	6:		Engineer: Bruce G. Newell
Distance and Direction from Road Inter			Address: 323 Main Street
			Commay 5C 29520
see attached	5hects		Telephone No.: 843 - 248 - 3533 5 WELL DEPTH (completed) Date Started: 8 - 4 - 99
Street Address & City of Well Location	:		S. 11222
Sketch Map:			18.76 ft. Date Completed: 8-4-99
			6. ☐ Mud Rotary ☐ Jetted ☑ Bored ☐ Dug
See attached sh	· 1		☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
see attuched on	2015		7. USE:
			☐ Domestic ☐ Public Supply—Permit No. ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial
			☐ Imgalion ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ Monitor Well ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
			8. CASING: Threaded Weided
			Diam.: 2" Height: Above/Below
·			Type: № PVC Galvanized Surface ft.
2 CUTTING SAMPLES: Yes	□ No		Steel Other Weight lb./ft.
			0.29 in. to 8.29 ft. depth Drive Shoe? Yes No
Geophysical Logs: Yes (ple	ase enclose) 🗆 l	No	in. to ft. depth
	1	opth to	9. SCREEN OVC
Formation Description		ttom of	Type: PVC Diam.: 2
	Stratum St	tratum	Slot/Gauge: 0.010 Length: 0 Set Between: 8.29 ft. and 18.29 ft. NOTE: MULTIPLE SCREENS
La	1-2.5		tt. andtt. USE SECOND SHEET
large rock gravel	1 4.5		Sieve Analysis
0 1 0 22 52 21	3-5.5		10. STATIC WATER LEVEL
fine brown sand brown sand (some			13.57 ft. below land surface after 24 hours
brown sand (some sandy clay) marble size	16-7		11 PUMPING LEVEL Below Land Surface.
Sea letel Octob Marie	75/		ft. afterhrs. PumpingG.P.M.
brown sandy clay (max	1,5 9 5		Pumping Test: ☐ Yes (please enclose) ☑No
ore: (nink tint) sondu	/ /		Yield:
gray (pink tint) sandy clay (pebble sized)	10'-19'		12. WATER QUALITY
Character Strate			Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
			Please enclose lab results.
			13. ARTIFICIAL FILTER (gravel pack)
			Installed fromft.
			Effective size Uniformity Coefficient
·			14. WELL GROUTED? TYPES INO
			Neat Cement ☐ Sand Cement ☐ Concrete ☑ Other Period ite
			Depth: From tt. tott.
			15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type well disinfected Yes Type:
			upon completion No Amount:
			16. JMP: Date installed 12
			://fr. Name: Model No.:
			H.PVoltsLength of drop pipe it. Capacitygpm
			TYPE: Submersible Jet (shallow) Turbine Jet (deep) Reciprocating Centrifugal
			17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
*Indicate Water Bearing Zones			I will and this report is true to the best of my knowledge and Deller.
			C. Il and The Trust - market inc.
(Use a 2nd sheet if needed)			Registered Business Name: Southenstern Enulironmentalite:
3. REMARKS:			Address: 303 Main St. Johnson
-			Can No. 800
			Signed:
. ·			AUG NI LEO 1990 CELLONIO



Water Well Record Bureau of Water

PROMOTE PROTECT PROSPER 2000 B	uli Street, Columbia, SC 29201-1708; (803) 734-5300
1. LOCATION OF WELL: Teles wine	4. OWNER OF WELL: Dan Mc Eachin
1. LOCATION OF WELL: 1 e/escope County: Florence System Name 1. LOCATION OF WELL: 1 e/escope	Address: 1007 Wentworth Drive
Coasta Truck	Florence, SC 29501
stop	Telephone No.: 843 - 661 - 6177
Latitude: Longitude:	Engineer: Bruce G. Newell
Distance and Direction from Road Intersections:	Address: 323 Main Sorces
,	Conway 5C 29526
see attached sheets	Telephone No.: 843 - 248 - 3533
Street Address & City of Well Location:	5. WELL DEPTH (completed) Date Started: 8 - 24-79
Sketch Map:	36ft. Date Completed: \$ -25-99
See attached sheets	6. Li Mild Hotary Li Setted Le Bored Li Dug
SEE attación si	☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
	7. USE:
	☐ Domestic ☐ Public Supply-Permit No. ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial
	☐ Test Well ☐ Monitor Well ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
	8. CASING: Threaded Welded
	Diam.: Height: Above/Below
2 CHTTING CAMPLES: FI V FI V-	Type: PVC 🗆 Galvanized Surfaceft.
2. CUTTING SAMPLES:	□ Steel □ Other Weight lb./ft.
	in to 25 ft. depth Drive Shoe? Yes No
Geophysical Logs: ☐ Yes (please enclose) ☐ No	2'in. to _31ft. depth
*Thickness Depth to Formation Description of Bottom of	9. SCREEN
Stratum Stratum	Type: PVC Diam.: 2 Slot/Gauge: - OIO Length: 5
	Slot/Gauge: 3 Length: 5 Set Between: 3 ft. and 36 ft. NOTE: MULTIPLE SCREENS
Black Logn 0'-2'	ft. and ft. USE SECOND SHEET
	Sieve Analysis ☐ Yes (please enclose) ☐ No
1 /an Sand 2'-3'	10. STATIC WATER LEVEL
2	ft. below land surface after 24 hours
Brown Sandy Clay 3'-5'	11. PUMPING LEVEL Below Land Surface.
	ft. afterhrs. PumpingG.P.M.
Orange/light brown sand 5-7'	Pumping Test: ☐ Yes (please enclose) ☐ No
	Yield:
light brown, Clayish, 7-10'	12. WATER QUALITY
	Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Sand (Pehhles)	Please enclose lab results.
V	13. ARTIFICIAL FILTER (gravel pack) ☑Yes ☐No
Orange brown, sind 10-20	Installed from 25 ft. to 36 ft.
Oringe, brown, sind, 10'-20'	Effective size # Z Uniformity Coefficient
pebbles	14. WELL GROUTED? ☐ Yes ☐ No
1	☐ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
	☐ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
	15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
	Type well disinfected
	upon completion No Amount:
	16. PUMP: Date installed: Not installed □
	Mfr. Name: Model No.:
	H.PVoltsLength of drop pipeft. Capacitygpm
	TYPE: Submersible Jet (shallow) Turbine
	☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
*Indicate Water Bearing Zones	17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
	my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)	Registered Business Name: East Coast Drilling Date: 8 25-99
3. REMARKS:	
	Address: 21.33 Country Manier
	Signed: Rockey Frank Cert. No.: 1315
	Authorized Representative

APPENDIX B

Slug Test Data And Calculations

Slug Test Data

Project: Coastal Truck Stop

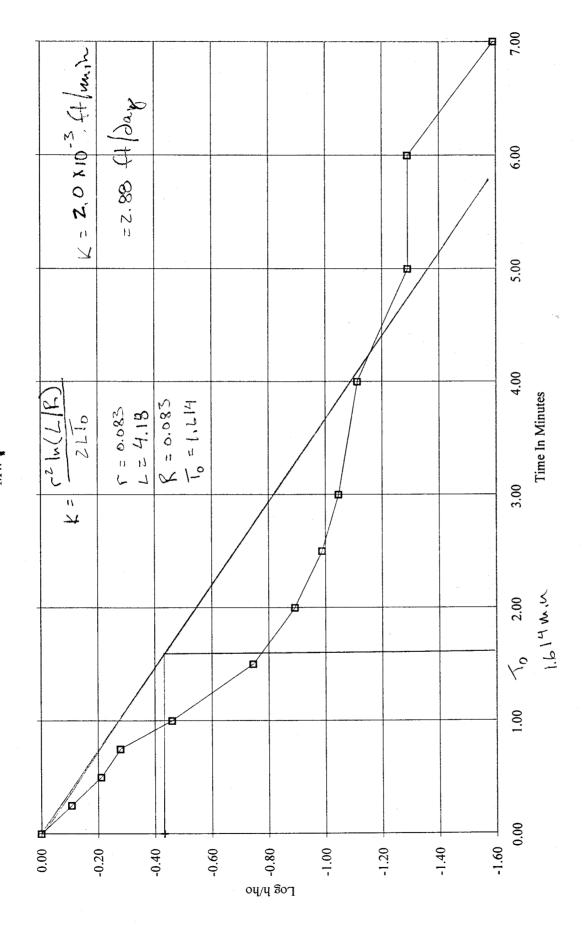
Monitoring Well: MW-1

Static Level: 14.13

T (minutes)	Depth to Groundwater	ц	ho	ou/u	log(h/ho)
	14.91	0.78	0.78	1.00	00.00
	14.74	0.61		0.78	-0.11
	14.61	0.48		0.62	-0.21
	14.54	0.41		0.53	-0.28
	14.40	0.27		0.35	94.0-
	14.27	0.14		0.18	-0.75
	14.23	0.10		0.13	68.0-
	14.21	0.08		0.10	66.0-
	14.20	0.07		60.0	-1.05
	14.19	90.0		0.08	-1.11
	14.17	0.04		0.05	-1.29
	14.17	0.04		0.05	-1.29
	14.15	0.02		0.03	-1.59

-0.43

Slug Test Analysis MW-



Slug Test Data

Coastal Truck Stop Project:

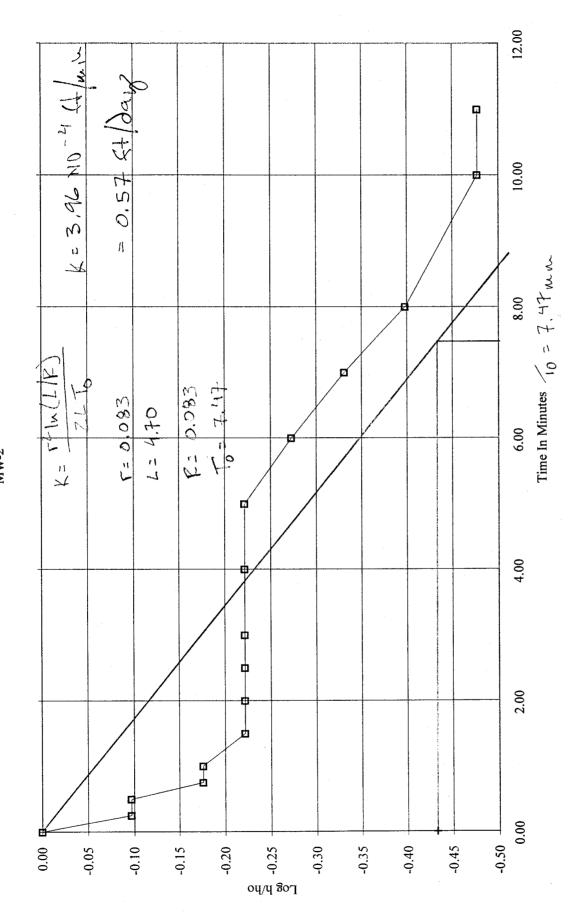
Monitoring Well: MW-2

13.68 Static Level:

log(h/ho)	
h/ho	
ho	
ᄺ	
Depth to Groundwater	
T (minutes)	

	0																			
log(h/ho)	00.00	-0.10	-0.10	-0.18	-0.18	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.27	-0.33	-0.40	-0.48	-0.48	-0.57	-0.70	-0.70	10.88
h/ho	1.00	08.0	08.0	0.67	0.67	09.0	09.0	09.0	09.0	09.0	09.0	0.53	0.47	0.40	0.33	0.33	0.27	0.20	0.20	0.13
ро	0.15																			
ਧ	0.15	0.12	0.12	0.10	0.10	60.0	60.0	60.0	60.0	60.0	0.09	80.0	0.07	90.0	0.05	0.05	0.04	0.03	0.03	0.02
Depth to Groundwater	13.83	13.80	13.80	13.78	13.78	13.77	13.77	13.77	13.77	13.77	13.77	13.76	13.75	13.74	13.73	13.73	13.72	13.71	13.71	13.70
T (minutes)	00.00	0.25	0.50	0.75	1.00	1.50	2.00	2.50	3.00	4.00	5.00	0.09	7.00	8.00	10.00	11.00	12.00	13.00	15.00	17.00

Slug Test Analysis MW-2



Slug Test Data

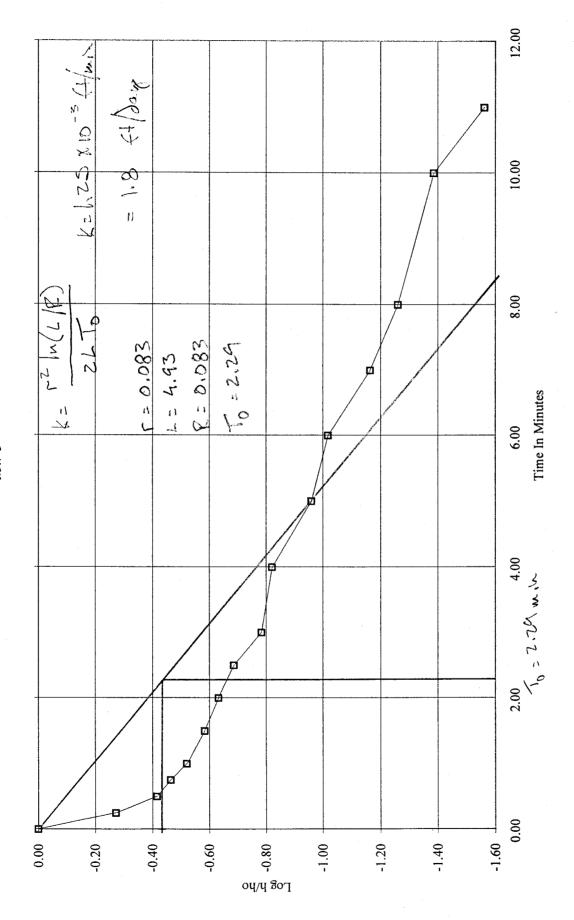
Coastal Truck Stop Project:

Monitoring Well: MW-5

13.36 Static Level: T (minu

0.00 14.09 0.73 0.73 1.00 -0.43 0.25 13.75 0.28 0.53 -0.27 0.50 13.75 0.28 0.34 -0.42 0.07 13.58 0.22 0.30 -0.47 1.50 13.51 0.19 0.26 -0.58 2.00 13.51 0.17 0.23 -0.69 2.50 13.48 0.15 0.21 -0.69 3.00 13.49 0.12 0.16 -0.78 4.00 13.44 0.08 0.11 -0.82 6.00 13.44 0.08 0.11 -1.02 6.00 13.41 0.05 0.07 -1.16 8.00 13.49 0.04 0.05 -1.26 9.00 13.39 0.01 -1.36 -1.36 1.00 13.37 0.01 0.01 -1.86 1.00 13.37 0.01 0.01 -1.86 1.00 13.37	(minutes)	Depth to Groundwater	4	рo	h/ho	log(h/ho)	
13.75 0.39 0.53 -0.27 13.64 0.28 0.38 -0.42 13.61 0.25 0.34 -0.47 13.58 0.22 0.30 -0.65 13.55 0.19 0.26 -0.58 13.43 0.15 0.21 -0.69 13.44 0.08 0.11 0.15 -0.96 13.43 0.07 0.07 -1.02 13.34 0.05 0.07 -1.26 13.33 0.04 0.05 -1.26 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86	0	4.0	0.73	0.73	1.00	00.00	-0.43
13.64 0.28 0.38 -0.42 13.61 0.25 0.34 -0.47 13.58 0.22 0.30 -0.52 13.53 0.17 0.23 -0.63 13.51 0.17 0.23 -0.63 13.48 0.12 0.16 -0.69 13.44 0.08 0.11 -0.96 13.43 0.07 0.01 -1.16 13.39 0.05 0.07 -1.16 13.39 0.02 0.03 -1.56 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86	2	7	0.39		0.53	-0.27	
13.61 0.25 0.34 -0.47 13.58 0.22 0.30 -0.52 13.53 0.19 0.26 -0.58 13.51 0.17 0.23 -0.63 13.48 0.12 0.16 -0.78 13.47 0.08 0.11 -0.96 13.43 0.07 0.11 -1.02 13.49 0.05 0.07 -1.16 13.39 0.02 0.03 -1.26 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86	0	13.64	0.28		0.38	-0.42	
13.58 0.22 0.30 -0.52 13.55 0.17 0.26 -0.58 13.51 0.17 0.23 -0.63 13.48 0.12 0.16 -0.78 13.47 0.11 0.15 -0.78 13.43 0.07 0.10 -1.02 13.40 0.07 0.07 -1.16 13.39 0.02 0.03 -1.26 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86	ស	'n	0.25		0.34	-0.47	
13.55 0.19 0.26 -0.58 13.53 0.17 0.23 -0.63 13.48 0.12 0.16 -0.78 13.47 0.08 0.11 -0.96 13.43 0.07 0.01 -1.02 13.40 0.05 0.07 -1.16 13.39 0.03 0.04 0.05 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86 13.37 0.01 0.01 -1.86	00	'n	0.22		0.30	-0.52	
13.530.170.2313.480.150.2113.440.010.1513.430.070.1013.410.070.0113.400.050.0713.390.030.0413.370.010.0113.370.010.0113.370.010.0113.370.010.01	09	ω,	0.19		0.26	-0.58	
13.510.150.2113.480.120.1613.440.080.1113.430.070.1013.400.050.0713.390.030.0413.370.010.0113.370.010.0113.370.010.0113.370.010.0113.370.010.01	00	т М	0.17		0.23	-0.63	
13.480.120.1613.470.080.1113.430.070.1013.410.050.0713.400.060.0713.390.030.0413.370.010.0113.370.010.0113.370.010.0113.370.010.0113.370.010.01	20	3.51			0.21	69.0-	
13.47 0.11 0.15 13.44 0.08 0.11 13.43 0.07 0.10 13.40 0.05 0.07 13.39 0.02 0.03 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01	00	3.48			0.16	-0.78	
13.440.080.1113.430.070.1013.400.040.0513.390.020.0413.370.010.0113.370.010.0113.370.010.0113.370.010.0113.370.010.01		3.47			0.15		
13.43 0.07 0.10 13.41 0.05 0.07 13.39 0.03 0.04 13.38 0.02 0.03 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01	.00	ω,	0.08		0.11		
13.41 0.05 0.07 13.39 0.03 0.04 13.38 0.02 0.03 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01	00	3.43	0.07		0.10		
13.400.040.0513.390.020.0413.370.010.0113.370.010.0113.370.010.0113.370.010.0113.370.010.01	00	3.41	0.05		0.07		
13.39 0.03 0.04 13.38 0.02 0.03 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01	00	40	0.04		0.05		
13.38 0.02 0.03 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01 13.37 0.01 0.01	00	3.39	0.03		0.04		
13.37 0.01 13.37 0.01 13.37 0.01 13.37 0.01 13.37 0.01	00	3.3	0.02		0.03		
13.37 0.01 13.37 0.01 13.37 0.01 13.37 0.01	00	3	0.01		0.01		
13.37 0.01 0.01 13.37 0.01 0.01	00	3	0.01		0.01	-1.86	
13.37 0.01 0.01	00	ω,	0.01		0.01	-1.86	
	00	•	0.01		0.01	-1.86	

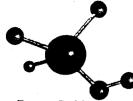
Slug Test Analysis MW-5



Page 1

APPENDIX C

Analytical Reports For Soil Samples



Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 1 October 20, 1999 Report # 9910000765 Order # 90096147 South Carolina Cert ID# 96023

Sample I.D.: MW9 Collected: 10/14 10/14/99 10:30 Received: 10/15/99 09:40

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
Percent Solids	83	%	160.3(ASTM-D2216	0.01	10/17/	/1999 10/17/199909	9:39JP
8260B BTEX w/Naph+MTBE in Soils by G	iC-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	3 PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	3- PMD
Toluene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	3 PMD
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	3 PMD
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	3 PMD
o-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	3 PMD
Naphthalene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	3 PMD
SURROGATE: Toluene-D8	99.50%						
SURROGATE: 1,-DCB-D4	97.00%						
SURROGATE: Dibromofluoromethane	102.50%						
8270C PAHs (610) in SOILS and Wastes b	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20) MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20) MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20) MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20) MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20) MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	OM C
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	OM (
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20) MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 2 October 20, 1999 Report # 9910000765 Order # 90096147 South Carolina Cert ID# 96023

Sample I.D.: MW9
Collected: 10/14/99
Received: 10/15/99

10:30 09:40

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Вепхо(а)рутепе	BDL	mg/Kg	3550/8270C	0.100	0/18/1999	10/19/1999 13:20	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	10/18/1999	10/19/1999 13:20	MD
SURROGATE: D5-Nitrobenzene	55.60%						•
SURROGATE: 2-Fluorobiphenyl	59.90%						

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page August 6, 1999 Report # 9907000772 Order # 90064745 South Carolina Cert ID# 96023

Sample I.D.: MW4

07/14/99 Collected: 12:30 Received: 07/16/99 09:00

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
SURROGATE: 4-Terphenyl-D14	89.00%						

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535 NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 4 August 6, 1999 Report # 9907000772 Order # 90064746 South Carolina Cert ID# 96023

Sample I.D.: MW5 Collected: 07/14 Received: 07/16 07/14/99 07/16/99

13:30 09:00

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Percent Solids	84	%	160.3(ASTM-D2216	0.01	07/19/	1999 07/19/19991	5:12JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000 0	7/18/1999	07/18/1999 10:02	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000 0	7/18/1999	07/18/1999 11:42	PMD
Toluene	14.6	ug/Kg	5035/8260B	5.000 0	7/18/1999	07/18/1999 11:42	2 PMD
Ethylbenzene	130	ug/Kg	5035/8260B	5.000 0	7/18/1999	07/18/1999 11:42	2 PMD
m & p-Xylene	589	ug/Kg	5035/8260B	5.000 0	7/18/1999	07/18/1999 11:42	2 PMD
o-Xylene	242	ug/Kg	5035/8260B	5.000 0	7/18/1999	07/18/1999 11:42	2 PMD
Naphthalene	809	ug/Kg	5035/8260B	5.000 0	7/18/1999	07/18/1999 11:43	2 PMD
SURROGATE: Toluene-D8	114.00%						
SURROGATE: 1,-DCB-D4	67.00%						
SURROGATE: Dibromofluoromethane	86.75%						
8270C PAHs (610) in SOILS and Wastes b	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330 0	7/16/1999	07/17/1999 14:50	5 MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330 0	7/16/1999	07/17/1999 14:50	6 MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330 0	7/16/1999	07/17/1999 14:50	5 MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330 0	7/16/1999	07/17/1999 14:50	5 MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330 0	7/16/1999	07/17/1999 14:5	5 M D
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330 0	7/16/1999	07/17/1999 14:50	5 MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330 0	7/16/1999	07/17/1999 14:5	5 MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330 0	7/16/1999	07/17/1999 14:5	6 MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 5 August 6, 1999 Report # 9907000772 Order # 90064746 South Carolina Cert ID# 96023

Sample I.D.: MW5 Collected: 07/14 07/14/99 13:30 Received: 07/16/99 09:00

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 14:56	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 14:56	MD
SURROGATE: D5-Nitrobenzene	82.70%						
SURROGATE: 2-Fluorobiphenyl	64.90%						

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop Page 6 August 6, 1999 Report # 9907000772 Order # 90064746 South Carolina Cert ID# 96023

Sample I.D.: MW5

Collected: 07/14/99 13:30 Received: 07/16/99 09:00

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
							

SURROGATE: 4-Terphenyl-D14

101.00%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Project Submission # 99/kst - 772 Access Animy men 94669-54669 werener or outerway every

PO #:

Date Required:	RUSH	Std. (5-7 Bus. days)	Requested:	Turnaround Time					3 E U	mw 4	Sample Label	Bruce (7.	i	Jay,	323 Man	Company Name: Dutheastern
L.	Z	Yes	on Ice?	Carried David					7/14/99 1:30	7/14/99 12:30	Date Time	Newell	Truck Stop	State: Zip: 29526	Shreet	Dutheastern Environmental
Other (specify)	2		1 roject tocation.	Droiner Location:			0.65% 9.75%		53	0 5 3	Matr # of Cont	TI =		36		Inc.
13)	6.7	time	Him Gartet	Relinquished By:					669 11	620 1	B N Pi	TE Op 7H	X Th			REQUESTED LAB ANAL)
		A/16 9:00	1115/99 HT pm	Time:					46 11'-258	15 111 - 3;	NOT		1248 Lake Murray Blvd. Irmo, SC 29063	6		YSIS
				Received By:					-2500 ppm	200 ppm	NOTES / COMMENTS		17none: (803) /81-4243 3lvd. Fax: 781-4303 Toll Free (888) 315-4243		ANALYTICAL, INC.	Access

Original Copy - Returned w/Report Yellow Copy - Access Analytical Copy Pink Copy - Client Copy

And the second



Access Analytical, Inc.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Sample I.D.: MW-6

Collected:

07/15/99

10:00 09:30

Received: 07/

07/17/99

	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Percent Solids	84	%	160.3(ASTM-D2216	0.01	07/19/	1999 07/19/19991:	5:14JP
8260B BTEX w/Naph+MTBE in Soil:	s by GC-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
Toluene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
o-Xylene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
Naphthalene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
SURROGATE: Toluene-D8	101.00%						
SURROGATE: 1,-DCB-D4	111.75%						
SURROGATE: Dibromofluoromethan	ne 97.25%						
8270C PAHs (610) in SOILS and W	astes by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 2 July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Sample J.D.: MW-6 Collected: 07/15/99 10:00 Received: 07/17/99 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYSI
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/19/1999	07/20/1999 08:38	MEC
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/19/1999	07/20/1999 08:38	MEC
SURROGATE: D5-Nitrobenzene	57.10%						
SURROGATE: 2-Fluorobiphenyl	43.60%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Sample I.D.: MW-6

07/15/99 Collected:

10:00

07/17/99 Received:

09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
				ZAIVAA A	LZX I .	ANAUI.	

SURROGATE: 4-Terphenyl-D14

55.60%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

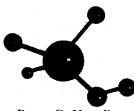
Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

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Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.





Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 July 18, 1999 Report # 9907000720 Order # 90064402 South Carolina Cert ID# 96023

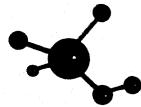
Sample I.D.: MW-1 Collected: 07/13

07/13/99 07/15/99

Received:

10:00 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	84.8	%	160.3(ASTM-D2216	0.01	07/17/	1999 07/17/199	710:48 SM F
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	155	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:	26. PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:	26 PMD
Toluene	11000	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:	26 PMD
Ethylbenzene	10600	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:	26 PMD
m & p-Xylene	32100	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:	26 PMD
o-Xylene	13500	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:	26 PMD
Naphthalene	2560	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:	26 PMD
SURROGATE: Toluene-D8	109.25%						
SURROGATE: 1,-DCB-D4	75.50%						
SURROGATE: Dibromofluoromethane	85.50%						
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1			
Naphthalene	1.97	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:	06 MD
2-Methylnaphthalene	2.37	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:	06 MD
1-Methylnaphthalene	1.20	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:	06 M D
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:	06 MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:	06 MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:	06 MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:	06 MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1000	07/17/1999 12:	06 MD



Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Sample I.D.: MW-6 Collected: 07/15/99 Received: 07/17/99

10:00 09:30

PARAMETER		RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYSI
Percent Solids		84	%	160.3(ASTM-D2216	0.01	07/19/	1999 07/19/19991:	5:14JP
8260B BTEX w/Naph+MTBE in S	Soils by GC-M	IS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether		BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
Benzene		BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
Toluene		BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
Ethylbenzene		BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
m & p-Xylene		BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
o-Xylene		BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
Naphthalene		BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 10:21	MGC
SURROGATE: Toluene-D8		101.00%						
SURROGATE: 1,-DCB-D4		111.75%						
SURROGATE: Dibromofluoromet	thane	97.25%						
8270C PAHs (610) in SOILS and	l Wastes by Go	C-MS		MEDF	1			
Naphthalene		B DL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
2-Methylnaphthalene		BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
1-Methylnaphthalene		BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	
Acenaphthene		BDL	mg/Kg	3550/8270C			07/20/1999 08:38	18 Tel 18
Phenanthrane		BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Fluoranthene		BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(a)anthracene		BDL	mg/Kg	3550/8270C			07/20/1999 08:38	
Benzo(b)fluoranthene		BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	
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Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 2 July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Sample I.D.: MW-6 Collected: 07/15/99 Received: 07/17/99 Collected by: Client

10:00 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYSI
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100 07	/19/1999	07/20/1999 08:38	MEC
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330 07	7/19/1999	07/20/1999 08:38	MEC
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330 07	7/19/1999	07/20/1999 08:38	MEC
Fluorene	BDL	mg/Kg	3550/8270C	0.330 07	7/19/1999	07/20/1999 08:38	MEC
Anthracene	BDL	mg/Kg	3550/8270C	0.330 07	7/19/1999	07/20/1999 08:38	MEC
Pyrene	BDL	mg/Kg	3550/8270C	0.330 07	7/19/1999	07/20/1999 08:38	MEC
Chrysene	BDL	mg/Kg	3550/8270C	0.330 07	7/19/1999	07/20/1999 08:38	MEC
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330 07	7/19/1999	07/20/1999 08:38	MEC
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330 07	7/19/1999	07/20/1999 08:38	MEC
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100 07	//19/1999	07/20/1999 08:38	MEC
SURROGATE: D5-Nitrobenzene	57.10%						
SURROGATE: 2-Fluorobiphenyl	43.60%			· ·			

Conway, SC 29526

Page July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Site Location/Project

Coastal Truck Stop

Sample I.D.: MW-6 Collected: 07/15 07/15/99 10:00 Received: 07/17/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST

SURROGATE: 4-Terphenyl-D14

55.60%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 4 July 21, 1999 Report # 9907000871 Order # 90065409 South Carolina Cert ID# 96023

Sample I.D.: MW-7 Collected: 07/15/99 Received: 07/17/99 Collected by: Client 11:00 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	84	%	160.3(ASTM-D2216	0.01	. 07/19/	1999 07/19/19991:	5:14JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
Toluene	266	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
Ethylbenzene	2450	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
m & p-Xylene	8770	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
o-Xylene	1960	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
Naphthalene	174	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
SURROGATE: Toluene-D8	106.50%						
SURROGATE: 1,-DCB-D4	106.25%						
SURROGATE: Dibromofluoromethane	97.25%						
8270C PAHs (610) in SOILS and Wastes I	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Phonaathrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 5 July 21, 1999 Report # 9907000871 Order # 90065409 South Carolina Cert ID# 96023

Sample I.D.: MW-7 Collected: 07/15/99 Received: 07/17/99 Collected by: Client

11:00 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/19/1999	07/20/1999 08:38	MEC
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/19/1999	07/20/1999 08:38	MEC
SURROGATE: D5-Nitrobenzene	85.00%						
SURROGATE: 2-Fluorobiphenyl	50.20%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 21, 1999 Report # 9907000871 Order # 90065409 South Carolina Cert ID# 96023

Sample I.D.: MW-7

Collected: 07/15/99 11:00 Received: 07/17/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST

SURROGATE: 4-Terphenyl-D14

73.70%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535 NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 7 July 21, 1999 Report # 9907000871 Order # 90065410 South Carolina Cert ID# 96023

Sample I.D.: MW-8 Collected: 07/15/99 Received: 07/17/99 01:00 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYSI
Percent Solids	83	%	160.3(ASTM-D2216	0.01	07/19/	1999 07/19/19991:	5:14 J P
8260B BTEX w/Naph+MTBE in Soils by C	GC-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000 (7/19/1999	07/19/1999 14:24	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	7/19/1999	07/19/1999 14:40	PMD
Toluene	BDL	ug/Kg	5035/8260B	5.000 (7/19/1999	07/19/1999 14:24	PMD
Ethylbenzene	10.1	ug/Kg	5035/8260B	5.000	7/19/1999	07/19/1999 14:24	PMD
m & p-Xylene	41.2	ug/Kg	5035/8260B	5.000	7/19/1999	07/19/1999 14:24	PMD
o-Xylene	13.0	ug/Kg	5035/8260B	5.000	7/19/1999	07/19/1999 14:24	PMD
Naphthalene	12.8	ug/Kg	5035/8260B	5.000	7/19/1999	07/19/1999 14:24	PMD
SURROGATE: Toluene-D8	103.00%						
SURROGATE: 1,-DCB-D4	111.50%						
SURROGATE: Dibromofluoromethane	91.75%						
8270C PAHs (610) in SOILS and Wastes	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 14:20	MEC
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 14:20	MEC
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 14:20	MEC
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 14:20	MEC
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 14:20	MEC
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 14:20	MEC
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 14:20	MEC
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 14:20	MEC

Conway, SC 29526

Site Location/Project

. Coastal Truck Stop

Page 8
July 21, 1999
Report # 9907000871
Order # 90065410
South Carolina Cert ID# 96023

Sample I.D.: MW-8
Collected: 07/15/99
Received: 07/17/99
Collected by: Client 01:00 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
ARAME I ER		TIT -	3550/8270C	0.100	07/19/1999	07/20/1999 14:	20 MEC
Benzo(a)pyrene	BDL	mg/Kg		0.330	07/19/1999	07/20/1999 14	:20 MEC
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	• • • • • • • • • • • • • • • • • • • •			
	BDL	mg/Kg	3550/8270C			07/20/1999 14	
Acenaphthylene	- ·	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14	:20 MEC
Fluorene	BDL	-	3550/8270C	0,330	07/19/1999	07/20/1999 14	:20 MEC
Anthracene	BDL	mg/Kg				07/20/1999 14	
	BDL	mg/Kg	3550/8270C	0.330			
Pyrene	BDL	mg/Kg	3550/8270C	0.330		07/20/1999 14	
Chrysene			3550/8270C	0.330	07/19/1999	9 07/20/1999 14	4:20 MEC
Benzo(k)fluoranthene	BDL	mg/Kg		0.330	07/19/1999	9 07/20/1999 1	4:20 MEC
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C			9 07/20/1999 1	
	BDL	mg/Kg	3550/8270C	0.100	07/19/199	7 0112011777 1	
Dibenzo(a,h)anthracene	63.00%						
SURROGATE: D5-Nitrobenzene							
SURROGATE: 2-Fluorobiphenyl	47.80%						

Conway, SC 29526

Page 9 July 21, 1999 Report # 9907000871 Order # 90065410 South Carolina Cert ID# 96023

Site Location/Project

Coastal Truck Stop

Sample I.D.: MW-8

Collected: Received:

07/15/99

01:00

07/17/99

09:30

Collected by: Client

DADAR GOTTO	DECLIFE	IDIMO	ACTION	DETECTION	D.4000	T) A (T) C	ANIATORE
PARAMETER	RESULT	UNITS	METHOD	DETECTION	DATE	DATE	ANALEST
				LIMIT	EXT.	ANALY.	

SURROGATE: 4-Terphenyl-D14

68.70%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

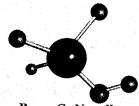
Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.



Access Analytical, Inc.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop Page 1 October 20, 1999 Report # 9910000765 Order # 90096147 South Carolina Cert ID# 96023

Sample I.D.: MW9

Collected: 10/14/99

10:30 09:40

Received: 10/15/99 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	83	%	160.3(ASTM-D2216	0.01	10/17/	1999 10/17/19990	9:39JP
8260B BTEX w/Naph+MTBE in Soils	by GC-MS(S.C.)LL		MEDF	1 1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000		10/19/1999 09:13	
Toluene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	PMD
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	PMD
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:13	PMD
o-Xylene	BDL	ug/Kg	5035/8260B	5.000		10/19/1999 09:13	PMD
Naphthalene	BDL	ug/Kg	5035/8260B	5.000		10/19/1999 09:13	
SURROGATE: Toluene-D8	99.50%						
SURROGATE: 1,-DCB-D4	97.00%						in the great of
SURROGATE: Dibromofluoromethane	102.50%						
8270C PAHs (610) in SOILS and Was	stes by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:20	MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330		10/19/1999 13:20	MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C			10/19/1999 13:20	MD
Acenaphthene	BDL	mg/Kg	3550/8270C			10/19/1999 13:20	MD
Phenanthrene	BDL	mg/Kg	3550/8270C			10/19/1999 13:20	MD .
Fluoranthene	BDL	mg/Kg	3550/8270C			10/19/1999 13:20	MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C			10/19/1999 13:20	MD .
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C			10/19/1999 13:20	MD
		٠, ٠		0.550	. 0. 10. 1777	10/1//27 13.20	. MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 2 October 20, 1999 Report # 9910000765 Order # 90096147 South Carolina Cert ID# 96023

Sample I.D.: MW9 Collected: 10/14 10/14/99 10/15/99 10:30 09:40

Received: 10/15 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	D	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C		0.100	10/18/1999	10/19/1999 13:20	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C		0.330	10/18/1999	10/19/1999 13:20	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C		0.330	10/18/1999	10/19/1999 13:20	MD
Fluorene	BDL	mg/Kg	3550/8270C		0.330	10/18/1999	10/19/1999 13:20	MD
Anthracene	BDL	mg/Kg	3550/8270C		0.330	10/18/1999	10/19/1999 13:20	MD
Pyrene	BDL	mg/Kg	3550/8270C		0.330	10/18/1999	10/19/1999 13:20	MD
Chrysene	BDL	mg/Kg	3550/8270C		0.330	10/18/1999	10/19/1999 13:20	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C		0.330	10/18/1999	10/19/1999 13:20	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C		0.330	10/18/1999	10/19/1999 13:20	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C		0.100	10/18/1999	10/19/1999 13:20	MD
SURROGATE: D5-Nitrobenzene	55.60%							∞ 12
SURROGATE: 2-Fluorobiphenyl	59.90%							

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop Page 3 October 20, 1999 Report # 9910000765 Order # 90096147 South Carolina Cert ID# 96023

Sample I.D.: MW9

Collected: 10/14/99 10:30 Received: 10/15/99 09:40

Collected by: Client

PARAMETER		RESULT	UNITS	МЕТНОО	DETECTION DATE LIMIT EXT.	DATE ANALY.	ANALYST
SURROGATE: 4-T	erphenyl-D14	69.20%					

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 4 October 20, 1999 Report # 9910000765 Order # 90096148 South Carolina Cert ID# 96023

Sample I.D.: MW10 Collected: 10/14/99 Received: 10/15/99

11:30 09:40

Received: 10/15 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	ON DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	85	%	160.3(ASTM-D2216	0.01	10/17/	1999 10/17/199909):39JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	PMD
Toluene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	PMD
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	PMD
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	PMD (make)
o-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	PMD
Naphthalene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	PMD
SURROGATE: Toluene-D8	99.00%						
SURROGATE: 1,-DCB-D4	98.50%						S. MARKER ST
SURROGATE: Dibromofluoromethane	90.00%						
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 5 October 20, 1999 Report # 9910000765 Order # 90096148 South Carolina Cert ID# 96023

Sample I.D.: MW10 Collected: 10/14/99 10/15/99

11:30 09:40

Received:

Col	lect	ted	by:	C	lien

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	10/18/1999	10/19/1999 13:21	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:21	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	0/18/1999	10/19/1999 13:21	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	0/18/1999	10/19/1999 13:21	MD ***
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	0/18/1999	10/19/1999 13:21	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	0/18/1999	10/19/1999 13:21	MD
SURROGATE: D5-Nitrobenzene	56.10%						च्हा बहु , देशका है
SURROGATE: 2-Fluorobiphenyl	63.70%						

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 10 October 20, 1999 Report # 9910000765 Order # 90096150 South Carolina Cert ID# 96023

Sample I.D.: MW14 Collected: 10/14/99 Received: 10/15/99 Collected by: Client 10:15 09:40

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	89	%	160.3(ASTM-D2216	0.01	10/17/	1999 10/17/19990	9:39JP
8260B BTEX w/Naph+MTBE in Soils	by GC-MS(S.C.)LL		MEDF	. 1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000 1	10/19/1999	10/19/1999 09:15	5 PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000 1	10/19/1999	10/19/1999 09:15	5 PMD
Toluene	BDL	ug/Kg	5035/8260B	5.000 1	10/19/1999	10/19/1999 09:15	5 PMD
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000 1	10/19/1999	10/19/1999 09:15	5 PMD
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000 1	10/19/1999	10/19/1999 09:15	5 PMD
o-Xylene	BDL	ug/Kg	5035/8260B	5.000 1	10/19/1999	10/19/1999 09:15	5 PMD
Naphthalene	BDL	ug/Kg	5035/8260B	5.000 1	10/19/1999	10/19/1999 09:15	5 PMD
SURROGATE: Toluene-D8	97.50%						
SURROGATE: 1,-DCB-D4	98.50%						> : \$145 £
SURROGATE: Dibromofluoromethane	95.50%						
8270C PAHs (610) in SOILS and Was	stes by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330 1	10/18/1999	10/19/1999 13:22	2 MD:
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330 1	10/18/1999	10/19/1999 13:22	2 MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	2 MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330 1	10/18/1999	10/19/1999 13:22	2 MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330 1	10/18/1999	10/19/1999 13:22	2 MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	2 MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	2 MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	2 MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop Page 12 October 20, 1999 Report # 9910000765 Order # 90096150 South Carolina Cert ID# 96023

Sample I.D.: MW14

Collected: 10/14/99 10:15 Received: 10/15/99 09:40

Collected by: Client

PARAMETER	RESULT UNITS	METHOD	DETECTION DATE	DATE ANALYST
			LIMIT EXT.	ANALY.
The state of the s	The state of the s			

SURROGATE: 4-Terphenyl-D14

84.50%

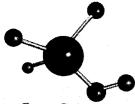
REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.



Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 September 1, 1999 Report # 9908001386 Order # 90078526 South Carolina Cert ID# 96023

Sample I.D.: CTS Telescoping Collected: 08/24/99 19:00

10:00

Received:

08/27/99

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION DATE DATE ANALY LIMIT EXT. ANALY.
Percent Solids	89.5	%	160.3(ASTM-D2216	0.01 08/28/1999 08/28/199914:061VR
Carbon, Total Organic	42.7	mg/Kg	9060 {N&S}	1.0 08/31/1999 09/01/199909:25\$N
8260B BTEX w/Naph+MTBE in Soils by C	GC-MS(S.C.)LL		MEDF	1
Methyl-Tert-Butyl-Ether	78.5	ug/Kg	5035/8260B	5.000 08/30/1999 08/30/1999 08:18 PMD
Benzene	104	ug/Kg	5035/8260B	5.000 08/30/1999 08/30/1999 08:18 PMD
Toluene	1640	ug/Kg	5035/8260B	5.000 08/30/1999 08/30/1999 08:18 PMD
Ethylbenzene	1380	ug/Kg	5035/8260B	5.000 08/30/1999 08/30/1999 08:18 PMD
m & p-Xylene	6380	ug/Kg	5035/8260B	5.000 08/30/1999 08/30/1999 08:18 PMD
o-Xylene	2340	ug/Kg	5035/8260B	5.000 08/30/1999 08/30/1999 08:18 PMD
Naphthalene	5810	ug/Kg	5035/8260B	5.000 08/30/1999 08/30/1999 08:18 PMD
SURROGATE: Toluene-D8	101.50%			O. 10.10 PMD
SURROGATE: 1,-DCB-D4	104.50%			
SURROGATE: Dibromofluoromethane	104.00%			
SC-DRO (Petroleum Hydrocarbons)-{SOILS}			MEDF	and the second s

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page September 1, 1999 Report # 9908001386 Order # 90078526 South Carolina Cert ID# 96023

Sample I.D.: CTS Telescoping Collected: 08/24/99 19: Received: 08/27/99 10: 10:00

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Diesel Range Org (C10-C28)	14.8	mg/Kg	3550/8015(mod)	5.000		09/01/1999 08:26	

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

99/08 - 1386Project Submission #:

Access Analytical - Chain of Custody Record 9-78526

PO:#:

Conway Project Name: Coostal T Report To: Address: 300 Main Company Name: *Date Required: Requested: Turnaround Time telescopina Southeastern Environmental, Inc _RUSH* Std. (5-7 Bus. days) Sample Label Truck Stop C. Newell State: 8-24-99 Collected Street Samples Recd. Yes on Ice? NO NO Zip: Collected 1900 29526 Ime Other Project Location: Matr | # of () SC N W Cont (specify) ≾ > ™ Ш REQUESTED LAB ANALYSIS: Stroham 3 Relinquished By: BTEX Napth (3550 Janes 5-26-99 4:30pm Total organic 18/ce/8 Date: GRAIN SIZE CONFIRMED WITH CHERYL Time: Irmo, SC 29063 1248 Lake Murray Blvd. 50mple depth = 1000 NOTES / COMMENTS Received By: ANALYTICAL, INC. Access Toll Free (888) 315-4243 Phone: (803) 781-4243 Fax: 781-4303 130/99

Original Copy - Returned w/Report Yellow Copy - Access Analytical Copy Pink Copy - Client Copy

Access Analytical - Chain of Custody Record

Project Submission #: 99/07 - 87 (59 80459-6	65410 PO#:
Company Name: Southeastern Environmental, Inc	REQUESTED LAB ANALYSIS	S ACCESS
323 Main Street	A 7	ANALYTICAL, INC.
Stat S(> *	
Project Names Coastal Truck Stop		ay Blvd.
Report To Bruce G. Newell	144 16)	limo, SC 29063 Toll Free (888) 315-4243
Date Collected	B'	NOTES / COMMENTS
mw 6 7/15/99 10:00 5 3	1000 ps40	0 11' - 5 pm
mw7 7/15/99 11:00 S 3	V V V 6540	9 11' - 5000 rpm
mw 8 7/15/99 1:00 53	1 1 7 ES410	= 1
Nothing Follows)	
•		

Original Copy · Returned w/Report Yellow Copy · Access Analytical Copy Pink Copy · Client Copy

*Date Required:

_RUSH*

Requested:

Std. (5-7 Bus. days)

Other

(specify)

Turnaround Time

Samples Recd.

Project Location:

Relinquished By:

Jaret 1

7/16/199

500 pm

Date: New Times

Received By:

07/17/27/20130

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N

Conway, SC 29526

Site Location/Project

. Coastal Truck Stop

Page 2 July 18, 1999 Report # 9907000720 Order # 90064402 South Carolina Cert ID# 96023

10:00 09:30

Sample I.D.: MW-1 Collected: 07/13/99 Received: 07/15/99

Collected by: Clien	t
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PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	7/16/1999	07/17/1999 12:06	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	7/16/1999	07/17/1999 12:06	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	7/16/1999	07/17/1999 12:06	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:06	MD
SURROGATE: D5-Nitrobenzene	53.50%						
SURROGATE: 2-Fluorobiphenyl	49.80%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 18, 1999 Report # 9907000720 Order # 90064402 South Carolina Cert ID# 96023

Sample I.D.: MW-1 Collected: 07/13 07/13/99 10:00 Received: 07/15/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
			······································				

SURROGATE: 4-Terphenyl-D14

70.50%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Conway, SC 29526

Site Location/Project

. Coastal Truck Stop

Page 4 July 18, 1999 Report # 9907000720 Order # 90064403 South Carolina Cert ID# 96023

Sample I.D.: MW-2 Collected: 07/13/99 Received: 07/15/99

11:30 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYSI
Percent Solids	85.1	%	160.3(ASTM-D2216	0.01	07/17/	1999 07/17/1999	10:48SMF
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	10			
Methyl-Tert-Butyl-Ether	58.2	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:2	8 PMD
Benzene	181	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:2	8 PMD
Toluene	11900000	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:2	8 PMD
Ethylbenzene	4790	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:2	8 PMD
m & p-Xylene	16000	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:2	8 PMD
o-Xylene	4850	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:2	8 PMD
Naphthalene	255	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:2	8 PMD
SURROGATE: Toluene-D8	111.00%						
SURROGATE: 1,-DCB-D4	68.25%						
SURROGATE: Dibromofluoromethane	98.50%						
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1,			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:0	8 MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:0	8 MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:0	8 MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:0	8 MD
Phenanthrene	BDL	mg/Kg	3550/827 ⊕©	0.330	07/16/1999	07/17/1999 12:0	8 MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:0	8 MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:0	8 MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:0	08 MD

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 5
July 18, 1999
Report # 9907000720
Order # 90064403
South Carolina Cert ID# 96023

11:30 09:30

Sample I.D.: MW-2 Collected: 07/13/99 Received: 07/15/99 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:08	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	: MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:08	MD
SURROGATE: D5-Nitrobenzene	63.60%						
SURROGATE: 2-Fluorobiphenyl	70.50%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 6 July 18, 1999 Report # 9907000720 Order # 90064403 South Carolina Cert ID# 96023

Sample I.D.: MW-2

Collected: 07/13/99 11:30

Received: 07/15/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
		····					

SURROGATE: 4-Terphenyl-D14

85.70%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project

. Coastal Truck Stop

Page 7
July 18, 1999
Report # 9907000720
Order # 90064404
South Carolina Cert ID# 96023

01:30 09:30

Sample I.D.: MW-3 Collected: 07/13/99 Received: 07/15/99 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	83.7	%	160.3(ASTM-D2216	0.01	07/17/	1999 07/17/19991	0:48 SM F
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	. 1			
Methyl-Tert-Butyl-Ether	8.3	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999 10:23	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999 10:23	PMD
Toluene	1400	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999 10:23	PMD
Ethylbenzene	1240	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999 10:23	PMD
m & p-Xylene	4660	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999 10:23	PMD
o-Xylene	1720	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999 10:23	PMD
Naphthalene	209	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999 10:23	PMD
SURROGATE: Toluene-D8	113.75%						
SURROGATE: 1,-DCB-D4	65.00%						
SURROGATE: Dibromofluoromethane	95.00%						
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09) MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD .
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09) MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09) MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09) MD

Conway, SC 29526

Site Location/Project

. Coastal Truck Stop

Page 8 July 18, 1999 Report # 9907000720 Order # 90064404 South Carolina Cert ID# 96023

Sample I.D.: MW-3 Collected: 07/13/99 Received: 07/15/99 Collected by: Client

01:30 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:09	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:09	MD
SURROGATE: D5-Nitrobenzene	64.80%						
SURROGATE: 2-Fluorobiphenyl	70.70%						

Conway, SC 29526

Page July 18, 1999 Report # 9907000720 Order # 90064404 South Carolina Cert ID# 96023

Site Location/Project

Coastal Truck Stop

Sample I.D.: MW-3 Collected: 07/13 07/13/99 01:30 Received: 07/15/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST

SURROGATE: 4-Terphenyl-D14

73.70%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.

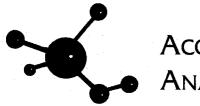
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.



Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project South Carolina **Coastal Truck Stop**

Page 1
August 6, 1999
Report # 9907000772
Order # 90064745 South Carolina Cert ID# 96023

Sample I.D.: MW4 Collected: 07/14

07/14/99

12:30 09:00

Received:

07/16/99

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYSI
Percent Solids	85	%	160.3(ASTM-D2216	0.01	07/19/	1999 07/19/19991:	5:12JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 10:01	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
Toluene	43.5	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
Ethylbenzene	449	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
m & p-Xylene	1660	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
o-Xylene	672	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
Naphthalene	428	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
SURROGATE: Toluene-D8	113.00%						
SURROGATE: 1,-DCB-D4	59.25%						
SURROGATE: Dibromofluoromethane	89.50%						
8270C PAHs (610) in SOILS and Wastes b	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
2-Methylnaphthalcne	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Phenanthrene	BDI.	mg/Kg	3550/8270C	0.330	07/16/1099	07/17/1999 14:54	MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 2 August 6, 1999 Report # 9907000772 Order # 90064745 South Carolina Cert ID# 96023

Sample I.D.: MW4 Collected: 07/14/99 07/16/99

12:30 09:00

Received: Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 14:54	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 14:54	MD
SURROGATE: D5-Nitrobenzene	57.90%						
SURROGATE: 2-Fluorobiphenyl	40.00%						

Conway, SC 29526

Site Location/Project **South Carolina** Coastal Truck Stop

Page August 6, 1999 Report # 9907000772 Order # 90064745 South Carolina Cert ID# 96023

Sample I.D.: MW4

Collected: 07/14/99 12:30 Received: 07/16/99 09:00

Collected by: Client

							
PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
							

SURROGATE: 4-Terphenyl-D14

89.00%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. Unless otherwise noted in analysis section, all work performed by Frecision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023) Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 4 August 6, 1999 Report # 9907000772 Order # 90064746 South Carolina Cert ID# 96023

Sample I.D.: MW5
Collected: 07/14/99
Received: 07/16/99
Collected by: Client 13:30 09:00

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYSI
Percent Solids	84	%	160.3(ASTM-D2216	0.01	07/19/	1999 07/19/19991	5:12JP
8260B BTEX w/Naph+MTBE in Soils by	GC-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 10:02	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:42	PMD
Toluene	14.6	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:42	PMD
Ethylbenzene	130	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:42	PMD
m & p-Xylene	589	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:42	PMD
o-Xylene	242	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:42	PMD
Naphthalene	809	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:42	PMD
SURROGATE: Toluene-D8	114.00%						
SURROGATE: 1,-DCB-D4	67.00%						
SURROGATE: Dibromofluoromethane	86.75%						
8270C PAHs (610) in SOILS and Waste	s by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/§270C	0.330	07/16/1999	07/17/1999 14:56	MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 5 August 6, 1999 Report # 9907000772 Order # 90064746 South Carolina Cert ID# 96023

Sample I.D.: MW5
Collected: 07/14/99
Received: 07/16/99
Collected by: Client 13:30 09:00

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	ON DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 14:56	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:56	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 14:56	MD
SURROGATE: D5-Nitrobenzene	82.70%						
SURROGATE: 2-Fluorobiphenyl	64.90%						

Conway, SC 29526

Site Location/Project **South Carolina Coastal Truck Stop**

Page August 6, 1999 Report # 9907000772 Order # 90064746 South Carolina Cert ID# 96023

Sample I.D.: MW5

Collected: 07/14/99 13:30 Received: 07/16/99 09:00

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST

SURROGATE: 4-Terphenyl-D14

101.00%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected preserved and analyzed in accordance

with all methodology requirements.

Access Analytical - Chain of Custody Record

Date Required:	RUSH	Sid. (5-7 Bus. days)	Requested:	Turnaround Time					MW 3	mw 2	MW I	Label	Report To:	Coashal Truck	n Nade	323 Mayo :	heastern	Sympany Name:	Project Submission #: 9907
Other(s	2	Yes	on Ice?					nothing tollows	7/13/99 1:30 5 3	7/13/99 11:30 5 3	7/13/99 10:00 5 3	Date 1 Fine Mair #0] Collected Collected 2	Newell	Shop	29526	Street Zip:	Environmental, Inc.		107-720
(specify)		FLOCK	Him Favet	Relinguished By					トノノウス	77 0 644	をもののの		EX PTI H	4				KTVA BY GELSENOGAN	150449-6
		7/5/19 0930 (JSIL POR	7/14/99 500 pm	Date Time: Received By;					1404 / 11- 5000 ppm	03 · 11 · - 3200 ppm	02/ 11'- 5000 ppm	NOTES / COMMENTS	Irmo, SC 29063 Toll Free (888) 315-4243	ay Blvd.		Analytical, Inc.	• Access	SIS	64404 PO#:

Original Copy - Returned w/Report Yellow Copy - Access Analytical Copy Pink Copy - Client Copy

Access Analytical - Chain of Custody Record

*Date Required:	Sid. (5-7 Bus. days)		Requested:	Tumpwann d Time					ME U	mw H	Sample Label	Bruce G.	Coastal Iru	- ¬		23 Main	Address: Address:	Company Name:	Project Submission #: 99/ks 7- 772
No	— Yes		Samples Recd						114/99 1	Į.	Date Collected C	Newell	ruck Sto		1	Street	Environme	7	(ca - 772
Other			Project Location:						1:30 5	12:30 5	Time Matr)	29526		ental, Inc	-	84745
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	3	2	367						- 2500	' - 3200	NOTES		I 248 Lake Murray Blvd. Irmo, SC 29063		6		•		PO#:
				Received By:					Ppm	o ppm	NOTES / COMMENTS		Toll Free (888) 315-4243	Phone: (•	ANALYTICAL, INC.	Access		

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of of

Access Analytical, Inc.



Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Strect

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Sample I.D.: MW-6

Collected: Received:

10:00 09:30

07/15/99 07/17/99

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANAL
Percent Solids	84	%	160.3(ASTM-D2216	0.01	07/19/	1999 07/19/1	99915:14JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 1	10:21 MG
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 1	10:21 MG
Toluene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 1	10:21 MG
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 1	10:21 MG
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 1	10:21 MG
o-Xylene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 1	10:21 MG
Naphthalene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 1	10:21 MG
SURROGATE: Toluene-D8	101.00%						
SURROGATE: 1,-DCB-D4	111.75%						
SURROGATE: Dibromofluoromethane	97.25%						
8270C PAHs (610) in SOILS and Wastes	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07′19/1999	07/20/1999	08:38 ME
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999	08:38 ME
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999	08:38 ME
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 (08:38 ME
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 (08:33 ME
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 (08:38 ME
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 (08:38 ME
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 (08:38 ME

Conway, SC 29526

Site Location/Project

. Coastal Truck Stop

Page 2 July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Sample I.D.: MW-6 Collected: 07/15/ 07/15/99 Received:

10:00 09:30

07/17/99 Client

•	Col	llected	by:	Clien
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PARAMETER	RESULT	UNITS	метнор	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100 0	7/19/1999	07/20/1999 08:38	MEC
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330 0	7/19/1999	07/20/1999 08:38	MEC
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330 0	7/19/1999	07/20/1999 08:38	MEC
Fluorene	BDL	mg/Kg	3550/8270C	0.330 0	7/19/1999	07/20/1999 08:38	MEC
Anthracene	BDL	mg/Kg	3550/8270C	0.330 0	7/19/1999	07/20/1999 08:38	MEC
Pyrene	BDL	mg/Kg	3550/8270C	0.330 0	7/19/1999	07/20/1999 08:38	MEC
Chrysene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330 0	7/19/1999	07/20/1999 08:38	MEC
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330 0	7/19/1999	07/20/1999 08:38	MEC
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	7/19/1999	07/20/1999 08:38	MEC
SURROGATE: D5-Nitrobenzene	57.10%						
SURROGATE: 2-Fluorobiphenyl	43.60%						

Conway, SC 29526

Page July 21, 1999 Report # 9907000871 Order # 90065408 South Carolina Cert ID# 96023

Site Location/Project

Coastal Truck Stop

Sample I.D.: MW-6

07/15/99 Collected: 10:00 Received: 07/17/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
SURROGATE: 4-Terphenyl-D14	55.60%						

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 4
July 21, 1999
Report # 9907000871
Order # 90065409 South Carolina Cert ID# 96023

Sample I.D.: MW-7

Collected: 07/15/99 Received: 07/17
Collected by: Client 07/17/99 11:00

09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Percent Solids	84	%	160.3(ASTM-D2216	0.01	07/19/	1999 07/19/199915	5:14JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
Toluene	266	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
Ethylbenzene	2450	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
m & p-Xylene	8770	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
o-Xylene	1960	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
Naphthalene	174	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:02	PMD
SURROGATE: Toluene-D8	106.50%						
SURROGATE: 1,-DCB-D4	106.25%						
SURROGATE: Dibromofluoromethane	97.25%						
8270C PAHs (610) in SOILS and Wastes I	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/3270C	0.330	07/19/1999	07/20/1999 08:38	MEC
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Phenanthrene	BD!	m∉′Kg	3550/8270C	0.330	07 /19 1999	07/20/1999 08:38	MEC
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 08:38	MEC

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 5 July 21, 1999 Report # 9907000871 Order # 90065409 South Carolina Cert ID# 96023

Sample I.D.: MW-7 Collected: 07/15/

07/15/99 07/17/99

11:00 09:30

Received:

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100 0	7/19/1999	07/20/1999 08:38	MEC
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Fluorene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Anthracene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Pyrene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Chrysene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	7/19/1999	07/20/1999 08:38	MEC
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	7/19/1999	07/20/1999 08:38	MEC
SURROGATE: D5-Nitrobenzene	85.00%						
SURROGATE: 2-Fluorobiphenyl	50.20%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 21, 1999 Report # 9907000871 Order # 90065409 South Carolina Cert ID# 96023

Sample I.D.: MW-7

07/15/99 Collected: 11:00 Received: 07/17/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS

SURROGATE: 4-Terphenyl-D14

73.70%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023) certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535 NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 7
July 21, 1999
Report # 9907000871
Order # 90065410 South Carolina Cert ID# 96023

Sample I.D.: MW-8 Collected: 07/15/

07/15/99

01:00 09:30

Received:

07/17/99

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
Percent Solids	83	%	160.3(ASTM-D2216	0.01	07/19/1	1999 07/19/19991	5:14JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:24	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:40	PMD
Toluene	BDL	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:24	PMD .
Ethylbenzene	10.1	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:24	PMD
m & p-Xylene	41.2	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:24	PMD
o-Xylene	13.0	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:24	PMD
Naphthalene	12.8	ug/Kg	5035/8260B	5.000	07/19/1999	07/19/1999 14:24	1 PMD
SURROGATE: Toluene-D8	103.00%						
SURROGATE: 1,-DCB-D4	111.50%						
SURROGATE: Dibromofluoromethane	91.75%						
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20) MEC
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20) MEC
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20) MEC
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20) MEC
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20) MEC
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20) MEC
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:2) MEC
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:2) MEC

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 8
July 21, 1999
Report # 9907000871
Order # 90065410 South Carolina Cert ID# 96023

01:00 09:30

Sample I.D.: MW-8 Collected: 07/15/99 Received: 07/17/99 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/19/1999	07/20/1999 14:20	MEC
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20	MEC
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20	MEC
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20	MEC
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20	MEC
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20	MEC
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20	MEC
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20	MEC
Indeno(1.2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/19/1999	07/20/1999 14:20	MEC
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/19/1999	07/20/1999 14:20	MEC
SURROGATE: D5-Nitrobenzene	63.00%						
SURROGATE: 2-Fluorobiphenyl	47.80%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 21, 1999 Report # 9907000871 Order # 90065410 South Carolina Cert ID# 96023

Sample I.D.: MW-8

07/15/99 Collected: 01:00 Received: 07/17/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS

SURROGATE: 4-Terphenyl-D14

68.70%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

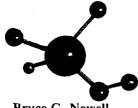
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

	Project Submission #: 99107 - 87		(
	Company Name: Southeastern Environmental Inc.		REQUESTED LAB ANALYSIS	S CSY	0	PO #:		1.0
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	Date Collected	Jo #	C PHY CAPH		1248 Lake Murr Irmo, SC 29063	ay Blvd.	Phone: (803) 781-4243 Fax: 781-4303 Toll Free (888) 315-4243	1243 1303 243
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Access Analytical, Inc.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 August 10, 1999 Report # 9908000214 Order # 90071169 South Carolina Cert ID# 96023

Sample I.D.: MW-#9

Collected: 08/03/99 Received: 08/05/99

Client

03/99 01:10 05/99 09:30

Collected	by:	Clien

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALY
Percent Solids	75.1	%	160.3(ASTM-D2216	0.01	08/07/1	999 08/07/1999	009:441VR/
Carbon, Total Organic	140	mg/Kg	9060 {N&S}	1.0	08/09/1	999 08/09/1999	015:03SN

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

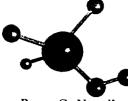
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Project Submission #: 9968 - 21469112-6

PO #:

Access Analytical, Inc.



Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page September 1, 1999 Report # 9908001386 Order # 90078526 South Carolina Cert ID# 96023

Sample I.D.: CTS Telescoping Collected: 08/24/99 19:00

Received:

08/27/99

10:00

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Percent Solids	89.5	%	160.3(ASTM-D2216	0.01		999 08/28/1999	014:061VR
Carbon, Total Organic	42.7	mg/Kg	9060 {N&S}	1.0	08/31/1	999 09/01/1999	009:25SN
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	78.5	ug/Kg	5035/8260B	5.000	08/30/1999 (08/30/1999 (08:1	8 PMD
Benzene	104	ug/Kg	5035/8260B	5.000)8/30/1999 ()8/30/1999_08:1	.8 PMD
Toluene	1640	ug/Kg	5035/8260B	5.000	08/30/1999 (8/30/1999_08:1	8 PMD
Ethylbenzene	1380	ug/Kg	5035/8260B	5.000)8/30/1999 (8/30/1999 08:1	.8 PMD
m & p-Xylene	6380	ug/Kg	5035/8260B	5.000)8/30/1999 C	8/30/1999 08:1	8 PMD
o-Xylene	2340	ug/Kg	5035/8260B	5.000)8/30/1999 C	8/30/1999 08:1	8 PMD
Naphthalene	5810	ug/Kg	5035/8260B	5.000 ()8/30/1999 (8/30/1999 08:1	8 PMD
SURROGATE: Toluene-D8	101.50%						
SURROGATE: 1,-DC8-D4	104.50%						
SURROGATE: Dibromofluoromethane	104.00%						
SC-DRO (Petroleum Hydrocarbons)-{SOILS}			MEDF	1			

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page September 1, 1999 Report # 9908001386 Order # 90078526 South Carolina Cert ID# 96023

Sample I.D.: CTS Telescoping

Collected: 08/24/99 19:00 08/27/99 Received: 10:00

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Diesel Range Org (C10-C28)	14.8	mg/Kg	3550/8015(mod)	5.000 0	8/31/1999	09/01/1999 08:26	FEB

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

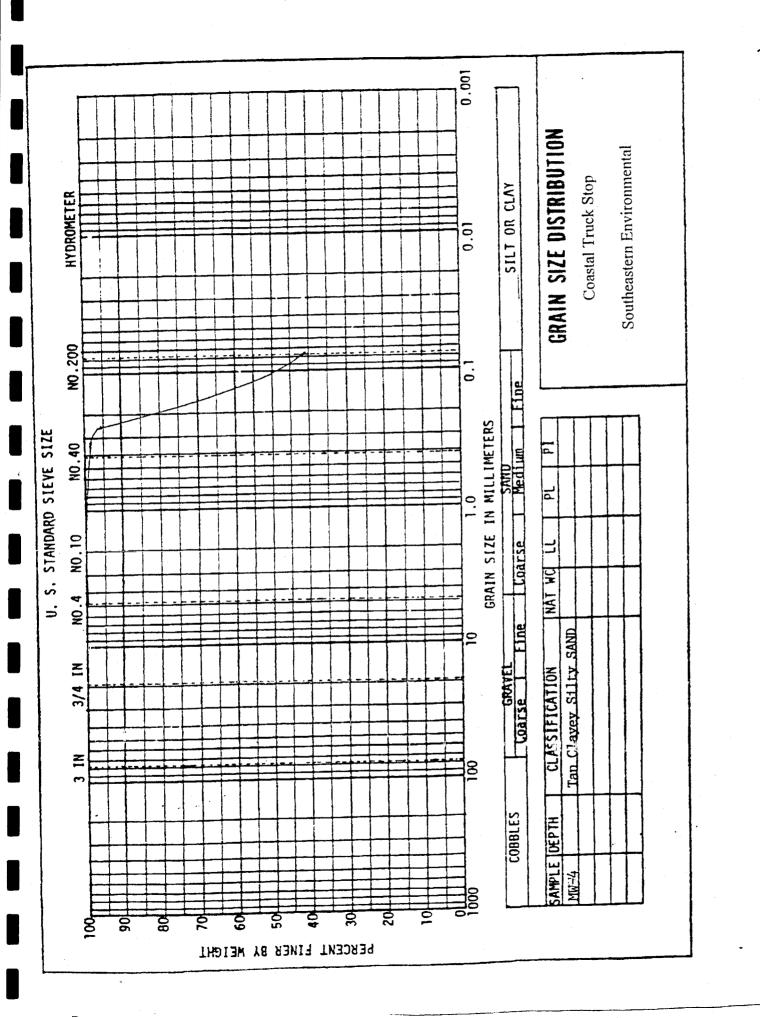
99/08-1386

Access Analytical - Chain of Custody Record 9-78526

PO #:

cTS telescoping Conway Report To: Southeastern Environmental, Inc Address: Main Street Company Name: Turnaround Time Project Name: Requested: *Date Required: Coastal Truck Stop _Std. (5-7 Bus. days) RUSH* Sample Label O. Newell State: 8-24-99 Collected Samples ixecd. 5 on Ice? No No Zip: 1900 Collected 295au Time Other _____(specify) Project Location: Matr \lesssim Z # of R E I E K A R A REQUESTED LAB ANALYSIS: Stephani J. Relinquished By: BTEX Napth (3550) Size/hydrometer Jones 5-26-99 4:30pm Total or Carbon 18/ce/3 Date: GRAIN SIZE CONFIRMED Irmo, SC 29063 Time 1248 Lake Murray Blvd. 1000 Soumple depth = NOTES / COMMENTS 6 Received By: WITH CHERYL Analytical, Inc. ACCESS ANALYSISI Toll Free (888) 315-4243 DISKEGARD Phone: (803) 781-4243 Fax: 781-4303

Original Copy - Returned w/Report Yellow Copy - Access Analytical Copy Pink Copy - Client Copy



Access Analytical - Chain of Custody Record

	८ वंचे 🛭	Sample depth = 8	Received By:	Original Copy · Retorned w/Report Ydlow Copy · Access Analytical Copy Fink Copy · Client Copy
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1386	REQUEST REQUEST REAL MARKET RE		Ataphorix	•
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Project Submission #:	O C Salar	+electoing 8	Turnaround Time Requested: Sid. (3.7 Bits. days) RUSH*	
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Access Analytical, Inc.

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page October 20, 1999 Report # 9910000765 Order # 90096147 South Carolina Cert ID# 96023

Sample I.D.: MW9

10/14/99 Collected:

10:30 09:40

10/15/99 Received:

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST

SURROGATE: 4-Terphenyl-D14

69.20%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 4 October 20, 1999 Report # 9910000765 Order # 90096148 South Carolina Cert ID# 96023

Sample I.D.: MW10 Collected: 10/14 10/14/99 10/15/99 11:30 09:40 Received:

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	85	%	160.3(ASTM-D2216	0.01	10/17/	1999 10/17/19990)9:39JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	4 PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	4 PMD
Toluene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:14	4 PMD
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:1	4 PMD
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:1	4 PMD
o-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:1	4 PMD
Naphthalene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:1	4 PMD
SURROGATE: Toluene-D8	99.00%						
SURROGATE: 1,-DCB-D4	98.50%						
SURROGATE: Dibromofluoromethane	90.00%						
8270C PAHs (610) in SOILS and Wastes I	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:2	1 MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:2	1 MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:2	1 MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:2	1 MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:2	1 MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:2	1 MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:2	1 MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:2	1 MD
			•				

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 5 October 20, 1999 Report # 9910000765 Order # 90096148 South Carolina Cert ID# 96023

Sample I.D.: MW10 Collected: 10/14/ 10/14/99 11:30 Received: 10/15/99 09:40

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100 1	0/18/1999	10/19/1999 13:21	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:21	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:21	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:21	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:21	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:21	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:21	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:21	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:21	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100 1	0/18/1999	10/19/1999 13:21	MD
SURROGATE: D5-Nitrobenzene	56.10%						
SURROGATE: 2-Fluorobiphenyl	63.70%						

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

- name in the insulation

Page October 20, 1999 Report # 9910000765 Order # 90096148 South Carolina Cert ID# 96023

Sample I.D.: MW10 10/14/99 Collected:

11:30 09:40 10/15/99

Received: Collected by: Client

Coastal Huen Day				DETECTION	DATE EXT.	DATE ANALY.	À
	RESULT	UNITS	METHOD	LIMIT	EXI.		
PARAMETER							
SURROGATE: 4-Terphenyl-D14	74.70%			Factor			

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 9601, Md. =#271, Md.

with all methodology requirements.

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 7 October 20, 1999 Report # 9910000765 Order # 90096149 South Carolina Cert ID# 96023

Sample I.D.: MW11 Collected: 10/14/ Received: 10/15/ 10/14/99 10/15/99 11:45 09:40

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Percent Solids	88	%	160.3(ASTM-D2216	0.01	10/17/	1999 10/17/199909	9:39JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:15	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:15	PMD
Toluene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:15	PMD
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:15	PMD
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:15	PMD
o-Xylene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:15	PMD
Naphthalene	BDL	ug/Kg	5035/8260B	5.000	10/19/1999	10/19/1999 09:15	PMD
SURROGATE: Toluene-D8	99.50%						
SURROGATE: 1,-DCB-D4	100.00%						
SURROGATE: Dibromofluoromethane	96.50%						
270C PAHs (610) in SOILS and Wastes b	by GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	. MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	. MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	. MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	, MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	. MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 8 October 20, 1999 Report # 9910000765 Order # 90096149 South Carolina Cert ID# 96023

Sample I.D.: MW11 Collected: 10/14/

10/14/99 10/15/99

11:45 09:40

Received:

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	10/18/1999	10/19/1999 13:22	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	10/18/1999	10/19/1999 13:22	MD
SURROGATE: D5-Nitrobenzene	58.30%						
SURROGATE: 2-Fluorobiphenyl	78.30%						

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page October 20, 1999 Report # 9910000765 Order # 90096149 South Carolina Cert ID# 96023

Sample I.D.: MW11

10/14/99 11:45 Collected: 10/15/99 09:40 Received:

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST

SURROGATE: 4-Terphenyl-D14

80.40%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 10 October 20, 1999 Report # 9910000765 Order # 90096150 South Carolina Cert ID# 96023

Sample I.D.: MW14 Collected: 10/14/

10/14/99

10:15 09:40

Received: 10/15/99 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Percent Solids	89	%	160.3(ASTM-D2216	0.01	10/17/	1999 10/17/19990	9:39JP
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	. 1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	0/19/1999	10/19/1999 09:15	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000 1	0/19/1999	10/19/1999 09:15	PMD
Toluene	BDL	ug/Kg	5035/8260B	5.000 1	0/19/1999	10/19/1999 09:15	PMD .
Ethylbenzene	BDL	ug/Kg	5035/8260B	5.000 1	0/19/1999	10/19/1999 09:15	PMD
m & p-Xylene	BDL	ug/Kg	5035/8260B	5.000 1	0/19/1999	10/19/1999 09:15	PMD
o-Xylene	BDL	ug/Kg	5035/8260B	5.000	0/19/1999	10/19/1999 09:15	PMD
Naphthalene	BDL	ug/Kg	5035/8260B	5.000 1	0/19/1999	10/19/1999 09:15	PMD
SURROGATE: Toluene-D8	97.50%						
SURROGATE: 1,-DCB-D4	98.50%						
SURROGATE: Dibromofluoromethane	95.50%						
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	0/18/1999	10/19/1999 13:22	MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:22	MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:22	MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:22	MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:22	MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:22	MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:22	MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330 1	0/18/1999	10/19/1999 13:22	MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 11 October 20, 1999 Report # 9910000765 Order # 90096150 South Carolina Cert ID# 96023

Sample I.D.: MW14 Collected: 10/14/ Received: 10/15/ 10/14/99 10/15/99 10:15 09:40

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	10/18/1999	10/19/1999 13:22	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	10/18/1999	10/19/1999 13:22	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	10/18/1999	10/19/1999 13:22	MD
SURROGATE: D5-Nitrobenzene	136.00%						
SURROGATE: 2-Fluorobiphenyl	89.10%						

Conway, SC 29526

Page 12 October 20, 1999 Report # 9910000765 Order # 90096150 South Carolina Cert ID# 96023

Site Location/Project South Carolina Coastal Truck Stop

Sample I.D.: MW14

Collected: 10/14/99 10:15 10/15/99 Received: 09:40

Collected by: Client

				:*		新	
PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
SURROGATE: 4-Terphenyl-D14	84.50%					1 1	

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

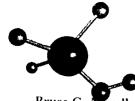
Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Access Analytical - Chain of Custody Record

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Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Step

Page August 13, 1999 Report # 9908000497 Order # 90072918 South Carolina Cert ID# 96023

Sample I.D.: MW4

Collected:

08/09/99

13:00

Received: Collected by: Client

08/11/99

09:30

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PARAMETER	RESULT						
Dames C. U.	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALY
Percent Solids	83.4	%	160.3(ASTM-D2216	0.01	()8/12/11	000 00434000	00.40
SC-DRO (Petroleum Hydrocarbons)-{SOILS}			MEDF	1	06/12/1	999 08/12/1999	08:581VR
Diesel Range Org (C10-C28)	69.0	mg/Kg	3550/8015(mod)	5.000 08	/11/1999_0)8/13/1999 11:5	5 FEB

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. Unless otherwise noted in analyst section, an work performed by Frecision Environmental Laboratory, inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535 NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

Access Analytical - Chain of Custody Record

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Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 July 18, 1999 Report # 9907000720 Order # 90064402 South Carolina Cert ID# 96023

Sample I.D.: MW-1

Collected:

07/13/99

10:00 09:30

Received:

07/15/99

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALY
Percent Solids	84.8	%	160.3(ASTM-D2216	0.01	07/17	/1999 07/17/199910	0:48SMF
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	155	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:26	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:26	PMD
Toluene	11000	ug/Kg	5035/8260B	5.000	07/1,7/1999	07/17/1999 11:26	PMD
Ethylbenzene	10600	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:26	PMD
m & p-Xylene	32100	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:26	PMD
o-Xylene	13500	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:26	PMD
Naphthalene	2560	ug/Kg	5035/8260B	5.000	07/17/1999	07/17/1999 11:26	PMD
SURROGATE: Toluene-D8	109.25%						
SURROGATE: 1,-DCB-D4	75.50%						
SURROGATE: Dibromofluoromethane	85.50%						
8270C PAHs (610) in SOILS and Wastes i	by GC-MS		MEDF	1			
Naphthalene	1.97	mg/Kg	3550/8270C	0.330	07/16/1999	07/17.1999 12:06	MD
2-Methylnaphthalene	2.37	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
1-Methylnaphthalene	1.20	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Phenanthrene	BDL	mg/Kg	3550.1927(10	0.330	07/16/1999	07/17/1999 12:1-4	MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Benzo(h)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 2 July 18, 1999 Report # 9907000720 Order # 90064402 South Carolina Cert ID# 96023

Sample I.D.: MW-1 Collected: 07/13/99 Received: 07/15/99

10:00 09:30

Received: 07/15 Collected by: Client

PARAMETER	RESULT	UNITS	метнор	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:06	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD .
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:06	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:06	5 MD
SURROGATE: D5-Nitrobenzene	53.50%						
SURROGATE: 2-Fluorobiphenyl	49.80%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 18, 1999 Report # 9907000720 Order # 90064402 South Carolina Cert ID# 96023

Sample I.D.: MW-1

Collected: 07/13/99 07/15/99 Received:

10:00 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS

SURROGATE: 4-Terphenyl-D14

70.50%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 4
July 18, 1999
Report # 9907000720
Order # 90064403 South Carolina Cert ID# 96023

Sample I.D.: MW-2 Collected: 07/13/99 Received: 07/15/99 Collected by: Client 11:30 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Percent Solids	85.1	%	160.3(ASTM-D2216	0.01	07/17/	1999 07/17/199910):48 SM F
8260B BTEX w/Naph+MTBE in Soils by GO	C-MS(S.C.)LL		MEDF	10			
Methyl-Tert-Butyl-Ether	58.2	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:28	PMD
Benzene	181	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:28	PMD
Toluene	11900000	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:28	PMD
Ethylbenzene	4790	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:28	PMD
m & p-Xylene	16000	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:28	PMD
o-Xylene	4850	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:28	PMD
Naphthalene	255	ug/Kg	5035/8260B	50.000	07/17/1999	07/17/1999 11:28	PMD
SURROGATE: Toluene-D8	111.00%						
SURROGATE: 1,-DCB-D4	68.25%						
SURROGATE: Dibromofluoromethane	98.50%						
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1 .			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD .
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD.
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	, MD
Phenanthrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD.
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	S MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	S MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 5
July 18, 1999
Report # 9907000720
Order # 90064403 South Carolina Cert ID# 96023

Sample I.D.: MW-2 Collected: 07/13/99 Received: 07/15/99

11:30 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:08	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:08	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:08	MD
SURROGATE: D5-Nitrobenzene	63.60%						
SURROGATE: 2-Fluorobiphenyl	70.50%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 18, 1999 Report # 9907000720 Order # 90064403 South Carolina Cert ID# 96023

Sample I.D.: MW-2

Collected: 07/13/99 Received: 07/15/99 11:30 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION	DATE	DATE	ANALYS
				LIMIT	EXT.	ANALY.	

SURROGATE: 4-Terphenyl-D14

85.70%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 7
July 18, 1999
Report # 9907000720
Order # 90064404
South Carolina Cert ID# 96023

Sample I.D.: MW-3 Collected: 07/13/99 Received: 07/15/99

01:30 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY	•	ANALYS)
Percent Solids	83.7	%	160.3(ASTM-D2216	0.01	07/17/	1999 07/17/1	99910	:48SMF
8260B BTEX w/Naph+MTBE in Soils by G	C-MS(S.C.)LL		MEDF	1				
Methyl-Tert-Butyl-Ether	8.3	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999	10:23	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999	10:23	PMD
Toluene	1400	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999	10:23	PMD
Ethylbenzene	1240	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999	10:23	PMD
m & p-Xylene	4660	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999	10:23	PMD
o-Xylene	1720	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999	10:23	PMD
Naphthalene	209	ug/Kg	5035/8260B	5.000	07/16/1999	07/16/1999	10:23	PMD
SURROGATE: Toluene-D8	113.75%							
SURROGATE: 1,-DCB-D4	65.00%							
SURROGATE: Dibromofluoromethane	95.00%							
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1				
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999	12:09	MD
2-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999	12:09	MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999	12:09	MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999	12:09	MD
Phenaninrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999	12:09	MD
Fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999	12:09	MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999	12:09	MD
Benzo(b)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999	12:09	MD
						•		

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 8 July 18, 1999 Report # 9907000720 Order # 90064404 South Carolina Cert ID# 96023

Sample I.D.: MW-3 Collected: 07/13/99 Received: 07/15/99

01:30 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYSI
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:09	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Indeno(1.2.3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 12:09	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 12:09	MD
SURROGATE: D5-Nitrobenzene	64.80%						
SURROGATE: 2-Fluorobiphenyl	70.70%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 18, 1999 Report # 9907000720 Order # 90064404 South Carolina Cert ID# 96023

Sample I.D.: MW-3

07/13/99 Collected: Received:

07/15/99

01:30 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
							

SURROGATE: 4-Terphenyl-D14

73.70%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

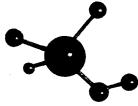
Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Project Submission #: $C_1C_1 | O_7 - 720$

720 9-64402 64404 PO#

Original Copy - Returned w/Report Yellow Copy - Access Analytical Copy Pink Copy - Client Copy



Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project South Carolina **Coastal Truck Stop**

Page 1 August 6, 1999 Report # 9907000772 Order # 90064745 South Carolina Cert ID# 96023

Sample I.D.: MW4

Collected: 07/14/99 Received:

12:30 07/16/99 09:00

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY,	ANALY
Percent Solids	85	%	160.3(ASTM-D2216	0.01	07/19/	/1999 07/19/19991:	5:12JP
8260B BTEX w/Naph+MTBE in Soils by GO	C-MS(S.C.)LL		MEDF	1			
Methyl-Tert-Butyl-Ether	BDL	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 10:01	PMD
Benzene	BDL	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
Toluene	43.5	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
Ethylbenzene	449	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	l PMD
m & p-Xylene	1660	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
o-Xylene	672	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	PMD
Naphthalene	428	ug/Kg	5035/8260B	5.000	07/18/1999	07/18/1999 11:41	I PMD
SURROGATE: Toluene-D8	113.00%						
SURROGATE: 1DCB-D4	59.25%						
SURROGATE: Dibromofluoromethane	89.50%						
8270C PAHs (610) in SOILS and Wastes b	y GC-MS		MEDF	1			
Naphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	4 MD
2-Methylnaphthalone	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	4 MD
1-Methylnaphthalene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	4 MD
Acenaphthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	4 MD
Phe muthrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	4 MD
Fluoranthene	BDL	mg/Kg	3550/8270C	. 0.330	07/16/1999	07/17/1999 14:54	4 MD
Benzo(a)anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	0 07/17/1999 14:54	4 MD
Benzo(h)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	4 MD

Conway, SC 29526

Site Location/Project South Carolina Coastal Truck Stop

Page 2 August 6, 1999 Report # 9907000772 Order # 90064745 South Carolina Cert ID# 96023

Sample I.D.: MW4 Collected: 07/14/99

Received:

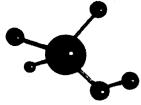
07/16/99

12:30 09:00

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
Benzo(a)pyrene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 14:54	MD
Benzo(ghi)perylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Acenaphthylene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Fluorene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Anthracene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Chrysene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Benzo(k)fluoranthene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Indeno(1,2,3-cd)pyrene	BDL	mg/Kg	3550/8270C	0.330	07/16/1999	07/17/1999 14:54	MD
Dibenzo(a,h)anthracene	BDL	mg/Kg	3550/8270C	0.100	07/16/1999	07/17/1999 14:54	MD
SURROGATE: D5-Nitrobenzene	57.90%						
SURROGATE: 2-Fluorobiphenyl	40.00%						

APPENDIX D

Analytical Reports For Groundwater Samples



Access Analytical, Inc.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 July 29, 1999 Report # 9907001004 Order # 90066258 South Carolina Cert ID# 96023

Sample I.D.: MW-1

Collected: 07/20/99 11:30 Received: 07/21/99 09:30

PARAMETER	RESULT	UNITS	метнор	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALY
Nitrate (as N)	6.73	mg/L	300.0	0.05	07/21/19	999 07/21/1999	06:00MC
Sulfate	3.21	mg/L	300.0	1.0	07/21/19	999 07/21/1999	06:01MC
Ferrous, Iron (Fe2+)	4.5	mg/L	SM3500-Fe D.	0.03	07/21/19	999 07/21/1999	16:02KOD
Lead	0.609	mg/L	SM3113B (239.2)	0.005	07/22/1	999 07/22/1999	18:00MAH
8260B BTEX(Ext. List)in Water by GC-MS (S	3.C.)		MEDF	100			
Methyl-Tert-Butyl Ether	7400	ug/L	5030/8260B	100.000	07/22/1999(07/22/1999 08:1	15 PMD
Benzene	19900	ug/L	5030/8260B	********		07/22/1999 08:1	
Toluene	26000	ug/L	5030/8260B	100.000	07/22/1999(07/22/1999 08:1	15 PMD
1,2-Dibromoethane (EDB)	111	ug/L	5030/8260B	100.000	07/22/1999(07/22/1999 08:1	15 PMD
Ethylbenzene	2040	ug/L	5030/8260B			07/22/1999 08:1	
m & p-Xylene	8570	ug/L	5030/8260B			07/22/1999 08:1	
o-Xylene	3510	ug/L	5030/8260B	100.000	07/22/1999	07/22/1999 08:1	15 PMD
1,3,5-Trimethylbenzene	411	ug/L	5030/8260B		_	07/22/1999 08:	
1,2,4-Trimethylbenzene	1620	ug/L	5030/8260B			07/22/1999 08:	
Naphthalene	592	ug/L	5030/8260B	100.000	07/22/1999	07/22/1999 08:	15 PMC
SURROGATE: Toluene-D8	103.75%						
SURROGATE: 1,4-DCB-D4	115.50%						
SURROGATE: Dibromofluoromethane	83.00%						
8270C PAHs (610) in WATER by GC/MC	[(Ion Trap)		MEDF	1			
Naphthalene	371	ug/L	3510/8270C	5.000		07/22/1999 13:	
2-Methylnaphthalene	91.8	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 13:	:35 ME

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 2 July 29, 1999 Report # 9907001004 Order # 90066258 South Carolina Cert ID# 96023

Sample I.D.: MW-1 Collected: 07/20 Received: 07/21 07/20/99 11:30 07/21/99 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
1-Methylnaphthalene	52.7	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 13:35	MEC
Acenaphthene	BDL	ug/L	3510/8270C	3.000	07/21/1 9 99	07/22/1999 13:35	MEC
Phenanthrene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 13:35	MEC
Fluoranthene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 13:35	MEC
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:35	MEC
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:35	MEC
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:35	MEC
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:35	MEC
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/22/1999 13:35	MEC
Fluorene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 13:35	MEC
Anthracene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 13:35	MEC
Pyrene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 13:35	MEC
Chrysene	BDL	ug/L	3510/8270C	1.000	07/21/1999	07/22/1999 13:35	MEC
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	07/21/1999	07/22/1999 13:35	MEC
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:35	MEC
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:35	MEC
SURROGATE: D5-Nitrobenzene	80.30%						
SURROGATE. 2-Fluorobipheny.	70.40%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 29, 1999 Report # 9907001004 Order # 90066258 South Carolina Cert ID# 96023

Sample I.D.: MW-1

Collected:

07/20/99

11:30

Received:

07/21/99

09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
				······································			

SURROGATE: 4-Terphenyl-D14

53.40%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

certs: Al. = #41180, Ct. = #PH0217, Ks. = #E270 + E1245, Ky. = #90087, La. = #9601, Md. = #271, Ma. = #M-FL535

NC. = #539, ND. = #R163, OK. = #9523, SC. = #96023, Tn. = #TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 4
July 29, 1999
Report # 9907001004
Order # 90066259 South Carolina Cert ID# 96023

Sample I.D.: MW-2 Collected: 07/19/99 Received: 07/21/99

1:00 09:30

Received: 07/21 Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Nitrate (as N)	0.26	mg/L	300.0	0.05	07/21/19	99 07/21/1999	06:01MC
Sulfate	2.92	mg/L	300.0	1.0	07/21/19	99 07/21/1999	06:01MC
Ferrous, Iron (Fe2+)	4.9	mg/L	SM3500-Fe D.	0.03	07/21/19	99 07/21/1999	16:02KOD
Lead	0.403	mg/L	SM3113B (239.2)	0.005	07/22/19	99 07/22/1999	18:00MAH
8260B BTEX(Ext. List)in Water by GC-MS	(S.C.)		MEDF	100			
Methyl-Tert-Butyl Ether	10500	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:1	17. PMD
Benzene	18500	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
Toluene	28300	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
1,2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
Ethylbenzene	3360	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
m & p-Xylene	10500	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
o-Xylene	4770	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
1,3,5-Trimethylbenzene	596	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
1,2,4-Trimethylbenzene	2560	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
Naphthalene	670	ug/L	5030/8260B	100.000	07/22/1999 0	7/22/1999 08:	17 PMD
SURROGATE: Toluene-D8	99.50%						
SURROGATE: 1,4-DCB-D4	116.00%						
SURROGATE: Dibromofluoromethane	83.25%						
8270C PAHs (610) in WATER by GC/M	C (Ion Trap)		MEDF	1			
Naphthalene	443	ug/L	3510/8270C	5.000	07/21/1999 0	7/22/1999 13:	35 MEC
2-Methylnaphthalene	125	ug/L	3510/8270C	5.000	07/21/1999 0	7/22/1999 13:	38 MEC
	•			*			

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 5 July 29, 1999 Report # 9907001004 Order # 90066259 South Carolina Cert ID# 96023

Sample I.D.: MW-2 Collected: 07/19/99 Received: 07/21/99 1:00 07/21/99 09:30

ARAMETER		RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
l-Methylnaphthalene		89.0	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 13:38	MEC
Acenaphthene		BDL	ug/L	3510/8270C	3.000	07/21/1999	07/22/1999 13:38	MEC
Phenanthrene		BDL	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 13:38	MEC
Fluoranthene		BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 13:38	MEC
Benzo(a)anthracene		BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:38	MEC
Benzo(b)fluoranthene		BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:38	MEC
Benzo(a)pyrene		BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:38	MEC
Benzo(ghi)perylene		BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:38	MEC
Acenaphthylene		BDL	ug/L	3510/8270C	3.000	07/21/1999	07/22/1999 13:38	MEC
Fluorene		BDL	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 13:38	MEC
Anthracene		BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 13:38	MEC
Pyrene		BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 13:38	MEC
Chrysene		BDL	ug/L	3510/8270C	1.000	07/21/1999	07/22/1999 13:38	MEC
Benzo(k)fluoranthene		BDL	ug/L	3510/8270C	0.500	07/21/1999	07/22/1999 13:38	MEC
Indeno(1,2,3-cd)pyre	ne	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:38	MEC
Dibenzo(a,h)anthrace	ne	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 13:38	MEC
SURROGATE: D5-N	litrobenzene	82.10%						
SURROGATE: 2-Flu	orotiphenyl	72.30%						
SURROGATE: D5-N	itrobenzene							

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 6 July 29, 1999 Report # 9907001004 Order # 90066259 South Carolina Cert ID# 96023

Sample I.D.: MW-2

Collected: 07/19/99

1:00

Received:

07/21/99

09:30

Collected by: Client

PARAMETER	RESULT UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
SURROGATE: 4-Terphenyl-D14	64.60%					

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023) Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Company Representative

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 7
July 29, 1999
Report # 9907001004
Order # 90066260 South Carolina Cert ID# 96023

Sample I.D.: MW-3 Collected: 07/19/99 Received: 07/21/99 3:18 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Nitrate (as N)	0.36	mg/L	300.0	0.05	07/21/1999	07/21/19990	06:01MC
Sulfate	3.51	mg/L	300.0	1.0	07/21/1999	07/21/19990	06:01MC
Ferrous, Iron (Fe2+)	9.5	mg/L	SM3500-Fe D.	0.03	07/21/1999	07/21/19991	6:02KOD
Lead	0.116	mg/L	SM3113B (239.2)	0.005	07/22/1999	07/22/19991	8:00MAH
8260B BTEX(Ext. List)in Water by GC-MS ((S.C.)		MEDF	1			
Methyl-Tert-Butyl Ether	31.5	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:22	2 PMD
Benzene	6800	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:22	2 PMD
Toluene	16900	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:22	2 PMD
1,2-Dibromoethane (EDB)	81.1	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:22	2 PMD
Ethylbenzene	2380	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:2:	2 PMD
m & p-Xylene	10000	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:2:	2 PMD
o-Xylene	4020	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:2	2 PMD
1,3,5-Trimethylbenzene	568	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:2	2 PMD
1,2,4-Trimethylbenzene	2220	ug/L	5030/8260B	1.000	07/22/1999 07/2	2/1999 09:2	2 PMD
Naphthalene	570	ug/L	5030/8260B	1.000	07/22/1999 07/2	22/1999 09:2	2 PMD
SURROGATE: Toluene-D8	98.25%						
SURROGATE: 1,4-DCB-D4	113.75%						
SUREOGATE: Dibromefluoromethane	86.00%						
8270C PAHs (610) in WATER by GC/MC	(Ion Trap)		MEDF	1			
Naphthalene	384	ug/L	3510/8270C	5.000	07/21/1999 07/2	22/1999 10:2	4 JAY
2-Methylnaphthalene	102	ug/L	3510/8270C	5.000	07/21/1999 07/2	22/1999 10:2	4 JAY

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 8
July 29, 1999
Report # 9907001004
Order # 90066260 South Carolina Cert ID# 96023

Sample I.D.: MW-3 Collected: 07/19/99 Received: 07/21/99 3:18 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
1-Methylnaphthalene	60.5	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 10:24	JAY
Acenaphthene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/22/1999 10:24	YAL
Phenanthrene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 10:24	JAY
Fluoranthene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 10:24	JAY
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 10:24	JAY
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 10:24	JAY
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 10:24	YAL
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 10:24	JAY
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/22/1999 10:24	JAY
Fluorene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/22/1999 10:24	JAY
Anthracene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 10:24	JAY
Pyrene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/22/1999 10:24	YAL
Chrysene	BDL	ug/L	3510/8270C	1.000	07/21/1999	07/22/1999 10:24	YAL
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	07/21/1999	07/22/1999 10:24	JAY
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 10:24	YAL
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/22/1999 10:24	YAL
SURROGATE: D5-Nitrobenzene	68.10%						
SURROGATE: 2-Fluorobiphenyl	65.80%						
			•				

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 29, 1999 Report # 9907001004 Order # 90066260 South Carolina Cert ID# 96023

Sample I.D.: MW-3

Collected: 07/19/99 3:18 Received: 07/21/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
SURROGATE: 4-Terphenyl-D14	28.40%						

REPORT COMMENTS:

with all methodology requirements.

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 10 July 29, 1999 Report # 9907001004 Order # 90066261 South Carolina Cert ID# 96023

Sample I.D.: MW-4 Collected: 07/20/99 Received: 07/21/99

11:00 09:30

Received: 07/21/ Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE DATE EXT. A	ATE NALY.	ANALYSI
Nitrate (as N)	0.32	mg/L	300.0	0.05	07/21/1999()7/21/199906	:02MC
Sulfate	2.65	mg/L	300.0	1.0	07/21/1999 ()7/21/199906	:02MC
Ferrous, Iron (Fe2+)	2.4	mg/L	SM3500-Fe D.	0.03	07/21/1999 ()7/21/199916	:02KOD
Lead	0.113	mg/L	SM3113B (239.2)	0.005	07/22/1999 ()7/22/199918	HAMOO:
8260B BTEX(Ext. List)in Water by GC-MS (S.C.)		MEDF	100			
Methyl-Tert-Butyl Ether	4530	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
Benzene	19300	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
Toluene	34300	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
1,2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
Ethylbenzene	4630	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
m & p-Xylene	15300	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
o-Xylene	6200	ug/L	5030/8260B	. 100.000 0	7/22/1999 07/22	/1999 08:18	PMD
1,3,5-Trimethylbenzene	1390	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
1,2,4-Trimethylbenzene	5660	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
Naphthalene	800	ug/L	5030/8260B	100.000 0	7/22/1999 07/22	/1999 08:18	PMD
SURROGATE: Toluene-D8	100.75%		•				
SURROGATE: 1,4-DCB-D4	112.75%						
SURROGATE: Dibromofluoromethane	84.75%						
8270C PAHs (610) in WATER by GC/MC	(Ion Trap)		MEDF	1			
Naphthalene	535	ug/L	3510/8270C	5.000 0	7/21/1999 07/23	/1999 10:25	JAY
2-Methylnaphthalene	231	ug/L	3510/8270C	5.000 0	7/21/1999 07/23	/1999 10:25	JAY
1							

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 11 July 29, 1999 Report # 9907001004 Order # 90066261 South Carolina Cert ID# 96023

Sample I.D.: MW-4 Collected: 07/20/99 Received: 07/21/99 11:00 Received: 07/21 Collected by: Client 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
1-Methylnaphthalene	118	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:25	JAY
Acenaphthene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/23/1999 10:25	JAY
Phenanthrene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:25	YAL
Fluoranthene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 10:25	YAL
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:25	JAY
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:25	JAY
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:25	JAY
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:25	JAY
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/23/1999 10:25	JAY
Fluorene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:25	JAY
Anthracene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 10:25	YAL
Pyrene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 10:25	JAY
Chrysene	BDL	ug/L	3510/8270C	1.000	07/21/1999	07/23/1999 10:25	JAY
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	07/21/1999	07/23/1999 10:25	JAY
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:25	YAL
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:25	YAL
SURROGATE: D5-Nitrobenzene	116.00%						
SURROGATE: 2-Fluorobiphenyl	86.70%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 12 July 29, 1999 Report # 9907001004 Order # 90066261 South Carolina Cert ID# 96023

Sample I.D.: MW-4

Collected: 07/20/99 11:00 Received: 07/21/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
							

SURROGATE: 4-Terphenyl-D14

85.10%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Company Representative

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 13 July 29, 1999 Report # 9907001004 Order # 90066262 South Carolina Cert ID# 96023

Sample I.D.: MW-5 Collected: 07/19/99 Received: 07/21/99

2:30

09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Nitrate (as N)	0.65	mg/L	300.0	0.05	07/21/199	99 07/21/19	9906:02MC
Sulfate	4.36	mg/L	300.0	1.0	07/21/199	99 07/21/19	9906:02MC
Ferrous, Iron (Fe2+)	6.5	mg/L	SM3500-Fe D.	0.03	07/21/199	99 07/21/19	9916:03K O D
Lead	0.043	mg/L	SM3113B (239.2)	0.005	07/22/199	99 07/22/19	9918:00MAH
8260B BTEX(Ext. List)in Water by GC-MS	(S.C.)		MEDF	1			
Methyl-Tert-Butyl Ether	13.1	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1999 09	2:25 PMD
Benzene	1590	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1999 09	25 PMD
Toluene	7410	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1999 09	2:25 PMD
1,2-Dibromoethane (EDB)	11.9	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1999 09	2:25 PMD
Ethylbenzene	1850	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1999 09	2:25 PMD
m & p-Xylene	7570	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1 99 9 09	2:25 PMD
o-Xylene	2750	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1999 09	2:25 PMD
1,3,5-Trimethylbenzene	559	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1999 09	25 PMD
1,2,4-Trimethylbenzene	2440	ug/L	5030/826∋B	1.000 0	7/23/1999 07	/23/1999 09	:25 PMD
Naphthalene	560	ug/L	5030/8260B	1.000 0	7/23/1999 07	/23/1999 09	2:25 PMD
SURROGATE: Toluene-D8	101.25%						
SURROGATE: 1,4-DCB-D4	110.75%						
SURROGATE: Dibromofluoromethane	85.75 %						
8270C PAHs (610) in WATER by GC/MC	(Ion Trap)		MEDF	1			
Naphthalene	332	ug/L	3510/8270C	5.000 0	7/21/1999 07	/23/1999 10	:27 JAY
2-Methylnaphthalene	106	ug/L	3510/8270C	5.000 0	7/21/1999 07	/23/1999 10	:27 JAY

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 14 July 29, 1999 Report # 9907001004 Order # 90066262 South Carolina Cert ID# 96023

Sample I.D.: MW-5 Collected: 07/19/99 Received: 07/21/99

2:30 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	ON DATE EXT.	DATE ANALY.	ANALYS
1-Methylnaphthalene	61.9	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:27	JAY
Acenaphthene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/23/1999 10:27	JAY
Phenanthrene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:27	JAY
Fluoranthene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 10:27	JAY
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:27	JAY
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:27	JAY
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:27	JAY
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:27	JAY
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/23/1999 10:27	JAY
Fluorene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:27	JAY .
Anthracene	BDL	ug/L	3510/8270Č	0.300	07/21/1999	07/23/1999 10:27	JAY
Pyrene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 10:27	YAL
Chrysene	BDL	ug/L	3510/8270C	1.000	07/21/1999	07/23/1999 10:27	JAY
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	07/21/1999	07/23/1999 10:27	JAY
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:27	YAL
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:27	JAY
SURROGATE: D5-Nitrobenzene	71.60%						
SURROGATE: 2-Fluorobiphenyl	70.40%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 29, 1999 Report # 9907001004 Order # 90066262 South Carolina Cert ID# 96023

Sample I.D.: MW-5

Collected: 07/19/99 2:30 09:30 Received: 07/21/99

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
SURROGATE: 4-Terphenyl-D14	69.20%						

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Company Representative

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 16 July 29, 1999 Report # 9907001004 Order # 90066263 South Carolina Cert ID# 96023

Sample I.D.: MW-6 Collected: 07/19/99

11:00 07/21/99 09:30

Received:

Collected by: Client	
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PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Nitrate (as N)	0.60	mg/L	300.0	0.05	07/21/1	999 07/21/1999	Ю6:03MC
Sulfate	5.55	mg/L	300.0	1.0	07/21/1	999 07/21/1999	X06:03MC
Ferrous, Iron (Fe2+)	BDL	mg/L	SM3500-Fe D.	0.03	07/21/1	1999 07/21/1999	16:03KOD
Lead	0.023	mg/L	SM3113B (239.2)	0.005	07/22/1	1999 07/22/1999)18:00MAH
8260B BTEX(Ext. List)in Water by GC-MS	(S.C.)		MEDF	1			
Methyl-Tert-Buryl Ether	BDL	ug/L	5030/8260B	1.000 0	7/22/1999	07/22/1999 08:2	20 PMD
Benzene	BDL	ug/L	5030/8260B	1.000 0	17/22/1999	07/22/1999 08:2	20 PMD
Toluene	4.61	ug/L	5030/8260B	1.000 0	7/22/1999	07/22/1999 08:2	20 PMD
1,2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B	1.000 0	7/22/1999	07/22/1999 08:2	20 PMD
Ethylbenzene	5.72	ug/L	5030/8260B	1.000 0	7/22/1999	07/22/1999 08:2	20 PMD
m & p-Xylene	20.8	ug/L	5030/8260B	1.000 0	7/22/1999	07/22/1999 08:2	20 PMD
o-Xylene	5.13	ug/L	5030/8260B	1.000 0)7/22/1999	07/22/1999 08:	20 PMD
1,3,5-Trimethylbenzene	3.41	ug/L	5030/8260B	1.000 0	7/22/1999	07/22/1999 08::	20 PMD
1,2,4-Trimethylbenzene	17.8	ug/L	5030/8260B	1.000 0)7/22/1999	07/22/1999 08:	20 _ PMD
Naphthalene	7.8	ug/L	5030/8260B	1.000 0)7/22/1999	07/22/1999 08::	20 PMD
SURROGATE: Toluene-D8	105.25%						
SURROGATE: 1,4-DCB-D4	121.50%	*					
SURROGATE: Dibromofluoromethane	83.25%						
8270C PAHs (610) in WATER by GC/MC	C (Ion Trap)		MEDF	1			
Naphthalene	BDL	ug/L	3510/8270C	5.000)7/21/1999	07/23/1999 09:	34 MEC
2-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000)7/21/1999	07/23/1999 09:	34 MEC

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 18 July 29, 1999 Report # 9907001004 Order # 90066263 South Carolina Cert ID# 96023

Sample I.D.: MW-6

Collected: Received:

07/19/99 07/21/99

11:00 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
SURROGATE: 4-Terphenyl-D14	55.40%				- · · · · · · · · · · · · · · · · · · ·		

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Company Representative

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 19 July 29, 1999 Report # 9907001004 Order # 90066264 South Carolina Cert ID# 96023

Sample I.D.: MW-7 Collected: 07/19 Received: 07/21 07/19/99 07/21/99 2:30 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE DATE ANALY: EXT. ANALY.
Nitrate (as N)	0.32	mg/L	300.0	0.05	07/21/1999 07/21/199906:03MC
Sulfate	2.50	mg/L	300.0	1.0	07/21/1999 07/21/199906:03MC
Ferrous, Iron (Fe2+)	8.6	mg/L	SM3500-Fe D.	0.03	07/21/1999 07/21/199916:03KOD
Lead	0.048	mg/L	SM3113B (239.2)	0.005	07/22/1999 07/22/199918:01 M AH
8260B BTEX(Ext. List)in Water by GC-MS	(S.C.)		MEDF	1	
Methyl-Tert-Butyl Ether	979	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 10:10 PMD
Benzene	BDL	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 10:11 PMD
Toluene	5440	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 09:26 PMD
1.2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 10:11 PMD
Ethylbenzene	1750	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 09:27 PMD
m & p-Xylene	5550	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 09:27 PMD
o-Xylene	1800	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 09:27 PMD
1,3,5-Trimethylbenzene	573	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 09:27 PMD
1,2,4-Trimethylbenzene	2190	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 09:27 PMD
Naphthalene	530	ug/L	5030/8260B	1.000	07/23/1999 07/23/1999 09:27 PMD
SURROGATE: Toluene-D8	102.50%				
SURROGATE: 1,4-DCB-D4	113.25%				
SURROGATE: Dibromofluoro dethane	75.00%				
8270C PAHs (610) in WATER by GC/MC	C (Ion Trap)		MEDF	1	
Naphthalene	303	ug/L	3510/8270C	5.000	07/21/1999 07/23/1999 10:29 JAY
2-Methylnaphthalene	115	ug/L	3510/8270C	5.000	07/21/1999 07/23/1999 10:29 JAY
					•

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 20 July 29, 1999 Report # 9907001004 Order # 90066264 South Carolina Cert ID# 96023

Sample I.D.: MW-7 Collected: 07/19 07/19/99

2:30 09:30

Received:

07/21/99

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
1-Methylnaphthalene	63.8	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:29	JAY
Acenaphthene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/23/1999 10:29	JAY
Phenanthrene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:29	YAL
Fluoranthene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 10:29	JAY
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:29	JAY
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:29	JAY
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:29	YAL
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:29	JAY
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/23/1999 10:29	JAY
Fluorene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:29	JAY
Anthracene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 10:29	JAY
Pyrene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 10:29	YAL
Chrysene	BDL	ug/L	3510/8270C	1.000	07/21/1999	07/23/1999 10:29	JAY
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	07/21/1999	07/23/1999 10:29	YAL -
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:29	YAL
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 10:29	YAL
SURROGATE: D5-Nitrobenzene	68.60%						
SURFOGATE: 2 Fluorobiphenyl	67.70%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 21 July 29, 1999 Report # 9907001004 Order # 90066264 South Carolina Cert ID# 96023

Sample I.D.: MW-7

Collected: 07/19/99 Received: 07/21/99

2:30 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
G							

SURROGATE: 4-Terphenyl-D14

30.90%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535

NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Company Representative

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 22 July 29, 1999 Report # 9907001004 Order # 90066265 South Carolina Cert ID# 96023

Sample I.D.: MW-8 Collected: 07/19/99 12:00 Received: 07/21/99 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE DA' EXT. AN	TE ANALYS ALY.
Nitrate (as N)	0.27	mg/L	300.0	0.05	07/21/1999 07	/21/199906:03MC
Sulfate	5.20	mg/L	300.0	1.0	07/21/1999 07	/21/199906:04MC
Ferrous, Iron (Fe2+)	2.6	mg/L	SM3500-Fe D.	0.03	07/21/1999 07	/21/199916:03KOD
Lead	0.016	mg/L	SM3113B (239.2)	0.005	07/22/1999 07	/22/199918:01MAH
8260B BTEX(Ext. List)in Water by GC-MS ((S.C.)	•	MEDF	. 1		
Methyl-Tert-Butyl Ether	BDL	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
Benzene	BDL	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
Toluene	65.1	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
1,2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
Ethylbenzene	1110	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
m & p-Xylene	4470	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
o-Xylene	1220	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
1,3,5-Trimethylbenzene	653	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
1,2,4-Trimethylberizene	2510	ug/L	:030/8260B	1.000 0	07/23/1999 07/23/1	999 09:28 PMD
Naphthalene	410	ug/L	5030/8260B	1.000 0	7/23/1999 07/23/1	999 09:28 PMD
SURROGATE: Toluene-D8	101.50%					
SURROGATE: 1,4-DCB-D4	111.25%					
SURROGATE: Dibromofluoromethane	78.75%					
8270C PAHs (610) in WATER by GC/MC	(Ion Trap)		MEDF	1		
Naphthalene	223	ug/L	3510/8270C	5.000 0	07/21/1999 07/23/1	999 10:31 JAY
2-Methylnaphthalene	107	ug/L	3510/8270C	5.000	7/21/1999 07/23/1	999 10:55 JAY

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 23 July 29, 1999 Report # 9907001004 Order # 90066265 South Carolina Cert ID# 96023

Sample I.D.: MW-8 Collected: 07/19/99 Received: 07/21/99

12:00

09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYS
1-Methylnaphthalene	59.3	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 10:55	5 JAY
Acenaphthene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/23/1999 12:50) JAY
Phenanthrene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 12:50) JAY
Fluoranthene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 12:50) JAY
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 12:50) JAY
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 12:50) JAY
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 12:50) JAY
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 12:50) JAY
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	07/21/1999	07/23/1999 12:50	YAL C
Fluorene	BDL	ug/L	3510/8270C	5.000	07/21/1999	07/23/1999 12:50) JAY
Anthracene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 12:50) JAY
Pyrene	BDL	ug/L	3510/8270C	0.300	07/21/1999	07/23/1999 12:50) JAY
Chrysene	BDL	ug/L	3510/8270C	1.000	07/21/1999	07/23/1999 12:50	YAL 0
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	07/21/1999	07/23/1999 12:50	O JAY
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 12:50	YAL 0
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	07/21/1999	07/23/1999 12:50	O JAY
SURROGATE: D5-Nitrobenzene	67.00%						
SURROGATE: 2-Fluorobiphenyl	59.30%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page July 29, 1999 Report # 9907001004 Order # 90066265 South Carolina Cert ID# 96023

Sample I.D.: MW-8

Collected: 07/19/99 12:00 Received: 07/21/99 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYSI

SURROGATE: 4-Terphenyl-D14

47.80%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

9 - 66258/66265

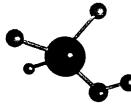
Project Submission #: 14

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REQUESTED LAB ANALYSIS			Company Name:
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Access Analytical, Inc.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project S.C. Coastal Truck Stop

Page August 31, 1999 Report # 9908001387 Order # 90078527 South Carolina Cert ID# 96023

Sample I.D.: Coastal Truck Stop Teles. Collected: 08/26/99 11:20

Received:

08/26/99 08/27/99 10:00

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Nitrate (as N)	1.35	mg/L	300.0	0.05	08/28/19	999 08/28/1999	9906:48JP
Sulfate	21	mg/L	300.0	1.0		999 08/28/1999	
Ferrous, Iron (Fe2+)	BDL	mg/L	SM3500-Fe D.	0.03	08/27/19	999 ()8/27/1999	9910:29KOD
Lead	0.007	mg/L	SM3113B (239.2)	0.005	08/28/19	999-08/28/1999	9909:53RAP
8260B BTEX(Ext. List)in Water by GC-MS	(S.C.)		MEDF	1			-
Methyl-Tert-Butyl Ether	15.0	ug/L	5030/8260B	1.000 08	08/28/1999 0	8/28/1999 10:;	:39 PMD
Benzene	89.6	ug/L	5030/8260B			8/28/1999 10:	
Toluene	289	ug/L	5030/8260B			8/28/1999 10:3	
1,2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B			8/28/1999 10:3	
Ethylbenzene	91.5	ug/L	5030/8260B			8/28/1999 10:3	
m & p-Xylene	265	ug/L	5030/8260B			8/28/1999 10:3	
o-Xylene	112	ug/L	5030/8260B			8/28/1999 10:3	
1,3,5-Trimethylbenzene	42.9	ug/L	5030/8260B			8/28/1999 10:3	
1,2,4-Trimethylbenzene	142	ug/L	5030/8260B	1.000 08	98/28/1999 Of	8/28/1999 10:3	
Naphthalene	5.0	ug/L	5030/8260B			8/28/1999 10:2	
SURROGATE: Toluene-D8	100.75%						
SURROGATE: 1,4-DCB-D4	112.75%						
SURROGATE: Dibromofluoromethane	104.50%						
8270C PAHs (610) in WATER by GC/MC	(Ion Trap)		MEDF	1			
Naphthalene	BDL	ug/L	3510/8270C	5.000 08	8/30/1999 08	8/30/1999 08:5	:52 MEC
2-Methylnaphthalene	BDL	ug/L	3510/8270C			8/30/1999 08:5	

Conway, SC 29526

Site Location/Project S.C. Coastal Truck Stop

Page 2 August 31, 1999 Report # 9908001387 Order # 90078527 South Carolina Cert ID# 96023

Sample I.D.: Coastal Truck Stop Teles. Collected: 08/26/99 11:20 Received: 08/27/99 10:00 Collected by: Client

Conected	by:	Chen

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
1-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000 0	8/30/1999	08/30/1999 08:52	MEC
Acenaphthene	BDL	ug/L	3510/8270C	3.000 0	8/30/1999	08/30/1999 08:52	MEC
Phenanthrene	BDL	ug/L	3510/8270C	5.000 0	8/30/1999	08/30/1999 08:52	MEC
Fluoranthene	BDL	ug/L	3510/8270C	0.300 0	8/30/1999	08/30/1999 08:52	MEC
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200 0	8/30/1999	08/30/1999 08:52	MEC
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200 0	8/30/1999	08/30/1999 08:52	MEC
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	8/30/1999	08/30/1999 08:52	MEC
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200 0	8/30/1999	08/30/1999 08:52	MEC
Acenaphthylene	BDL	ug/L	3510/8270C	3.000 0	8/30/1999	08/30/1999 08:52	MEC
Fluorene	BDL	ug/L	3510/8270C	5.000 0	8/30/1999	08/30/1999 08:52	MEC
Anthracene	BDL	ug/L	3510/8270C	0.300 0	8/30/1999	08/30/1999 08:52	MEC
Pyrene	BDL	ug/L	3510/8270C	0.300 0	8/30/1999	08/30/1999 08:52	MEC
Chrysene	BDL	ug/L	3510/8270C	1.000	08/30/1999	08/30/1999 08:52	MEC
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	08/30/1999	08/30/1999 08:52	MEC
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	08/30/1999	08/30/1999 08:52	MEC
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	08/30/1999	08/30/1999 08:52	MEC
SURROGATE: D5-Nitrobenzene	83.80%						
SURROGATE. 2-Fluorobiphenyl	87.70%						

Conway, SC 29526

Site Location/Project S.C. Coastal Truck Stop Page 3 August 31, 1999 Report # 9908001387 Order # 90078527 South Carolina Cert ID# 96023

Sample I.D.: Coastal Truck Stop Teles.

Collected: 08/26/99 11:20 Received: 08/27/99 10:00

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION	DATE	DATE	ANALYST
I III III III III III III III III III	10000			LIMIT	EXT.	ANALY.	
				1341744 4			

SURROGATE: 4-Terphenyl-D14

40.20%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Company Representative

Access Analytical - Chain of Custody Record Project Submission #: 99 1287 9-75527

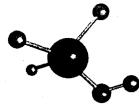
PO #:

Company Name:	-	REQUESTED LAB ANALYSIS:
Jaytheastern	Joutheastern Environmental Inc	ACCESS
Address:	Street	
City: State: Zip:	late: Zip: 29526	N N N N N N N N N N N N N N N N N N N
Project Name: Coastal Truck Stop	uck Stop	T T 1248 Lake Murray Blvd.
Report To: Bruce G. Newell	G. Newell	T T C C C C C C C C C C C C C C C C C C
Sample Label	Date Time Matr # of Collected Collected Collected Collected	R PO Z E D T WENTS NOTES / COMMENTS
Coastal Truck Stop Telescoping		77777 CUT = 15.6/7852
ETS Telescopina	8 3 400 pt 18 8 3	→ → → →
	-	
Turnaround Time Requested:	Samples Reed. Project Location:	Relinquished By: Date: Time: Received By:
Std. (5-7 Bus days)	7	8/2189
RUSH*	Z	
*Date Required:	Other (s)	(specify)

Original Copy · Returned w/Report Yellow Copy · Access Analytical Copy Pink Copy · Client Copy

Access Analytical, Inc.

of



Access ANALYTICAL, INC.

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 1 August 12, 1999 Report # 9908000392 Order # 90072492 South Carolina Cert ID# 96023

Sample I.D.: MW 9 Collected: 08/05

08/95/99

11:00

Received:

08/09/99

09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYS
Nitrate (as N)	4.08	mg/L	300.0	0.05	08/10/19	99 08/10/1999	13:45MC
Sulfate	2.48	mg/L	300.0	1.0	08/10/19	99 08/10/1999	13:45MC
Ferrous, Iron (Fe2+)	BDL	mg/L	SM3500-Fe D.	0.03	08/10/19	99 08/10/1999	10:371VR/M
Lead	0.012	mg/L	SM3113B (239.2)	0.005	08/10/19	99 08/10/1999	11:01MAH
8260B BTEX(Ext. List)in Water by GC-MS (S.C.)		MEDF	1			
Methyl-Tert-Butyl Ether	BDL	ug/L	5030/8260B	1.000	08/12/1999 0	8/12/1999 10:0	7 PMD
Benzene	BDL	ug/L	5030/8260B	1.000	08/12/1999 0	8/12/1999 10:0	7 PMD
Toluene	BDL	ug/L	5030/8260B	1.000	08/12/1999 0	8/12/1999 10:0	7 PMD
1,2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B	1.000	08/12/1999 0	8/12/1999 10:0	7 PMD
Ethylbenzene	BDL	ug/L	5030/8260B	1.000	08/12/1999 O	8/12/1999 10:0	7 PMD
m & p-Xylene	1.46	ug/L	5030/8260B	1.000	08/12/1999 (8/12/1999 10:0	7 PMD
o-Xylene	BDL	ug/L	5030/8260B	1.000	08/12/1999 (8/12/1999 10:0	7 PMD
1,3,5-Trimethylbenzene	BDL	ug/L	5030/8260B	1.000	08/12/1999 0	8/12/1999 10:0)7 . PMD
1,2,4-Trimethylbenzene	1.29	ug/L	5030/8260B	1.000	08/12/1999 0	8/12/1999 10:0)7 PMD
Naphthalene	BDL	ug/L	5030/8260B	1.000)8/12/1999 (8/12/1999 10:0)7 PMD
SURROGATE: Toluene-D8	95.75%						
SURROGATE: 1,4-DCB-D4	103.25%						
SURROGATE: Dibromofluoromethane	102.50%						
8270C PAHs (610) in WATER by GC/MC	(Ion Trap)		MEDF	1			
Naphthalene	BDL	ug/L	3510/8270C	5,000	08/10/1999(08/11/1999 10:2	20 MEC
2-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	08/10/1999 (8/11/1999 10::	20 MEC

Conway, SC 29526

Site Location/Project

. Coastal Truck Stop

Page 2 August 12, 1999 Report # 9908000392 Order # 90072492 South Carolina Cert ID# 96023

Sample I.D.: MW 9 Collected: 08/05

08/05/99

Received:

14:00 09:30

08/09/99

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	N DATE EXT.	DATE ANALY.	ANALYSI
1-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:20	MEC
Acenaphthene	BDL	ug/L	3510/8270C	3.000	08/10/1999	08/11/1999 10:20	MEC
Phenanthrene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:20	MEC
Fluoranthene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:20	MEC
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:20	MEC
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:20	MEC
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:20	MEC
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:20	MEC
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	08/10/1999	08/11/1999 10:20	MEC
Fluorene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:20	MEC
Anthracene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:20	MEC
Pyrene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:20	MEC
Chrysene	BDL	ug/L	3510/8270C	1.000	08/10/1999	08/11/1999 10:20	MEC
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	08/10/1999	08/11/1999 10:20	MEC
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:20	MEC
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:20	MEC
SURROGATE: D5-Nitrobenzene	56.60%						
SURROGATE: 2-Fluorobiphenyl	76.30%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page August 12, 1999 Report # 9908000392 Order # 90072492 South Carolina Cert ID# 96023

Sample J.D.: MW 9

08/05/99 Collected:

11:00

Received:

08/09/99

09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
SURROGATE: 4-Terphenyl-D14	43.80%			• • • • • • • • • • • • • • • • • • • •			

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.

10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 4 August 12, 1999 Report # 9908000392 Order # 90072493 South Carolina Cert ID# 96023

Sample I.D.: MW 10 Collected: 08/05/99 Received: 08/09/99

13:15 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYST
Nitrate (as N)	3.93	mg/L	300.0	0.05	08/10/1	999 08/10/1999	13:45MC
Sulfate	2.69	mg/L	300.0	1.0	08/10/	1999 08/10/1999	13:45MC
Ferrous, Iron (Fe2+)	BDL	mg/L	SM3500-Fe D.	0.03	08/10/1	999 08/10/1999	10:37IVR/M
Lead	0.013	mg/L	SM3113B (239.2)	0.005	08/10/1	1999 08/10/1999	11:01MAH
8260B BTEX(Ext. List)in Water by GC-MS	(S.C.)		MEDF	1,			
Methyl-Tert-Butyl Ether	BDL	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
Benzene	BDL	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
Toluene	4.09	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
1,2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
Ethylbenzene	2.63	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
m & p-Xylene	5.02	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
o-Xylene	2.41	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
1,3,5-Trimethylbenzene	BDL	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
1,2,4-Trimethylbenzene	2.74	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
Naphthalene	BDL	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	7 PMD
SURROGATE: Toluene-D8	101.25%						
SURROGATE: 1,4-DCB-D4	92.00%						
SURROGATE: Dibromofluoromethane	106.00%						
8270C PAHs (610) in WATER by GC/MC	(Ion Trap)		MEDF	1			
Naphthalene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:2	1 MEC
2-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:2	1 MEC

Bruce G. Newell Southeastern Environmental Inc 323 Main Street

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 5 August 12, 1999 Report # 9908000392 Order # 90072493 South Carolina Cert ID# 96023

Sample I.D.: MW 10 Collected: 08/05/99 Received: 08/09/99

13:15 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	N DATE EXT.	DATE ANALY.	ANALYST
1-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:21	MEC
Acenaphthene	BDL	ug/L	3510/8270C	3.000	08/10/1999	08/11/1999 10:21	MEC
Phenanthrene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:21	MEC
Fluoranthene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:21	MEC
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:21	MEC
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:21	MEC
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:21	MEC
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:21	MEC
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	08/10/1999	08/11/1999 10:21	MEC
Fluorene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:21	MEC
Anthracene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:21	MEC
Pyrene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:21	MEC
Chrysene	BDL	ug/L	3510/8270C	1.000	08/10/1999	08/11/1999 10:21	MEC
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	08/10/1999	08/11/1999 10:21	MEC
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:21	MEC
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:21	MEC
SURROGATE: D5-Nitrobenzene	55.60%						
SURROGATE: 2-Fluorobiphenyl	81.20%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 6 August 12, 1999 Report # 9908000392 Order # 90072493 South Carolina Cert ID# 96023

Sample I.D.: MW 10

Collected:

08/05/99 13:

13:15 09:30

Received:

08/09/99

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST

SURROGATE: 4-Terphenyl-D14

57.50%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023) Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826 Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

Company Representative

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 7 August 12, 1999 Report # 9908000392 Order # 90072494 South Carolina Cert ID# 96023

Sample I.D.: MW 11 Collected: 08/05/99

Received:

12:00 09:30

08/09/99

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Nitrate (as N)	.34	mg/L	300.0	0.05	08/10/1	999 08/10/1999	13:45MC
Sulfate	3.44	mg/L	300.0	1.0	08/10/1	999 08/10/1999	13:45MC
Ferrous, Iron (Fe2+)	3.20	mg/L	SM3500-Fe D.	0.03	08/10/1	999 08/10/1999	010:37IVR/M
Lead	0.12	mg/L	SM3113B (239.2)	0.005	08/10/1	999 08/10/1999	11:01MAH
8260B BTEX(Ext. List)in Water by GC-MS	(S.C.)		MEDF	1.			
Methyl-Tert-Butyl Ether	BDL	ug/L	5030/8260B	1:000	08/12/1999	08/12/1999 09:3	38 PMD
Benzene	10.1	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	38 PMD
Toluene	1.63	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	38 PMD
1,2-Dibromoethane (EDB)	BDL	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	38 PMD
Ethylbenzene	19.9	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	38 PMD
m & p-Xylene	9.10	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	38 PMD
o-Xylene	2.08	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	38 PMD
1,3,5-Trimethylbenzene	67.8	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	38 PMD
1,2,4-Trimethylbenzene	33.3	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09:3	38 PMD
Naphthalene	15.2	ug/L	5030/8260B	1.000	08/12/1999	08/12/1999 09::	38 PMD
SURROGATE: Toluene-D8	99.25%						
SURROGATE: 1,4-DCB-D4	98.50%						
SURROGATE: Dibromofluoromethane	108.50%						
8270C PAHs (610) in WATER by GC/MC	C (Ion Trap)		MEDF	1			
Naphthalene	10.8	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10::	21 MEC
2-Methylnaphthalene	15.0	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10::	21 MEC

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 8 August 12, 1999 Report # 9908000392 Order # 90072494 South Carolina Cert ID# 96023

Sample I.D.: MW 11 Collected: 08/05/99 Received: 08/09/99

12:00 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
1-Methylnaphthalene	10.1	ug/L	3510/8270C	5.000 0	8/10/1999	08/11/1999 10:21	MEC
Acenaphthene	BDL	ug/L	3510/8270C	3.000 0	8/10/1999	08/11/1999 10:21	MEC
Phenanthrene	BDL	ug/L	3510/8270C	5.000 0	8/10/1999	08/11/1999 10:21	MEC
Fluoranthene	BDL	ug/L	3510/8270C	0.300	8/10/1999	08/11/1999 10:21	MEC
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	8/10/1999	08/11/1999 10:21	MEC
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	8/10/1999	08/11/1999 10:21	MEC
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	8/10/1999	08/11/1999 10:21	MEC
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	8/10/1999	08/11/1999 10:21	MEC
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	8/10/1999	08/11/1999 10:21	MEC
Fluorene	BDL	ug/L	3510/8270C	5.000	8/10/1999	08/11/1999 10:21	MEC
Anthracene	BDL	ug/L	3510/8270C	0.300	8/10/1999	08/11/1999 10:21	MEC
Pyrene	BDL	ug/L	3510/8270C	0.300	8/10/1999	08/11/1999 10:21	MEC
Chrysene	BDL	ug/L	3510/8270C	1.000	8/10/1999	08/11/1999 10:21	MEC
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	8/10/1999	08/11/1999 10:21	MEC
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	8/10/1999	08/11/1999 10:21	MEC
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	8/10/1999	08/11/1999 10:21	MEC
SURROGATE: D5-Nitrobenzene	50.10%						
SURROGATE: 2-Fluorobiphenyl	54.50%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page August 12, 1999 Report # 9908000392 Order # 90072494 South Carolina Cert ID# 96023

Sample I.D.: MW 11

08/05/99 Collimened:

12:00 08/09/99 09:30

Received:

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST

SURROGATE: 4-Terphenyl-D14

41.80%

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)

Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535

NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826

Unless otherwise noted, samples submitted for EPA 5035 were collected, preserved and analyzed in accordance

with all methodology requirements.

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 10 August 12, 1999 Report # 9908000392 Order # 90072495 South Carolina Cert ID# 96023

Sample I.D.: MW 14 Collected: 08/05/99

Received:

08/09/99

12:45 09:30

Sulfate Ferrous, Iron (Fe2+) Lead 0.0 8260B BTEX(Ext. List)in Water by GC-MS (S.C.) Methyl-Tert-Butyl Ether Benzene Toluene 1,2-Dibromoethane (EDB) Ethylbenzene m & p-Xylene 1	‡7 DL	mg/L mg/L S	300.0 300.0	0.05 1.0		08/10/1999	13:45MC
Ferrous, Iron (Fe2+) Lead 8260B BTEX(Ext. List)in Water by GC-MS (S.C.) Methyl-Tert-Butyl Ether Benzene Toluene 1,2-Dibromoethane (EDB) Ethylbenzene m & p-Xylene 1	DL	J	300.0	1.0			
Lead 0.08 8260B BTEX(Ext. List)in Water by GC-MS (S.C.) Methyl-Tert-Butyl Ether 8 Benzene 1 1,2-Dibromoethane (EDB) Ethylbenzene 6 m & p-Xylene 1		mg/L S		1.0	08/10/1999	08/10/1999	13:45MC
8260B BTEX(Ext. List)in Water by GC-MS (S.C.) Methyl-Tert-Buryl Ether Benzene Toluene 1,2-Dibromoethane (EDB) Ethylbenzene m & p-Xylene 1	016		M3500-Fe D.	0.03	08/10/1999	08/10/1999	10:371VR/M
Methyl-Tert-Butyl Ether Benzene Toluene 1,2-Dibromoethane (EDB) Ethylbenzene m & p-Xylene 1		mg/L SM	13113B (239.2)	0.005	08/10/1999	08/10/1999	11:01MAH
Benzene Toluene 1 1,2-Dibromoethane (EDB) Ethylbenzene m & p-Xylene 1			MEDF	1			
Toluene 1 1,2-Dibromoethane (EDB) E thylbenzene	3.68	ug/L	5030/8260B	1.000 0	8/12/1999 08/1	12/1999 17:0)9 PMD
1,2-Dibromoethane (EDB) Ethylbenzene m & p-Xylene 1	591	ug/L	5030/8260B	1.000 0	8/12/1999 08/1	12/1999 17:0	9 PMD
Ethylbenzene 0 m & p-Xylene 1	350	ug/L	5030/8260B	1.000 0	8/12/1999 08/1	12/1999 17:0)9 PMD
m & p-Xylene 1	BDL	ug/L	5030/8260B	1.000 0	8/12/1999 08/1	12/1999 09:3	39 PMD
•	640	ug/L	5030/8260B	1.000 0	8/12/1999 08/1	12/1999 17:0	09 PMD
	490	ug/L	5030/8260B	1.000 0	8/12/1999 08/	12/1999 17:0)9 PMD
o-Xylene	633	ug/L	5030/8260B	1.000 0	8/12/1999 08/	12/1999 17:0	09 PMD
1,3,5-Trimethylbenzene	357	ug/L	5030/8260B	1.000 0	8/12/1999 08/	12/1999 17:0	O9 PMD
1,2,4-Trimethylbenzene	290	ug/L	5030/8260B	1.000 0	8/12/1999 08/	12/1999 17:0	09 PMD
Naphthalene	8.4	ug/L	5030/8260B	1.000 0	8/12/1999 08/	12/1999 17:	10 PMD
SURROGATE: Toluene-D8 10	06.50%						
SURROGATE: 1,4-DCB-D4	00.50%						
SURROGATE: Dibromofluoromethane	77.75%						
8270C PAHs (610) in WATER by GC/MC (Ion Tra	ap)		MEDF	1			
Naphthalene E	BDL	ug/L	3510/8270C	5.000 0	8/10/1999 08/	11/1999 10::	22 MEC
2-Methylnaphthalene E	BDL	ug/L	3510/8270C	5.000 0	8/10/1999 08/	11/1999 10:2	22 MEC

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page 11 August 12, 1999 Report # 9908000392 Order # 90072495 South Carolina Cert ID# 96023

Sample I.D.: MW 14 Collected: 08/05/99 Received: 08/09/99

12:45 09:30

PARAMETER	RESULT	UNITS	METHOD	DETECTIO LIMIT	ON DATE EXT.	DATE ANALY.	ANALYST
1-Methylnaphthalene	10.2	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:22	MEC
Acenaphthene	BDL	ug/L	3510/8270C	3.000	08/10/1999	08/11/1999 10:22	MEC
Phenanthrene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:22	MEC
Fluoranthene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:22	MEC
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:22	MEC
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:22	MEC
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:22	MEC
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:22	MEC
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	08/10/1999	08/11/1999 10:22	MEC
Fluorene	BDL	ug/L	3510/8270C	5.000	08/10/1999	08/11/1999 10:22	MEC
Anthracene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:22	MEC
Pyrene	BDL	ug/L	3510/8270C	0.300	08/10/1999	08/11/1999 10:22	MEC
Chrysene	BDL	ug/L	3510/8270C	1.000	08/10/1999	08/11/1999 10:22	MEC
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	08/10/1999	08/11/1999 10:22	MEC
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:22	MEC
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	08/10/1999	08/11/1999 10:22	MEC
SURROGATE: D5-Nitrobenzene	91.30%						
SURROGATE: 2-Fluorobiphenyl	98.30%						

Conway, SC 29526

Site Location/Project

Coastal Truck Stop

Page August 12, 1999 Report # 9908000392 Order # 90072495 South Carolina Cert ID# 96023

Sample I.D.: MW 14

Collected: 08/05/99 12:45 08/09/99 Received: 09:30

Collected by: Client

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
SURROGATE: 4-Terphenyl-D14	66.10%						

REPORT COMMENTS:

BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc. 10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023) Certs: Al. =#41180, Ct. =#PH0217, Ks. =#E270 + E1245, Ky. =#90087, La. =#9601, Md. =#271, Ma. =#M-FL535 NC. =#539, ND. =#R163, OK. =#9523, SC. =#96023, Tn. =#TN02826 Unless otherwise noted, submitted for EPA 5035 were collected, preserved and analyzed in accordance with all methodology requirements.

99/08-39 L Access Analytical - Chain of Custody Record

9-72492-9-72495

Project Submission #

PO #:

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Access Analytical, Inc.

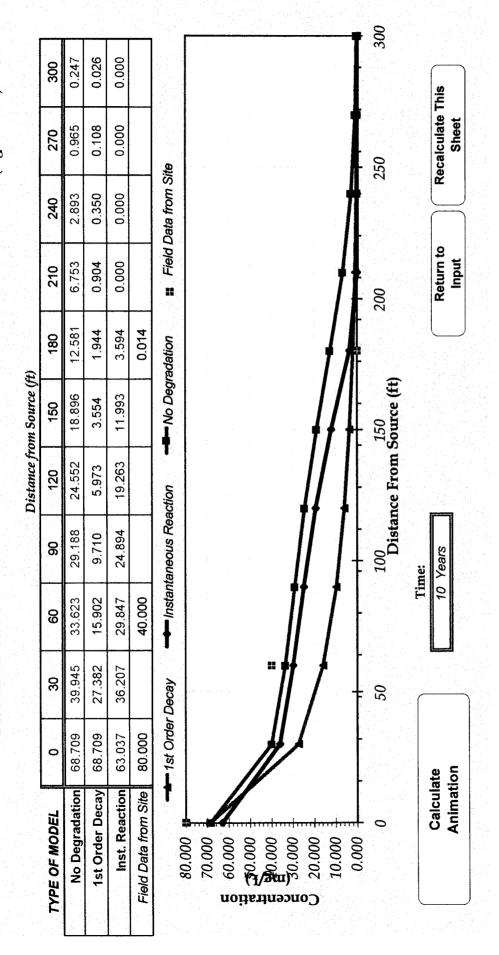
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APPENDIX E

Fate and Transport Model Input and Results

Recalculate This Vertical Plane Source: Look at Plume Cross-Section 115 \$1. Enter value directly...or 2. Calculate by filling in grey cells below. formulas, hit button below) ▶ Data used directly in model Observed Centerline Concentrations at Monitoring Wells Dispersivities, R, lambda, other Value calculated by model. 270 Sheet Restore Formulas for Vs, Paste Example Dataset (Don't enter any data) View of Plume Looking Down If No Data Leave Blank or Enter "0" 240 and Input Concentrations & Widths 210 Data Input Instructions: Help 0.14 180 for Zones 1, 2, and 3 20 150 Variable, Run Name **RUN ARRAY** View Output 40.0 Coastal 10 Source Thickness in Sat. Zone* 10 (#) 8. CHOOSE TYPE OF OUTPUT TO SEE: <u>S</u> \mathcal{E} 7. FIELD DATA FOR COMPARISON 2 6 4 5 9 88 Š B **BIOSCREEN Natural Attenuation Decision Support System** Width* (ft) | Conc. (mg/L)* Dist. from Source (ft) Concentration (mg/L) 1st Order Source Halflife (see Hel CENTERLINE View Output Modeled Area Length* 8 Modeled Area Width* 8 50 Source Zones: 6. SOURCE DATA In Source NAPL, Soil RUN Simulation Time* 5. GENERAL Soluble Mass Inst. React. Version 1.4 30 2 10 S (cm/sec) (per yr) (mg/L) (mg/L)(mg/L)(mg/L) (mg/L) (year) (Zkg) (ft/yr) (Kg/ (#J#) \mathfrak{F} 0 € \mathfrak{F} D \mathcal{E} 0 1.1E-02 5.7E-5 2.5E-1 17.5 0.003 200 8 44.8 2.6 9.9 0.8 0.0 8.0 2.5 0.3 88 6 6 0 ò Air Force Center for Environmental Excellence alpha x alpha y alpha z t-half or Instantaneous Reaction Model NO3 Fe2+ SO4 CH4 lambda 800 8 40 9 œ 9 × ~ Estimated Plume Length Longitudinal Dispersivity* Transverse Dispersivity* FractionOrganicCarbon 4. BIODEGRADATION 1st Order Decay Coeff* Observed Ferrous Iron* 1. HYDROGEOLOGY Hydraulic Conductivity Vertical Dispersivity* Observed Methane* Partition Coefficient Retardation Factor* Seepage Velocity* Hydraulic Gradient 3. ADSORPTION 2. DISPERSION Soil Bulk Density Solute Half-Life ò ŏ Delta Oxygen* Delta Sulfate* Delta Nitrate* **Porosity**

DISSOLVED HYDROCARBON CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)



300 Vertical Plane Source: Look at Plume Cross-Section Recalculate This A or 2. Calculate by filling in grey calls helm. formulas, hit button below) ▶ Data used directly in model. Observed Centerline Concentrations at Monitoring Wells Dispersivities, R, lambda, other ▼ Value calculated by model. Sheet Restore Formulas for Vs, Paste Example Dataset (Don't enter any data) View of Plume Looking Down If No Data Leave Blank or Enter "0" and Input Concentrations & Widths Data Input Instructions: Help 180 for Zones 1, 2, and 3 20 150 Variable* 06 Run Name **RUN ARRAY** View Output 40.0 60 Coastal 20 Source Thickness in Sat. Zone* 10 (#) 8. CHOOSE TYPE OF OUTPUT TO SEE: 7. FIELD DATA FOR COMPARISON 380 20 8 B (mg/L)* **BIOSCREEN Natural Attenuation Decision Support System** Source Halflife (see Help) Concentration (mg/L) Dist. from Source (ft) ✓ 1st Order CENTERLINE 300 View Output Modeled Area Length* Modeled Area Width* 6 စ္ထ 40 20 50 Source Zones: SOURCE DATA Conc In Source NAPL, Soil Simulation Time* 5. GENERAL Soluble Mass Width* (ft) Version 1.4 Inst. React. 10 30 S (cm/sec) (per yr) (mg/L) (year) (mg/L) (mg/L) (mg/L) (mg/L) (L/kg) (#J#) (Kg/l) \mathcal{F} \mathcal{E} \mathfrak{E} \mathcal{E} T 0 0 1.1E-02 5.7E-5 2.5E-1 0.003 17.5 44.8 80 0.0 200 2.6 9.9 0.8 2.5 ဆွ 6 **4** ò Air Force Center for Environmental Excellence alpha x alpha y alpha z or Instantaneous Reaction Model NO3 Fe2+ lambda t-half SO4 CH4 800 00 40 g 9 スー Estimated Plume Length Longitudinal Dispersivity* Transverse Dispersivity* FractionOrganicCarbon 4. BIODEGRADATION 1st Order Decay Coeff* Observed Ferrous Iron* 1. HYDROGEOLOGY Hydraulic Conductivity Vertical Dispersivity* Observed Methane* Partition Coefficient Retardation Factor* Hydraulic Gradient Seepage Velocity* 3. ADSORPTION 2. DISPERSION Soil Bulk Density ò Solute Half-Life Delta Oxygen* Delta Sulfate* Delta Nitrate* **Porosity**

DISSOLVED HYDROCARBON CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

					Distance Jr	Distance from Source (11)	3				
TYPE OF MODEL	0	30	9	06	120	150	180	210	240	270	300
No Degradation	59.012	34.399	29.257	26.324	24.343	22.880	21.684	20.541	19.221	17.496	15.213
1st Order Decay	59.012	23.524	13.683	8.420	5.328	3.432	2.237	1.471	0.971	0.641	0.418
Inst. Reaction	49.185	27.382	22.463	19.490	17.449	15.941	14.705	13.487	11.993	9.912	7.022
Field Data from Site	80.000		40.000				0.014				
	1st Order Decay	r Decay	Instan	Instantaneous Reaction	action	No Degradation	adation	# Field	Field Data from Site	ite	
20.000 10.000 10.000 0.000 0.000		20		. + 100 Dista	100 Distance From Source (ft)	150 Source (ft)		200		250	300
Calculate Animation	late		Tin 20	Time: 20 Years				Return to Input	E	Recalculate This Sheet	his

VPPENDIX F

Tier I Evaluation

III. Tier I Evaluation

A. CURRENT LAND USE - Identify any potential receptors or human exposure pathways (e.g. basements, contaminated soils from UST closures, etc.) within a 1000-foot radius for current land use. Complete the table below. Additional sheets may be attached if necessary.

				, 	
	In Contact In Contact	οN	Kes	Leaching to Ground-Water	
		ON	Χes	eliteloV noiteledal	
		ON	Yes	Dermal contact	·
		(an)	Yes	noizsegnl	Subsurtace Soil
		©N)	Дes	Leaching to Ground-Water	
	07-04-5MT	(N)	sэY	Volatile noiselsdril	
	1:62 (2-2,294)	en)	гэY	Dermal contact	
	一分かけっとの	ON)	SaY	Ingestion	Surticial Soil
·	[m.factes)	(%)	χcz	eliteloV noiteledni	
	Sukace Mater Justach	(N)	ХeУ	Dèrmal contact	
	00	ON	səД	noiteagul	Surface Water
	gulague	(ON)	Yes	elistloV noiselsdal	
	Nater	(N)	Yes	Dermal Contact	
	Sildis	ON)	хэХ	Ingestion	Ground-Water
		(ON)	səХ	Explosion Hazard	
		ON)	Yes	noiteledal	. Ait
Data Requirements (IF pathway selected)	Exposure point or Reason for Non-Selection		2 yawnta9 Ynoitaulav3	Exposure Route	Media (for exposure)

B. FUTURE LAND USE - Identify any potential receptors or human exposure pathways (e.g. basements, contaminated soils from UST closures, etc.) within a 1000-foot radius for projected future land use. Complete the table below. Additional sheets may be attached if necessary

					
	In Contact when when	οN	Səl	of griches Leaching to	
	5	οN	691	Solistile noitsladul	
	(12+20/2022) J J	οN	€ S9Y	Dermal contact	
		(ON)	SəY	noiteagnl	Subsurface Soil
		ON)	Хся	Leaching to Ground-Water	
	(2720dvnj	©N)	Yes	Volatile noiselarion	
	Surficial	ON	Yes	Dermal contact	
	$\rho_{\rm o}$	ON	Yes	noiteagnl	Surticial Soil
		(on)	χes	Volatile noitelednl	
	7stow batarguz	ON	Yes	Dermal contact	
	No 500 face	ON	Yes	noissagnl	Surface Water
***	plague	ÓИ	λes	eliteloV noiteledal	
	Water	(ON)	Yes	Dermal Contact	
	Roblic	ON)	Yes	noizeagni	Ground-Water
		(ON)	Хes	Explosion Hazard	
		QN)	Хes	noiteledal	Ait
Data Requirements (IF pathway selected)	Exposure point or Reason tor Non-Selection	selected for (Ves or No)		Exposure Route	Media (for exposure)

TABLES

Southeastern Environmental, INC. HAND AUGER / SOIL BORING LOG

Job Location: Coastal Truck Stop

Date: 3/4/99 – 3/

Water Table: ~10'

Samples Taken By: JMH/JVB/AWB/SY

Job Type: RA

Bore	Sample	OVA	Soil	Muncell	Comments	Time
Hole	Depth	(ppm)	Description	Туре		
·	(ft.)	5000	Brown sandy clay	7.5YR 6/3	CMD ONC ODOD	11:26
1	7	5000		7.5YR 6/3	STRONG ODOR	11.20
1	10	5000	Orange Brown sandy clay		STRONG ODOR	
2	8	1200	Brown sandy clay	7.5YR 6/3	ODOR	11:40
2	10	5000	Mottled gray orange snady clay	2.5Y 6/3	STRONG ODOR	12:00
3	6	400	Brown sandy clay	7.5YR 6/3		12:15
3	10	5000	Brown clay	7.5YR 6/3	STRONG ODOR	12:30
4	8	200	Orange clay	5YR 6/4	NO ODOR	
4	10	1000	Orange brown clay	5YR 6/4	SOME ODOR	
5	8	2200	Brown sandy clay	7.5YR 6/3	SOME ODOR	
5	10	5000	Brown sandy clay	7.5YR 6/3	STRONG ODOR	
6	7	1000	Brown sandy clay	7.5YR 6/3		13:44
6	11	5000	Orange sandy clay	5YR 6/4	STRONG ODOR	
7	8	300	Brown sandy clay	7.5YR 6/3		
7	11	5000	Mottled orange gray sandy clay	5YR 6/4	STRONG ODOR	
8	11	8	Brown sandy clay	7.5YR 6/3		
9	 7	5000	Brown sandy clay	7.5YR 6/3	STRONG ODOR	14:00
9	111	5000	Orange brown hard clay	5YR 6/4	STRONG ODOR	14:30
10	8	300	Brown sandy clay	7.5YR 6/3		1410
10	11	5000	Orange brown clay	5YR 6/4	STRONG ODOR	1245
11	5	120	Brown sandy clay	7.5YR 6/3		
11	8	5000	Brown sandy clay	7.5YR 6/3	STRONG ODOR	
11	11	5000	Brown Sandy clay	7.5YR 6/3	STRONG ODOR	1506
12	8	20	Brown sandy clay	7.5YR 6/3	NDO	
13	3	5000	Brown sandy	7.5YR 6/3	STRONG ODOR	1445
13	5	5000	Tan sand	2.5Y 6/3	STRONG ODOR	
13	8	5000	Brown sandy clay	7.5YR 6/5	SOME ODOR	1516
14	11	3100	Brown sandy clay	7.5YR 6/5	GAS ODOR	
15	3	25	Brown sandy clay	7.5YR 6/3	NDO	1505
15	8	3	Tan orange sand	5YR 6/4	NDO	1524
15	11	5000	Tan orange sand	5YR 6/4	STRONG ODOR	1530
16	11	5000	Orange sandy clay	5YR 6/4	STRONG ODOR	
17	5	200	Lt. Brown sand	7.5YR 6/3	ODOR	

17	8	5000	Gray sand	2.5Y 6/3	STRONG ODOR	
17	11	5000	Brown sandy clay	7.5YR 6/3	STRONG ODOR	
18	8	4	Brown sand	7.5YR 6/3	NDO	
18	11	5000	Brown sand	7.5YR 6/3	STRONG ODOR	
19	8	2200	Brown sand	7.5YR 6/3		
19	11	5000	Brown sand	7.5YR 6/3	STRONG ODOR	
20	8	2100	Brown sand	7.5YR 6/3		
20	11	4900	Brown sand	5YR 6/4	STRONG ODOR	
21	3	180	Tan/Brown sand	7.5YR 7/2	STRONG ODON	
21	5	30	Tan/Brown sand	7.5YR 6/3	NDO	
	8	3500	Brown sand	7.5YR 6/2	STRONG ODOR	
21 21	11	5000	Brown sand	7.5YR 6/4	STRONG ODOR	-
22	2.5	5000	Brown tan sand	7.5YR 6/3	STRONG ODOR	
	5	5000	Lt. Brown sand	7.5YR 6/3	STRONG ODOR	
22	8	5000	Brown sand	7.5YR 6/4	STRONG ODOR	
22	11	5000	Brown sand	7.5YR 5/6	STRONG ODOR	
23	5	250	Damp orange clay	7.5YR 3/6	NDO	
	8	3	Brown sandy clay	7.5YR 5/4	NDO	
23		450	Damp orange clay	5YR 6/4	? ODOR	
23	11	26	Brown sand	7.5YR 6/4	NDO	
24	8	5	Orange clay	7.5YR 3/6	NDO	
24		110	Orange tan clay	5YR 6/4	NDO	
24	11	3	Orange clay	5YR 6/4	NDO	-
25	8	190	Tan/Orange clay	5YR 6/4	NDO	
25	11	ND	Brown sand	7.5YR ³ / ₄	NDO	
26	5	ND ND	Orange tan clay	7.5YR 6/4	NDO	
26	8	2700	Orange tan clay	5YR 6/4	SOME ODOR	
26	11	15	Orange tan clay	5YR 5/8	NDO	
27	8	3100	Orange tan clay	5YR 5/6	SOME GAS ODOR	
27	11	ND ND	Orange tan clay	5YR 5/2	NDO	1115
28	8	2600	Orange tan clay	5YR 7/1, 6/8	SOME GAS ODOR	1110
28	11	ND	tan sandy clay	5YR 5/2	NDO	
29	8	300	Orange clay	5YR 6/4	NDO	
29	11	ND ND	Tan clay	5YR 6/1	NDO	-
31	8	60	Tan clay	5YR 7/1	OLD ROTTEN ODOR	
31	11	ND	Tan clay	5YR 5/1	NDO NDO	
32	8	40	Tan clay	5YR 6/1	NDO	
32	11	1500	Brown sandy clay	5YR 4/1	STRONG ? ODOR	
33	11	100	Brown sandy clay	5yr 4/1	NDO	1
34	11	ND	Red dry clay	5YR 6/5	NDO	-
35	11.5		Red/drk orange dry clay	7.5YR 5/6, 5YR	NDO	1435
36	11.5	70		5/8, 5YR 8/1		1 100
37	11	50	Red/drk orange dry clay	7.5YR 5/6, 5YR 8/1, 2.5YR 4/8	NDO	1 1 1 2 2
38	11	240	Red dry sandy clay	5YR 6/5	NOT MUCH ODOR	1419
39	11	5000	orange dry clay	5YR 8/1, 5YR 6/4, 2.5YR 4/8	GAS ODOR	

-

40	11				ODOR ?	1100
	11	5000	Gray clay	5YR 3/1	GAS ODOR	
42	11	150	Moist gray clay	5YR 8/1,7/1	NOT MUCH ODOR	
43	11	17	Lt. Brown sandy clay	5YR 4/1	NDO	
44	11.5	5000	Dry Brown sandy clay	5YR 8/1, 7/1	GAS ODOR	1427
45	11	30	Gray / It. Brown clay	2.5Y 6/3	NDO	1430
46	11	5000	Brown Grey clay	7.5YR 6/8, 8/0	STRONG ODOR	
		ND	Red dry clay	2.5Y 7/0 5YR 6/5	NDO	1000
47	11	ND	Red dry clay	5YR 6/5	NDO	1000
48	$\frac{1}{11}$	ND ND	Red dry clay	5YR 6/5	NDO	1015
49	11	ND	Red dry clay	5YR 6/5	NDO	1030
50	11	ND ND	Red dry clay	5YR 6/5	NDO	1130
51		4	Red /gray dry clay	5YR 6/5	NDO	1130
52	11	24	Red /gray dry clay	5YR 6/5	NDO	1145
53	11	60	Red /gray dry clay	5YR 6/5	NDO	
54	11	1	Reddish brown sand	5YR 6/5	NDO	
55	11	12	Red/gray/brown sand	5YR 6/5	NDO	
56	11	11	Red/gray/brown sand	5YR 6/5	NDO	
57	11	500	Red/gray/brown sand	5YR 6/5	ODOR	
58	11	2000	Red/gray/brown sand	5YR 6/5	NDO	
59	11	35	Red/gray/lt. brown sand	5YR 6/5	NDO	
60	11		Gray brown sandy clay	2.5Y 6/3	NDO	
61	11	ND 14	Dry Gray Brown sandy	2.5Y 6/3	NDO	1459
62	11	14	clay			
63	11	ND	Lt. Gray Brown sandy clay (dry)	2.5Y 6/3	NDO	1035
64	11	ND	Brown sandy clay	7.5YR 6/3	NDO	1042
65	11	ND	Brown sandy clay	7.5YR 6/3	NDO	1057
66	11	ND	Red dry sandy clay	5YR 6/5	NDO	1122
67	11	ND	Orange (some gray) dry sandy clay	7.5 YR 6/8	NDO	1130
68	11	ND	Orange (some gray) dry sandy clay	7.5 YR 6/8	NDO	1148
69	11	ND	Orange dry sandy clay	7.5 YR 6/8	NDO	1200
70	11	ND	Red/gray/brown sand	5YR 6/5	NDO	1210
71	11	ND	Red/gray/brown sand	5YR 6/5	NDO	1223
72	11	ND	Red/gray/brown sand	5YR 6/5	NDO	1235
73	11	ND	Red/drk orange dry clay	7.5YR 5/6, 5YR 8/1, 2.5YR 4/8	NDO	1248
74	111	7	Red /gray dry clay	5YR 6/5	NDO	1259
75	11	ND	Red /gray dry clay	5YR 6/5	NDO	1312
76	11	ND	Tan clay	5YR 6/1	NDO	1327
77	11	ND	Tan + Black Sandy Clay	10YR 6/1	NDO	1339
78	11	ND	Red /gray dry clay	5YR 6/5	NDO	1350
79	8	ND	Tan Sandy Clay	7.5YR 6/2	NDO	11:00
-	11	200	Tan Brown Clay	7.5YR 6/3	NDO	11:10
80	5	ND	Lt. Tan Sand	7.5YR 7/2	NDO	11:08
-	8	450	Dk. Tan Sandy Clay	7.5YR 6/2	Some odor	11:10

	11	30	Dk. Tan Sandy Clay	7.5YR 5/2	NDO	11:20
81	5	35	Tan Sand	2.5YR 7/3	NDO	11:20
	8	8	Orange Brown Sandy Clay	7.5YR 5/3	NDO	11:25
	11	5000+	Tan clayish sand	7.5YR 7/2	Strong odor	11:30
82	5	2	Tan Sand	2.5YR 7/3	NDO	11:10
	8	5000+	Brown Clayish Sand	2.5YR 6/2	Strong Odor	11:13
	11	5000+	Orange + Tan Clay	7.5YR 6/2 5/6	Strong Odor	11:20
83	8	5 .	Tan Sand Wet	7.5YR 6/2	NDO	11:45
	11	ND	Tan + Black Sandy Clay	10YR 6/1	NDO	11:50
84	8	4	Brown/orange Clay	10YR 6/2	NDO	12:00
	11	130	Tan Clayish sand	10YR 6/2	NDO	12:18
85	8	2	Tan Sandy Clay Wet	2.5Y 6/3	NDO	12:05
	11	ND	Brown + Orange Clay	7.5YR 5/6 2.5Y 7/2	NDO	12:10
86	8	ND	Brown Clay	2.5Y 5/4	NDO	12:08
	11	ND	Lt. Gray Clayish Sand	2.5Y 6/2	NDO	12:10
87	8	ND	Tannish Orange Clay	2.5Y 6/3	NDO	12:15
	11	10	Dk. Gray Clay	2.5Y 6/2	NDO	12:20
88	8	2	Tan Clay	2.5Y 6/3	NDO	12:25
	11	3	Gray Clay	2.5Y 6/2	NDO	12:30
89	8	3	Gray Brown Clay	2.5Y 6/2	NDO	12:30
	11	4	Gray Brown Clay	2.5Y 6/3	NDO	12:35
90	8	35	Gray Brown Clay	2.5Y 6/2	NDO	12:35
	11	2	Gray Brown Clay	2.5Y 6/3	NDO	12:40

Disposal method: barreled on site
*IGWA - gen. soil descrip. * SLA - soil type, Muncell, conditions, rocks or minerals * RA - (Same as SLA)

Table 2

Field Parameters Coastal Truck Stop Site Florence, South Carolina Site ID# 03538

					-								
	MW-1	MW-2	MW-3	MW-4	9-MM	MW-6	MW-7	8-WM	6-MM	MW-10	MW-11	MW-14	Δ
Temperature (C)	22.8	22.9	23	23.3	22.4	23.1	21.3	20.7	20.9	22.3	23.5	22.1	21.9
Conductivity (S)	55	111	66	64	48	*	68	30	38	37	40	23	*
Hd	4.8	5.1	5.4	4.6	5.1	4.5	5.6	4.9	4.2	4.1	5.3	2	10.4
Dissolved Oxygen (mg/l)	2.8	1.5	1.4	2.3	1.5	4	2.3	1.5	5.9	4.6	2.3	3.3	3.8

Table 3

Potentiometric Data Summary Coastal Truck Stop Florence, South Carolina Site ID# 03538

stentiometric Stop			7
otentiometric Coastal Truck Stop Coastal Truck Stop Florence, South Carolina Florence, 3538		Groundwater	1
Caste South Oar		Ground- Elevation	-1
Florence n3538	undwater	Elevation	
Florence, Site ID# 03538	1 to Groundwater	136.52	_
Casing Depart	09/29/1999	135.60	_
Well # Elevation	13.31	136.32	$\neg \gamma$
Elevation 1	13.63	136.80	
149.83	13.13	136.56	
1 149.23	13.10	130.55	
149.45	12.91	134.57	
3 149.71	12.54	NM	
4 149.1	13.04	136.47	
5 143.61	NM	135.93	-
11 141.	11.54	NM	
6 148.6	11.0.	1 30	
7 148.01	12.08	134.30	
8 148.01	NM	136.50	
9 147.73	12.75	136.92	
10 147.05	11.87		
	12.79		
	12:13		
14 149.71			
TW			

Soil Analytical Data Summary Coastal Truck Stop Site Florence, South Carolina Site ID# 03538 Reported in µg/kg (parts per billion)

Table 4

Gr. Co. Floi Site Rep.

BDL: Belov NA: Analys.

၁၀၁	RBSL	IGWA	MW-1	MW-2	MW-3	WW.4	MW-5	MW-6	MW-7	MW-8	6-WM	MW-10	M1-11	MW-14	E
Depth of Sample		11	11	11	11	11	11	11	11	11	8.5	8.5	8.5	9.5	ĪΦ
Benzene	2	6.2	BDL	181	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	90	2
Toluene	1622	78.6	11000	(11900)	1400	43.5	14.6	BDL	266	BDL	BDL	BDL	BDL	BDL	\$
Ethylbenzene	1260	622	10600	964	1240	449	130	BDL	2450	10.1	BDL	90	BDL	BDL	138
Xylenes	42471	403	45600	20850	6380	1332	831	BDL	10730	44.2	BDL	BDL	뎚	BDL	872
Total BTEX	¥	1109.8	67200	37721	9020	1824.5	975.6	BDL	13446	54.3	BDL	BDL	BDL	BDL	118
MTBE		NA	155	58.2	8.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	78
2-Methy Inaphthalene		BDL	2370	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	≥
1-Methylnaphthalene		BDL	1200	BDL.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	B	≥
Naphthalene (8260)	210	BDL	2560	255	209	428	809	BDL	174	12.8	BDL	BDL	BDL	BDL	581
Naphthalene (8270)		BDL	1970	BDL	189	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2
Benzo(a)anthracene	73084	BDL.	BDL	BDL.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	≥
Benzo(b)flouranthene	29097	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	Ž
Benzo(k)flouranthene	231109	BDL.	В	BDL	BDL	BDL	BDL	BDI.	BDL	BDL	BDL	BDL	BDL	BDL	₹
Chrysene	12998	BDL.	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	Ž
Dibenz(a,h)anthracene	87866	BDL	BDL	BDL	BDL	BDL	BDL	TICIB	BDL	BDL	BDL	B	BDL	BDL	₹

BDL: Below analytical detection limit NA: Analysis not Conducted

Inorganic Parameters Reported in mg/l

									And in case of the last of the				
	MW-1	1 MW-2	MW-3	MW-4	9-MM	9-MM	MW-7	MW-8	6-WW	MW-10	MW-11	MW-14	≱L
Nitrate	6.73	3 0.26	0.36	0.32	0.65	9.0	0.32	0.27	4.08	3.93	0.34	0.2	1.35
Sulfate	3.2	2.92	3.51	2.65	4.36	5.55	2.5	5.2	2.48	2.69	3.44	47	21
Ferrous Iron (Fe 2+)	4.5	4.9	9.5	2.4	6.5	BDL	8.6	2.6	BDL	BDL	3.2	BDL	BDL

Southeastern Environmental, INC.

WATER TESTING LOG

Job Location: Coastal Truck Stop

Date: 7/19/99-8/5/99

Samples Taken By: AWB/SB

Job Type: R.A.

* Note: all GWT measured on 9/29/99

WELL	G.W.T.	TEMP.	Conduct	рН	DO ₂	Comments	Time
#	Depth	(C)	(S)				
1	13.31'	22.2	73	4.8	2.8		
Т.	13.31	22.8	29	4.8	2.0		
		22.9	46	4.9			
		22.8	43	4.9			
		22.8	70	4.8			
		22.8	50	4.8			
		22.8	59	4.8	-		
		22.8	53	4.8			
		22.8	38	4.8			
		22.9	59	4.8			w
		22.8	55	4.8			
		22.0		4.0			
		22.8	55	4.8			
		22.0	33	4.0			
2	12.63'	24.7	110	5.0	1.5		
		23.3	111	5.1			
		23.1	107	5.1			
		23.1	106	5.1			
		23.1	112	5.1			
		23.0	90	5.1			
		22.9	111	5.1			
		22.9	116	5.1			
		22.9	89	5.1			
		22.9	38	5.1	-		
		22.9	114	5.1		-	
		22.9	94	5.1			
		22.9	115	5.1			
	,						
		22.9	111	5.1			
		,					
3	13.13'	23.5	101	5.4	1.4		

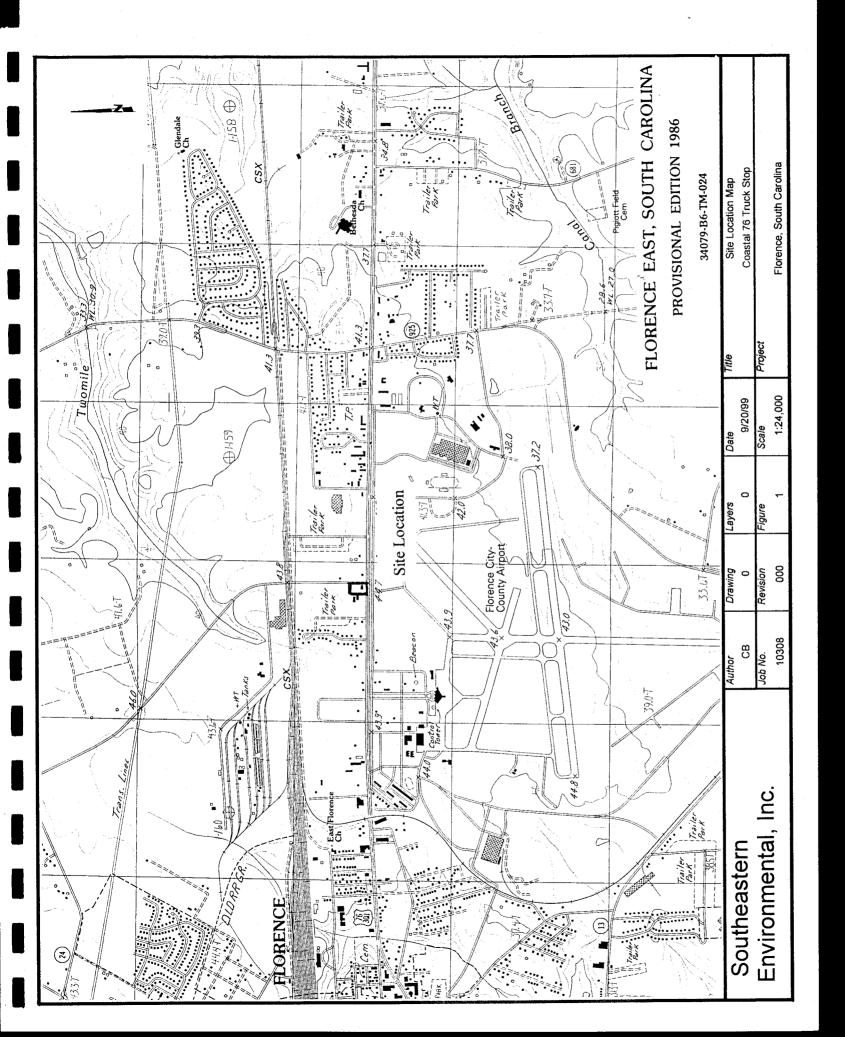
		1000	170	1 5 4	 	τ
	1	23.2	79	5.4		
	1	23.1	100	5.4		
		23.1	98	5.4		
		23.1	102	5.4		
		23.0	68	5.4		
		23.1	98	5.4		
		23.0	102	5.4		
		23.0	66	5.4		
		22.9	36	5.4		
		22.8	99	5.4		
		23.1	52	5.4		
		23.0	99	5.4		
		23.0	104	5.4		
		23.0	99	5.4		
						 <u> </u>
		1				
4	12.91'	23.9	58	4.6	2.3	
	1	23.6	12	4.6		
		23.4	13	4.6		
		23.2	45	4.6		
		23.3	20	4.6		
		23.3	40	4.6		
		23.3	65	4.6		
		23.3	62	4.6		
		23.3	64	4.6		
		23.3	63	4.6		
	-	12000	+	1		 -
		23.3	64	4.6		
						1
						-
5	12.54'	23.8	69	5.1	1.5	
-	12.04	23.4	68	5.0	+ • • •	1
		23.0	51	5.1		
		22.8	47	5.1		
.		22.6	15	5.1		
<u> </u>		22.5	16	5.1		
		22.3	09	5.1		
		22.4	48	5.1		
	_	22.3	63	5.1		+
		22.6	44	5.1		
		22.6	54	5.1		
······································		4	1 34	12.1		
		22.4	48	5.1		

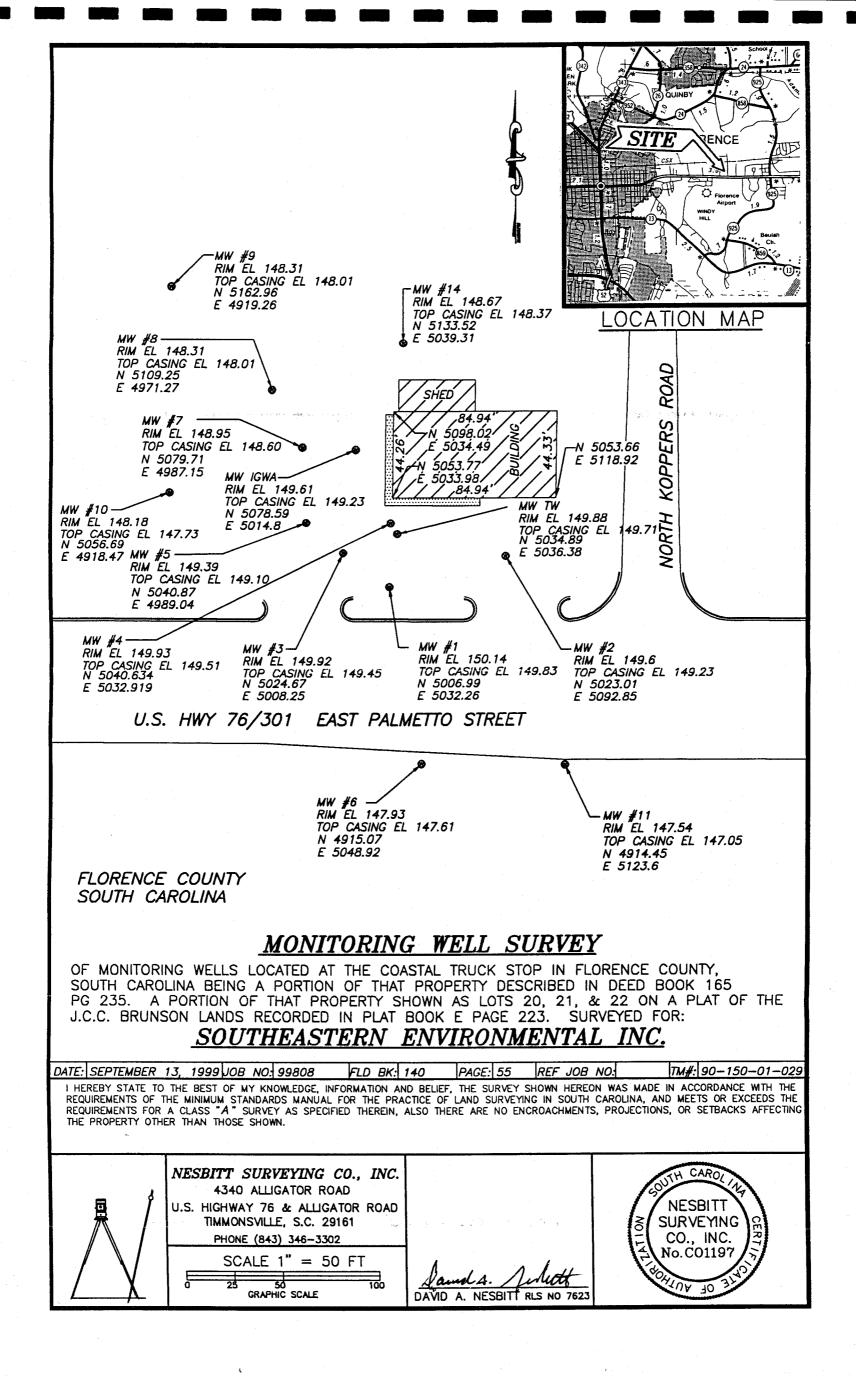
		Т	T		T		1
	12.04/	04.0	200	120	4.0		
6	13.04'	24.2	280	3.0	4.0		-
		23.4	80	4.2			-
		23.3	27	4.4			
		23.2	16	4.5			ļ
	ļ	23.3	22	4.5	-		
		23.1	48	4.5			
		23.1	15	4.5	_		
		23.1	4	4.5			
		23.1	15	4.5			
		23.1	24	4.5			
							-
		23.1		4.5			
7		22.1	72	5.4	2.3	Well under	
						storage building	<u> </u>
		21.3	905	5.5			
		21.2	83	5.6			
		21.5	58	5.6			<u> </u>
		21.3	53	5.6			
		21.3	71	5.6			
		21.3	68	5.6			
		21.3	98	5.6			
		21.3	61	5.6			
		21.3	68	5.6			
8	11.54'	21.8	22	4.8	1.5		
		20.9	26	4.8			ļ
		20.8	27	4.9			
		20.8	30	4.9			
		20.7	30	4.9			
		20.7	30	4.9			
		20.7	25	4.9			
		20.8	26	4.9			
		20.7	30	4.9			
		20.7	30	4.9			· .
		20.7	30	4.9			
		20.7	30	4.9			
9	12.08'	21.7	41	7.1	5.9		
		21.1	9	6.0			
		21.0	49	5.4			

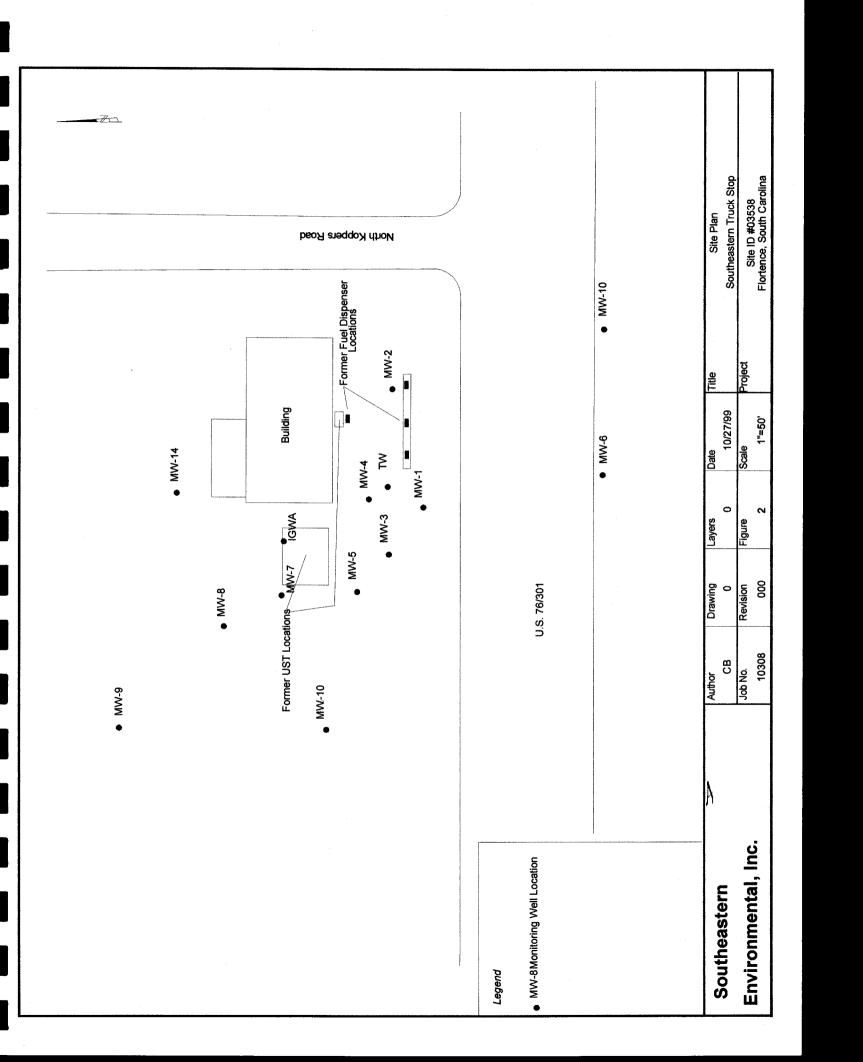
		20.9	43	4.4			
		20.9	41	4.3			
		20.9	22	4.2			
		20.8	39	4.2			
		20.9	38	4.2			
		20.9	39	4.2			
		20.9	38	4.2			
4.0				1 7	 	TT 3 7 1 1 1	
10		23.0	38	4.7	4.6	Unable to obtain	
						GWT due to	•
		00.6				buried well	
		22.6	37	4.4			
		22.6	35	4.2	-		
		22.5	17	4.2			
		22.4	37	4.1			
	ļ	22.3	37	4.1			
		22.3	37	4.1			
		22.3	37	4.1			
		22.3	37	4.1			
		22.3	37	4.1	ļ		
		22.3	37	4.1			
	-			7			
11	12.75'	24.2	26	5.1	2.3		
		23.7	15	5.2			
		23.5	31	5.3			
		23.5	24	5.3			
		23.5	29	5.3			
		23.5	40	5.3			
		23.5	36	5.3			
		23.5	36	5.3		-	
		23.5	45	5.3			
		23.5	35	5.3			
		23.5	40	5.3			-
	1						
				ı	1	1	
12	Well no						
12	Well no						
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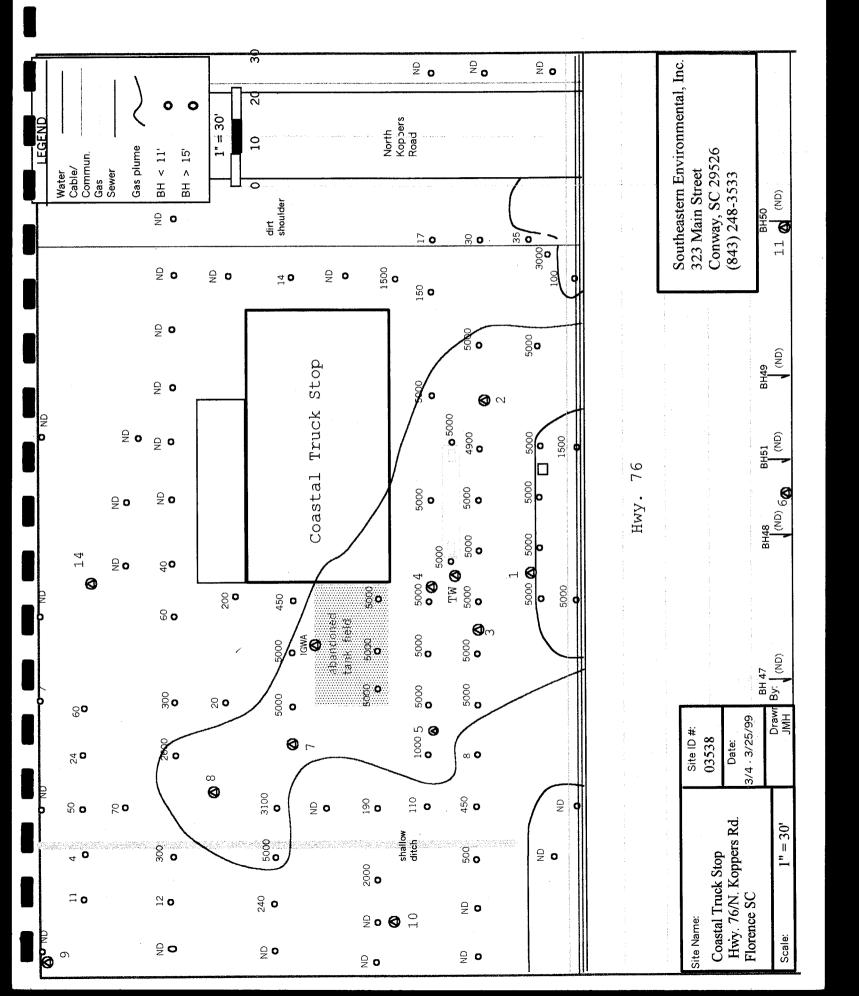
1 /	11.87′	23.2	32	5.9	3.3		Ţ
14	11.0/				3.3		-
		22.4	17	5.4			
		22.3	13	4.8			
		22.2	18	5.2	 		
		22.1	13	5.0	ļ		-
		22.2	77	5.0			
		22.2	23	4.8			
		22.2	23	5.0			
	· · · · · · · · · · · · · · · · · · ·	22.2	11	4.9			
		22.1	13	5.0			
		22.1	70	5.0			
		22.1	15	5.0			
		22.1	23	5.0			
			·			and the same of th	
Tele	12.79'	22.5	131	11.3	3.8		
		22.2	190	10.7			
		22.2	225	11.5		1	
		22.2	200	10.1			
		22.0	170	9.9			
		21.8	82	9.5			
		21.7	138	9.4			
		21.8	159	10.7			
		21.9	86	9.6			
-		21.8	430	11.5			
		22.0	368	10.6			
		21.9	142	10.8			
		21.9	45	9.7			
		22.1	184	9.9			
		21.9	128	9.6			
		22.3	439	11.3			
		21.9	204	10.3			
		21.9		10.4			
			1	1	<u> </u>	Andrew Andrews	
	<u> </u>						
L	J.,						

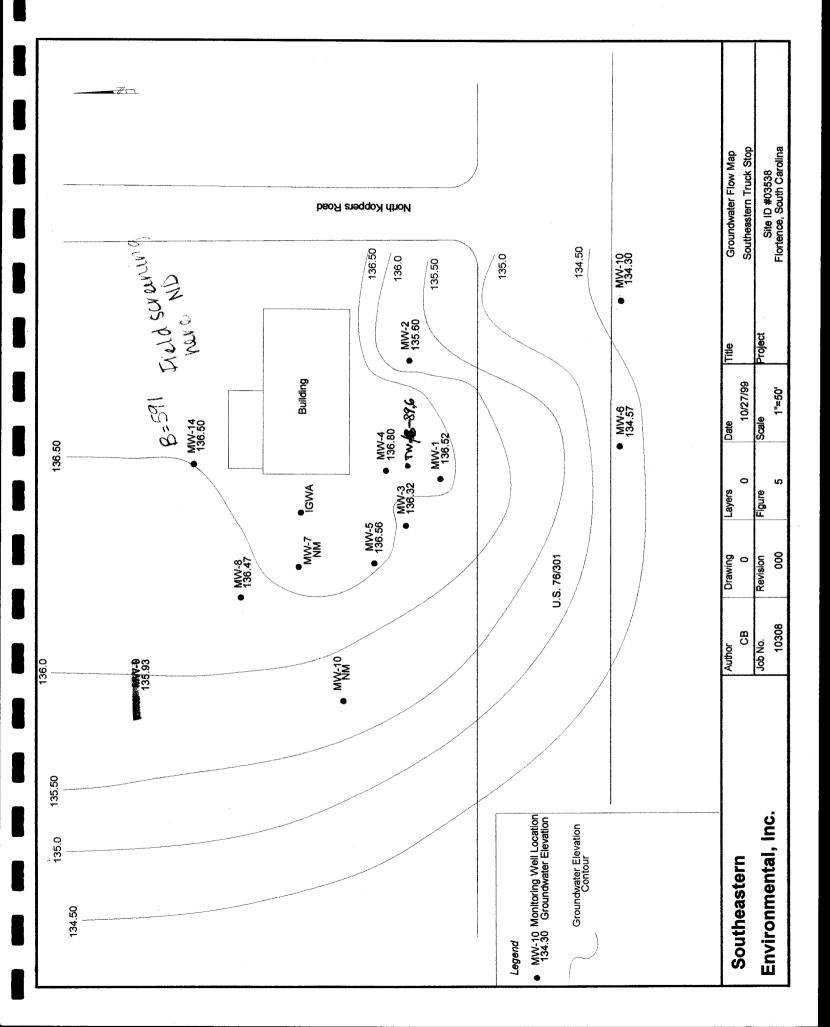
FIGURES

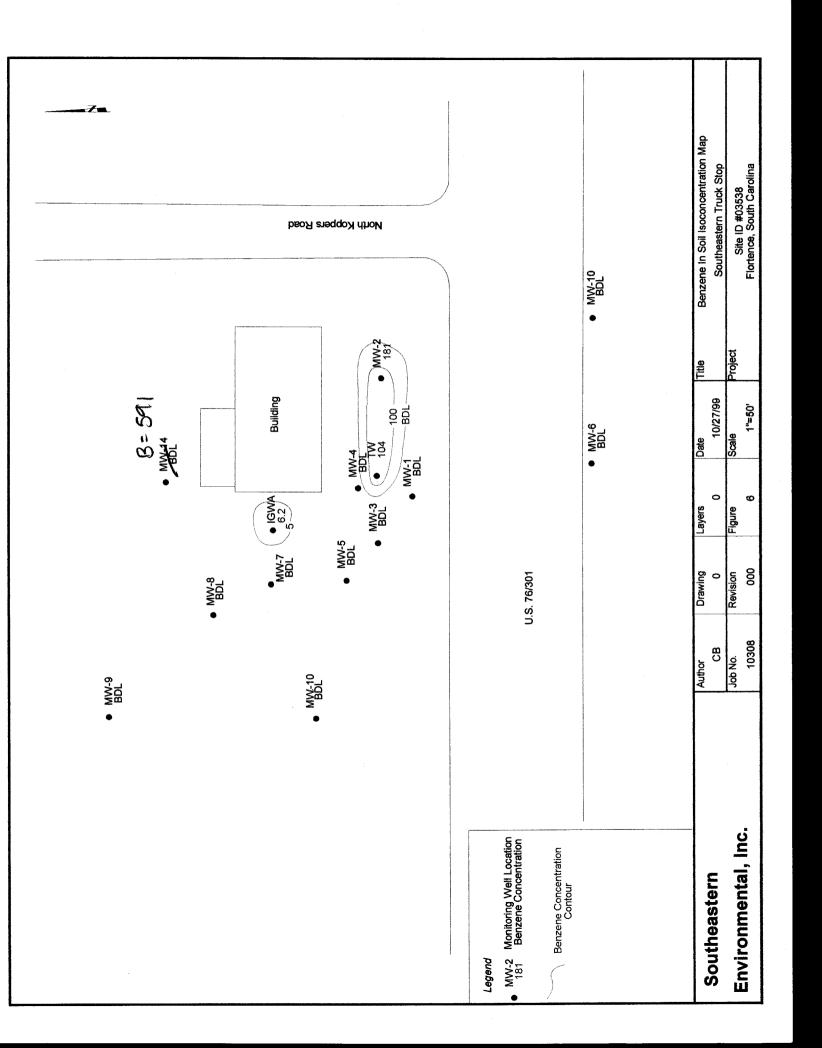


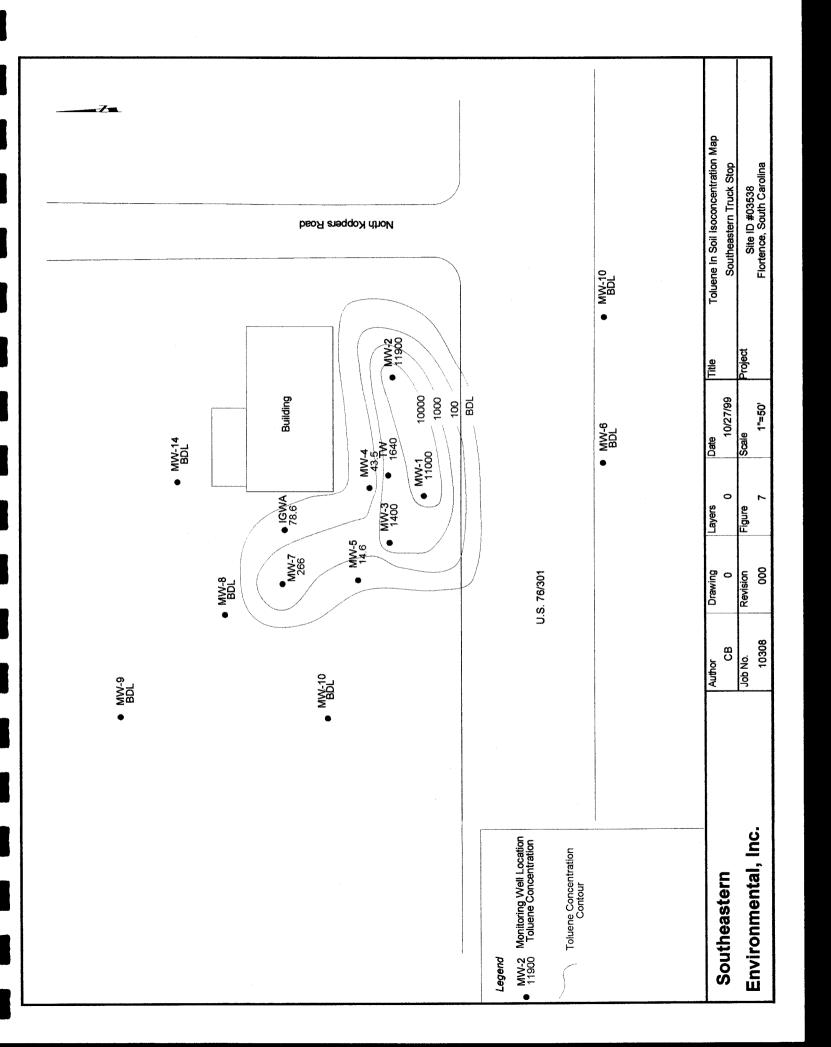


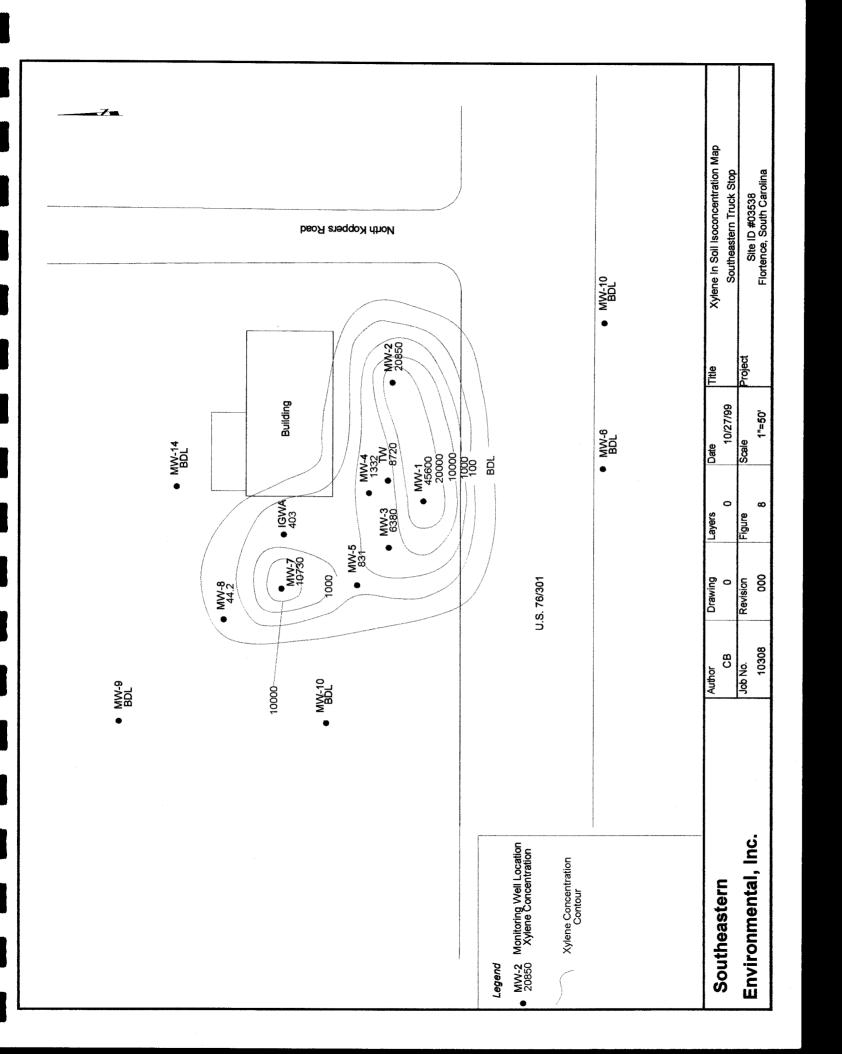


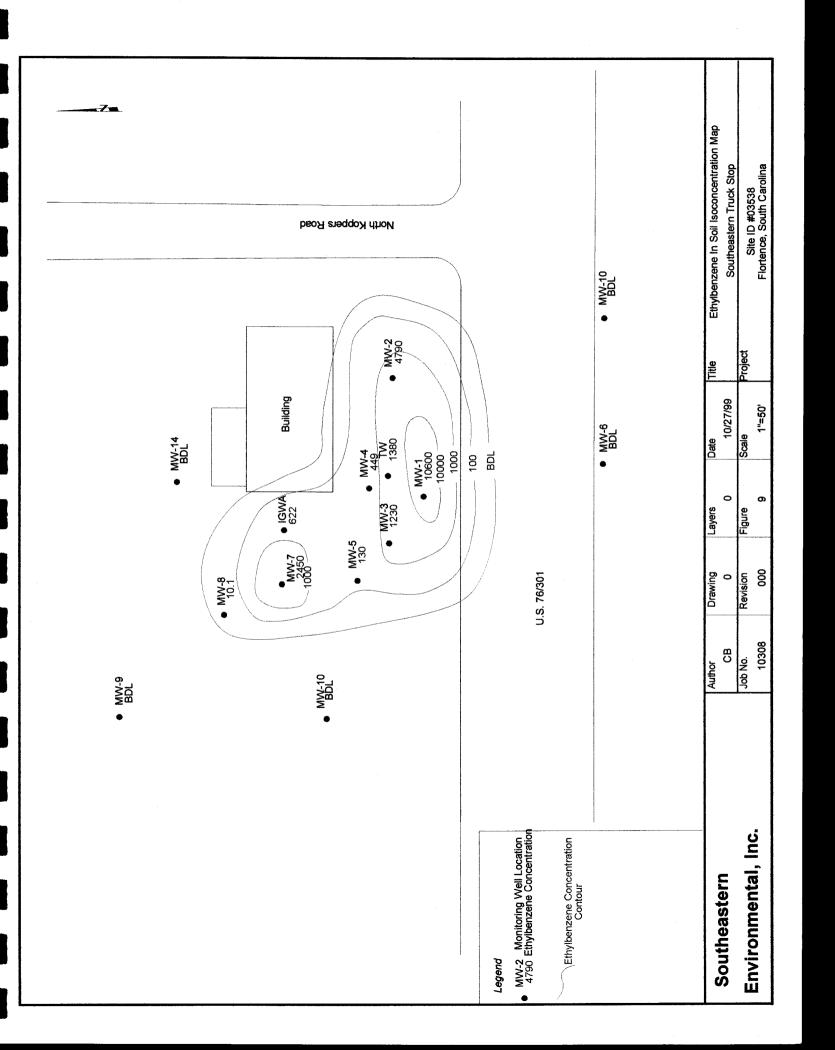


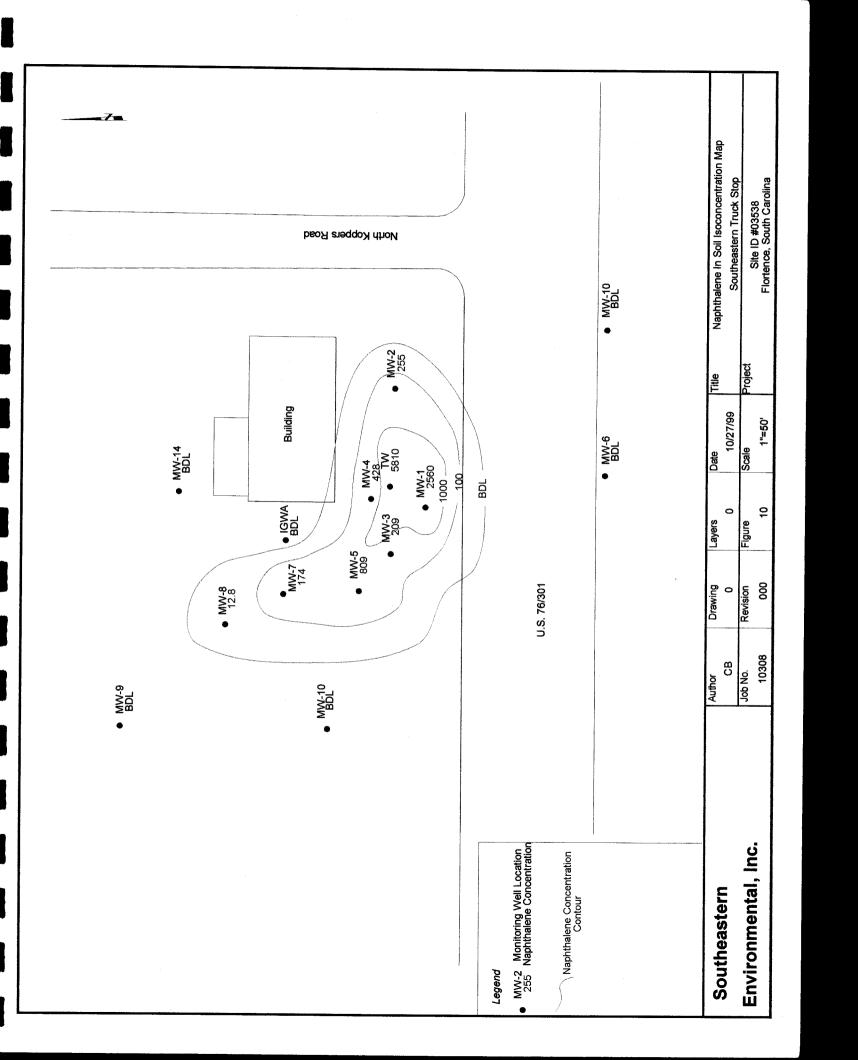


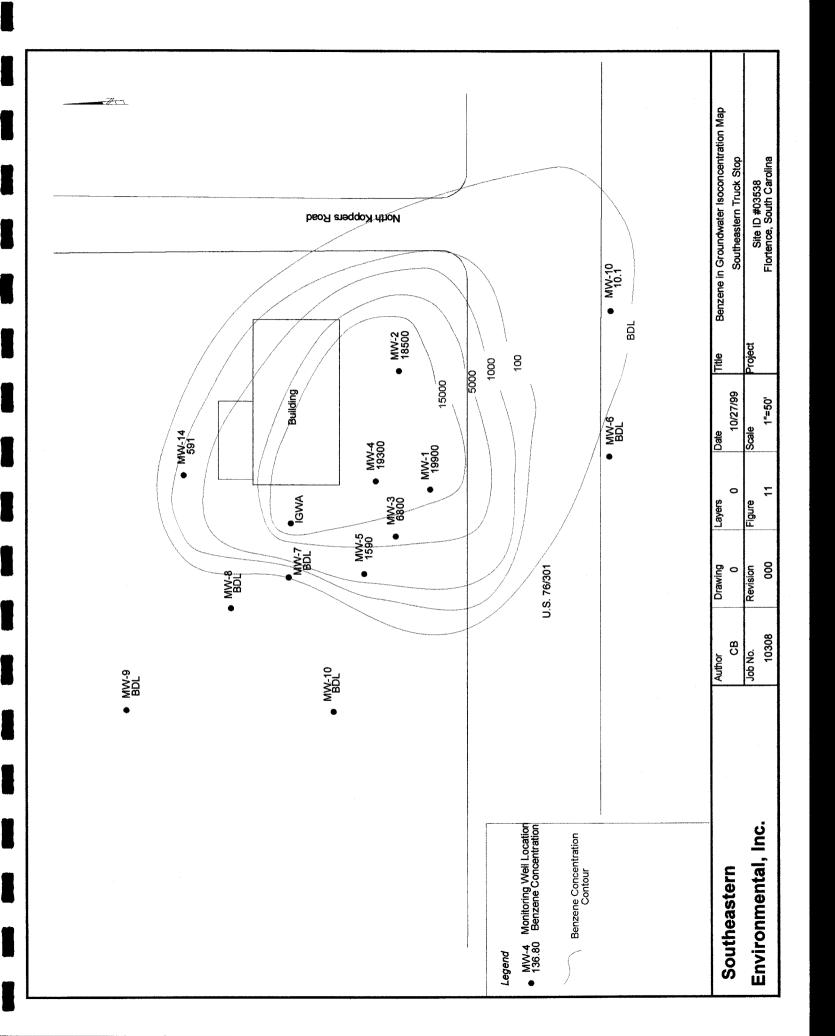


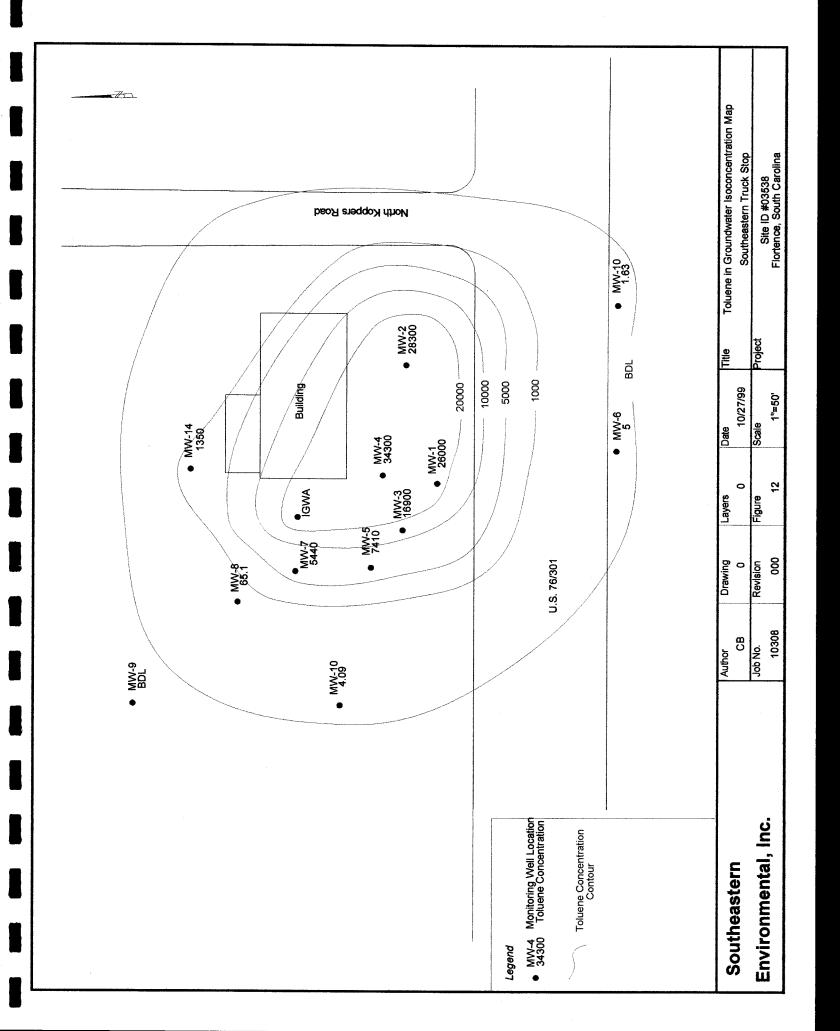


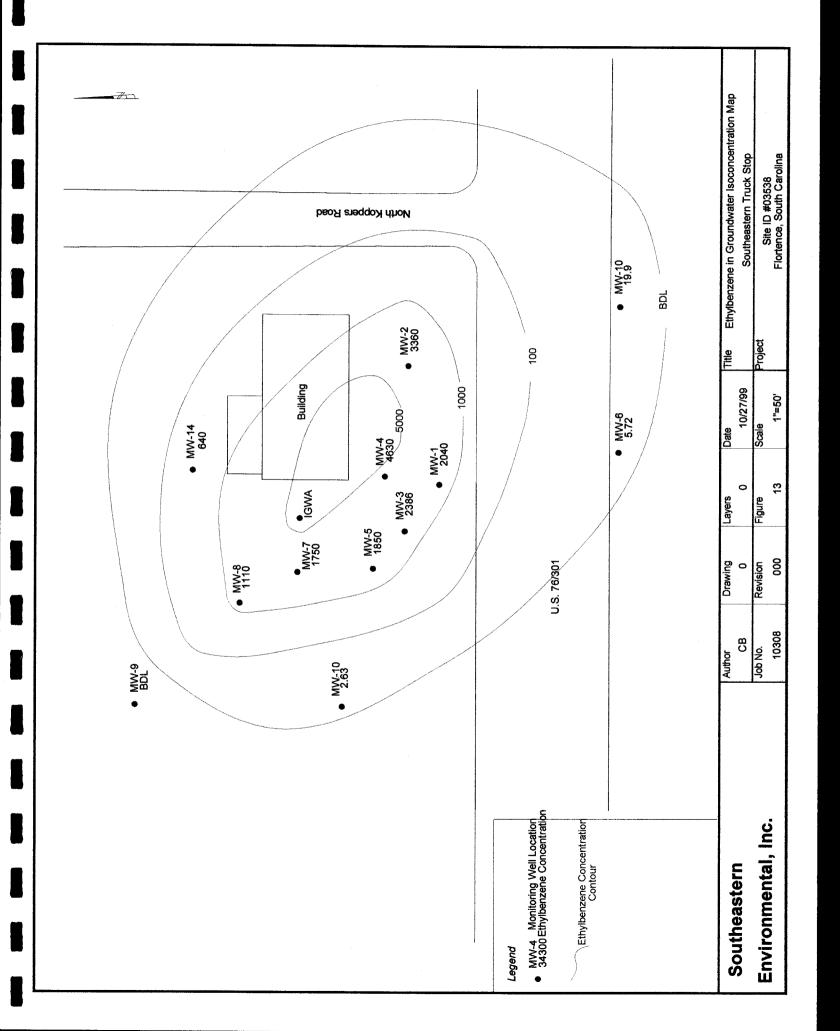


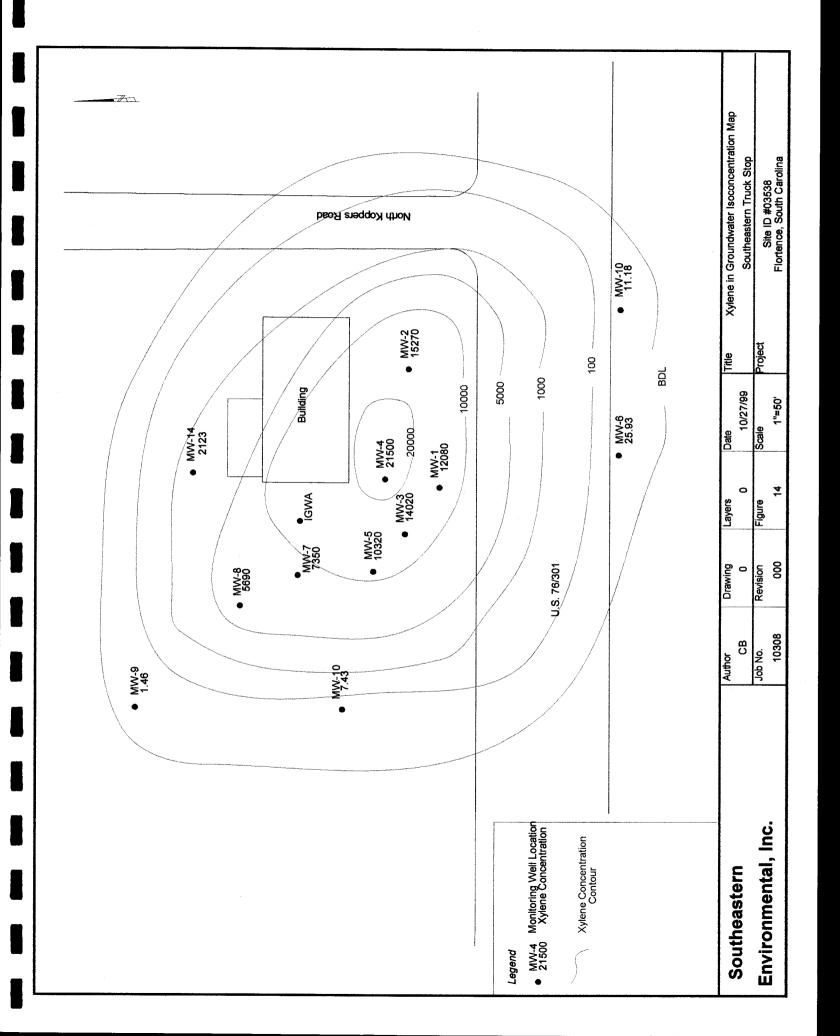


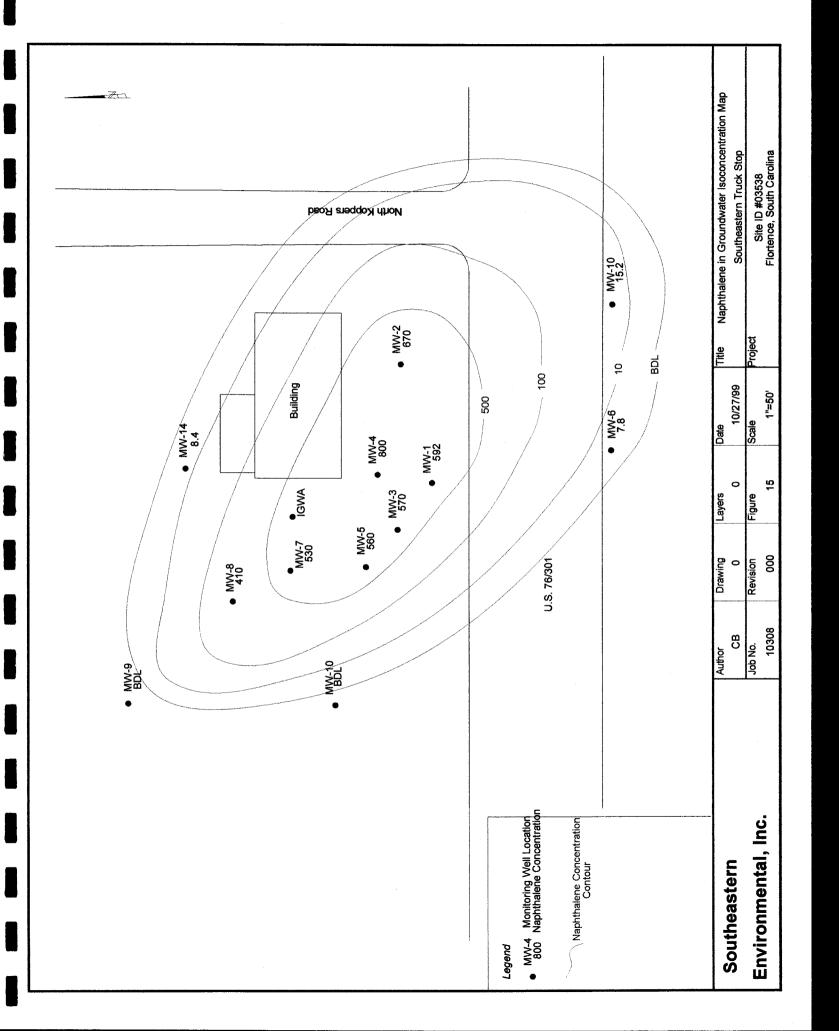


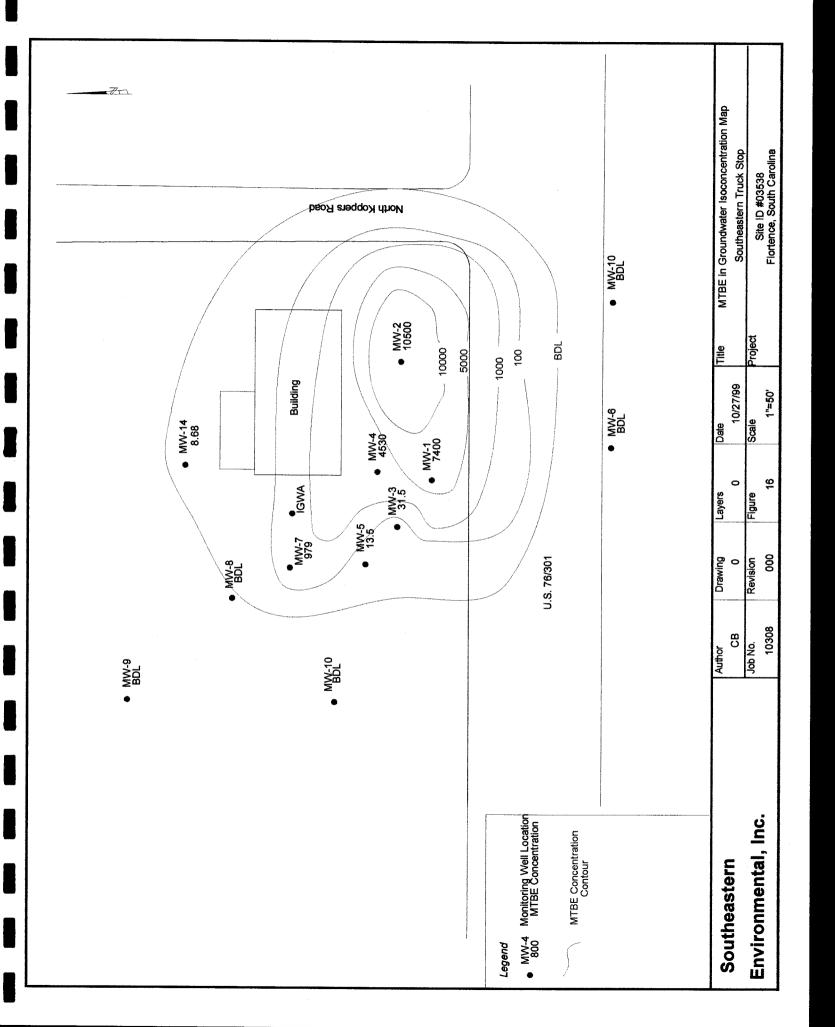


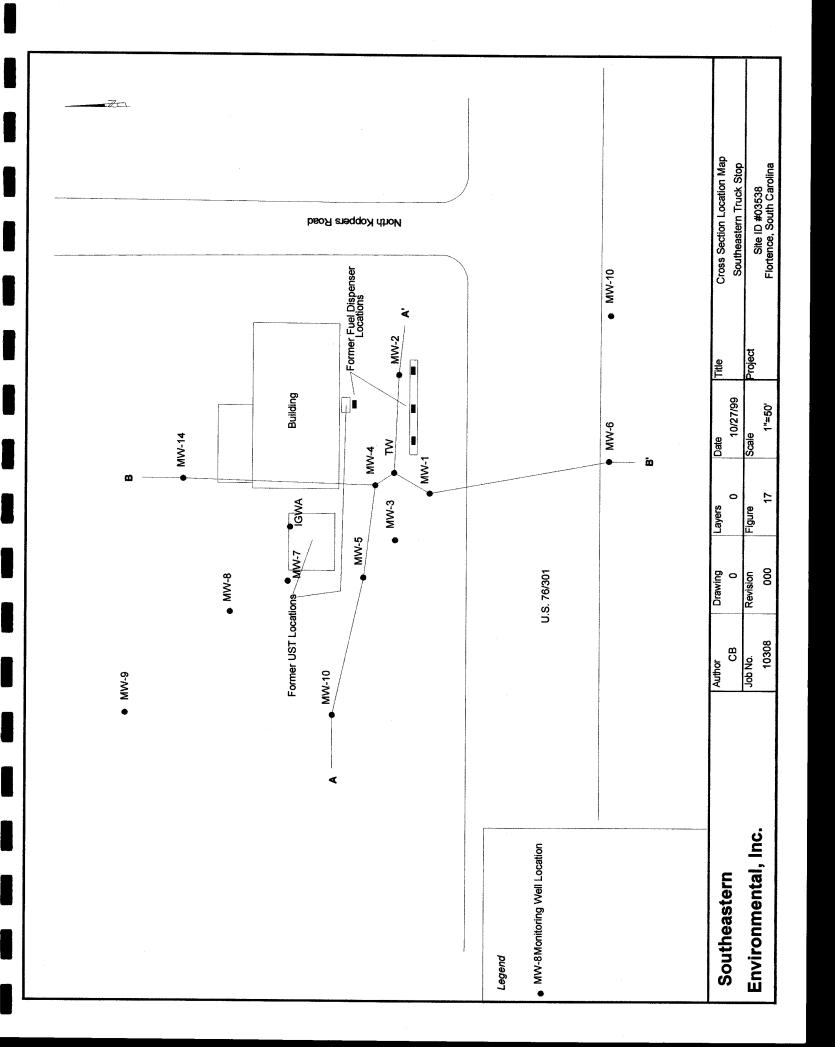


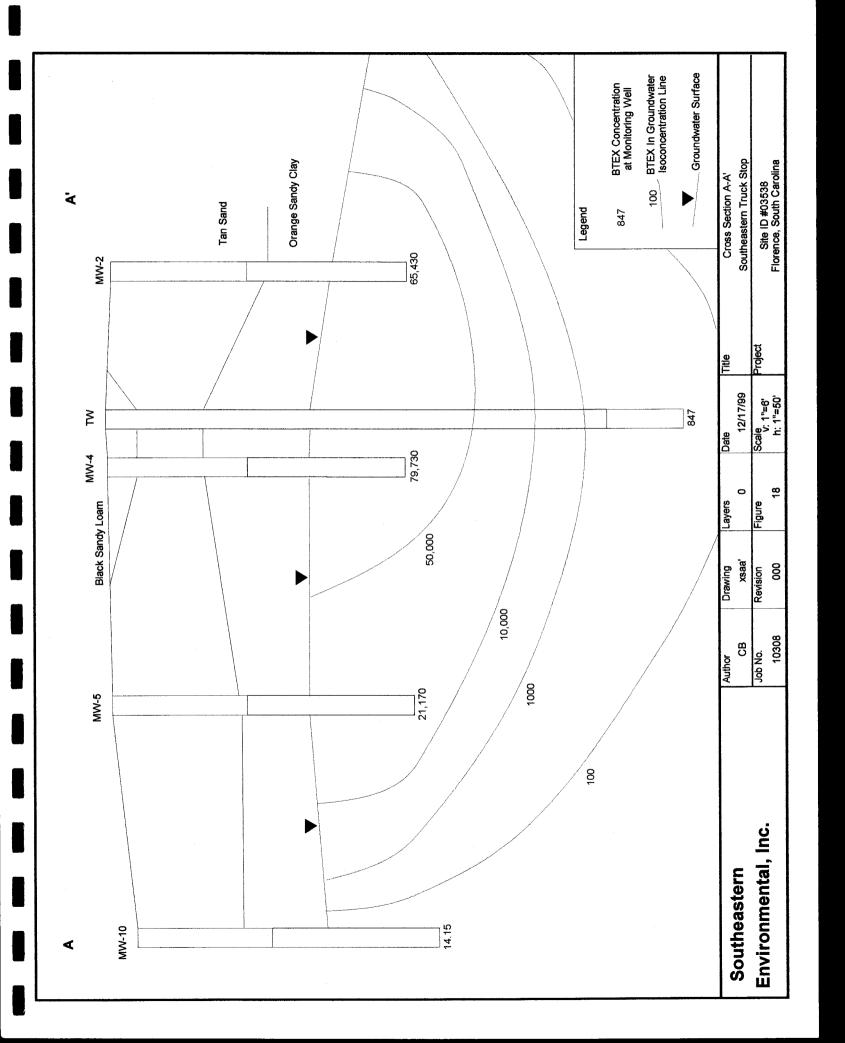


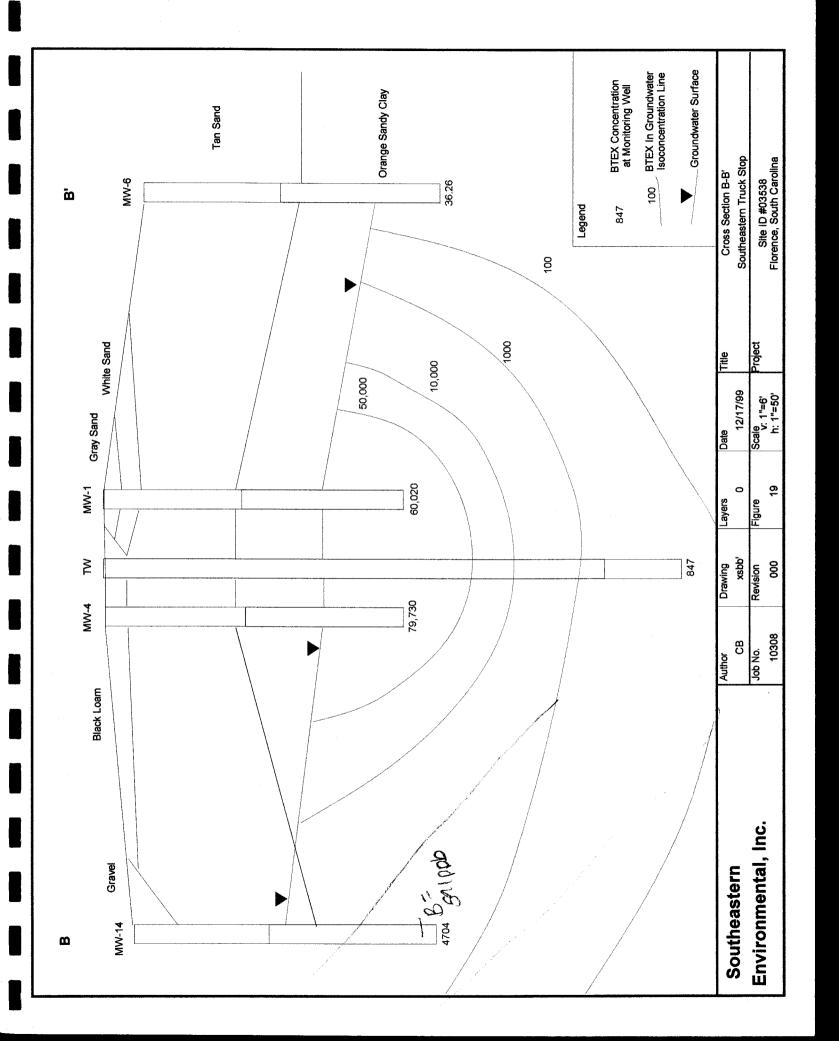












UNDERGROUND STORAGE TANK AND PROPERTY OWNER

RECEIVE Maia

PERMISSION FORM - UST Permit #03538

STORAGE MANA MONT

If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form. I, WAN M: EACH: N, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf contractor services to conduct assessment and corrective action activities as required, and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these site rehabilitation tasks. The contractor(s) will be designated as my contractor for only the required site rehabilitation activities. Compensation to the contractor(s) will be from the SUPERB Account and I will have no obligation to pay the contractor(s). I understand that SCDHEC will be responsible for notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing. Name of Facility CONSTAL TRUCK STOP Phone # 843-669-6177 Street Address of Facility 2607 E. PALMETTO ST FLORENCE Town, City, District, Suburb Name of nearest intersecting street, road, highway, alley Is this facility within the city limits? (yes or no) Is this facility serviced by a public water or sewer utility? (yes or no) \(\) if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines ______, phone number Were underground storage tanks previously removed from the ground at this facility? (yes or no) if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation

Phone number 4-8-8-3733 Is the property currently leased or rented to someone? (yes or no) 15, if yes, please provide their name 5.44 TYSSM and phone number 843 662278 and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site. NAME of UST/property owner (Please Print): Phone Number (home) Signature of UST/property Owner: Month Day



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

JAN 2 0 2012

Re:

QAPP Contractor Addendum Request

Groundwater Sampling Contract

Solicitation # IFB-5400002759, PO#4600088529

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400002759 and the UST Management Division Quality Assurance Program Plan (QAPP), it is requested that you submit a Contractor Addendum for each site listed below. The Addendums must be submitted within 15 business days in my attention. The project manager for each site will issue a notice to proceed once the Addendum has been reviewed and approved. Please note, site reconnaissance should be conducted during the Addendum review so that any issues that arise may be addressed prior to commencing work at the site.

UST	Site Name	County	# samples and requested analysis*	Project
Permit #			·	Manager
14597	Hoopers Auto Service	Anderson	15-BTEXMN, DCA, Oxygenates, & EDB	R. Miner
04878	Nickelpumper 233	Jasper	5-BTEXMN, DCA, Oxygenates, & EDB	D. Ebinger
03051	Arnold Stewart	Dorchester	24-BTEXMN, DCA, Oxygenates, & EDB	A. Smith
19449	Wando Lounge	Berkeley	18-BTEXMN, DCA, Oxygenates	A. Smith
04474	Stewart Sandwich	Greenville	10-BTEXMN, DCA, & EDB	A. Smith
07608	Frm Red Diamond	Richland	11-BTEXMN, DCA, & Oxygenates	A. Smith
16410	Brown's Market	Spartanburg	9-BTEXMN, DCA, Oxygenates, EDB, & lead	M. Milenkova
03538	Coastal 76 Truck Stop	Florence	14-BTEXMN, DCA, Oxygenates, EDB, & lead	M. Milenkova
08604	Roadrunner Market	Spartanburg	10-BTEXMN, DCA, Oxygenates, EDB, & lead	M. Milenkova
00141	Chevron Food Mart	Aiken	11-BTEXMN, DCA, Oxygenates, EDB, & lead	M. Hornosky

^{*} The number of samples does not include trip blanks, field blanks, or field duplicates.

Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely.

Debra L. Thoma, Hydrogeologist Corrective Action Section

UST Management Division

Bureau of Land & Waste Management

Enc:

Site Information Packets

CC:

Technical Files

Midlands Environmental Consultants, Inc.

Ms. Debra Thoma, Hydrogeologist Corrective Action Section Assessment and Corrective Action Division Underground Storage Tank Program Bureau of Land and Waste Management South Carolina Department of Health and Environmental Control 2600 Bull Street Columbia, South Carolina 29201



Subject:

QAPP Contractor Addendum – Revision 1

Coastal 76 Truck Stop Florence, South Carolina

SCDHEC Site ID Number 03538 MECI Project Number 12-3791

Certified Site Rehabilitation Contractor UCC-0009



Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

On February 3, 2012, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,

Midlands Environmental Consultants, Inc.

Courtney M. Sanders Staff Biologist Brendon P. Kelly Project Scientist

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan Addendum to the SC DHEC UST Programmatic QAPP Coastal 76 Truck Stop, SCDHEC Site ID# 03538

2513 E. Palmetto Street, Florence, South Carolina

Prepared by: Courtney M. Sanders Staff Biologist Midlands Environmental Consultants, Inc. (Certified Site Rehabilitation Contractor UCC-0009) 235-B Dooley Road Lexington, SC 29073 (803)808-2043

Date: February 7, 2012

Approvals

Maia Milenkova SC DHEC Project Manager

Brendon P. Kelly **A**Contractor QA Manager

Jeff L. Coleman Site Rehabilitation Contractor

Michael Woodrum Laboratory Director laca leleuire Date 2/09/12

Signature

Date <u>2</u>-7-12

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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Maia Milenkova	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896- 6664	803-896- 6245	milenkmp@dhec.sc.gov
Jeff L. Coleman	Site Rehabilitation Contractor	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	jlc@meci.net
Courtney M. Sanders	Quality Assurance Officer	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	cms@meci.net
Brendon P. Kelly	Field Manager	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	bpk@meci.net
Michael Woodrum	Laboratory Director	Shealy Environmental Services,Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791- 9700	803-791- 9111	mwoodrum@shealylab.com
	Well Services/Driller				

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Maia Milenkova	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896- 6664	803-896-6245	milenkmp@dhec.sc.gov
Site Rehabilitation Contractor	Jeff L. Coleman	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808-2048	jlc@meci.net
Quality Assurance Officer	Courtney M. Sanders	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808-2048	cms@meci.net
Field Manager	Brendon	Midlands Environmental	803-808-	803-808-2048	bpk@meci.net

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
	P. Kelly	Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	2043		
Analytical Laboratory Director	Michael Woodrum	Shealy Environmental Services,Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791- 9700	803-791-9111	mwoodrum@shealylab.com
Project Verifier	Courtney M. Sanders or Brendon P. Kelly	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808-2048	cms@meci.net

Table 2A Addendum Role Identification and Contact Information

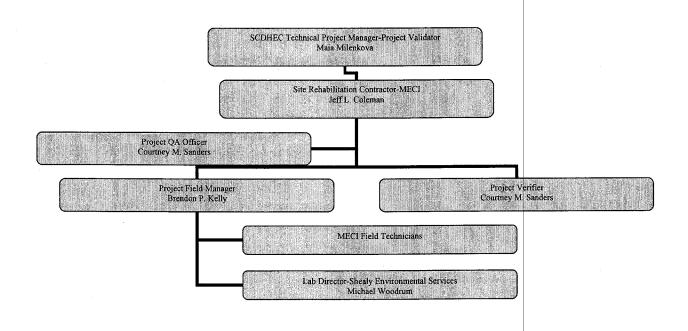


Figure 1A Organizational Chart

Project Manager (Maia Milenkova) – The project manager is responsible for direct oversight of contractors conducting assessment and site rehabilitation of releases at UST sites.

Site Rehabilitation Contractor (Jeff L. Coleman.) – The Site Rehabilitation Contractor is an independent contractor responsible for managing and coordinating field and office activities needed for assessments or cleanup.

- -Final Review of all work produced for a scope of work.
- -Final say on technical interpretation of data.

Quality Assurance Officer (Courtney M. Sanders) – The Quality Assurance Officer is responsible for the oversight of all quality assurance activities associated with projects performed by the Site Rehabilitation Contractor.

- -In charge of producing and maintaining the QAPPA for MECI.
- -Reviews (and Audits, if necessary) all work produced in conjunction with a scope of work.
- -Quality control of data entry and report preparation.

Field Manager (Brendon P. Kelly) - The field manager will oversee all work done on any given project.

- -Assign, direct and oversee all field personnel working on each project.
- -Responsible for coordinating with the SCDHEC project manager, should any problems or clarifications arise.
- -Responsible for all reporting done in conjunction with field work.

Analytical Laboratory Director (Michael Woodrum) – The Laboratory Director is directly responsible for the Analytical Laboratory used during a scope of work. The Analytical Laboratory receives the soil and water samples from the site rehabilitation contractor, performs the requested analyses, and provides analytical reports.

Project Verifier (Courtney M. Sanders) – The project verifier is responsible for verifying the quality of data produced during a scope of work. This includes review of field work and laboratory reports for potential quality issues.

Field Technicians (various employees) – Responsible for all field activities for a given scope of work.

- -Conduct all initial site visit, and record findings
- -Conduct all field activities associated with a scope of work. All work will be conducted according to the MECI SOP. Will be responsible for reporting any potential problems are inconsistencies found during assessment activities.
- -Completes the chain of custody upon completion of sampling event and delivers samples to lab or office for later lab pick-up.

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

The subject site (Coastal 76 Truck Stop) is located at 2513 E. Palmetto Street, Florence, Florence County, South Carolina. The subject site formally maintained one 2,000 gallon gasoline underground storage tank (UST), one 3,000 gallon gasoline UST, one 1,000 gallon gasoline UST and one 2,000 gallon diesel UST. These UST's were abandoned by removal from the ground in August of 1995. SCDHEC reported a release from these UST's in September of 1995 and confirmed the release in August of 1997. The subject site is currently rated a Class 3BA.

The site is being sampled in conjunction with the SCDHEC Groundwater Sampling Contract (Solicitation # IFB-5400002759, PO# 4600088529).

Please answer the following: Does this project fall under UST or Brownfields area?

Underground Storage Tank Division

A6 Project/Task Description

1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).

The subject site (Coastal 76 Truck Stop) will be sampled in conjunction with the \$CDHEC Groundwater Sampling Contract (Solicitation # IFB-5400002759, PO# 4600088529). During assessment activities monitoring wells will be sampled for petroleum constituents.

- 2. The work will begin within fourteen (14) days of receipt of approved QAPP contractors addendum after cost approval and sampling should be complete by twenty-one (21) days of receipt of approved QAPP contractors addendum.
- 3. Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site is located at 2513 E. Palmetto Street, Florence, Florence County, South Carolina. The site is currently occupied by a vacant building.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Principal		Professional		State of South	
Geologist	Bryan T. Shane, P.G.	Geologist	10/30/1993	Carolina	1102
Senior		OSHA 40 hr			
Scientist	Jeff Coleman	HAZWOPER	7/27/2007	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	7/27/2011	N/A	N/A
Project		OSHA 40 hr			
Scientist	Brendon Kelly	HAZWOPER	8/21/2009	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/15/11	N/A	N/A
Staff		OSHA 40 hr			
Geologist	John Bryant	HAZWOPER	4/17/2009	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/14/2010	N/A	N/A
Field	Brian Owen	OSHA 40 hr	8/21/2009	N/A	N/A

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Technician		HAZWOPER			
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/15/11	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Courtney Sanders	HAZWOPER	12/10/2010	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/15/11	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Kyle Pudney	HAZWOPER	12/10/2010	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/15/11	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Chris Lashley	HAZWOPER	12/10/2010	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/15/11	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Gavin Globensky	HAZWOPER	7/29/2011	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Ryan Ariail	HAZWOPER	9/23/2011	N/A	N/A
Lab Manager	Michael Woodrum	***	***	Lab	SC 32010
				Certification	

Table 3A Required Training and Licenses

<u>Brendon P. Kelly</u> of <u>Midlands Environmental Consultants</u>, <u>Inc.</u> is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: <u>235-B Dooley Road</u>, <u>Lexington</u>, <u>SC 29073</u>.

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the Laboratory	Shealy Environmental Services, Inc	
Name of Lab Director	Michael Woodrum	
SC DHEC Certification Number_	32010	
Parameters this Lab will analyze	e for this project:	

BTEX, Napth, MTBE, 1,2 DCA, 8-oxygenates (EPA Method 8260-B), EDB (EPA Method 8011), and Total Lead (EPA Method 6010).

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A9 Documents and Records

Personnel will receive the most current version of the QAPP Addendum via: (Check all that apply)					
US MailCourier X Hand delivered					
Other (please specify): E-mailed electronic copies					

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Instrument Raw	Target,	Hardcopy and	Hardcopy: Offsite storage for 7 yrs	Yes
Data	Thermospec, or	Electronic	Electronic: Two external storage	
	Iteva software		device backups – one offsite, one	
			onsite storage for 10 yrs	
Final Reports	LIMS	Electronic	Electronic: Two external storage	Yes
			device backups – one offsite, one	
			onsite storage for 10 years	
			MECI office: 235B Dooley Road /	Yes
Field Work	Field Staff	Hardcopy	Min. 5 years	
			MECI office: 235B Dooley Road /	Yes
Chain of Custody	Field Staff	Hardcopy	Min. 5 years	
		Hardcopy &	MECI office: 235B Dooley Road /	Yes
QAPP Addendum	Brendon Kelly	Electronic	Min. 5 years	
			MECI office: 235B Dooley Road /	Yes
Internal QC record	Brendon Kelly	Hardcopy	Min. 5 years	
		Hardcopy &	MECI office: 235B Dooley Road /	Yes
Sampling Report	Brendon Kelly	Electronic	Min. 5 years	

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
Site Reconnaissance	2/3/12	2/3/12	Already Completed
QAPP preparation	2/6/12	2/6/12	In progress
QAPP approval	2/7/12	2/28/12	Assuming three week turnaround
Monitoring well			
Sampling	2/29/12	3/14/12	Sampled within 2 weeks of QAPP approval
Report Preparation	3/15/12	4/5/12	Three weeks to prepare/submit report

ltem	Start Date	End Date	Comments

Table 5A Sampling Activities

B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

<u>Estimate</u> the number of samples of each matrix that are expected to be collected:

Soil	
Ground Water from monitoring wells	13
From Drinking/Irrigation water wells	
Field Duplicate Collection	1
Field Blank Collection	1
Trip Blank	1
From surface water features	
Total number of Water samples	16

Notes:

During the February 3, 2012 site visit, thirteen (13) monitoring wells were located. Monitoring well MW-9 is behind a locked gate, and could not be located.

Monitoring well MW-8 is in need of three bolts to be properly secure.

Samples will be analyzed by Shealy Environmental Services, Inc. for BTEX, Napth, MTBE, 1,2 DCA, 8-Oxygenates (8260-B), EDB (8011) and Total Lead (EPA Method 6010).

For the sample matrices indicated above, please describe how samples will be collected and the equipment needed.

Please see MECI Monitoring Well Sampling SOP for sampling procedures and type of materials used for sampling

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable?

All equipment, excluding electronic water level indicators, field probes and turbidity tubes, is disposable.

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination.

Please see MECI Monitoring Well Sampling SOP for decontamination procedures.

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

All samples will be shipped to the lab via courier or overnight shipping company. Please see MECI Monitoring Well Sampling SOP for sample shipping procedures.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Water level indicator not working properly	Attempt to clean probe, change battery, use back-up indicator if need be.	Record on field sheets, notify office staff. Take indicator out of rotation until problem identified and corrected.	Field Staff, Field Manager
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
Wells not located	Use metal detector, measure from known points, contact project manager for additional information.	Record method used to attempt to locate the well on field sheets, and possibly reasoning for the well to be missing	Field Staff

Table 6A Field Corrective Action

B3 Sample Handling and Custody

1. How will the samples get from the Site to the Lab to ensure holding requirements are met?

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. How will the contactors cool the samples and keep the samples cool?

All samples are kept on wet ice, obtained from MECI office.

3. How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?

A calibrated thermometer and temperature blank will be used to document sample temperature. The temperature blank is immediately checked by the sample receiving technician upon arrival at the laboratory.

4. Where will the samples be stored in the Lab once they are received?

All samples are stored in clean refrigeration units monitored and maintained at 4 degrees C + or - 2 degrees. Volatile organic samples are stored separately form all other samples.

5. Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.

A chain of custody (COC) will be filled out for each sampling event at each project site. COC to be signed by MECI and Shealy Environmental technician at time physical transfer of samples occurs to courier. Shealy uses the following COC procedures to protect sample integrity following pickup by their courier: A full time Sample Receiving Technician receives all samples and completes a Sample Receipt Checklist (SRC), which will identify any anomalies, if any exist the Sample Receiving Technician or Project Manager must resolve the deviation internally and/or notify the client to resolve the anomaly

B4 Analytical Methods

1. Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:

Parameter	SOP ID*	Method Referenced	Equipment	Comments
BTEX+Naph+MTBE+Oxygentaes	S-VO-002	8260B	GC/MS	
PAH's	S-SV-021	8270D	GC/MS	
EDB	S-SV-012	8011	GC	
Lead,T.	S-IM-022	6010C	ICP	
Ferrous Iron	S-IN-009	SM 3500-FED	Spectrophotometer	
Nitrate	S-IN-042	353.2	Auto- analyzer/Lachate	
Sulfate	S-IN-010	300.0	Ion Chromatograph	
Methane	S-VO-004	RSK-175	GC	
TOC	S-IN-030	Walkley-Black	N/A	
DRO - TPH	S-SV-001	8015C	GC	
pH	MECI SOP 4.3.6	*	YSI 63	
Conductivity	MECI SOP 4.3.6	*	YSI 63	
Dissolved Oxygen	MECI SOP 4.3.6	*	YSI 550A	

Temperature	MECI SOP 4.3.6	*	YSI 550A	
Turbidity	MECI SOP 4.3.6	*	60 cm Turbidity Tube	

Table 7A Analytical SOPs and Referenced Methods

• This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-VO-002	S-VO-002	GC/MS VOLATILES ANALYSIS BASED ON EPA
		METHODS 8260B AND 624 PREPARED BY EPA
		METHODS 5030B, 5035 AND 3585
S-SV-021	S-SV-021	GC/MS ANALYSIS BASED ON EPA METHOD
		8270D PREPARED BY EPA METHODS 3520C,
		3550C AND 3580A
S-SV-012	S-SV-012	GC/ECD ANALYSIS OF EDB AND DBCP BASED
		ON METHOD 8011 & 504.1
S-IM-022	S-IM-022	INDUCTIVELY COUPLED PLASMA ATOMIC
		EMISSION SPECTROSCOPY-PECTROMETRIC
		METHOD for TRACE ELEMENT ANALYSES
		METHOD 6010C
S-IN-009	S-IN-009	FERROUS IRON (PHENANTHROLINE METHOD)
		STANDARD METHOD 3500-Fe D
S-IN-042	S-IN-042	NITRATE+NITRITE NITROGEN BY EPA
		METHOD 353.2, NITRATE NITROGEN BY 353.2
		SUBTRACTION,
		AND NITRITE NITROGEN BY EPA METHOD
		353.2
S-IN-010	S-IN-010	INORGANIC ANIONS BY ION
		CHROMATOGRAPHY
		EPA METHOD 300.0 and SW-846 9056 and
		9056A
S-VO-004	S-VO-004	STANDARD OPERATING PROCEDURE GC
		ANALYSIS BASED ON METHOD RSKSOP-175
S-IN-030	S-IN-030	TOTAL ORGANIC CARBON (TOC)
		WALKLEY-BLACK PROCEDURE
S-SV-001	S-SV-001	GC/FID DIESEL RANGE ORGANICS ANALYSIS
		BASED ON METHOD 8015B and/or 8015C
		PREPARED BY EPA METHODS 3520C, 3550C
		and 3580A
MECI SOP 4.3.6	MECI SOP 4.3.6	Sampling Standard operating procedures

Table 8A SOP Abbreviation Key

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
COC or	Call Client	Sample Receiving Checklist	PM – Kelly Maberry

Sample Receiving		(SRC)	kmaberry@shealylab.com
issues Analytical errors	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com
QA/QC Failure	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com
On time delivery	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
BTEX+Naph+MTBE+Oxygenates	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
PAH's	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
EDB	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	·
Lead	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as	

				reditiary 1, 2012
			Hazardous or non-Hazardous waste.	
Ferrous Iron	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Nitrate, Sulfate	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	
Methane	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.	,
All	Water	On-Site	Portable Granulated Activated Carbon (GAC) Unit	All waste water produced from sampling and decontamination activities will be run through a GAC unit

Table 10A Sample Disposal Procedures

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

		r	T		February 7, 2012
Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
Volatiles Mass Spec	Shealy SOP S- SV-021 Page 7	Change traps, clean ion source, replace filaments	Periodic	Laboratory	MSV Analyst
Semivolatile Mass Specc	Shealy SOP S- SV-021 Page 7	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
ECD GC	Shealy SOP S- SV-012 Page 5	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
Dionex IC	Shealy SOP S- IN-010 Page 6	Replace auto sampler filter, tubing, line filter, sample Line and Waste Line, as needed. Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst
ICP	Shealy SOP S- IM-005 Page 6 & 7	Clean Sample introduction system , auto sampler, torch, Change spray chamber, torch tubing, tubing	Periodic	Laboratory	ICP Analyst
Leeman Mercury Analyzer	Shealy SOP S- IM-006 Page 5	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst
Flow Injection Analysis – Lachat 8000	Shealy SOP S- IN-042 Page 5	Replace sample and reagent lines, replace light source, re-wrap heating coil, replace column	Periodic/As Needed	Laboratory	Nitrate Analyst
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace probe tip	Yearly	Order from YSI	B. Kelly
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace batteries	As Needed	In stock at office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Check buffer solutions for expiration	Weekly	In stock at office	B. Kelly
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace membrane	4 to 8 weeks	In stock at office	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace batteries	As Needed	In stock at office	Field Staff

YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
Turbidity Tube	#1, #2, #3	General inspection for wear and tear on equipment, clarity of Secchi Disk	Daily	Tubes will be cleaned/fixed in office	Field Staff

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this

Instrument/Equipment &	Type of Inspection	Requirement	Individual	Resolution of
Serial Number			Responsible	Deficiencies
Volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi-volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC Shealy SOP S-SV-012 Page 5	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument maintenance
Dionex IC Shealy SOP S-IN-010 Page 6	Daily calibration check	Method Requirements	IC Analyst	Recalibration or instrument maintenance
ICP Shealy SOP S-IM-005 Page 6 & 7	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument maintenance
Leeman Mercury Analyzer Shealy SOP S-IM-006 Page 5	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000 Shealy SOP S-IN-042 Page 5	Daily and continuing calibration check	See calibration criteria	Nitrate Analyst	Recalibration or instrument maintenance
YSI 63 - 09C 101302, 10K 101895, 07M 100905	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
YSI 550A - 04L 2026AK, 08B 101407, 04A 0912AI	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer

Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

- 1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
- 2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
- 3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
Volatiles Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by continuous calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst	S-VO-002
Semi-volatile Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-SV-021
GC ECD	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-SV-012
Dionex IC	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-IN-010
ICP	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst	S-IM-022
Cetac Mercury Analyzer	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-IM-006
Lacaht QuickChem 8000	Minimum of 5 calibration standards	Daily or when indicated by calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-IN-042
YSI 63 YSI 63	pH Calibration Conductivity	Daily As directed by	+/- 0.2 pH units +/- 10 uS	clean/replace probe tip, recalibrate clean/replace	Field Staff Field Staff	4.3.6 4.3.6

Instrument	Calibration	Frequency of	Acceptance Criteria	Corrective Action	Person	SOP
	Procedure	Calibration		(CA)	Responsible	Reference*
					for CA	
	Calibration	manufacturer		probe tip,		
				recalibrate		
				clean/replace		
				probe tip,		
YSI 550A	DO calibration	Daily	+/- 0.25 mg/l	recalibrate	Field Staff	4.3.6
				clean/replace		
	Temperature			probe tip,		
YSI 550A	Calibration	Daily	+/- 1 °C	recalibrate	Field Staff	4.3.6
Electronic		,				
Water Level	Checked vs.		+/- 0.01 foot per 10	Replace probe		
Indicator	Standard	Monthly	foot length	tape	Field Staff	***
Oil/Water	Checked vs.		+/- 0.01 foot per 10	Replace probe		
Interface probe	Standard	Monthly	foot length	tape	Field Staff	***

Table 13A Instrument Calibration Criteria and Corrective Action

B8 Inspection/Acceptance Requirements for Supplies and Consumables

- 1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
- 2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Laboratory	Fisher,VWR	Certificates of analysis and	Laboratory storage	Receiving and laboratory
Chemicals		laboratory testing		personnel
Laboratory	O2Si, Restek,	Certificates of analysis and	Vendor specific	Laboratory Analysts
standards	High Purity, VHG, Supelco	laboratory verifications	storage conditions	
Sample	Daniels Scientific,	Certificates of analysis and	Bottle storage area	Sample receiving personnel
Containers	QEC	laboratory testing		
Clear, Disposable polyethylene		Individual sleeves intact, ball	Stored in Vehicle Bay, Off of the	·
Bailers	Preferred Pump	valve operational	ground	B. Kelly, Field Staff
			Stored in Vehicle Bay, Off of the	
Nylon Rope	Preferred Pump	Covered with plastic	ground	B. Kelly, Field Staff
			Stored in Vehicle Bay, Off of the	
Nitrile Gloves	Preferred Pump	Unopened box, no holes	ground	B. Kelly, Field Staff
40 mL HCL preserved amber	Shealy Environmental		Stored in Vehicle Bay, Off of the	
vials	Services	Custody seal intact	ground	B. Kelly, Field Staff
250 mL HNO3	Shealy		Stored in Vehicle	
preserved metals	Environmental		Bay, Off of the	D 1/ 11 F1 11 01 F
vials	Services	Custody seal intact	ground	B. Kelly, Field Staff

^{*} This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Shealy Environmental Services Intact ground B. Kelly, Field Staff PH Buffer TRS Within expiration date Environmental, Enviroequipment Conductivity TRS Within expiration date Stored in calibration room Conductivity TRS Within expiration date Stored in calibration room Enviroequipment COMembranes YSI, Clean, in box Stored in calibration room Batteries Any Store Not previously used Stored in calibration room Stored in calibration room B. Kelly, Field Staff Clean, in box Stored in calibration room B. Kelly, Field Staff Calibration room Calib					1001441 1,2012
Coolers Services Intact ground B. Kelly, Field Staff pH Buffer TRS Within expiration date Environmental, Enviroequipment Conductivity TRS Within expiration date Stored in calibration room Standard Environmental, Enviroequipment COMembranes YSI, Clean, in box Stored in calibration room Enviroequipment Clean, in box Stored in calibration room Batteries Any Store Not previously used Stored in B. Kelly, Field Staff		1 1		i II	
pH Buffer TRS Within expiration date Stored in calibration room Conductivity TRS Within expiration date Stored in calibration room Standard Environmental, Environmental, Enviroequipment CO Membranes YSI, Clean, in box Stored in calibration room Batteries Any Store Not previously used Stored in B. Kelly, Field Staff Stored in calibration room B. Kelly, Field Staff Stored in calibration room B. Kelly, Field Staff Stored in calibration room B. Kelly, Field Staff Stored in B. Kelly, Field Staff Stored in Calibration room B. Kelly, Field Staff	Coolers	1	Intact	- F	B. Kelly, Field Staff
Conductivity TRS Within expiration date Stored in calibration room Standard Environmental, Enviroequipment CO Membranes YSI, Clean, in box Stored in calibration room Enviroequipment Clean, in box Stored in calibration room Batteries Any Store Not previously used Stored in B. Kelly, Field Staff	pH Buffer	TRS	Within expiration date	Stored in	
Conductivity Standard Standard Environmental, Enviroequipment Clean, in box Enviroequipment Clean, in box Enviroequipment Clean, in box Enviroequipment Calibration room B. Kelly, Field Staff		Environmental,		calibration room	
Standard Environmental, Enviroequipment Comparison of Com		Enviroequipment			
Enviroequipment OO Membranes YSI, Enviroequipment Clean, in box Clean, in box Calibration room Batteries Any Store Not previously used Stored in B. Kelly, Field Staff	Conductivity	TRS	Within expiration date	Stored in	B. Kelly, Field Staff
DO Membranes YSI, Enviroequipment Batteries Any Store Not previously used Stored in calibration room Stored in B. Kelly, Field Staff Staff B. Kelly, Field Staff	Standard	Environmental,		calibration room	
Enviroequipment calibration room Batteries Any Store Not previously used Stored in B. Kelly, Field Staff		Enviroequipment			
Batteries Any Store Not previously used Stored in B. Kelly, Field Staff	DO Membranes	YSI,	Clean, in box	Stored in	B. Kelly, Field Staff
States in States		Enviroequipment		calibration room	
calibration room	Batteries	Any Store	Not previously used	Stored in	B. Kelly, Field Staff
			•	calibration room	

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

- 1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
- 2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
- 3. Indicate the acceptance criteria for these data sources and/or models.

Data Source	Used for	Justification for use in this project	Co	mments
Historical Data	Site Maps and Well Construction Information	Well Location and Detail		

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed.

There are no non-direct measurements in this project

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab. This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures."

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

Section C Assessment and Oversight C1 Assessment and Response Actions

1. The Contractor is supposed to observe field personnel daily during sampling sampling samples are collected and handled properly and report problems to DHEC within 24 hours. Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?

Midlands Environmental Consultants, Inc. Coastal 76 Truck Stop QAPP Addendum Revision 1 February 7, 2012

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager. If severe problems are identified by the SCDHEC project manager, the project manager can stop the work until the problems are corrected.

2. The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?

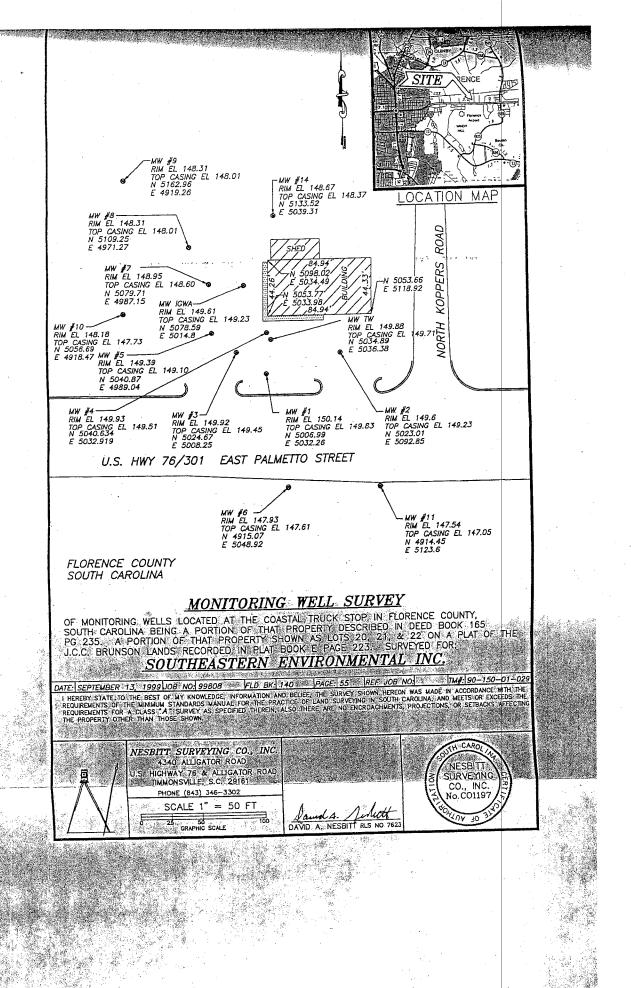
The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. If during a random audit, severe problems are found, work will be stopped by the according Wibby Environmental representative and the QA officer contacted to determine corrective action. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).





Chain of Custody Record

unless other arrangements are made.

Shealy Environmental Services, Inc. 106 Vantage Point Drive

West Columbia, South Carolina 29172

Number 12602

°C Temp. Blank □ Y / □ N

Telephone No. (803) 791-9700 Fax No. (803) 791-9111 www.shealylab.com Client Sampler (Printed Name) Quote No. Report to Contact Waybill No. Address Telephone No. / Fax No. / Email Page of Zip Code Preservative City State Number of Containers 4. HNO3 Bottle (See Instructions on back) 1. Unpres. 7. NaOH Project Name Preservative 2. NaOH/ZnA 5. HCL 3. H2SO4 Lot No. 6. Na Thio. P.O Number Project Number Matrix Analysis Sample ID / Description (Containers for each sample may be GW DW WW Remarks / Cooler ID Date Time combined on one line) Possible Hazard Identification Sample Disposal QC Requirements (Specify) Turn Around Time Required (Prior lab approval required for expedited TAT) □Unknown □Non-Hazard □Flammable □Skin Irritant □Poison ☐ Return to Client Disposal by Lab ☐ Standard ☐ Rush (Please Specify) Date Time Date Time 1. Received by 1. Relinquished by / Sampler Date Time 2. Received by Date Time 2. Relinquished by Time Date 3. Received by Date Time 3. Relinguished by Date Time 4. Laboratory Received by Date Time 4. Relinquished by Note: All samples are retained for six weeks from receipt LAB USE ONLY

Received on Ice (Check)

☐ Yes ☐ No ☐ Ice Pack

Receipt Temp.

3/1/12 # 03538 Coastal Truck Stop Site visit w/ Bob A Maia On-site Field Audit + Groundwater Monitoring Midlands Environmental - Gavin & Kyle turbidity measured using tube/black & white disc Method partly cloudy, breezy, upper 60s wells that have not been "touched" in 12 months must be purged before samples can be taken NTUs have to be less than 10 or stabilized MW-10 one bouter put into well. Came back half full a nighty sedimented. NTUs came out 7240. Vials filled. Settled out to more than 'b Sedimented. Didn't touse purge because no water Suggested may come back later to continue purge 9 sample Suggested they put meter information onto field data sheets.

Having issues with turbidity 9 low water levels at site.

Reaffirmed GAPP. Take a minimum of 3 readings.
Take readings. May have to wait between each reading because of slow recharge rate.

Wells not dry if water still coming back into well.

Define "dry."

Have to an 3 readings. If not stabilized, take 4th reading. If not stabilized, their project manager decides whether or not to sample.

Told them they may have to make 3 complete passes of site to get sta 3 readings.

Jessica Effice 3/1/12

Midlands Environmental Consultants, Inc.

Ms. Debra Thoma, Hydrogeologist Corrective Action Section Underground Storage Tank Program Bureau of Land and Waste Management South Carolina Department of Health and Environmental Control 2600 Bull Street Columbia, South Carolina 29201

Subject:

Report of Groundwater Sampling

Coastal 76 Truck Stop 2513 E. Palmetto Street Florence, South Carolina

SCDHEC Site ID Number 03538; CA # 39814

MECI Project Number 12-3791

Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Coastal 76 Truck Stop) is located at 2513 E. Palmetto Street, Florence, Florence County, South Carolina. The subject site formally maintained one 2,000 gallon gasoline underground storage tank (UST), one 3,000 gallon gasoline UST, one 1,000 gallon gasoline UST and one 2,000 gallon diesel UST. These UST's were abandoned by removal from the ground in August of 1995. SCDHEC reported a release from these UST's in September of 1995 and confirmed the release in August of 1997. The subject site is currently rated a Class 3BA.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On March 1, 2012, MECI personnel collected groundwater samples from seven (7) monitoring wells at the subject site. Two (2) monitoring wells, MW-3 and MW-4, were gauged and contained free phase petroleum product. Four (4) monitoring wells were gauged and determined to be dry. MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water





interface probe for free phase petroleum product level measurements. Based on a request by SCDHEC personnel, all of the wells were to be purged prior to sampling. Six (6) monitoring wells were purged prior to sampling. One monitoring well, MW-11, was unable to be purged prior to sampling due to insufficient water. Purging was completed by bailing at least three well volumes of water from the well, until pH, conductivity, dissolved oxygen stabilized to within 10%, or all water was evacuated from the well, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, water temperature, and turbidity were obtained before well sampling process. MECI utilized YSI550A meter for DO (mg/L) and temperature readings (°C), YSI63 meters for pH and conductivity (uS) readings and a 60 cm turbidity tube for turbidity readings. The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Dated June 2011) and MECI's Standard Operating Procedures (MECI SOP, Dated August, 2011).

Groundwater samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis. The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method \$260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH'S (EPA Method 8270)	Ferrous Iron (Field Test)
							<u> </u>	An	alyte Sa	mpled				
MW-1			X											
MW-2			X											
MW-3			X											
MW-4		1	X											
MW-5	X				X	X	X	X	X					
MW-6			X											
MW-7	X				X	X	X	X	X					
MW-8	X				X	X	X	X	X					
MW-9				X								<u> </u>		
MW-10	X				X	X	X	X	X					
MW-11		X			X	X	X	X	X	ļ		-		
MW-12				X										
MW-13				X								-		
MW-14	X				X	X	X	X	X				ļ	
MW-IGWA			X									-		
MW-TW	X				X	X	X	X	X		ļ			
MW-7 Duplicate					X	X	X	X	X		-			
Field Blank					X	X	X	X		<u> </u>				-
Trip Blank					X		X	X		12 DC		<u> </u>	<u>L.</u>	<u> </u>

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

Trip Blank provided by Shealy Environmental, temperature obtained upon receipt at Laboratory

Contractor Checklist

Item#	Item	Yes	No	N/A	
1	Is Facility Name, Permit #, and address provided?	X			
2	Is UST Owner/Operator name, address, & phone number provided?			X	
3	Is name, address, & phone number of current property owner provided?			X	
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X			
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?	-		X	
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X			
7	Has the facility history been summarized?	Х			
8	Has the regional geology and hydrogeology been described?			X	
9	Are the receptor survey results provided as required?			X	
10	Has current use of the site and adjacent land been described?			X	
11	Has the site-specific geology and hydrogeology been described?			X	
12	Has the primary soil type been described?			X	
13	Have field screening results been described?			X	
14	Has a description of the soil sample collection and preservation been detailed?			X	
15	Has the field screening methodology and procedure been detailed?			X	
16	Has the monitoring well installation and development dates been provided?			X	
17	Has the method of well development been detailed?			X	
18	Has justification been provided for the locations of the monitoring wells?			X	
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X	
20	Has the groundwater sampling methodology been detailed? See MECI SOP	X			
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X			
22	Has the purging methodology been detailed? See MECI SOP	X			
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	Х			
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X			
25	Does the report include a brief discussion of the assessment done and the results?			X	
26	Does the report include a brief discussion of the aquifer evaluation and results?			X	
27	Does the report include a brief discussion of the fate & transport models used?			X	

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			х
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			Х
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			Х
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			Х
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			х
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			х
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Site Activity Summary

UST Permit #:

03538

Facility Name:

Coastal 76 Truck Stop

County:

Florence

Field Personnel:

K. Pudney, G. Globensky



235-B Dooley Road, Lexington, SC 29073 (803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1	N	***	***	TD=17.80	***	***	***	***	***	Gauged Dry
MW-2	N	***	***	TD=18.30	***	***	***	***	***	Gauged Dry
MW-3	N	***	***	TD=18.00	17.80	18.20	0.40	***	***	Free Phase Petroleum Product to bottom of the well
MW-4	N	***	***	TD=18.35	17.56	17.58	0.02	***	***	Free Phase Petroleum Product
MW-5	Y	2/20/12	15:10	TD=18.20	***	17.05	***	0.20	0.50	Slight Odor
MW-6	N	***	***	TD=17.78	***	***	***	***	***	Gauged Dry
MW-7	Υ	2/20/12	15:20	TD=18.10	***	16.54	***	0.15	0.50	Slight Odor
MW-8	Y	2/20/12	14:30	TD=18.00	***	15.59	***	0.45	1.50	Slight Odor / 3 Bolts Added
MW-9	N	***	***	***	***	***	***	***	***	Not Located
MW-10	Y	2/20/12	15:40	TD=18.25	***	15.65	***	6.90	1.0	No Odor
MVV-11	N	***	***	TD=18.40	***	17.85	***	***	***	Insufficient water for field measurements or purging
MW-12	N	***	***	***	***	***	***	***	***	Not on Map provided by SCDHEC
MW-13	Ŋ	***	***	***	***	***	***	***	***	Not on Map provided by SCDHEC
MW-14	Y	2/20/12	14:40	TD=18.14	***	16.35	***	0.16	0.75	Ödor
MW-IGWA	N	***	***	TD=16.40	***	***	***	***	***	Gauged Dry
		1	I		<u> </u>			<u> </u>	4.25	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #:

03538

Facility Name:

Coastal 76 Truck Stop

County:

Florence

Field Personnel:

K. Pudney, G. Globensky



Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-TW	Y	3/1/12	13:35	31-36	***	17.75	***	4.23	12.00	No Odor / Well Cap Added
MW-7 Duplicate	Y	3/1/12	15:20	***	***	***	***	***	***	MW-7 Duplicate Sample
Field Blank	Y	3/1/12	16:00	***	***	***	***	***	***	Field Blank
Trip Blank	Y	3/1/12	14:00	***	***	***	***	***	***	Trip Blank
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	<u></u>		L		1	<u> </u>	<u> </u>		16.25	TOTAL GALLONS PURGED

Date (mm/dd/yy): 3/1/2012			Facility Name: Coastal 76	Truck Stop		.,.
Field Personnel: K. Pudney, C	G. Globensky		Site ID#: 03538	M	onitoring Well #	MW-5
General Weather Conditions:	Clear, Sunny		Water Supply Well	Public	Private	•
Ambient Air Temperature:	18.0 °C		Monitoring Well Diameter (D):		2 inches	
Quality pH/Conductivity Meter	Assurance DO Meter		Conversion Factor (C): 3.14 x (D	•	r a 2 inch well C=0 r a 4 inch well C=0	
YSI 63	YSI 550A		* Free Product Thickness:			feet
09C 101302 X	04L 2026AK	X	Depth to Free Product (DFP)			feet
10K 101895	08B 101895		Depth to Ground Water (DGW)	17.05		feet
07M 100905	04A 0912AI		Total Well Depth (TWD)	18		feet
Calibration Buffer: 4, 7, & 10			Length of the water column (LW	C=TWD-DGW	<i>I</i>) 0.9	5 feet
			1 casing volume (CV=LWC X C)= X	<u>0.163</u> 0.15	gallons
Chain o	f Custody		3 casing volume (3 X CV)=		3 0.46	gallons
			Total Volume of Water Purged B	efore Sampling	g 0.5	gals.
Relinquished by Date/Time	Received by	Date/Time	*If free product is present over 1/8 in	nch, sampling w	ill not be required.	

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:00	15:00	15:10					
pH (s.u.)	6.72	7.02	7.10					
Specific Conductivity (µmhos/cm)	71.7	85.9	90.5					
Water Temperature (°C)	22.3	22.4	22.4					
Dissolved Oxygen	0.20	0.56	0.48					
Turbidity (NTU)	>240	>240	>240					
PID readings, if required								

Remarks:	Sample Time:	15:10	Parameters within 10%	
	V			

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy):	3/1/2012			Facility Name:	Coastal 76 Truck Sto	р
Field Personnel:	K. Pudney, G	. Globensky		Site ID#: 03538		Monitoring Well #
General Weather C	Conditions:	Clear, Sunny		Water Supply Well	Public	Private
Ambient Air Temp	erature:	18.0 °C		Monitoring Well Dia	meter (D):	2 inches
	Quality A	<u>Assurance</u>		Conversion Factor (C	C): $3.14 \times (D/2)^2$	for a 2 inch well C=0
pH/Conductivity M	<u>leter</u>	DO Meter				for a 4 inch well C=0
YSI 63		YSI 550A		* Free Product Thick	ness:	
09C 101302	X	04L 2026AK	X	Depth to Free Produc	et (DFP)	
10K 101895		08B 101895		Depth to Ground Wa	ter (DGW) 16.5	4
07M 100905		04A 0912AI		Total Well Depth (T	WD) 18.	1
Calibration Buffer:	4, 7, & 10			Length of the water of	olumn (LWC=TWD-I	OGW) 1.
			·	1 casing volume (CV	=LWC X C)= X	X <u>0.163</u> 0.25
	Chain o	f Custody		3 casing volume (3 X	(CV)=	3 0.76
				Total Volume of War	ter Purged Before Sam	pling 0.5
Relinquished by	Date/Time	Received by	Date/Time	*If free product is pres	ent over 1/8 inch, sampli	ng will not be required.

0.15

>240

0.98

>240

1.05

>240

Parameters within 10%

Cumulative Volume Purged (gallons)

Specific Conductivity (µmhos/cm)

Remarks:

Sample Time:

15:20

Water Temperature (°C)

PID readings, if required

Dissolved Oxygen

Turbidity (NTU)

Time (military)

pH (s.u.)

	Monitoring	g Well Dian	neter (D):		2	inches			
	Conversion	n Factor (C)	: 3.14 x (D/	(2) ²	for a 2 inch	,			
	Depth to Fr Depth to G Total Well Length of t 1 casing vo 3 casing vo Total Volu	olume (CV= olume (3 X olume) me of Wate	(DFP) er (DGW) /D) elumn (LWC -LWC X C) CV)= er Purged Be	= X efore Sampl	16.54 18.1 C=TWD-DGW) 1.56				
Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post S	Sampling		
12:40	15:15	15:20		·					
6.91	6.82	6.85							
124.9	137.8	141.0							
20.8	20.8	20.9							
	I	1		l .		1	1	1	

MW-7

Date (mm/dd/yy):	3/1/2012			Facility N
Field Personnel:	K. Pudney, G	. Globensky		Site ID#:
General Weather C	onditions:	Clear, Sunny		Water Suj
Ambient Air Tempe	erature:	18.0 °C		Monitoring
	Quality A	Assurance		Conversion
pH/Conductivity Mo	<u>eter</u>	DO Meter		
YSI 63		YSI 550A		* Free Pro
09C 101302	X	04L 2026AK	X	Depth to F
10K 101895		08B 101895		Depth to C
07M 100905		04A 0912AI		Total Well
Calibration Buffer:	4, 7, & 10			Length of
				1 casing vo
	Chain of	Custody		3 casing vo
				Total Volu
Relinquished by	Date/Time	Received by	Date/Time	*If free pro-

Facility Name: Coastal 7	6 Truck Sto	р		
Site ID#: 03538		Monitori	ng Well #	MW-8
Water Supply Well	Public		Private	
Monitoring Well Diameter (D):		2	inches	·
Conversion Factor (C): 3.14 x (I	D/2) ²		sh well C=0.	
* Free Product Thickness:				feet
Depth to Free Product (DFP)		·		feet
Depth to Ground Water (DGW)	15.5	9		feet
Total Well Depth (TWD)	1	8		feet
Length of the water column (LW	/C=TWD-D	OGW)	2.4	1 feet
1 casing volume (CV=LWC X C	S)= >	<u>0.16</u>	0.39	gallons
3 casing volume (3 X CV)=			3 1.18	gallons
Total Volume of Water Purged I *If free product is present over 1/8			1.5 required.	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	11:37	12:30	14:22	14:30			
pH (s.u.)	7.01	6.21	6.29	6.31			
Specific Conductivity (µmhos/cm)	43.8	48.9	56.9	58.2			
Water Temperature (°C)	19.4	20.3	20.5	20.4			
Dissolved Oxygen	0.45	1.04	2.11	2.05			
Turbidity (NTU)	>240	>240	>240	>240			
PID readings, if required							

Remarks:	Sample Time:	14:30	

Date (mm/dd/yy):	3/1/2012			Facility Name:	Coastal 76 Truck	Stop
Field Personnel:	K. Pudney, G	. Globensky		Site ID#: 03538		Monitoring We
General Weather C	onditions: _	Clear, Sunny		Water Supply Well	Public	Pri
Ambient Air Tempe	erature:	18.0 °C		Monitoring Well Dia	ameter (D):	2incl
	Quality .	Assurance		Conversion Factor (C): $3.14 \times (D/2)^2$	for a 2 inch wel
pH/Conductivity M	eter	DO Meter				for a 4 inch wel
YSI 63		YSI 550A		* Free Product Thicl	cness:	
09C 101302	X	04L 2026AK	X	Depth to Free Produ	ct (DFP)	
10K 101895		08B 101895		Depth to Ground Wa	ater (DGW)1.	5.65
07M 100905		04A 0912AI		Total Well Depth (T	WD) 18	8.25
Calibration Buffer:	4, 7, & 10			Length of the water	column (LWC=TWI	D-DGW)
				1 casing volume (CV	V=LWC X C)=	X <u>0.163</u>
	Chain o	f Custody		3 casing volume (3 2	X CV)=	3
				Total Volume of Wa	ater Purged Before S	ampling
Relinquished by	Date/Time	Received by	Date/Time			pling will not be require
				L		

Site ID#:	03538		Monitoring	Well#	MW-10
Water Supp	oly Well	Public		Private	
Monitoring	Well Diameter (D):		2	inches	
Conversion	Factor (C): 3.14 x (D) /2) ²	for a 2 inch for a 4 inch		
* Free Produ	act Thickness:				feet
Depth to Fre	ee Product (DFP)				feet
Depth to Gr	ound Water (DGW)	15.65			feet
Total Well I	Depth (TWD)	18.25			feet
Length of th	e water column (LW	C=TWD-D	GW)	2.6	feet
1 casing vol	ume (CV=LWC X C	(t)=X	0.163	0.42	gallons
	ume (3 X CV)=		3	1.27	gallons

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	10:20	13:45	15:40				
pH (s.u.)	5.68	6.03	6.12	-			
Specific Conductivity (µmhos/cm)	40.2	39.7	39.6				
Water Temperature (°C)	20.0	20.1	20.1				
Dissolved Oxygen	6.90	5.83	5.75		4.0		
Turbidity (NTU)	>240	>240	>240				
PID readings, if required							

Remarks:	Sample Time:	15:40	Parameters within 10%	
<u></u>				

Date (mm/dd/yy): 3/1/20	12	Facility Name: Coastal 76 Truck Sto	p
Field Personnel: K. Pudney	, G. Globensky	Site ID#: 03538	Monitoring Well # MW-1
General Weather Conditions:	Clear, Sunny	Water Supply Well Public	Private
Ambient Air Temperature:	18.0°C	Monitoring Well Diameter (D):	2 inches
	ty Assurance	Conversion Factor (C): 3.14 x (D/2) ²	for a 2 inch well C=0.163 for a 4 inch well C=0.652
pH/Conductivity Meter YSI 63	DO Meter YSI 550A	* Free Product Thickness:	feet
09C 101302 X 10K 101895 07M 100905 Calibration Buffer: 4, 7, & 10	04L 2026AK X 08B 101895 04A 0912AI	Depth to Free Product (DFP) Depth to Ground Water (DGW) Total Well Depth (TWD) Length of the water column (LWC=TWD-D) 1 casing volume (CV=LWC X C)=	4 feet OGW) 1.79 feet X 0.163 0.29 gallons 3 0.88 gallons
Relinquished by Date/Time	Received by Date/Time	Total Volume of Water Purged Before Sam *If free product is present over 1/8 inch, sampling	

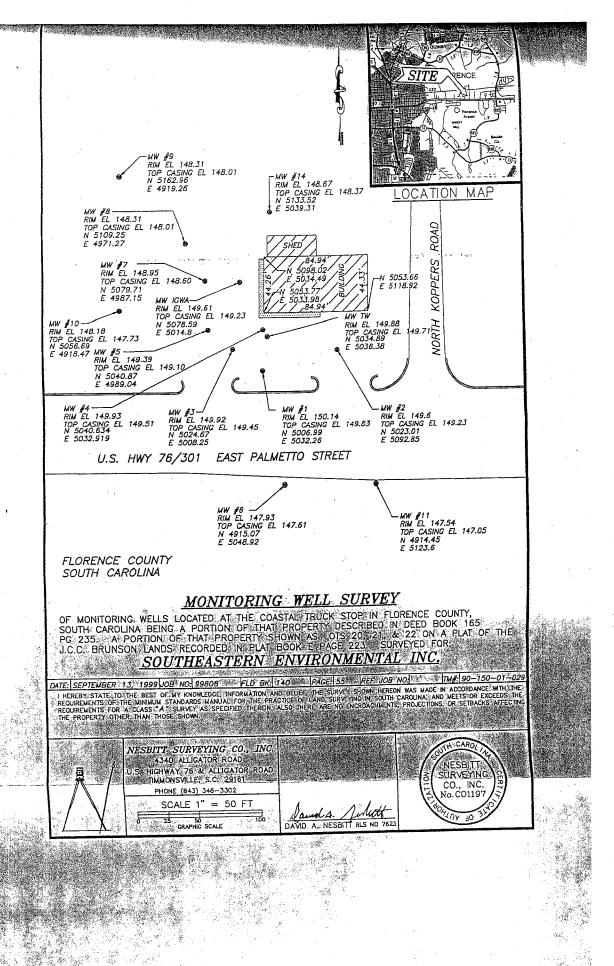
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Date (mm/dd/yy):	3/1/2012		
Field Personnel:	K. Pudney, G.	Globensky	
General Weather C	onditions:	Clear, Sunny	
Ambient Air Tempe	erature:	18.0 °C	
	Quality A	ssurance	
pH/Conductivity M		DO Meter	
YSI 63		YSI 550A	
09C 101302	X	04L 2026AK	X
10K 101895		08B 101895	
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		
	Chain of	Custody	
Relinquished by	Date/Time	Received by	Date/Time

Facility Name:	Coastal 76 Truck Sto	ор		
Site ID#: 03538		Monitori	ng Well#	MW-TW
Water Supply Well	Public		Private	
Monitoring Well Dia	meter (D):	2	inches	
Conversion Factor (C	$(2): 3.14 \times (D/2)^2$		ch well C=0.	
* Free Product Thick	ness:			feet
Depth to Free Produc	t (DFP)			feet
Depth to Ground Wa	ter (DGW) 17.7	75		feet
Total Well Depth (T	WD) 3	66		feet
Length of the water	olumn (LWC=TWD-)	OGW)	18.2	5 feet
1 casing volume (CV	=LWC X C)=	X <u>0.10</u>	<u>63</u> 2.97	gallons
3 casing volume (3 >	(CV)=		3 8.92	gallons
	er Purged Before Sam ent over 1/8 inch, sampl		12 e required.	gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Samplin
Time (military)	13:20	13:23	13:28	13:30	13:35		
pH (s.u.)	6.34	6.20	6.18	6.15	6.13		
Specific Conductivity (µmhos/cm)	38.6	30.7	28.9	29.0	28.7		
Water Temperature (°C)	23.1	22.9	22.2	22.1	22.1		
Dissolved Oxygen	4.23	4.48	5.24	5.12	5.10		
Turbidity (NTU)	<5	>240	>240	>240	>240		
PID readings, if required							

Remarks:	Sample Time:	13:35	



EAL) Chain of Custody Record West Columb Telephone No. (803) 71

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 12004

SHEALY ENVIRONMENTAL

SERVICES, INC.

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SHEALS Chain of Custody Record

Shealy Environmental Services, Inc. 106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fex No. (803) 791-9111

Number 12003

SHEALY ENVIRONMENTAL

SERVICES,

INC.

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Re: Treatment of Purge Water
Coastal 76 Truck Stop
Florence, South Carolina
SCDHEC Site ID Number 03538
MECI Project Number 12-3791

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

- 1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
- 2. No free-product was detected in any of the purge water drums.
- 3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
- 4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
- 5. Record of usage is maintained by Contractor.
- 6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
- 7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

A total of 16.25 gallons were treated on March 1, 2012 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,

Midlands Environmental Consultants, Inc.

Courtney M. Sanders Staff Biologist

Report of Analysis

SC DHEC - UST Management

2600 Bull Street Columbia, SC 29201 Attention: Debra Thoma



Project Name: Coastal 76 Truck Stop

Project Number: UST Permit #03538/CA #39815

Lot Number: NC02058

Date Completed: 03/13/2012



Kelly M. Maberry Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.



SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

Case Narrative SC DHEC - UST Management

Lot Number: NC02058

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Receiving

Sample -001 for volatiles analysis contained vials with air bubbles greater than 1/4" or 6mm in diameter. The laboratory uses these vials for screening and the vials without bubbles for analysis whenever possible. Condition of samples is documented on the Sample Receipt Checklist (SRC).

Shealy Environmental Services, Inc.

Sample Summary SC DHEC - UST Management

Lot Number: NC02058

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-5	Aqueous	03/01/2012 1510	03/02/2012
002	MW-7	Aqueous	03/01/2012 1520	03/02/2012
003	MW-8	Aqueous	03/01/2012 1430	03/02/2012
004	MW-10	Aqueous	03/01/2012 1540	03/02/2012
005	MW-14	Aqueous	03/01/2012 1440	03/02/2012
006	MW-TW	Aqueous	03/01/2012 1335	03/02/2012
007	MW-7 Dup	Aqueous	03/01/2012 1520	03/02/2012
800	Field Blank	Aqueous	03/01/2012 1600	03/02/2012
009	Trip Blank	Aqueous	03/01/2012 1400	03/02/2012

(9 samples)

Executive Summary SC DHEC - UST Management

Lot Number: NC02058

Sample	e Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-5	Aqueous	Benzene	8260B	640		ug/L	6
001	MW-5	Aqueous	1,2-Dichloroethane	8260B	12		ug/L	6
001	MW-5	Aqueous	Ethylbenzene	8260B	990		ug/L	6
001	MW-5	Aqueous	Naphthalene	8260B	210		ug/L	6
001	MW-5	Aqueous	Toluene	8260B	5100		ug/L	6.
001	MW-5	Aqueous	Xylenes (total)	8260B	5800		ug/L	6
001	MW-5	Aqueous	tert-Amyl alcohol (TAA)	8260B	180		ug/L	6
001	MW-5	Aqueous	tert-butyl alcohol (TBA)	8260B	8.9	J	ug/L	6
001	MW-5	Aqueous	1,2-Dibromoethane (EDB)	8011	0.45		ug/L	7
001	MW-5	Aqueous	Lead	6020A	670		ug/L	7
002	MW-7	Aqueous	Benzene	8260B	180		ug/L	8
002	MW-7	Aqueous	1,2-Dichloroethane	8260B	4.1	J	ug/L	. 8
002	MW-7	Aqueous	Ethylbenzene	8260B	740		ug/L	8
002	MW-7	Aqueous	Naphthalene	8260B	210		ug/L	8
002	MW-7	Aqueous	Toluene	8260B	870		ug/L	8
002	MW-7	Aqueous	Xylenes (total)	8260B	2500		ug/L	8
002	MW-7	Aqueous	3,3-Dimethyl-1-butanol	8260B	2.5	J	ug/L	8
002	MW-7	Aqueous	tert-Amyl alcohol (TAA)	8260B	140		ug/L	8
002	MW-7	Aqueous	tert-butyl alcohol (TBA)	8260B	8.9	J	ug/L	8
002	MW-7	Aqueous	Lead	6020A	280		ug/L	9
003	MW-8	Aqueous	Naphthalene	8260B	4.1	J	ug/L	10
003	MW-8	Aqueous	Xylenes (total)	8260B	3.4	J	ug/L	10
003	MW-8	Aqueous	tert-Amyl alcohol (TAA)	8260B	72	J	ug/L	10
003	MW-8	Aqueous	tert-butyl alcohol (TBA)	8260B	18	J	ug/L	10
003	MW-8	Aqueous	Lead	6020A	140		ug/L	11
004	MW-10	Aqueous	Lead	6020A	2.9		ug/L	13
005	MW-14	Aqueous	Benzene	8260B	530		ug/L	14
005	MW-14	Aqueous	1,2-Dichloroethane	8260B	10		ug/L	14
005	MW-14	Aqueous	Ethylbenzene	8260B	1500		ug/L	14
005	MW-14	Aqueous	Naphthalene	8260B	260		ug/L	14
005	MW-14	Aqueous	Toluene	8260B	3100		ug/L	14
005	MW-14	Aqueous	Xylenes (total)	8260B	4400		ug/L	14
005	MW-14	Aqueous	3,3-Dimethyl-1-butanol	8260B	1.1	J	ug/L	14
005	MW-14	Aqueous	tert-Amyl alcohol (TAA)	8260B	630		ug/L	14
005	MW-14	Aqueous	tert-butyl alcohol (TBA)	8260B	9.5	J	ug/L	14
005	MW-14	Aqueous	1,2-Dibromoethane (EDB)	8011	0.21		ug/L	15
005	MW-14	Aqueous	Lead	6020A	5.2		ug/L	15
006	MW-TW	Aqueous	Naphthalene	8260B	2.6	J	ug/L	16
006	MW-TW	Aqueous	Lead	6020A	13		ug/L	17
007	MW-7 Dup	Aqueous	Benzene	8260B	210		ug/L	18
007	MW-7 Dup	Aqueous	1,2-Dichloroethane	8260B	4.4	J	ug/L	18
007	MW-7 Dup	Aqueous	Ethylbenzene	8260B	930		ug/L	18
007	MW-7 Dup	Aqueous	Naphthalene	8260B	210	٠,	ug/L	18
007	MW-7 Dup	Aqueous	Toluene	8260B	1100		ug/L	18
007	MW-7 Dup	Aqueous	Xylenes (total)	8260B	3200		ug/L	18

Executive Summary (Continued)

Lot Number: NC02058

Sample	e Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
007	MW-7 Dup	Aqueous	3,3-Dimethyl-1-butanol	8260B	2.1	J	ug/L	18
007	MW-7 Dup	Aqueous	tert-Amyl alcohol (TAA)	8260B	170		ug/L	18
007	MW-7 Dup	Aqueous	tert-butyl alcohol (TBA)	8260B	9.3	J	ug/L	18
007	MW-7 Dup	Aqueous	Lead	6020A	180		ug/L	19

(49 detections)

Description: MW-5

Date Sampled: 03/01/2012 1510 Date Received: 03/02/2012

Laboratory ID: NC02058-001

Matrix: Aqueous

Volatile O	rganic	Compounds	bv	GC/MS
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Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/10/2012 0542	DĎ		79862
2	5030B	8260B	50	03/13/2012 1204	AAC		80018

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	640		250	10	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	12		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	990		250	85	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	210		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	5100		250	85	ug/L	2
Xylenes (total)	1330-20-7	8260B	5800		250	85	ug/L	2

		Run 2 A	Run 2 Acceptance			
Surrogate	Q	% Recovery	Limits	Q	% Recovery Limits	
1,2-Dichloroethane-d4		106	70-130		92	70-130
Bromofluorobenzene		87	70-130		82	70-130
Toluene-d8		112	70-130		96	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/10/2012 0542	DD		79862

Run 1

Parameter	CAS Number	Analytical Method	Result Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND	10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND	1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	180	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND ¹	10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	8.9 J	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75 - 4	8260B	ND	100	1.0	ug/L	1

Acceptance

Surrogate	Q	% Recovery	Limits
Bromofluorobenzene		87	70-130
1,2-Dichloroethane-d4		106	70-130
Toluene-d8		112	70-130

B = Detected in the method blank

J = Estimated result < PQL and > MDL

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Description: MW-5

Date Sampled: 03/01/2012 1510 Date Received: 03/02/2012

Laboratory ID: NC02058-001

Matrix: Aqueous

EDB &	DBCP b	y Microextraction	n
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Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/08/2012 0312	MSM	03/06/2012 0915	79418

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	0.45		0.032	0.032	ug/L	1

Run 1 Acceptance Q % Recovery Surrogate Limits

1,1,1,2-Tetrachloroethane 105 57-137

ICP-MS

				ICF-	IVIO						
Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep D	ate	Batch			
1	3005A	6020A	1	03/06/2012 002	22 BNW	03/05/20	12 1031	79321			
Paran	neter			CAS A	nalytical Method	Result	Q	PQL	MDL	Units	Run
Lead			7.	439-92-1	6020A	670		1.0	0.047	ua/L	1

J = Estimated result < PQL and > MDL

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

P = The RPD between two GC columns exceeds 40% * = Reportable result (only when report all runs)

Description: MW-7

Date Sampled:03/01/2012 1520 Date Received: 03/02/2012

Laboratory ID: NC02058-002

Matrix: Aqueous

Volatile	Organic	Compound	is by	y GC/MS
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Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	
1	5030B	8260B	1	03/10/2012 0604	DĎ		79862	
2	5030B	8260B	20	03/13/2012 1225	AAC	•	80018	

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	180		100	4.0	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	4.1	J	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	740		100	34	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	210		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	870		100	34	ug/L	2
Xylenes (total)	1330-20-7	8260B	2500	*	100	34	ug/L	2

		Run 1 A	Acceptance	Run 2 A	cceptance
Surrogate	Q	% Recovery	Limits Q	% Recovery	Limits
1,2-Dichloroethane-d4		97	70-130	99	70-130
Bromofluorobenzene		90	70-130	93	70-130
Toluene-d8		108	70-130	100	70-130

Volatile Organic Compounds by GC/MS

					<u> </u>			
Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	
1	5030B	8260B	1	03/10/2012 0604	DĎ		79862	

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	2.5	J	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	140		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	8.9	J	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 A % Recovery	Acceptance Limits
Bromofluorobenzene		90	70-130
1,2-Dichloroethane-d4		97	70-130
Toluene-d8		108	70-130

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

 $J = Estimated result < PQL and <math>\geq MDL$

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-7

Date Sampled:03/01/2012 1520 Date Received: 03/02/2012

Laboratory ID: NC02058-002

Matrix: Aqueous

EDB & DBCP k	by Microextraction
EDR & DRCL R	by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis Da 03/08/2012 0		Prep I 03/06/20	Date 012 0915	Batch 79418			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1 2-Di	ibromoethane (FDR)	<u> </u>		106-93-4	8011	ND		0.020	0.020	ua/L	1

Run 1 Acceptance Surrogate Q % Recovery Limits

1,1,1,2-Tetrachloroethane 57-137 107

ICP-MS

Run	Prep Method	Analytical Method	Dilution	•	-	Prep [Batch			
1	3005A	6020A	1	03/06/2012	0026 BNW	03/05/20	012 1031	79321			
				CAS	Analytical						
Param	neter			Number	Method	Result	Q	PQL	MDL	Units	Run
Lead			7.	439-92-1	6020A	280		1.0	0.047	ug/L	1

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

 $J = Estimated result < PQL and <math>\geq MDL$

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-8

Date Sampled:03/01/2012 1430 Date Received: 03/02/2012 Laboratory ID: NC02058-003

Matrix: Aqueous

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 03/08/2012	•	Prep	Date	Batch 79699			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benze	ne			71-43-2	8260B	ND		5.0	0.20	ug/L	• 1
1,2-Di	chloroethane			107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylb	enzene			100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methy	I tertiary butyl ether	(MTBE)	1	634-04-4	8260B	ND		5.0	0.40	ug/L	1
Napht	halene			91-20-3	8260B	4.1	J	5.0	1.7	ug/L	1
Toluer	ne			108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xvien	es (total)		1	330-20-7	8260B	3.4	J	5.0	1.7	ug/L	1

 Surrogate
 Run 1 & Acceptance (No. Recovery)
 Acceptance (Limits)

 1,2-Dichloroethane-d4
 85
 70-130

 Bromofluorobenzene
 97
 70-130

 Toluene-d8
 97
 70-130

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 03/13/2013	•	Prep	Date	Batch 80001			
Param	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopi	ropyl ether (IPE)			108-20-3	8260B	ND		10	0.40	ug/L	1
Ethano	ol			64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dir	nethyl-1-butanol		(624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-t	ert-butyl ether (ETBE	≣)	(37-92-3	8260B	ND		100	0.20	ug/L	1
tert-Ar	nyl alcohol (TAA)			75-85-4	8260B	72	J	100	6.7	ug/L	1
tert-An	nyl methyl ether (TAI	ME)	,	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-bu	ityl alcohol (TBA)			75-65-0	8260B	18	J	100	6.7	ug/L	1
tert-Bu	tyl formate (TBF)		7	762-75-4	8260B	ND		100	1.0	ug/L	1
Surrog	gate	Q	Run 1 % Recov								
Bromo	fluorobenzene		96	70-1	130						
1,2-Did	chloroethane-d4		96	70-1	130						
Toluen	e-d8		100	70-1	130						

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep !		Batch			
1	8011	8011	1	03/08/2012 0355	MSM	03/06/2	012 0915	79418			
			· ·	CAS Ana	alytical	-					
Param	neter			Number M	ethod	Result	Q	PQL	MDL	Units	Run

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

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Description: MW-8

Lead

Date Sampled:03/01/2012 1430 Date Received: 03/02/2012

Laboratory ID: NC02058-003

Matrix: Aqueous

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/08/2012 0355	MSM	03/06/2012 0915	79418

Parameter	CAS Number	Analytical Method	Result C	Q PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND	0.019	0.019	ug/L	1	
	Run 1 Accept	ance						

Surrogate Q % Recovery Limits

1,1,1,2-Tetrachloroethane 97 57-137

ICP-MS

Run 1	Prep Method 3005A	Analytical Method 6020A	Dilution 1	Analysis Date 03/06/2012 0031	Analyst BNW	Prep 03/05/2	Date 012 1031	Batch 79321			
Param	otor				alytical lethod	Result	0	PQL	MDL	Units	Run

6020A

140

1.0

0.047

ug/L

7439-92-1

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Description: MW-10

Date Sampled:03/01/2012 1540 Date Received: 03/02/2012

Laboratory ID: NC02058-004

Matrix: Aqueous

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
. 1	5030B	8260B	1	03/10/2012 0625	DD		79862
2	5030B	8260B	1	03/13/2012 1408	AAC		80022

Parameter				nalytical Method	l Result	Q	PQL	MDL	Units	Run
Benzene		71-	43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane		107-0	06-2	8260B	ND.		5.0	0.30	ug/L	1
Ethylbenzene		100-4	41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)		1634-	04-4	8260B	ND.		5.0	0.40	ug/L	1
Naphthalene		91-	20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene		108-8	88-3	8260B	, ND		5.0	1.7	ug/L	1
Xylenes (total)		1330-	20-7	8260B	, ND		5.0	1.7	ug/L	2
Surrogate	Q	Run 1 /	Acceptance Limits	Q %	Run 2 A 6 Recovery	cceptanc Limits	e .			
1,2-Dichloroethane-d4		104	70-130		93	70-130				
Bromofluorobenzene		90	70-130		96	70-130				
Toluene-d8		99	70-130	,	94	70-130				

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis (03/10/2012		Prep [Date	Batch 79862			
Param	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)			108-20-3	8260B	ND		10	0.40	ug/L	1
Ethano	ol			64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dir	methyl-1-butanol		(624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-t	ert-butyl ether (ETBE)			637-92-3	8260B	ND		100	0.20	ug/L	1
tert-An	nyl alcohol (TAA)			75-85-4	8260B	ND		100	6.7	ug/L	1
tert-An	nyl methyl ether (TAM	E)		994-05-8	8260B	ND		10	0.20	ug/L	1
tert-bu	tyl alcohol (TBA)			75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Bu	ityl formate (TBF)		•	762-75-4	8260B	ND		100	1.0	ug/L	1
Surro	gate	Q	Run ′ % Recov								
Bromo	fluorobenzene		90	70-1	30						

Surrogate	Q	% Recovery	Limits
Bromofluorobenzene		90	70-130
1,2-Dichloroethane-d4		104	70-130
Toluene-d8		99	70-130

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-10

Lead

Date Sampled:03/01/2012 1540 Date Received: 03/02/2012

Laboratory ID: NC02058-004

Matrix: Aqueous

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/08/2012 0416	MSM	03/06/2012 0915	79418

Parameter	CAS Number	Analytical Method	Result Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND	0.023	0.023	ug/L	1	
Surrogate	Run 1 Accep					**		

Surrogate

1,1,1,2-Tetrachloroethane 99 57-137

ICP-MS

Run 1	Prep Method 3005A	Analytical Method 6020A	Dilution 1	Analysis I 03/06/2012	_	Prep 03/05/2	Date 012 1031	Batch 79321			
Parame	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run

7439-92-1

6020A

2.9

1.0

0.047

ug/L

1

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-14

Date Sampled:03/01/2012 1440 Date Received: 03/02/2012

Laboratory ID: NC02058-005

Matrix: Aqueous

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/10/2012 0647	DD		79862
2	5030B	8260B	20	03/13/2012 1247	AAC		80018

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	530		100	4.0	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	10		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	1500		100	34	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	260		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	3100		100	34	ug/L	2
Xylenes (total)	1330-20-7	8260B	4400		100	34	ug/L	2

		Run Z A	2 Acceptance			
Surrogate	Q	% Recovery	Limits	Q	% Recovery	Limits
1,2-Dichloroethane-d4		96	70-130		98	70-130
Bromofluorobenzene		86	70-130		96	70-130
Toluene-d8		109	70-130		100	70-130

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis Date 03/10/2012 0647	Analyst DD	Prep Date	Batch 79862	
			,	CAS Ana	lytical			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	1.1	J	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	630		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	9.5	J	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 / % Recovery	Acceptance Limits
Bromofluorobenzene		86	70-130
1,2-Dichloroethane-d4		96	70-130
Toluene-d8		109	70-130

Level 1 Report v2.1

H = Out of holding time

ND = Not detected at or above the MDL

E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-14

Date Sampled:03/01/2012 1440 Date Received: 03/02/2012

Laboratory ID: NC02058-005

Matrix: Aqueous

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/08/2012 0438	MSM	03/06/2012 0915	79418

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	0.21		0.019	0.019	ug/L	1
	Run 1 Accept	ance						

Surrogate Q % Recovery Limits

1,1,1,2-Tetrachloroethane

Lead

107 57-137

7439-92-1

ICP-MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Da	ate	Batch			
1	3005A	6020A	1	03/06/2012 004	0 BNW	03/05/20	12 1031	79321			
				CAS A	nalytical						
Param	eter			Number	Method	Result	Q .	PQL	MDL	Units	Run

6020A

5.2

1.0

0.047

1

ug/L

ND = Not detected at or above the MDL

E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" $\,$

Description: MW-TW

Date Sampled:03/01/2012 1335 Date Received: 03/02/2012 Laboratory ID: NC02058-006

Matrix: Aqueous

Volatile	Organic	Compound	is by GC/MS
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Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/10/2012 0709	DĎ		79862
2	5030B	8260B	1 .	03/13/2012 1429	AAC		80022

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	2.6	J	5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	2

		Run 1 A	Acceptance	Run 2 A	Run 2 Acceptance		
Surrogate	Q	% Recovery	Limits Q	% Recovery	Limits		
1,2-Dichloroethane-d4		103	70-130	94	70-130		
Bromofluorobenzene		91	70-130	96	70-130		
Toluene-d8		101	70-130	95	70-130		

Volatile Organic Compounds by GC/MS

				3				
Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	
1	5030B	8260B	1	03/10/2012 0709	DD		79862	

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Acceptance

Surrogate Q	% Recovery	Limits
Bromofluorobenzene	91	70-130
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	101	70-130

Run 1

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-TW

Lead

Date Sampled:03/01/2012 1335 Date Received: 03/02/2012 Laboratory ID: NC02058-006

Matrix: Aqueous

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/08/2012 0459	MSM	03/06/2012 0915	79418

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4	8011	ND	,	0.019	0.019	ug/L	1	
Sumanata	Run 1 Accept								

Surrogate Q % Recovery Limits

1,1,1,2-Tetrachloroethane 99 57-137

ICP-MS

Run 1	Prep Method 3005A	Analytical Method 6020A	Dilution 1	Analysis Date 03/06/2012 004	Analyst BNW	Prep Date 03/05/2012 1031	Batch 79321			
Parame	eter				alytical /lethod	Result Q	PQL	MDL	Units	Run

6020A

13

1.0

0.047

ug/L

7439-92-1

ND = Not detected at or above the MDL

E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-7 Dup

Date Sampled:03/01/2012 1520 Date Received:03/02/2012 Laboratory ID: NC02058-007

Matrix: Aqueous

Volatile	Organic	Compounds	hv	GC/MS
V OIGHIC	Cidallic	Combounds		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/10/2012 0731	DD		79862
2	5030B	8260B	20	03/13/2012 1309	AAC		80018

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	210		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	4.4	J	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	930		100	34	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1 .
Naphthalene	91-20-3	8260B	210		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	1100		100	34	ug/L	2
Xylenes (total)	1330-20-7	8260B	3200		100	34	ug/L	2
and the second s								

		Run 1	Acceptance		Run 2 A	cceptance
Surrogate	Q ,	% Recovery	Limits	Q	% Recovery	Limits
1,2-Dichloroethane-d4		97	70-130		96	70-130
Bromofluorobenzene		86	70-130		95	70-130
Toluene-d8		109	70-130		101	70-130

Volatile Organic Compounds by GC/MS

				<u> </u>				· · · · · · · · · · · · · · · · · · ·
Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	
1	5030B	8260B	1	03/10/2012 0731	DD		79862	
				040				

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	2.1	J	100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	170		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	9.3	J	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Acceptance

Q	% Recovery	Limits
	86	70-130
	97	70-130
	109	70-130
	<u>Q</u>	86 97

Run 1

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-7 Dup

Date Sampled:03/01/2012 1520 Date Received: 03/02/2012

Laboratory ID: NC02058-007

Matrix: Aqueous

EDB & DBCP b	y Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/08/2012 0521	MSM	03/06/2012 0915	79418

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1
Surrogate	Run 1 Accept Q % Recovery Lim							
1,1,1,2-Tetrachloroethane	115 57-1	37						

ICP-MS

Run 1	Prep Method 3005A	Analytical Method 6020A	Dilution 1	Analysis Dat 03/06/2012 00		Prep D 03/05/20		Batch 79321			
Param	neter			CAS /	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead	٠.,		74	439-92-1	6020A	180		1.0	0.047	ug/L	1

H = Out of holding time

ND = Not detected at or above the MDL

 $J = \text{Estimated result} < \text{PQL and} \geq \text{MDL}$

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: Field Blank

Date Sampled:03/01/2012 1600 Date Received: 03/02/2012 Laboratory ID: NC02058-008

Matrix: Aqueous

	Volatile (Organic C	ompounds	by (GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/10/2012 0217	DD		79862

Parameter	CAS Number	Analytical Method	Result Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND	5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND	5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND	5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND	5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND	5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND	5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		125	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		99	70-130

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
,1	5030B	8260B	1	03/10/2012 0217	DĎ		79862

	CAS	Analytical			-		
Parameter	Number	Method	Result	Q PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND	10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND	1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND	100	1.0	ug/L	1 1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND	100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND	10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND	100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND	100	1.0	ug/L	. 1

Surrogate	Run 1 Acceptance Q % Recovery Limits
Bromofluorobenzene	91 70-130
1,2-Dichloroethane-d4	125 70-130
Toluene-d8	99 70-130

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis E 03/08/2012	•	Prep 03/06/2	Date 1012 0915	Batch 79418			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: Field Blank

Date Sampled:03/01/2012 1600 Date Received: 03/02/2012 Laboratory ID: NC02058-008

Matrix: Aqueous

EDB & DBCP by Microextraction

Run Dilution Analysis Date **Prep Method Analytical Method** Analyst Batch 1 8011 03/08/2012 0542 MSM 03/06/2012 0915 79418 8011 1 CAS **Analytical Parameter PQL** MDL

ParameterNumberMethodResultQPQLMDLUnitsRun1,2-Dibromoethane (EDB)106-93-48011ND0.0190.019ug/L1

Surrogate Run 1 Acceptance Q % Recovery Limits

1,1,1,2-Tetrachloroethane 95 57-137

ND = Not detected at or above the MDL

Description: Trip Blank

Date Sampled:03/01/2012 1400 Date Received: 03/02/2012

Laboratory ID: NC02058-009

Matrix: Aqueous

Volatile	Organic	Comp	oounds	by	GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B		Analysis I 03/10/2012	•	Prep D	ate	Batch 79862			
Param	neter		· Ď	CAS lumber	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benze	ne		-	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Di	chloroethane		10	7-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylb	enzene		10	0-41-4	8260B	ND		5.0	1.7	ug/L	. 1
Methy	I tertiary butyl ether	(MTBE)	163	34-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphti	halene		(91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluer	ne		10	8-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylene	es (total)		133	30-20-7	8260B	ND		5.0	1.7	ug/L	1
Surro	gate	Q	Run 1 % Recove	Accepta ry Limit							
1,2-Di	chloroethane-d4		126	70-1	30	·		·			
Bromo	fluorobenzene		92	70-1	30						
Toluer	ne-d8		99	70-1	30						

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	DilutionAnalysis DateAnalystPrep Date103/10/2012 0239DD		Batch 79862				
Param	neter			CAS Number	Analytical Method	Result	Q PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)			108-20-3	8260B	ND	10	0.40	ug/L	1
Ethano	ol			64-17-5	8260B	ND	1000	33	ug/L	1
3,3-Di	methyl-1-butanol		(624-95-3	8260B	ND	100	1.0	ug/L	1
Ethyl-t	ert-butyl ether (ETB	E)	. (637-92-3	8260B	ND	100	0.20	ug/L	. 1
tert-Ar	nyl alcohol (TAA)			75-85-4	8260B	ND	100	6.7	ug/L	1
tert-Ar	nyl methyl ether (TA	ME)	· !	994-05-8	8260B	ND	10	0.20	ug/L	1
tert-bu	tyl alcohol (TBA)			75-65-0	8260B	ND	100	6.7	ug/L	1
tert-Bu	ityl formate (TBF)		•	762-75-4	8260B	ND	100	1.0	ug/L	1
Surro	gate	Q	Run ′ % Recov							
Bromo	fluorobenzene		92	70-1	30					
1,2-Di	chloroethane-d4		126	70-1	30					
Toluer	ne-d8		99	70-1	30					

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ79699-001

Batch: 79699

Analytical Method: 8260B

Matrix: Aqueous Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	03/08/2012 1228
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	03/08/2012 1228
Ethylbenzene	ND		1	5.0	1.7	ug/L	03/08/2012 1228
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	03/08/2012 1228
Naphthalene	ND		1	5.0	1.7	ug/L	03/08/2012 1228
Toluene	ND		1	5.0	1.7	ug/L	03/08/2012 1228
Xylenes (total)	ND		1	5.0	1.7	ug/L	03/08/2012 1228
Surrogate	Q % Rec		eptance Limit			-	
Bromofluorobenzene	100	. 70	0-130		-		
1,2-Dichloroethane-d4	95	70	0-130				
Toluene-d8	93	70	0-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ79699-002

Matrix: Aqueous

Batch: 79699 Prep Method: 5030B
Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	39	1	78	70-130	03/08/2012 1059
1,2-Dichloroethane	50	39	1	78	70-130	03/08/2012 1059
Ethylbenzene	50	41	1	82	70-130	03/08/2012 1059
Methyl tertiary butyl ether (MTBE)	50	40	1	79	70-130	03/08/2012 1059
Naphthalene	50	45	1	91	70-130	03/08/2012 1059
Toluene	50	41	1	81	70-130	03/08/2012 1059
Xylenes (total)	100	83	1	83	70-130	03/08/2012 1059
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	96	70-130	•,			
1,2-Dichloroethane-d4	90	70-130				
Toluene-d8	95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ79699-003

Batch: 79699

Analytical Method: 8260B

Matrix: Aqueous Prep Method: 5030B

Spike % Rec % RPD Amount Result **Parameter** (ug/L) (ug/L) Q Dil % Rec % RPD Limit Limit **Analysis Date** Benzene 50 39 1 78 0.049 70-130 20 03/08/2012 1121 1.2-Dichloroethane 50 38 1 76 2.2 70-130 20 03/08/2012 1121 Ethylbenzene 50 41 1 83 0.87 70-130 20 03/08/2012 1121 Methyl tertiary butyl ether (MTBE) 50 38 1 75 5.2 70-130 20 03/08/2012 1121 Naphthalene 50 89 70-130 20 03/08/2012 1121 45 1 1.7 Toluene 50 41 82 0.53 70-130 20 03/08/2012 1121 1 100 Xylenes (total) 70-130 20 03/08/2012 1121 82 82 1.5 Acceptance Surrogate Q % Rec Limit Bromofluorobenzene 96 70-130 1,2-Dichloroethane-d4 87 70-130 Toluene-d8 96 70-130

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ79862-001

Batch: 79862

Analytical Method: 8260B

Matrix: Aqueous

Prep Method: 5030B

Parameter	Result	Q D	il PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND	1	100	6.7	ug/L	03/09/2012 2328
tert-Amyl methyl ether (TAME)	ND	1	10	0.20	ug/L	03/09/2012 2328
tert-Butyl formate (TBF)	ND	1	100	1:0	ug/L	03/09/2012 2328
Diisopropyl ether (IPE)	ND	1	.10	0.40	ug/L	03/09/2012 2328
3,3-Dimethyl-1-butanol	ND	. 1	100	1.0	ug/L	03/09/2012 2328
Ethanol	ND	. 1	1000	33	ug/L	03/09/2012 2328
Ethyl-tert-butyl ether (ETBE)	ND	1	100	0.20	ug/L	03/09/2012 2328
tert-butyl alcohol (TBA)	ND	1	100	6.7	ug/L	03/09/2012 2328
Surrogate	Q % Rec	Acceptar Limit	ce			, ·
Bromofluorobenzene	92	70-130)			
1,2-Dichloroethane-d4	118	70-130				•
Toluene-d8	103	70-130)			

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ79862-002

Batch: 79862

Matrix: Aqueous

Analytical Method: 8260B

Prep Method: 5030B

Parameter	Spike Amount (ug/Ĺ)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000	-1	101	70-130	03/09/2012 2200
tert-Amyl methyl ether (TAME)	50	56	1	112	70-130	03/09/2012 2200
tert-Butyl formate (TBF)	250	250	1	100	70-130	03/09/2012 2200
Diisopropyl ether (IPE)	50	52	1	104	70-130	03/09/2012 2200
3,3-Dimethyl-1-butanol	1000	1000	1	104	70-130	03/09/2012 2200
Ethanol	5000	5600	1	113	70-130	03/09/2012 2200
Ethyl-tert-butyl ether (ETBE)	50	50	1	100	70-130	03/09/2012 2200
tert-butyl alcohol (TBA)	1000	990	1	99	70-130	03/09/2012 2200
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	88	70-130				
1,2-Dichloroethane-d4	106	70-130				
Toluene-d8	104	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ79862-003

Batch: 79862

Analytical Method: 8260B

Matrix: Aqueous

Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	950		- 1	95	6.5	70-130	20	03/09/2012 2222
tert-Amyl methyl ether (TAME)	50	55		1	111	0.70	70-130	20	03/09/2012 2222
tert-Butyl formate (TBF)	250	240		1	98	2.1	70-130	20	03/09/2012 2222
Diisopropyl ether (IPE)	50	51		1	103	0.86	70-130	20	03/09/2012 2222
3,3-Dimethyl-1-butanol	1000	970		1	97	7.3	70-130	20	03/09/2012 2222
Ethanol	5000	5400		1	108	4.1	70-130	20	03/09/2012 2222
Ethyl-tert-butyl ether (ETBE)	50	50		1	99	0.98	70-130	20	03/09/2012 2222
tert-butyl alcohol (TBA)	1000	920		1	92	7.0	70-130	20	03/09/2012 2222
Surrogate	Q % Rec		ptance imit						
Bromofluorobenzene	88	70	-130						
1.2-Dichloroethane-d4	105	70	-130						

PQL = Practical quantitation limit

Toluene-d8

P = The RPD between two GC columns exceeds 40%

70-130

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ79862-001

Batch: 79862

Analytical Method: 8260B

Matrix: Aqueous Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	NĎ		1	5.0	0.20	ug/L	03/09/2012 2328
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	03/09/2012 2328
Ethylbenzene	ND		1	5.0	1.7	ug/L	03/09/2012 2328
Methyl tertiary butyl ether (MTBE)	ND ND		1	5.0	0.40	ug/L	03/09/2012 2328
Naphthalene	ND		1	5.0	1.7	ug/L	03/09/2012 2328
Toluene	ND		1 .	5.0	1.7	ug/L	03/09/2012 2328
Xylenes (total)	ND		. 1	5.0	1.7	ug/L	03/09/2012 2328
Surrogate	Q %R	Ac ec	ceptance Limit				
Bromofluorobenzene	92		70-130				
1,2-Dichloroethane-d4	118	}	70-130				
Toluene-d8	103	3	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ79862-002

Batch: 79862

Analytical Method: 8260B

Matrix: Aqueous

Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	49	1	99	70-130	03/09/2012 2200
1,2-Dichloroethane	50	50	1	99	70-130	03/09/2012 2200
Ethylbenzene	50	50	1	100	70-130	03/09/2012 2200
Methyl tertiary butyl ether (MTBE)	50	51	1	101	70-130	03/09/2012 2200
Naphthalene	50	55	. 1	111	70-130	03/09/2012 2200
Toluene	50	50	1	101	70-130	03/09/2012 2200
Xylenes (total)	100	.100	1	102	70-130	03/09/2012 2200
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	88	70-130				
1,2-Dichloroethane-d4	106	70-130				
Toluene-d8	104	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ79862-003

Batch: 79862

Analytical Method: 8260B

Matrix: Aqueous Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	50	1	100	1.2	70-130	20	03/09/2012 2222
1,2-Dichloroethane	50	49	1	98	1.8	70-130	20	03/09/2012 2222
Ethylbenzene	50	51	.1	102	2.5	70-130	20	03/09/2012 2222
Methyl tertiary butyl ether (MTBE)	50	51	· 1	102	0.10	70-130	20	03/09/2012 2222
Naphthalene	50	54	1	107	3.4	70-130	20	03/09/2012 2222
Toluene	50	49	· 1	99	1.8	70-130	20	03/09/2012 2222
Xylenes (total)	100	100	1	103	0.75	70-130	20	03/09/2012 2222
Surrogate	Q % Rec	Accept Lim						
Bromofluorobenzene	88	70-1	30	·				
1,2-Dichloroethane-d4	105	70-1	30					
Toluene-d8	103	70-1	30					

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ80001-001

Batch: 80001 Analytical Method: 8260B Matrix: Aqueous

Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	03/12/2012 2309
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	03/12/2012 2309
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	03/12/2012 2309
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	03/12/2012 2309
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	03/12/2012 2309
Ethanol	ND -		1	1000	33	ug/L	03/12/2012 2309
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	03/12/2012 2309
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	03/12/2012 2309
Surrogate	Q % Red	C	Acceptance Limit				
Bromofluorobenzene	97		70-130				
1,2-Dichloroethane-d4	100		70-130				
Toluene-d8	101		70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ80001-002

Batch: 80001

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	770	1	77	70-130	03/12/2012 2052
tert-Amyl methyl ether (TAME)	50	41	1	83	70-130	03/12/2012 2052
tert-Butyl formate (TBF)	250	230	1	91	70-130	03/12/2012 2052
Diisopropyl ether (IPE)	50	49	1	99	70-130	03/12/2012 2052
3,3-Dimethyl-1-butanol	1000	830	1	83	70-130	03/12/2012 2052
Ethanol	5000	5100	1 .	103	70-130	03/12/2012 2052
Ethyl-tert-butyl ether (ETBE)	50	47	1	94	70-130	03/12/2012 2052
tert-butyl alcohol (TBA)	1000	860	1	86	70-130	03/12/2012 2052
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	96	70-130				
1,2-Dichloroethane-d4	101	70-130				
Toluene-d8	103	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ80001-003

Batch: 80001

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% RPD	% Rec Limit	% RPD	Analysis Date
tert-Amyl alcohol (TAA)	1000	820	1	82	6.2	70-130	20	03/12/2012 2147
tert-Amyl methyl ether (TAME)	50	42	1	84	1.1	70-130	20	03/12/2012 2147
tert-Butyl formate (TBF)	250	230	1	93	2.1	70-130	20	03/12/2012 2147
Diisopropyl ether (IPE)	50	50	[.] 1	101	2.0	70-130	20	03/12/2012 2147
3,3-Dimethyl-1-butanol	1000	900	1	90	8.9	70-130	20	03/12/2012 2147
Ethanol	5000	6000	1	119	15	70-130	20	03/12/2012 2147
Ethyl-tert-butyl ether (ETBE)	50	47	1	95	0.49	70-130	20	03/12/2012 2147
tert-butyl alcohol (TBA)	1000	910	1.	91	6.4	70-130	20	03/12/2012 2147
Surrogate	Q % Red	Acceptance Limit						
Bromofluorobenzene	97	70-130						
1,2-Dichloroethane-d4	97	70-130						
Toluene-d8	102	70-130						₩ .

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ80018-001

Batch: 80018

Analytical Method: 8260B

Matrix: Aqueous Prep Method: 5030B

Parameter	F	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	N	I D		1	5.0	0.20	ug/L	03/13/2012 0900
Ethylbenzene	1	ND		1	5.0	1.7	ug/L	03/13/2012 0900
Toluene	· · · · · · · · · · · · · · · · · · ·	ID		1	5.0	1.7	ug/L	03/13/2012 0900
Xylenes (total)	ľ	1D "		. 1	5.0	1.7	ug/L	03/13/2012 0900
Surrogate		Q % Rec		cceptance Limit				
Bromofluorobenzene		92		70-130	 			
1,2-Dichloroethane-d4		96		70-130				
Toluene-d8		99		70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ80018-002

Batch: 80018

Matrix: Aqueous

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	46	1	93	70-130	03/13/2012 0734
Ethylbenzene	50	50	1	. 99	70-130	03/13/2012 0734
Toluene	50	47	1	93	70-130	03/13/2012 0734
Xylenes (total)	100	96	1	96	70-130	03/13/2012 0734
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	98	70-130				
1,2-Dichloroethane-d4	101	70-130				
Toluene-d8	99	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ80018-003

Batch: 80018

Analytical Method: 8260B

Matrix: Aqueous

Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	48		1	96	3.0	70-130	20	03/13/2012 0756
Ethylbenzene	50	49		1	98	1.0	70-130	20	03/13/2012 0756
Toluene	50	48		1	97	3.6	70-130	20	03/13/2012 0756

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ80018-003

Batch: 80018

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit		sis Date
Xylenes (total)	100	95		1	95	0.57	70-130	20	03/13/20	012 0756
Surrogate	Q % Red	A A	cceptance Limit							
Bromofluorobenzene	92		70-130							
1,2-Dichloroethane-d4	97		70-130							
Toluene-d8	97		70-130							

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ80022-001

Batch: 80022

Matrix: Aqueous

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q Dil	PQL	MDL	Units	Analysis Date	
Xylenes (total)	ND	1	5.0	1.7	ug/L	03/13/2012 0918	
Surrogate	Q % Rec	Acceptance Limit					
Bromofluorobenzene	97	70-130					
1,2-Dichloroethane-d4	95	70-130					
Toluene-d8	95	70-130					

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ80022-002

Matrix: Aqueous

Batch: 80022

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
Xylenes (total)	100	110	1	111	70-130	03/13/2012 0753
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	97	70-130				
1,2-Dichloroethane-d4	93	70-130				
Toluene-d8	98	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ80022-003

Batch: 80022

Analytical Method: 8260B

Matrix: Aqueous

Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit Analysis Date
Xylenes (total)	100	110	1	112	0.81	70-130	20 03/13/2012 0814
Surrogate	Q % Rec	Acceptance Limit					
Bromofluorobenzene	97	70-130			٠		
1,2-Dichloroethane-d4	92	70-130					
Toluene-d8	97	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

EDB & DBCP by Microextraction - MB

Sample ID: NQ79418-001

Batch: 79418

Analytical Method: 8011

Matrix: Aqueous

Prep Method: 8011

Prep Date: 03/06/2012 915

Parameter	Result	Q Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND	1	0.020	0.020	ug/L	03/08/2012 0229
Surrogate	Q % Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane	110	57-137				

EDB & DBCP by Microextraction - LCS

Sample ID: NQ79418-002

Batch: 79418

Analytical Method: 8011

Matrix: Aqueous

Prep Method: 8011

Prep Date: 03/06/2012 915

onium u	Spike Amount	Result				% Rec	
Parameter	(ug/L)	(ug/L)	Q	Dil	% Rec	Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.26		- 1	105	60-140	03/08/2012 0250
Surrogate	Q % Rec	Acceptan Limit	ce				
1,1,1,2-Tetrachloroethane	101	57-137					

EDB & DBCP by Microextraction - MS

Sample ID: NC02058-008MS

Batch: 79418

Analytical Method: 8011

Matrix: Aqueous

Prep Method: 8011

Prep Date: 03/06/2012 915

	Sample Amount	Spike Amount	Result				% Rec	
Parameter	(ug/L)	(ug/L)	(ug/L)	Q	Dil	% Rec	Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.26		1	105	60-140	03/08/2012 0604
Surrogate	Q % Red		ptance imit					
1,1,1,2-Tetrachloroethane	100	57	'-137					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

EDB & DBCP by Microextraction - MSD

Sample ID: NC02058-008MD

Batch: 79418

Analytical Method: 8011

Matrix: Aqueous

Prep Method: 8011

Prep Date: 03/06/2012 915

Parameter	Aı	mple nount ng/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPI) Analysis Date
1,2-Dibromoethane (EDB)	N	D -	0.24	0.22		1	92	14	60-140	20	03/08/2012 0625
Surrogate	Q	% Rec		eptance imit							
1,1,1,2-Tetrachloroethane		87	5	7-137							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-MS-MB

Sample ID: NQ79321-001

Batch: 79321

Analytical Method: 6020A

Matrix: Aqueous

Prep Method: 3005A

Prep Date: 03/05/2012 1031

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Lead	ND		1 .	1.0	0.047	ug/L	03/06/2012 0008

ICP-MS-LCS

Sample ID: NQ79321-002

Batch: 79321

Analytical Method: 6020A

Matrix: Aqueous

Prep Method: 3005A

Prep Date: 03/05/2012 1031

	Spike Amount	Result						
Parameter	(ug/L)	(ug/L)	Q	Dil	% Rec	Limit	Analysis Date	
Lead	100	98		1	98	80-120	03/06/2012 0012	

ICP-MS - LCSD

Sample ID: NQ79321-003

Batch: 79321

Analytical Method: 6020A

Matrix: Aqueous

Prep Method: 3005A

Prep Date: 03/05/2012 1031

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Lead	100	97		1	97	1.3	80-120	20	03/06/2012 0017	

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 12004

www.shealylab.com Sampler (Printed Name) Quote No. Report to Contact homa GAVIN GLOBENSKY Telephone No. / Fax No. / Email Waybill No. Page 2 of Preservative **Number of Containers** Bottle (See Instructions on back) 1. Unpres. 4. HNO3 7. NaOH Preservative Project Name 2. NaOH/ZnA 5. HCL 76 Truck 3. H2SO4 Lot No. 6. Na Thio. 8 orygents £08 (8011 P.O Number Project Number 39815 Matrix N Co 2058 4600098529 Analysis Sample ID / Description Remarks / Cooler ID (Containers for each sample may be Date Time GW DW WW S combined on one line) DRY Product -ALW-3:10 6 $M \setminus M \neq$ ·do/ 3:20 MW-2:30 MW located MW-3:40 Turn Around Time Required (Prior lab approval required for expedited TAT) Sample Disposal Possible Hazard Identification QC Requirements (Specify) □Poison □Unknown □Non-Hazard □Flammable □Skin Irritant ☐ Standard ☐ Rush (Please Special) □ Beturn to Client □ Disposal by Lab 1. Received by Date Time 1. Reling Received by Time 604 21:05 Date Date Time 3. Received by 4. Reinquished by Time // 4. Laboratory Received by Time 1623 Note: All samples are retained for six weeks from receipt LAB USE ONLY Received on Ice (Check) ✓Yes □ No □ Ice Pack Receipt Temp. Temp, Blank unless other arrangements are made.

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 12003

www.shealylab.com Report to Contact Sampler (Printed Name) SCOHEC Quote No. GAVIN GLOBENSKY homa Page 2 Address 2600 Bull Telephone No. / Fax No. / Email SWeet 803-896-6241 Preservative **Number of Containers** 1. Unpres. Bottle (See Instructions on back) 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL Preservative 3. H2SO4 6. Na Thio. Lot No. 8 Orryson Hs STEX MAPHY MYBE Project Number (**1** N Con SI Matrix 46000 88529 Analysis Sample ID // Description (Containers for each sample may be Date Time GW DW WW S Remarks / Cooler ID combined on one line) only silt at botter MW-6 2:40 o do MW. :35 ader 2:20 4:00 2:00 Turn Around Time Required (Prior lab approval required for expedited TAT) Sample Disposal Possible Hazard Identification QC Requirements (Specify) ☐ Standard ☐ Rush (Please Specifi □ Return to Client □ Disposal by Lab □Non-Hazard □Flammable □Skin Irritant □Poison □Unknown 1. Relinquished by / Sampl 1. Received by Date Time 2. Relinquished by 21105 3. Received by Date Relinquished by 4. Laboratory Received by Tim#UX 1625 Note: All samples are retained for six weeks from receipt LAB USE ONLY unless other arrangements are made. ✓ Yes □ No □ Ice Pack Received on Ice (Check) Receipt Temp. Temp. Blank A Y / □ N

Page 1 of 1 Replaces Date: 05/06/11 Effective Date: 10/11/11

Sample Receipt Checklist (SRC)

Client: SCOHRC	Cooler Inspected by/date	e: a 19/2/12_Lot #:	N Co2058
	Cooler mspected by/date	7. <u>7. 7. C. 100</u> 0 11.	

Means of	receipt:	SESI	☐ Client ☐ UPS ☐ FedEx ☐ Airborne Exp ☐ Other
Yes 🗍	No No		
Yes 🗍	No		1. Were custody seals present on the cooler?2. If custody seals were present, were they intact and unbroken?
Method:	Te	iture upon r mperature l	
Method o	of coolant	: W	et Ice Blue Ice Dry Ice None
			14, 15, 16), an explanation/resolution must be provided.
11 Tespons	13 140 (3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified?
Yes 🗍	No 🗀	NA 🗔	PM notified by SRC, phone, note (circle one), other: (For
_			coolers received via commercial courier, PMs are to be notified immediately.
Yes 🗌	No 🗌	NA -	4. Is the commercial courier's packing slip attached to this form?
Yes 🖵	No 🗌	39	5. Were proper custody procedures (relinquished/received) followed?
Yes 🗌	No 🗌	NA.	5a Were samples relinquished by client to commercial courier?
Yes	No 🗌		6. Were sample IDs listed?
Yes	No 🗌		7. Was collection date & time listed?
Yes	No 🗌		8. Were tests to be performed listed on the COC?
Yes	No 🗌		9. Did all samples arrive in the proper containers for each test?
Yes	No 🗌		10. Did all container label information (ID, date, time) agree with COC?
Yes	No _		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes	No 🗌		12. Was adequate sample volume available?
Yes	No 🗌		13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes	No.		14. Were any samples containers missing?
Yes	No		15. Were there any excess samples not listed on COC?
) TA [7]	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA
Yes	No 🗌	NA 🗌	vials?
Yes	No 🗌	NA 🗌	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes 🗌	No 📗	NA	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes 🗍	No 🗌	NAT	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb
			(<0.2mg/L) samples free of residual chlorine?
Yes 🗌	No 🗌	NA	20. Were collection temperatures documented on the COC for NC samples?
Yes 🔲	No 🔲	MAT	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations,
Samula D		<u> </u>	etc) correctly transcribed from the COC into the comment section in LIMS?
Sample P		ion (Musi	be completed for any sample(s) incorrectly preserved or with headspace.)
Sample(s)		ple receivin	were received incorrectly preserved and were adjusted g with (H ₂ SO ₄ .HNO ₃ ,HCl,NaOH) with the SR # (number)
according	iy ili sainj	bie receiviii	g with(H ₂ SO ₄ ,HNO ₃ ,HCl,NaOH) with the SK # (flumber)
Sample(s)	~ 01.	1/2-)	were received with bubbles >6 mm in diameter.
Sample(s)			were received with TRC >0.2 mg/L for NH3/
		/pest/PCB/	
		aken, if ne	······································
Was client		Yes [No Did client respond: Yes No
SESI emplo			Date of response:
Comments:			· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·	

Midlands Environmental Consultants, Inc.

Ms. Maia Milenkova, Hydrogeologist Assessment Section Underground Storage Tank Program Bureau of Land and Waste Management South Carolina Department of Health and Environmental Control 2600 Bull Street Columbia, South Carolina 29201



Subject:

Report of Groundwater Sampling (Revisions)

Coastal 76 Truck Stop 2513 E. Palmetto Street Florence, South Carolina

SCDHEC Site ID Number 03538; CA # 39814

MECI Project Number 12-3791

Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Milenkova,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Revisions of the Report of Groundwater Sampling for the referenced site. These revisions include a copy of the attached Topographic Map and Site Activity Summary sheets which clarifies the status of the Free Phase Petroleum Product detected in monitoring well MW-3.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

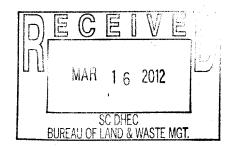
Sincerely,

Midlands Environmental Consultants, Inc.

Jeff L. Coleman Senior Scientist

Semoi Scientis

Attachments:



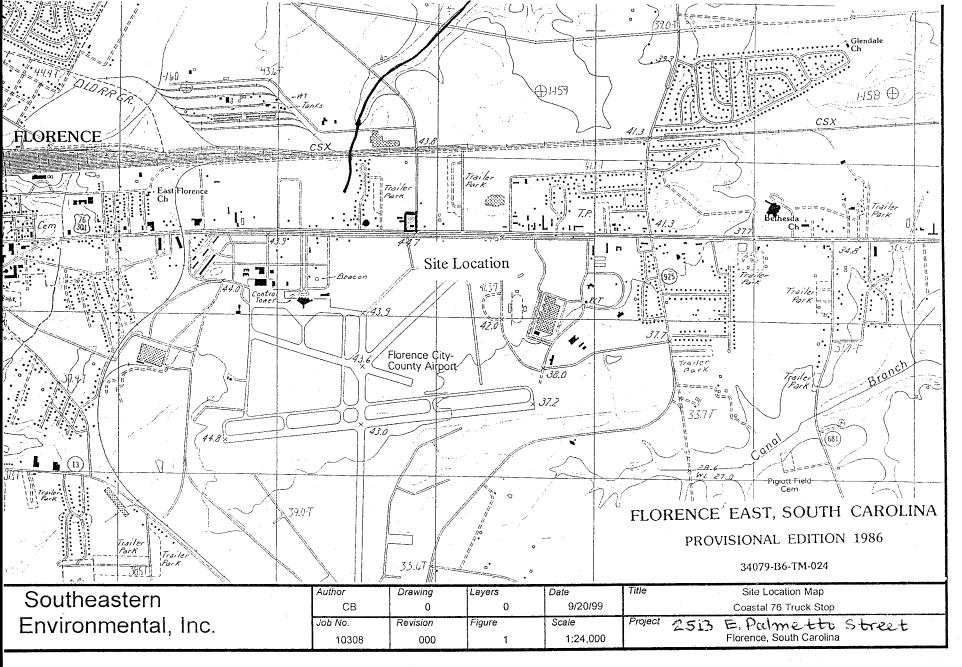


Figure 1

Site Activity Summary

UST Permit #:

03538

Facility Name:

Coastal 76 Truck Stop

County:

Florence

Field Personnel:

K. Pudney, G. Globensky



235-B Dooley Road, Lexington, SC 29013 (803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1	N	***	***	TD=17.80	***	***	***	***	***	Gauged Dry
MW-2	N	***	***	TD=18.30	***	***	***	***	***	Gauged Dry
MW-3	N	***	***	TD=18.20	17.80	N/A	N/A	***	***	Free Phase Petroleum Product, however product thickness was not obtained due to groundwater not being encountered in the well.
MW-4	N	***	***	TD=18.35	17.56	17.58	0.02	***	***	Free Phase Petroleum Product
MW-5	Y	2/20/12	15:10	TD=18.20	***	17.05	***	0.20	0.50	Slight Odor
MW-6	N	***	***	TD=17.78	***	***	***	***	***	Gauged Dry
MW-7	Υ	2/20/12	15:20	TD=18.10	***	16.54	***	0.15	0.50	Slight Odor
MW-8	Y	2/20/12	14:30	TD=18.00	***	15.59	***	0.45	1.50	Slight Odor / 3 Bolts Added
MW-9	N	***	***	***	***	***	***	***	***	Not Located
MW-10	Υ	2/20/12	15:40	TD=18.25	***	15.65	***	6.90	1.0	No Odor
MW-11	N	***	***	TD=18.40	***	17.85	***	***	***	Insufficient water for field measurements or purging
MW-12	N	***	***	***	***	***	***	***	***	Not on Map provided by SCDHEC
MW-13	N	***	***	***	***	***	***	***	***	Not on Map provided by SCDHEC
MW-14	Υ	2/20/12	14:40	TD=18.14	***	16.35	***	0.16	0.75	Odor
MW-IGWA	N	***	***	TD=16.40	***	***	***	***	***	. Gauged Dry
									4.25	TOTAL GALLONS PURGED

Site Activity Summary

UST Permit #:

03538

Facility Name:

Coastal 76 Truck Stop

County:

Florence

Field Personnel:

K. Pudney, G. Globensky



235-B Dooley Road, Lexington, SC 29073 (803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-TW	Y	3/1/12	13:35	31-36	***	17.75	***	4.23	12.00	No Odor / Well Cap Added
MW-7 Duplicate	Y	3/1/12	15:20	***	***	***	***	***	***	MW-7 Duplicate Sample
Field Blank	Y	3/1/12	16:00	***	***	***	***	***	***	Field Blank
Trip Blank	Y	3/1/12	14:00	***	***	***	***	***	***	Trip Blank
APPROXIMATE CONTRACTOR										
· ·								,		٠
										· · ·
-										
					THE STATE OF THE S				16.25	TOTAL GALLONS PURGED



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

APR 3 0 2012

BRYAN SHANE MIDLANDS ENVIRONMENTAL CONSULTANTS INC PO BOX 854 LEXINGTON SC 29071

Re:

QAPP Contractor Addendum Directive for Small Scope Contract

Solicitation # 5400003229; PO# 4600117789

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct assessments at several facilities. Please submit the Site-specific Quality Assurance Project Plan for an IGWA, Tier I or Assessment Plan, and Assessment Component Cost Agreement as necessary, to my attention within fifteen (15) days from the date of this correspondence. Plan implementation shall not commence prior to receipt of written technical and financial approval from the Department. The facilities will be assigned a Cost Agreement (CA) numbers once the QAPP Contractor Addendum has been approved by the project manager. Please reference the CA numbers and Purchase Order # 4600117789 on the appropriate invoices submitted for payment. As specified in the referenced bid, the completed invoice forms and associated reports (include contract certification number) are expected on or before the designated due date (see below) after the technical and cost approval from the project manager.

UST Permit #	Facility	ARRA	County	Project Manager	Work Scope	Due Date*
03538	Coastal 76 Truck Stop	No	Florence	Milenkova	Monitoring Well Installation	60 Days

^{*}From receipt of Notice to Proceed letter

Midland's Environmental Consultants, Inc. will perform services at the sites on behalf of the site's UST owners; however, payments will be made from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. The site's UST owners have no obligation for payment for this scope of work. Please note, if there are any changes in the established cost agreement amounts (e.g., additional water supply wells sampled, additional well footage, etc.) contact the site's project manager for technical and/or financial approval. Failure to do so prior to submittal of invoice may result in delay of payment.

IGWA, Tier I or Assessment Plan, Implementation and Report submittal shall be performed in accordance with the referenced contract. Per Section 3.4.2., a late fee of \$50.00/day (not to exceed 20% of the cost agreement total) may be levied for each report submitted after the deadline established in the Notice to Proceed.



Please provide this office with a schedule of drilling dates and coordinate all work with me before commencing work at the facility. In accordance with the bid specification, a bi-monthly status report of the project should be provided by the 5th and 20th of each month via e-mail to my attention. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. If you have any questions or need further assistance, please contact me at (803) 896-6629.

Sincerely,

Minda Hornosky, Hydrogeologist

Assessment Section

Underground Storage Tank Management Division

Bureau of Land and Waste Management

enc: Information Packet

cc: Maia Milenkova, UST Management Division (w/enc)

Technical File (w/enc)



South Carolina Department of Health and Environmental Control

UNDERGROUND STORAGE TANK DIVISION BUREAU OF LAND AND WASTE MANAGEMENT 2600 Bull Street, Columbia, South Carolina 29201

Telephone: 803-896-6240

MEMORANDUM

TO: Bryan Shane, Midla	nds Environmental Consultants, Inc.	
FROM: Maia Milenkova		
RE: NOTICE TO PRO	CEED	
Facility Name:	Coastal 76 Truck Stop	
Permit Number:	03538	
County:	Florence	
Work To Be Completed:	Replace IGWA, MW-1, MW-2, MW-3 and MW-4 (dry w/FP) and install additional four shallow and one deep w map for locations. Conduct slug test in the deep well and l size/hydrometer for the same well. Provide tax map information cross sections. Sample all wells for BTEXNM, 1, 2 DCA, lead.	ell. See enclosed have grain nation and two
CA#	here is no wells MW-12 and MW-13 installed currently	

BOTH billable and unbillable tanks

SCDHEC UST Management Tracking BOTH bit Site Information for N-03538 Facility: COASTAL 76 TRUCK STOP

Bus. Address	2513 E PALMETTO ST FLORENCE SC 29506-380	9 <u>Phone</u> County	Florence	District Florence EQC Office
Category	Retail Sales <u>Last</u>	Inspection	02/28/95	Trans. of Ownership
Tank Owner Bus. Address Operator	MCEACHIN, DAN 1007 WENTWORTH DR FLORENCE SC 29501	<u>Phone</u>	803-651-8835	Financial Responsibility Financial Mechanism Expiration Date None
Bus. Address	MOTACIUN DAN	Phone		
Land Owner Bus. Address	MCEACHIN, DAN 1007 WENTWORTH DR FLORENCE SC 29501	Phone	803-651-8835	
Tanks	4 <u>Billable</u> 0 <u>Aband.</u> 4 <u>Compliance Operator(s)</u>	<u>Other</u>	0	ID Training Date

Rel. No. 1 Active Triks	Reported NFA Confirmed CU Init. CU Compl.	09/27/95 08/19/97 07/23/98	Fin. Type Di Emer. Resp. Abate. Met Transferred	08/30/95	Product RBCA / Score Superb Qualified Superb Determ. Dt Project Manager	Petroleum 3BA 300200 Y 08/19/97 MILENKOVA, MAIA		Y N
Ranking Rel. No. 1	SCRBCA:	3BA - Fre	Source e product > 0.0	UST 11 foot thick	Responsible Party	MCEACHIN, DAN I	2 Inches to 1 Foot	

Ranking	SCRBCA: 3BA -	Free product >	0.01 foot thick		<u>FP TI</u>	hick: 2 Inches to 1 Fo	oot
	Contaminant Benzene Toluene Ethylbenzene Xylene Naphthalene MTBE	640 5100 1 990	700 000 25		EDB FP-0. WELI Lead MW- DRY(1,2,6,IGWA - (3/12)	ug/L SSTL's .45
Receptor Ttype: Distancd to Rec GW Depth:	NONE eptor: 1 17	Total Score	<u>:</u> 14	4 V ater Flow:	FP-0. MW-9 SE ON C	3 FP-0.4' MW-4 .02(3/12) 9 NL(3/12) CITY WATER RST CASE WELL W-5	

SuperB Check List Rel. No.	1		Original Qualified Date: 19-AUG-97 Release Reported: 09/27/95 Deductible Group from Release Report Date: 25K		
		Y	All tanks Registered? Tanks must be registered Before eligible.		· .
		Υ	Fees Paid to date?		
		Ν	Contamination requiring Remediation confirmed?		
			Enviro Company	<u>Deductible</u>	Limit Amount
		N	Enviro Insurance?		
			A written statement of No Insurance dated: 09/27/95		
			Abatement Met: 08/30/95 Abatement Method: Permanently closed		
			Approved by: WRIGHT, JOHN W Approved date:	08/19/97	Qualified? Y

SCDHEC UST Management Tracking BOTH billable and unbillable tanks

Site Information for N-03538 Facility: COASTAL 76 TRUCK STOP

Tonk No		Camat	al D	Toul Count Mat	0	Die Orest Met	01
Tank No.	1	Const.	<u>Class</u> R	Tank Const. Mat.	SL	Pipe Const. Mat.	SL
		<u>Operate</u>	T Status ABD	Tank Protect.	CP <u>CP</u>	Pipe Protect.	CP <u>CP</u>
		Notify 05/28/87	Capacity 2,000	Tank Cont. Meth.	SW	Pipe Cont. Meth.	SW
		<u>Variance</u>	Product DL	Overfill Type	<u>Ver</u>	Piping Type	
		Compl.	C Status	Age @ Notif.	25	Dist. to Well	
		Spill Det.	Left Gal.	Owner @ ABD	MCEACHIN, DAN		Last Use
		Aband. 08/30/95	<u>Method</u> RG	CAS No.	Chem.		
		Under Dispenser Co	nt. N <u>Drop Tube</u>	N Tank Leak D	et.	Pipe Leak Det	
Tank No.	2	Const.	<u>Class</u> R	Tank Const. Mat.	SL	Pipe Const. Mat.	SL
		<u>Operate</u>	T Status ABD	Tank Protect.	CP <u>CP</u>	Pipe Protect.	CP <u>CP</u>
		Notify 05/28/87	Capacity 1,000	Tank Cont. Meth.	SW	Pipe Cont. Meth.	SW
		<u>Variance</u>	Product GN	Overfill Type	<u>Ver</u>	Piping Type	
		Compl.	C Status	Age @ Notif.	25	Dist. to Well	
		Spill Det.	Left Gal.	Owner @ ABD	MCEACHIN, DAN	•	Last Use
	•	Aband. 08/30/95	Method RG	CAS No.	Chem.		
		Under Dispenser Co	nt. N <u>Drop Tube</u>	N Tank Leak De	<u>et.</u>	Pipe Leak Det	
Tank No.	3	Const.	Class R	Tank Const. Mat.	SL	Pipe Const. Mat.	SL
		<u>Operate</u>	T Status ABD	Tank Protect.	CP <u>CP</u>	Pipe Protect.	CP <u>CP</u>
		Notify 05/28/87	Capacity 3,000	Tank Cont. Meth.	SW	Pipe Cont. Meth.	SW
		Variance	Product GN	Overfill Type	<u>Ver</u>	Piping Type	
		Compl.	C Status	Age @ Notif.	25	Dist. to Well	
		Spill Det.	Left Gal.	Owner @ ABD	MCEACHIN, DAN		Last Use
		Aband. 08/30/95	Method RG	CAS No.	Chem.		
		Under Dispenser Co	nt. N <u>Drop Tube</u>	N Tank Leak De	et.	Pipe Leak Det	•
Γank No.	4	Const.	Class N	Tank Const. Mat.	SL	Pipe Const. Mat.	SL
		Operate	T Status ABD	Tank Protect.	CP	Pipe Protect.	<u>CP</u>
		Notify 09/12/95	Capacity 2,000	Tank Cont. Meth.	SW	Pipe Cont. Meth.	sw
		Variance	Product GN	Overfill Type	<u>Ver</u>	Piping Type	
		Compl.	C Status	Age @ Notif.	20	Dist. to Well	
		Spill Det.	Left Gal.	Owner @ ABD	MCEACHIN, DAN		Last Use 01/01/
* *		Aband. 08/30/95	Method RG	CAS No.	Chem.		
		Under Dispenser Co		N Tank Leak De	at	Pipe Leak Det.	

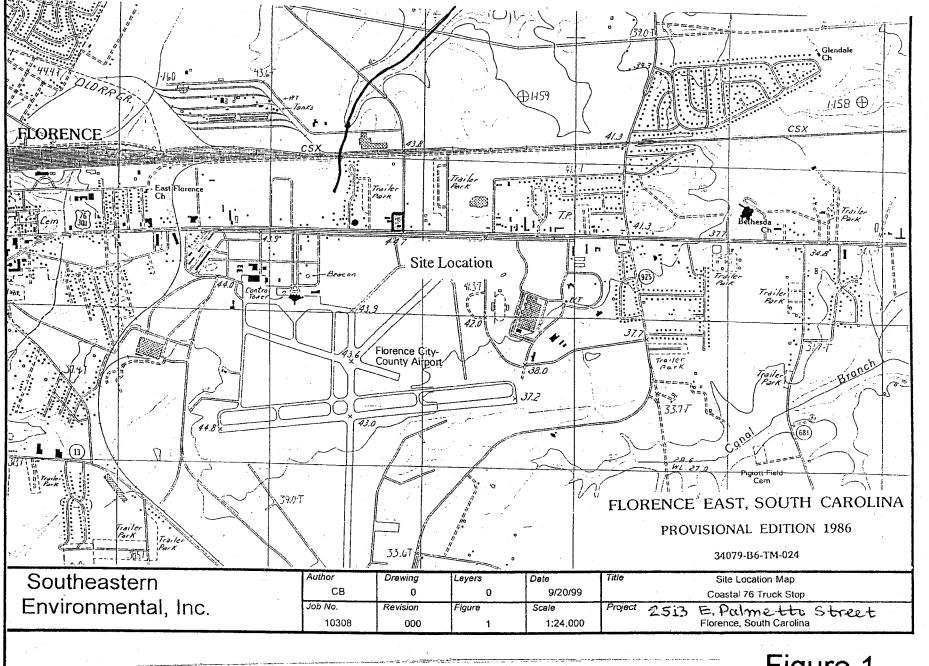
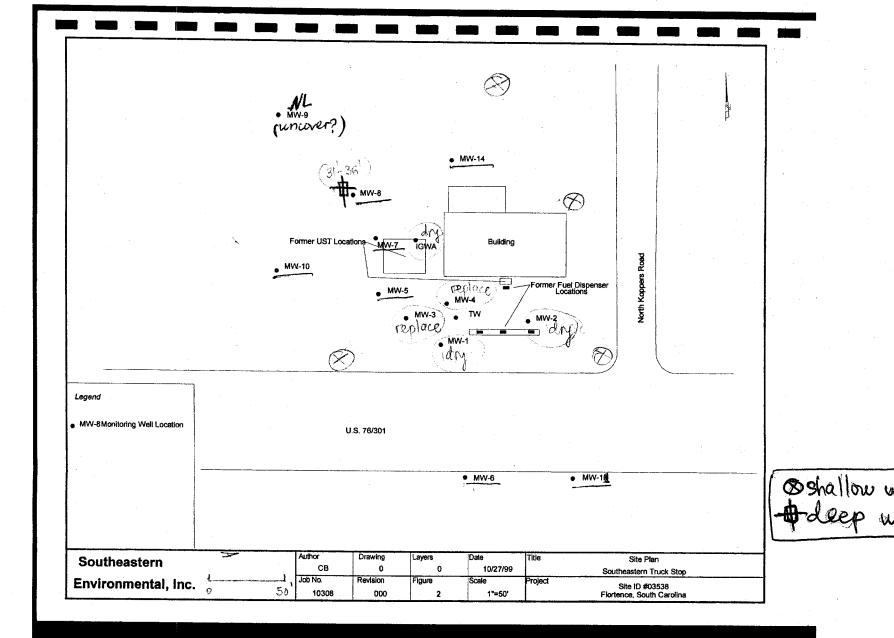


Figure 1



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Bureau of Water 2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

PROMOTE PROTECT PROSPER			A THE COLUMN TO THE PARTY OF TH
1 LOCATION OF WELL:	mw#	5 .	4 OWNER OF WELL DON'T I ICE OLD IN
System	Name: C 00:5	ital 🚟	4. OWNER OF WELL Dan McEachin Address 1007 Wentworth Diffe. Florence, 50 2950 Telephone No. 843- (119-1177
			942 (1.0 - (1.77)
	D3538		Engineer Bruce G. Newell
Latitude: Longitude	le:	TANK REPORT	Addross: 323 Main Street
Distance and Direction from Road Inte	rsections:		
see attached	5600+6		Telephone No 942-247-3533
			5. WELL DEPTH (completed) Date Started: 7-14-99
Street Address & City of Well Location	1:		0, 1122
Sketch Map:			
•			6. LI MUO HOTZITY LI SELECT CONTROL CONTROL
See attached sh	eets		Air Addity Colver
300 00.100.000			7. USE: Domestic Public Supply-Permit No. Industry
į			☐ Irrigation ☐ Air Conditioning ☐ Commercial
:			☐ Test Well ☑ Monitor Well ☐
			8. CASING: Threaded Welded
·			Diam.: 2" Height: Above/Below tt.
2. CUTTING SAMPLES: [] Yes	□ No		Type: Mr PVC Li Galvanized Contact
2 COTTING SAMPLES. LI 165			Steel Other Weight Ib./ft. O.29 in. to \$,29 tt. depth Drive Shoe? See No
Geophysical Logs: Yes (ple	ase enclose)	□ No	in. to ft. depth
Geophysical 2093 to (p.	Thickness	Depth to	9. SCREEN Type: PVC Diam.: 2"
Formation Description	of	Bottom of	Type: PVC Diam.: 2
	Stratum	Stratum	Stat/Gauge: 0.010 Length: 10
	1-2.5		Set Between: 1. A 9 ft. and 18. 29 ft. NOTE: MULTIPLE SCREENS USE SECOND SHEET
areyish sandy topsoil	1-4.5		Sieve Analysis
	3-3.5		10. STATIC WATER LEVEL
It tan sand	13-3.0		13, 28 tt. below land surface after 24 hours
11 1	4-4.5		11 PUMPING LEVEL Below Land Surface.
It. brown sand		· · · · · · · · · · · · · · · · · · ·	tt. after hrs. Pumping G.P.M.
orange brown sand	5-8.5		Pumping Test: ☐ Yes (please enclose) ☑No
brange brasisara	1		Yield:
1t. brown sand bebbles	9-11		12. WATER QUALITY
17. DIGGY SQUE PARTY			Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
red clayish sand	11.5-15		Please enclose lab results.
1+ orange moist	-1 101		13. ARTIFICIAL FILTER (gravel pack) 2 Yes No
It. orange moist sandy clay	15.5'-19'		Installed fromft. toft.
J			Effective sizeUniformity Coefficient
	<u> </u>		14. WELL GROUTED? Wes No Wheat Cement Sand Cement Concrete Cother Rentonite
	1		Deoth: From
			15. NEAREST SOURCE OF POSSIBLE CONTROL OF Type:
			upon completion No Amount:
·			16. PUMP: Date installed:Not installed 🔽
	+		Model No.
·	1		H.P. Volts Length of drop pipe ft. Capacitygpm
			TYPE: Supmersible Jet (snallow) Turbine
			Glet (deep) GReciprocating Centrifugat
Page 70-5	1		17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
*Indicate Water Bearing Zones			my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)			Registered Business Name: Southenstern Embironmentalais:
3. REMARKS:			and while of firm have
			Address: 303 Half St. Address: Signed: Cert. No.: 880
1			Authorized Representative
OHEC 1903 (10/96) CDPY 1 MA	AIL TO: S.C.	SEPARTME	T OF HEALTH AND ENVIRONMENTAL CONTROL ADDRESS 480VE)

	T	
1)	H b	t. (,
	33.23	
	CONTE	
PROMOTE	PROTECT	PROSPEX

Bureau of Water 2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

PROMOTE PROTECT PROSPEX		2000 50	in Otroot, Colorible, Co.
1 LOCATION OF WELL:	MW#	ب ب	4 OWNER OF WELL Dan McPachin
County: Florence System	Name: C 00:	5to:1	Address: 50 J950
	ick -240p	ALTERNATION CONTRACTOR	Florence, SC 2950 Telephone No.: 843 (649 - 6177
A DE	D3537		Engineer: Bruce G. Newell
Latitude: Longitu	de:		The Article of the Shope
Distance and Direction from Road Inte	ersections:		Conway, 5C 29520
see attached	علمه ماء		CONWAY, 5C 29520 Telephone No. 843-247-3533
Sec andoned	5neas	•	5. WELL DEPTH (completed) Date Started: 7-15-99
Street Address & City of Well Locatio	n:		3. Well Ber Wilderman
Sketch Map:			18.76 tt. Date Completed: 7-15-99
			6. Mud Rotary G Jetted Bored Dug
See attached st	uets		Li Air Rotary Li Univeni
Size Certa critical and			7. USE: Domestic Public Supply—Permit No Industry
			☐ Irrigation ☐ Air Conditioning ☐ Commercial
			☐ Test Well ☐
•			8. CASING: EThreaded D Welded
			Diam.: 2 " Height: Above/Below Surface tt.
2. CUTTING SAMPLES: Yes	□ No		Type: 52 FVC Garvanized Constant
2 CUTTING SAMPLES: LI TES	١٩٥ ټ		O.29 in. to 9.39 ft. depth Drive Shoe? Yes No
Geophysical Logs: Yes (pl	ease enclose)	□ No	in. to ft. depth
Geophysical Logs 163 (pr	Thickness	Depth to	9. SCREEN
Formation Description	of	Bottom of	Diam.: Q
	Stratum	Stratum	Length: 10
	1-1.5		Set Berween: 9.29 tt. and 9.29 tt. NOTE: MULTIPLE SCREENS tt. and tt. USE SECOND SHEET
tan sandy topsoil	17-1.5		Sieve Analysis
,	2-2.5		10. STATIC WATER LEVEL
orange			10. STATIC WATER LEVEL 1. It, below land surface after 24 hours
111 1	3-4.5		11 PULMPING LEVEL Below Land Surface.
white tan sand		<u> </u>	ft. afterhrs. Pumping G.P.M.
It brown sand	5-8.5		Pumping Test: Yes (please enclose)
(pebble)			Yield:
orange red sand	9-15.5		12. WATER QUALITY
H. tan sana/It. orang	1 10'		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
sand damp	16-19		Please enclose lab renults.
			13. ARTIFICIAL FILTER (gravel pack) 2 Yes No
			installed fromtt, tott.
			Effective sizeUniformity Coefficient
	1	<u> </u>	14. WELL GROUTED? DYES DNo DNeat Cement Dand Cement Concrete Cother Bentonite
	1		Deoth: From 1.10 1.10 1.10 1.10 1.10 1.10 1.10 1.1
			15. NEAREST SOURCE OF POSSIBLE CONTAMINATION. Type well disinfected Yes Type:
	-	<u> </u>	upon completion No Amount:
			16. PUMP: Date installed: Not installed &
		<u> </u>	Mfr. Name: Model No.:
		•	HP Volts Length of drop pipeft. Capacitygpm
	,	!	TYPE: □ Supmersible □ Jet (shallow) □ Turbine
		! !	□ Jet (deep) □ Reciprocating □ Centrifugal
7-1-	;	1	17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
*Indicate Water Bearing Zones			my direction and this report is true to the best of my knowledge and belief.
			Registered Business Name: Southeastern Environmentalis:
(Use a 2nd sheet if needed)			
(Use a 2nd sheet if needed)	<u> </u>		203 Main Starmuray an
(Use a 2nd sheet if needed) 3. REMARKS:			Address: 303 Main St. Conyagy
			Address: 383 Main St. Conusey Signed: Authorized Representative Cert. No.: 880

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Bureau of Water lumbia. SC 29201-1708; (803) 734-5300

PROMOTE PROTECT PROSPER	2600 BL	III Street, Columbia, SC 29201-1708, (803) 734-3300
1. LOCATION OF WELL:	mw# 7	A OWNER OF WELL Dan McEachin
County: Florence System	Name: C 00:510-1	Address: 1007 Wentworth Prive
	ack Stop	Flurence, SC 2950 Telephone No.: 843- (069-0177
#LD #	D3538	Engineer: Bruce G. Newell
Latitude	ide: - Section	Address 727 Wain Skept
Distance and Direction from Road In	ersections:	1 Cm m 40 29520
see attached	sheets	Telephone No.: 943-247-3533
	· .	5. WELL DEPTH (completed) Date Started: 7-15-99
Street Address & City of Well Location Sketch Map:	71.	18 85 tt. Date Comoleted: 7-15-99
Skerch Mau:	,	6. Mud Rotary Detted & Bores Duy
See attached st	1 -	☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
see amachea si	res	7. USE:
		☐ Domestic ☐ Public Supply—Permit No. ☐ Industry ☐ Irrication ☐ Air Conditioning ☐ Commercial
		Imigation
		8 CASING: PThreaded D Welded
		Diam.: 2" Height: Above/Below
2 CUTTING SAMPLES: [] Yes	□ No	Type: PVC Galvanized Surface tt. Steel Gother Weight Ib./ft.
2 CUTTING SAMPLES. 10 165	_ NO	Steel Other Weight Ib./ft.
Geophysical Logs: Yes (p.	ease enclose) 🗆 No	in. to ft. depth
	*Thickness Depth to	9. SCREEN 2"
Formation Description	of Bottom of	Type: PVC Diam.: 2
	Stratum Stratum	SiovGauge: 0.010 Length: 10 Set Setween: 3.38 ft. and 18.38 ft. NOTE: MULTIPLE SCREENS
It tan sand	11-2.5	tt. andtt. USE SECOND SHEET
11. 10. 1001	1	Sieve Analysis Yes (please enclose) No
It. brown sand	3-45	10. STATIC WATER LEVEL
It brown clavish	r' 0 E'	12. 93 tt. below land surface after 24 hours
sand (pebbles)	5, 9. 2	11. PUMPING LEVEL Below Land Surface
It. brown sandy	9'-10.5	Pumping Test: Yes (please enclose)
clay (pebbles)	' 	Yield:
reddish pink sandy clay	11-125	12 WATER QUALITY
red clayish sand	1	Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
T CA C. C. C. C. C. C. C. C. C. C. C. C. C.	13-19.5	Please enclose lab results.
		13. ARTIFICIAL FILTER (gravel pack) ØYes □No
		Installed fromft. toft. Fifactive sizeUniformity Coefficient
		THE COUNTY OF TWO THE
		Meat Cement □ Sand Cement □ Concrete ### Other Bentanite
		Deart: From
	i	15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
		Type well disinfected
		upon completion No Amount: Not installed Not installed
		18. FOMF. Date installed.
		Mfr. 'ame: Model No.: H.P. Volts Length of drop pipe t. Capacity:pm
		TYPE: Submersible Set (shallow) Turbine
		☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
*Indicate Water Bearing Zones	0	17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
moleate Water Dearing Zones		my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)		Registered Business Names Southenstern Environmentalie:
3. REMARKS:	4	Address: 303 Main St Conung
**	1	Con No. ??
•		Signed: Authorized Representative
MEC 1903 (10/96) COPY ' M	AIL TO: LC. DEPARTMEN	T OF HEALTH AND ENVIRONMENTAL CONTROL ADDRESS ABOVE)
AUCO (SAULIUSO)		

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13	П	٠ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ	\sim
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		27 R	
	52 P.		73
			. 42
		<i>36</i> 2 E	
e TOMO	TE PROT	KCT N	OSPEK

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

PROMOTE PROTECT PROSPER	2000 L	OWNER OF WELL Dan Hickachin
A LOCATION OF WELL	mw#8	Address 1007 Wentworth Drive
County: Florence System	n Name: C 00.5tol	は 100mg Co 1
Trovence Tr	uck 5top	** 1 - ** - ** - ** - ** - ** - ** - **
Elizabeth August Lagrangian Company	F-D 35 3 X	
-Latitude: Longil	tude:	Address: 323 Main Street
Distance and Direction from Road In	ntersections:	Address: 323 Main Street Commy, 5C 29520 Telephone No. 843-248-3533 Date Started: 7-15-99
		Tolonbone No. 947-247-3533
see attached	5heets	5. WELL DEPTH (completed) Date Staned: 7-15-99
Street Andress & City of Well Locat	ion:	
Sketch Map:		CV Record C Dug
Skelct map.		6. Mud Hotary District Cable tool Cother
sec attached =	الم م المح	☐ Air Rotary ☐ Univer
see attachea =	orkers	7. USE:
		Air Conditioning
•		C Test Well Mcnitor Well
		8. CASING: Threaded Welded
		Diam Height: Above/Below
		Time DEVIC F Galvanized Surface
2. CUTTING SAMPLES: Tyes	□ No	Use Steel ☐ Other Drive Shoe? ☐ Yes ☐ No
		O. 24 in. to 1. 24 it. depth 5.100 since 5
Geophysical Logs: Tyes	(please enclose) 🗀 No	"
	*Thickness Depth t	9. SCREEN OVC
Formation Description	of Bottom Stratum Stratur	
	- CAGO	
المحمد والمرا	1-2.5	
white tan sand	11-0.5	Sieve Analysis
light tan orange	3-4.5	10 STATIC WATER LEVEL
sand		ft. below land surface after 24 hours
tan clayish sand	5-10.5	11. PUMPING LEVEL Below Land Surface.
Gebble)		tt afterhrs. Pumping
pinkish sanay day	11-12.5	Pumping Test: ☐ Yes (please enclose) ☑ No
(pebbles)		Yield:
l v via govel	13'-19'	12 WATER QUALITY Charging Analysis & res O No Bacterial Analysis O Yes W No
brange clayish sand	·	Chemical Analysis & Yes O No Bacterial Analysis O 163
		Disease copiese lab resuits.
		13. ARTIFICIAL FILTER (gravel pack) 2/Yes \(\text{No} \) No
		Installed from ft. to
		Ellective size
		14. WELL GROUTED? DYES INO Neat Cement I Sand Cement I Concrete it Other Bentonite tt.
	i	Neat Cement Sand Cement Controls
	· _	Depth: From
		15. NEAREST SOURCE OF POSSIBLE CONTROL Type well disinfected ☐ Yes Type:
		upon completion No Amount:
		16. PUMP: Date installed: Not installed as Mr. Name: Not installed as
		Length of grop pipett. Capacitygpm
		let (shallow)
	į	C Bosingo Centrifugal
*Indicate Water Bearing Zones		17. WATER WELL CONTRACTOR'S CERTIFICATION of my knowledge and belief. my direction and this report is true to the best of my knowledge and belief. Inc.
1		Same Swithenstern Environmentalie:
(Use a 2nd sneet if needed)	!	my direction and this report is true to the best of my knowledge and true. Registered Business Name: Southenstern Environmentalists:
3. REMARKS:		Address: 303 Main St. Conus
•		Address: So 17 Cen. No.: 880
		чилогией биогеваливами
		DDRESS ASCVE)

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Water Well Record Bureau of Water

	2600 B	ull Street, Columbia, SC 29201-1708; (803) 734-5300
1. LOCATION OF WELL:	mw#9	4. OWNEROFWELL: Dan McEachin
County: Clausers System	Name: Coastal	Address: 1007 Wentworth Drive Florence, SC 2950
1.0	uck 570p 03538	Telephone No.: 843- 669-6177
		Engineer: Bruce G. Newell
Latitude: Longitul Distance and Direction from Road Inte		Address: 323 Main Street
7.7		Conway, 5C 29520 Telephone No.: 843-247-3533
see attached		5. WELL DEPTH (completed) Date Started: 7-13-99
Street Address & City of Well Locatio	n:	18.8 ft. Date Completed: 7-13-99
Sketch Map:		6. ☐ Mud Rotary ☐ Jetted ☑ Bored ☐ Dug
see attached st	and te	☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
Jee anachea si	uers.	7. USE: Domestic Public Supply-Permit No Industry
		☐ Irrigation ☐ Air Conditioning ☐ Commercial
		☐ Test Well ☑ Monitor Well ☐ ☐
		8. CASING: EThreaded D Welded Diam.: 2" Height: Above/Below
		Type: PVC Galvanized Surface
2. CUTTING SAMPLES: Yes	□ No	O. Steel Other Weight Ib./ft. O. 33 in. to 8.33 it. depth Orive Shoe? Tyes No
Geophysical Logs: Tyes (pi	ease enclose) 🗆 No	in, to tt, depth
	*Thickness Depth to	9. SCREEN PVC Diam. 3"
Formation Description	of Bottom of Stratum	Slevicaure: O DID Length: 10
It. tan sandy	17 11	Set Between: 8:33 ft. and 11. 33 ft. NOTE: MULTIPLE SCHEENS
IDam	1-4.5	ti. andtt. USE SECOND SHEET Sieve Analysis Yes (please enclose) No
It. brown sandy	5-6.5	10 STATIC WATER LEVEL
orange brown	1 4	13. 48 ft. below land surface after 24 hours
sandy loam	7-7.5	11. PUMPING LEVEL Below Land Surface. ft. afterhrs. Pumping G.P.M.
orangé brown	7.5-13	Pumping Test: Yes (please enclose)
tan/orange wet	 	Yield:
sandy clay	13.5-195	12. WATER QUALITY
		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
		Please enclose lab results. 13. ARTIFICIAL FILTER (gravel pack) 2 Yes □ No
		installed from ft. to ft.
	i i	Effective size Uniformity Coefficient
		14. WELL GROUTED: Tyes INO Neat Cement I Sand Cement I Concrete Tother Bentonite
· *		Depth: From tt. tott.
		15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: It direction
		Type well disinfected Yes Type:
		upon completion No Amount:Not installed
		Mr. Name: Model No.:
		HP
		TYPE: 3 Submersible 3 Jet (snallow) 5 Turbine 3 Jet (deep) 5 Reciprocating 5 Centrifugal
		17 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
*Indicate Water Bearing Zones		my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)		Registered Business Name: Southenstern Environmentalia:
3. REMARKS:		Address: 323 Main St. OBWay 27
:		13 A Market 190 8 70
		Signed: Authorized Regressmative

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		3 2	
PROMO	7 7 101	ECT PRO	SPER

Bureau of Water 2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

PROMOTE PROTECT PROSPER		2000 00	il Otteet, Oottillotta, GO Zozot. God, (GGG)
1. LOCATION OF WELL:	mw#	7 <u> </u>	4 OWNER OF WELL Dan Mic Eachin
County: Clarence System	Name: C 00:	51 0 1	Address: 1007 Wentworth Drive
County: Florence System	ick 3top	Action with the series of	Address: 1007 Wentworth Detwo Florence, 50 2950 Telephone No.: 843 (669-6177
D*	×03538		Telephone No.: 843 (004-017-1
Latitude: Longitu			In Engineer Toring, (17, API DEL)
Distance and Direction from Road Inte			Adoress: 323 Main Street
		_	Conway 5C 2959U
see attached	5heets	5	Telephone No:::843-248-3533 5. WELL DEPTH (completed) Date Started: 8-4-99
Street Address & City of Well Location	n:		
Sketch Map:			18.89 tt. Date Completed: 8-4-99
			6. ☐ Mud Rotary ∴ Jetted ☑ Bored ☐ Dug
See attached st	سلمد		☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
sec attuched si	wers		7. USE:
			Domestic Public Supply—Permit No.
			☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☑ Monitor Well ☐ ☐
			8. CASING: EThreaded D Welded
•			Diam.: 2" Height: Above/Below
			Type: NEVC Calvanized Surfaceft.
2. CUTTING SAMPLES: Yes	□ No		Steel Other Weight lb./ft.
Geophysical Logs: Yes (ple	ease enclose)	□ No	in. toft. aeoth
	Thickness	Depth to	9. SCREEN OUC
Formation Description	Of Stantian	Bottom of Stratum	Type: PVC Diam.: 2
	Stratum	Suatum	Siot/Gauge: 0.010 Length: 10 Set Setween: 8.42 ft. and 8.42 ft. NOTE: MULTIPLE SCREENS
area lam on cond	1-1.5		t, andft. USE SECOND SHEET
gray brown sand			Sieve Analysis
It tan sand	2'- 2.5		10. STATIC WATER LEVEL
	i .		15.03 ft. below land surface after 24 hours
ton sand some	3-4.5		11 PUMPING LEVEL Below Land Surface.
fine It. tan/orang	e 1		tt, after hrs. Pumping G.P.M.
Sand	5-7		Pumping Test: ☐ Yes (please enclose) ⊋No
fine It. brown	i , ,		Yield:
sana	7.5 -95		12 WATER QUALITY
	·		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
sandy clay (marble)	10,-11,		Please enclose lab results.
Wasad Sondu	1		13. ARTIFICIAL FILTER (gravel pack)
It red sandy	11.5'-19	·	Installed from t. toft.
3			Effective size Uniformity Coefficient
]		14. WELL GROUTED? D'Yes ONO
			Weat Cament Sand Cament Concrete Cother Bentonite
			Death: From the fit to ft.
			15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type well disinfected Yes Type:
			upon completion ☐ No Amount:
	1		16, PUMP: Date installed: Not installed
	1	1	Mfr. Name: Model No.:
		<u>:</u>	H.PVoltsLength of drop pipeft. Capacitygpm
	1	Í	TYPE: ☐ Supmersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
	1	!	Jet (deep) Reciprocating Centringal 17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under
*Indicate Water Bearing Zones		İ	my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)		1	Registered Business Name: Southeastern Environmenticate:
3. REMARKS:			Address: 303 Main St. Conway
			11 1 1 Con No. 880
	•		Augnorated Representative
		DED. 071:7:	TOE JEST WAR ENVIRONMENTAL CONTROL ADDRESS ABOVE)

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Bureau of Water 2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

PROMOTE PROTECT PROSPER		2000 00	in Oricot, Columbia, CO 2000
+ LOCATION OF WELL:	mw +	= 14).	4. OWNER OF WELL Dan McEachin Address: 1007 Westworth Drive
County: Florence System	Name: COQ:	Stall .	Address: 1007 Wentwork Drive
			for the second of the second o
LAST LEVEL TO THE	-03538		Telephone No.: 843 - (\$69 - \$177
Latitude	de:	4000	Engineer Bruce G. Newell
Distance and Direction from Road Inte	rsections:		Addross 323 Main Street Conway SC 2952U
see attached	sheets	;	Telephone No.: 943-248-3533
Street Address & City of Well Location	n:		5. WELL DEPTH (completed) Date Started: 8-4-99
Sketch Map:		·	
			6. ☐ Mud Rotary ☐ Jetted ☑ Bored ☐ Dug
Sec attached sheets		•	☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other
			7. USE: □ Domestic □ Public Supply-Permit No. □ □ Industry
			☐ Imigation ☐ Air Conditioning ☐ Commercial
			☐ Test Well ☑ Monitor Well ☐
			8. CASING: EThreaded D Welded
			Diam.: 2 " Height: Above/Below Type: RZPVC □ Galvanized Surfaceft.
2 CUTTING SAMPLES: C Yes	□ No		Steel C Other Weightlb./ft.
			0.29 in, to 8.29 ft. depth Drive Shoe? Tyes No
Geophysical Logs: Yes (ple	ase enclose)	□ No	in. to ft. depth
	Thickness	Depth to	9. SCREEN OUC
Formation Description	of Stratum	Bottom of Stratum	Type: PVC Diam.: 2
	Stratum	Ouatum	Slot/Gauge: 0.010 Lengin: 10' Set Between: 8.29 ft. and 18.29 ft. NOTE: MULTIPLE SCREENS
large rock gravel	1-2.5		t. andh. USE SECOND SHEET
Targe 10011 graver	, .,		Sieve Analysis
fine brown sand	3-5.5		10. STATIC WATER LEVEL
brown sand (some	,' -"		13.57 ht. below land surface after 24 hours
sandy clay) marble size	16-7		11. PUMPING LEVEL Below Land Surface.
	7.5/- ,		ft. afterhrs. Pumping G.P.M.
brown sandy clay (mor	He) 9.5		Pumping Test: ☐ Yes (please enclose) ☑No
gray (pink tint) sandy	10'-19'		Yield:
Clay (pebble sized)	,,,,		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☑ No
			Please enclose lab results.
	 		13. ARTIFICIAL FILTER (gravel pack) ☑Yes ☐No
			Installed fromtt. tott.
			Effective size Uniformity Coefficient
			14. WELL GROUTED? D'Yes ONO
			Wheat Cement □ Sand Cement □ Concrete ☑ Other Pentarte
			Death: From tt. to tt. direction
			15. NEAREST SOURCE OF POSSIBLE CONTAMINATION:ft direction Type well disinfected □ Yes Type:
	1		upon completion II No Amount:
		:	16. JMP: Date installed: Not installed
	-		Mfr. Name: Model No.:
	;		H.P. Volts Length of drop pipeft. Capacitygpm
	!		TYPE: Submersible: Jet (shallow): Turbine
en en en en en en en en en en en en en e	<u> </u>		☐ Jer (deep) ☐ Reciprocating ☐ Centrifugal
*Indicate Water Bearing Zones			17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)			Registered Business Name: Southenstern Enulmmentable:
3. REMARKS:	· · · · · · · · · · · · · · · · · · ·		
· · · · · · · · · · · · · · · · · · ·			
			Signed: Carr. No.: 890
			Authorized Representative

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Bureau of Water
2600 Bull Street Columbia SC 29201-1708

PROMOTE PROTECT PROSPER		uii Street, Columbia, SC 29201-1708; (803) 734-5300
1. LOCATION OF WELL: Te	lescope	4. OWNER OF WELL: Dan Mc Eachin
County: L / System	n Namer∕	Address: 1007 Wentworth Drive Florence, SC 29501 Telephone No: 843-661-6177
	COASTAL Truck	Florence, SC 29501
		Telephone No.: 843 - ((1 - 6177
Latitude: Longiti		align Engineer: 「Bruce Gill Nowell 」 かから 中国の認思が会議議
Distance and Direction from Road In	and the second s	Address: 323 Main Street Convey 5C 29526
see attache	a sheets	Telephone No.: 843 - 249 - 3533
1		5. WELL DEPTH (completed) Date Started: 8 - 24-99
Street Address & City of Well Location Sketch Map:	on;	
1		36 It. Date Completed: \$ -25-99
see attached sheets		6. ☐ Mud Rotary ☐ Jetted ☐ Errored ☐ Dug
DCC WITH		☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other 7. USE:
		7. USE: Domestic Dublic Supply-Permit No Didustry
		☐ Irrigation ☐ Air Conditioning ☐ Commercial
		☐ Test Well ☐ Monitor Well ☐
		a. Choing, arthreaded Weided
		Diam.: Height: Above/Below Type: TPVC [] Galvanized Surface
2. CUTTING SAMPLES:	□ No	
		0.5 in to 25 th denth Drive Shoe? Ves No
Geophysical Logs: Yes (pl	ease enclose) D No	in. to 3.1 tt. depth
Formation Description	*Thickness Depth to	9. SCREEN
	Stratum Stratum	Type: PVC Diam.: 2
PI Li		Slot/Gauge: OtO Length: 5 Set Between: 3i ft. and 36 ft. NOTE: MULTIPLE SCREENS
Black Loam	0'-2'	ft. andft. USE SECOND SHEET
TCI	2121	Sieve Analysis ☐ Yes (please enclose) ☐ No
190 Jand	4-5	10. STATIC WATER LEVEL
Roya Salvela	13'- <1	ft, below land surface after 24 hours
12.000 > Clay	15 · 5	11. PUMPING LEVEL Below Land Surface.
Orange/light brown sand	5-7	ft. afterhrs. Pumping G.P.M.
, J, J	1	Pumping Test: Yes (please enclose) No Yield:
light brown, clayish,	7'-10'.	12. WATER QUALITY
		Chemical Analysis ☑ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Sand (pehbles)		Please enclose lab results.
		13. ARTIFICIAL FILTER (gravel pack) ☑ Yes □ No
Oringe brown, Jind	10-20	Installed from 25 ft. to 36 ft.
J. 1		Effective size_# Z Uniformity Coefficient
pibbles		14. WELL GROUTED? ☐ Yes ☐ No
		Sand Cement □ Concrete □ Other
		Depth: From
•		Type well disinfected ☐ Yes Type:
		upon completion No Amount:
		16. PUMP: Date installed: Not installed Not installed
		Mfr. Name: Model No.:
		H.PVoltsLength of drop pipeft. Capacitygpm
		TYPE: Submersible Jet (shallow) Turbine
		☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
*Indicate Water Bearing Zones		 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
(Use a 2nd sheet if needed)		· · · · · · · · · · · · · · · · · · ·
3. REMARKS:	L	Registered Business Name: East Coast Dr.lling Date: 8 25-99
		Address: 21.33 Country Manor
TW		Signed: Ruckey Foul Cert. No. 1315
		Authorized Representative
EC 1903 (10/96) CORV 1 MAI	TO: S.C. DEBARTHENT	OF HEALTH AND ENVIRONMENTAL CONTROL (APPRICA ACCUSE)

Midlands Environmental Consultants, Inc.

Ms. Maia Milenkova, Hydrogeologist
Assessment Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201





Subject:

QAPP Contractor Addendum - Revision 0

Coastal 76 Truck Stop Florence, South Carolina

SCDHEC Site ID Number 03538 MECI Project Number 12-3980

Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Milenkova,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

On May 15, 2012, MECI personnel performed a site visit to the subject site to evaluate site conditions, attempt to locate monitoring wells and identify potential problems for future assessment activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,

Midlands Environmental Consultants, Inc.

Courtney M. Sand Staff Biologist Jeff L. Coleman Senior Scientist

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Coastal 76 Truck Stop, SCDHEC Site ID# 03538

2513 East Palmetto Street, Florence, South Carolina

Prepared by:
Jeff L. Coleman
Senior Scientist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: May 17, 2012

Approvals

Maia Milenkova
SC DHEC Project Manager

Brendon P. Kelly
Contractor QA Manager

Bryan T. Shane, P.G.
Site Rehabilitation Contractor

Michael Woodrum
Laboratory Director

Date

Date

Date

May 17, 2012

Signature

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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Maia Milenkova	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6664	803-896- 6245	milenkmp@dhec.sc.gov
Bryan T. Shane, P.G.	Site Rehabilitation Contractor	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808- 2048	bts@meci.net
Brendon P. Kelly	Quality Assurance Officer	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808- 2048	bpk@meci.net
Jeff L. Coleman	Field Manager	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808- 2048	jlc@meci.net
Michael Woodrum	Laboratory Director	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791- 9111	mwoodrum@shealylab.com
Tommy Bolyard	Well Services/Driller	Environmental Probing and Drilling Services 17538 Greenhill Road Charlotte, NC 28278	704-607-7529	803-548- 2233	EDPS@comporium.net

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephon e Number	Fax Number	Email Address
Project Manager	Maia Milenkova	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896- 6664	803-896- 6245	milenkmp@dhec.sc.gov
Site Rehabilitation Contractor	Bryan T. Shane, P.G.	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	bts@meci.net
Quality Assurance Officer	Brendon P. Kelly	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	bpk@meci.net
Field Manager	Jeff L. Coleman	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	jlc@meci.net
Analytical Laboratory Director	Michael Woodrum	Shealy Environmental Services, Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791- 9700	803-791- 9111	mwoodrum@shealylab.com
Soil Boring and Monitoring Well Driller	Tommy Bolyard	Environmental Probing and Drilling Services 17538 Greenhill Road Charlotte, NC 28278	704-607- 7529	803-548- 2233	EDPS@comportum.net

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephon e Number	Fax Number	Email Address
Registered Land Surveyor	Jay S. Joshi	Construction Support Services, Inc. 1318 RL Coward Road	803-776- 9909	803-776- 2688	jsjoshi@constructionsupportsc.com
right a little	1	Hopkins, SC 29061	r (1)		1 pt de ser
Disposal Facility	Carol Weldon	Waste Management, Inc. Richland Landfill 1047 Highway Church Road Elgin, SC 29045	803-744- 3346	866-904- 7194	Not Available
Project Verifier	Courtney M. Sanders or Brendon P. Kelly	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	cms@meci.net

Table 2A Addendum Role Identification and Contact Information

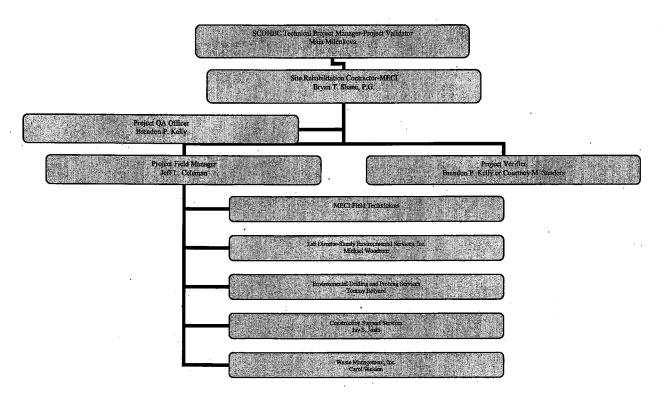


Figure 1A Organizational Chart

Project Manager (Maia Milenkova) – The project manager is responsible for direct oversight of contractors conducting assessment and site rehabilitation of releases at UST sites.

Site Rehabilitation Contractor (Bryan T. Shane, P.G.) – The Site Rehabilitation Contractor is an independent contractor responsible for managing and coordinating field and office activities needed for assessments or cleanup.

-Final Review of all work produced for a scope of work.

-Final say on technical interpretation of data.

Quality Assurance Officer (Brendon P. Kelly) – The Quality Assurance Officer is responsible for the oversight of all quality assurance activities associated with projects performed by the Site Rehabilitation Contractor.

- -In charge of producing and maintaining the QAPPA for MECI.
- -Reviews (and Audits, if necessary) all work produced in conjunction with a scope of work.
- -Quality control of data entry and report preparation.

Field Manager (Jeff L. Coleman) –The field manager will oversee all work done on any given project.

- -Assign, direct and oversee all field personnel working on each project.
- -Responsible for coordinating with the SCDHEC project manager, should any problems or clarifications arise.
- -Responsible for all reporting done in conjunction with field work.

Project Verifier (Courtney M. Sanders) – The project verifier is responsible for verifying the quality of data produced during a scope of work. This includes review of field work and laboratory reports for potential quality issues.

Well Driller (Tommy Bolyard) – The well driller is responsible for installing monitoring wells according to South Carolina Well Standards, R.61-71. The well driller is a subcontractor for MECI.

Field Technicians (various employees) – Responsible for all field activities for a given scope of work.

- -Conduct all initial site visit, and record findings
- -Conduct all field activities associated with a scope of work. All work will be conducted according to the MECI SOP. Will be responsible for reporting any potential problems are inconsistencies found during assessment activities.
- -Completes the chain of custody upon completion of sampling event and delivers samples to lab or office for later lab pick-up

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

The subject site (Costal 76 Truck Stop) is located at 2513 East Palmetto Street, Florence, Florence County, South Carolina. The subject site formally maintained four underground storage tanks (UST's), including 1-2,000 gallon gasoline UST, 1-3,000 gallon gasoline UST, 1-1,000 gallon gasoline UST, and 1-2,000 gallon diesel UST. These UST's were abandoned by removal from ground in August of 1995. The South Carolina Department of Health and Environmental Control reported a release of petroleum product for the subject UST's in September of 1995 and confirmed this release in August of 1997. The subject site is currently rated a Class 3BA.

The site is being assessed in conjunction with the SCDHEC Small Scope Assessment Contract (Solicitation # IFB-5400003229, PO# 4600117789).

Please answer the following: Does this project fall under UST or Brownfields area?

Underground Storage Tank Division

A6 Project/Task Description

1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).

The scope of this assessment will be to install eight (8) watertable bracketing monitoring wells and one double cased "Deep" monitoring well. During the installation of the "Deep" monitoring well, a grain size/hydrometer sample will be collected from within the screened interval and associated slug test performed. Following the well installation, the entire monitoring well network will be sampled for BTEX, Napth, MTBE, 1,2-DCA, 8-oxygenates, ethanol (8260-B), EDB (8011), and Total Lead (EPA Method 6010).

A subsequent survey will be conducted by MECI personnel to locate the vertical and horizontal positions of the newly installed monitoring wells.

- 2. The work will begin within fourteen (14) days of receipt of approved QAPP contractors addendum after cost approval and the scope of work should be complete by sixty (60) days of receipt of approved QAPP contractors addendum.
- 3. Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site is located at 2513 East Palmetto Street, Florence, Florence County, South Carolina. The site is currently an abandoned gas station. All work will be conducted on the subject property.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Principal	D T Chara D O	Professional	10/30/1993	State of South Carolina	1102
Geologist Senior	Bryan T. Shane, P.G.	Geologist OSHA 40 hr	10/30/1993	Calonia	1102
Scientist	Jeff Coleman	HAZWOPER	7/27/2007	N/A	N/A
		OSHA 8 hr	7/27/2011	N/A	N/A

Title/Job	Name	Training Required	Date training received	Type of License	License Number
	· · · · · · · · · · · · · · · · · · ·	HAZWOPER			
		refresher			
Project		OSHA 40 hr		·	
Scientist	Brendon Kelly	HAZWOPER	8/21/2009	N/A	N/A
	<u> </u>	OSHA 8 hr			
n		HAZWOPER			2.9877
		refresher	12/14/2010	N/A	N/A
Staff		OSHA 40 hr			
Geologist	John Bryant	HAZWOPER	4/17/2009	N/A	N/A
7		OSHA 8 hr			•
		HAZWOPER	ļ		
		refresher	12/14/2010	N/A	N/A
Field		OSHA 40 hr			
Technician	Brian Owen	HAZWOPER	8/21/2009	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/14/2010	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Courtney Sanders	HAZWOPER	12/10/2010	N/A	N/A
Staff		OSHA 40 hr		· · ·	
Biologist	Kyle Pudney	HAZWOPER	12/10/2010	N/A	N/A
Staff		OSHA 40 hr		·	Ť
Biologist	Chris Lashley	HAZWOPER	12/10/2010	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Gavin Globensky	HAZWOPER	7/29/2011	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Ryan Ariail	HAZWOPER	9/23/2011	N/A	N/A
Lab Manager	Michael Woodrum	***	***	Lab	SC 32010
				Certification	
Surveying	Jay S. Joshi	Tier A Land	6/1/1992	PLS	14811
Services		Surveyor			
		Certification			
Drilling	Tommy Bolyard -	SC Drillers	8/24/2004	В	01846
Services	EDPS	Certification			

Table 3A Required Training and Licenses

<u>Brendon P. Kelly of Midlands Environmental Consultants, Inc.</u> is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location:235-B Dooley Road, Lexington, SC 29073.

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the Laboratory___Shealy Environmental Services, Inc.____

Name of Lab Director	Michael Woodrum		
SC DHEC Certification Number			
Parameters this Lab will analyz			
raiameters tins Lab will alialyz	e ioi una project.		
oxygenates, ethanol (826	•	for BTEX, Napth, MTBE, 1,2-DCA, tal Lead (EPA Method 6010).	8-
erak	01 115 1 1	±. 13	
Full Name of the Laboratory			
Name of Lab Director			
SC DHEC Certification Number		**	
Parameters this Lab will analyz	e for this project:	·	
Grain size distribution test will be 1140.	performed by Schnabel E	ngineering in accordance with AST	M Method D-
Please note: SC DHEC may recast part of this QAPP.	quire that the contractor	submit some or all of the Labora	atory's SOPs
A9 Documents and Record	s		
Personnel will receive the mos (Check all that apply)	current version of the G	APP Addendum via:	
US MailCourier	_X_ Hand delivered		\
Other (please specify): E-n	nailed electronic copies	_	

Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Target, Thermospec, or Iteva software	Hardcopy and Electronic	Hardcopy: Offsite storage for 7 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs	Yes
LIMS	Electronic	Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years	Yes
Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Field Staff		MECI office: 235B Dooley Road / Min. 5 years	Yes
Brendon Kelly	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
Brendon Kelly	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Brendon Kelly	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
EDPS	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
	Target, Thermospec, or Iteva software LIMS Field Staff Field Staff Brendon Kelly Brendon Kelly	Target, Thermospec, or lteva software LIMS Electronic Electronic Electronic Electronic Electronic Field Staff Hardcopy Hardcopy & Electronic Brendon Kelly Brendon Kelly Brendon Kelly Electronic	Target, Thermospec, or Iteva software Electronic Electronic Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years MECI office: 235B Dooley Road / Min. 5 years Hardcopy Hardcopy & MECI office: 235B Dooley Road / Min. 5 years Hardcopy & MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years MECI office: 235B Dooley Road / Min. 5 years

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

item	Start Date	End Date	Comments
Site Reconnaissance	5/15/2012	5/15/2012	Aiready Completed
QAPP preparation	5/15/2012	5/17/2012	In progress
QAPP approval	5/17/2012	6/7/2012	Assuming three week turnaround
PUPs Request	6/7/2012	6/11/2012	Give 72 hours until PUPs ticket active
Monitoring Well Installation	6/11/2012	6/25/2012	2 Weeks to mobilize Drill Rig.
Monitoring well Sampling	6/25/2012	7/2/2012	Week to mobilize sampling crew. Standard Day Turn Around Time on analytical (2 Weeks)
Report Preparation	7/2/2012	7/23/12	Three weeks to prepare/submit report

Table 5A Sampling Activities

B2 Sampling Methods

Estimate the number of samples of each matrix that are expected to be collected:

Soil ____1___

Ground Water from monitoring wells _____18___

From Drinking/Irrigation water wells _____

Field Duplicate Collection _____1__

Field Blank Collection _____1__

Trip Blank _____1

From surface water features _____

Total number of samples _____22___

The samples will be (check as many as apply): _____Homogenized _____Split Notes:

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

- -Eighteen (18) water samples will be collected from monitoring well network and be analyzed for BTEX, Napth, MTBE, 1,2-DCA, 8-oxygenates, ethanol (8260-B), EDB (8011), and Total Lead (EPA Method 6010).
- -It is anticipated that one (1) field duplicate will be sampled. One duplicate will be collected during the monitoring well sampling event.
- -It is anticipated that one (1) field blank will be collected. One field blank will be collected during the monitoring well sampling event.
- It is anticipated that one (1) trip blank will be analyzed (1 per cooler utilized during Assessment activities). One cooler will be collected during the monitoring well sampling event.

Environmental Drilling and Probing Services (EDPS) will mobilize a Canterra CT-450 drilling rig to the subject site. All drilling activities will be performed under the supervision of a South Carolina Certified Well Driller and MECI field personnel (Tommy Bolyard, #B 01846).

Wells and temporary borings will be installed according to MECI Standard Operating Procedures (4.1.1, 4.1.5, 4.2.1, 4.2.2, & 4.2.4) and in accordance with South Carolina Well Standards, R.61-71.

Monitoring wells will be purged/sampled in accordance with MECI SOP #4.3.1 through 4.3.5.

For the sample matrices indicated above, please describe how samples will be collected and the equipment needed.

Please see MECI SOP 4.1.1 (Soil Screening and Sampling), 4.2 (Monitoring Well Installation), 4.3 (Monitoring Well Sampling) for field procedures that we be utilized during the subject assessment.

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable?

All equipment, excluding electronic water level indicators and field probes, is disposable.

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination.

Prior to usage of non-disposable equipment, it is decontaminated with isopropanol applied by a Teflon squeeze bottle and rinsed with analyte free water. This rinse water is collected and run through a portable GAC (granulated activated carbon) unit.

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

Environmental Drilling and Probing Services (EDPS) will mobilize a Canterra CT-450 drilling rig to the subject site. All drilling activities will be performed under the supervision of a South Carolina Certified Well Driller and MECI field personnel (Tommy Bolyard, #B 01846).

Coastal 76 Truck Stop – QAPP Addendum Revision 0 Florence,, SC SCDHEC Site ID# 03538

Wells will be installed according to MECI Standard Operating Procedures (4.2., 4.2.2, 4.2.3 & 4.2.4) and in accordance with South Carolina Well Standards, R.61-71.

Drill cuttings will be disposed of by MECI personnel at Waste Management Richland County Landfill in Elgin, SC.

All samples (if needed) will be shipped to the lab via lab courier or delivered directly to the lab by MECI personnel.

Following monitoring well installation a subsequent survey will be conducted by MECI personnel.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Unable to gain access to drilling location	Attempt to create path to well location through vegetation, Utilize plywood boards to cross soft ground,	Record on field sheets, notify SCDHEC and Office.	Field Staff, Field Manager
	contact SCDHEC project manager to discuss a potential change to the well location.		
Hitting a Utility Line while Drilling	Contact PUPS (Palmetto Utilities Protection Service), contact appropriate utility (if gas line is hit, notify fire department)	Record in field sheets, on PUPS ticket in office. Contact SCDHEC project manager to inform them of problem.	Field Staff, Field Manager
Drilling rig breaks down	Attempt to correct problem. If the problem cannot be determined, or cannot be fixed, discontinue drilling for the day. Drilling can continue once drill rig has been fixed, or new drill rig is mobilized to the site	Record on field sheet, notify office staff.	Field Staff, Drill rig operator
Property Owner will not allow access onto property for drilling activities	Stop drilling. Attempt to discuss with property owner the need for the work. Inform SCDHEC project manager of the access issue. If no resolution can be made, discontinue drilling on the disputed property until access can be obtained or new well location is determined.	Document on field sheets (or QAPP, if access denied during QAPP site visit). Inform SCDHEC project manager immediately if any disputes arise.	Field Staff, Field Manager

Table 6A Field Corrective Action

B3 Sample Handling and Custody

1. How will the samples get from the Site to the Lab to ensure holding requirements are met?

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. How will the contactors cool the samples and keep the samples cool?

All samples are kept on wet ice, obtained from MECI office.

3. How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?

A calibrated thermometer and temperature blank will be used to document sample temperature. The temperature blank is immediately checked by the sample receiving technician upon arrival at the laboratory.

4. Where will the samples be stored in the Lab once they are received?

All samples are stored in clean refrigeration units monitored and maintained at 4 degrees C + or - 2 degrees. Volatile organic samples are stored separately form all other samples.

5. Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.

A chain of custody (COC) will be filled out for each sampling event at each project site. COC to be signed by MECI and Shealy Environmental technician at time physical transfer of samples occurs to courier. Shealy uses the following COC procedures to protect sample integrity following pickup by their courier: A full time Sample Receiving Technician receives all samples and completes a Sample Receipt Checklist (SRC), which will identify any anomalies, if any exist the Sample Receiving Technician or Project Manager must resolve the deviation internally and/or notify the client to resolve the anomaly.

B4 Analytical Methods

1. Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:

Parameter	SOP ID*	Method Referenced	Equipment	Comments
BTEX+Naph+MTBE+Oxygentaes	S-VO-002	8260B	GC/MS	

+ + + 186.

		T		
PAH's	S-SV-021	8270D	GC/MS	
ÉDB	S-SV-012	8011	GC	
Lead,T.	S-IM-022	6010C	ICP	
Ferrous Iron	S-IN-009	SM 3500-FED	Spectrophotometer	
Nitrate	S-IN-042	353.2	Auto- analyzer/Lachate	
Sulfate	S-IN-010 s.s.s.s.	300.0	Ion Chromatograph	2.12
Methane	S-VO-004	RSK-175	GC	•
TOC	S-IN-030	Walkley-Black	N/A	
DRO - TPH	S-SV-001	8015C	GC	
	*			
pH	Standard	MECI SOP 4.3.6	YSI 63	Place probe in
Conductivity	Standard	MECI SOP 4.3.6	YSI 63	sample and allow to
Dissolved Oxygen	Standard	MECI SOP 4.3.6	YSI 550A	equilibrate before
Temperature	Standard	MECI SOP 4.3.6	YSI 550A	recording reading
PID reading	MECI SOP 4.2.2			Use MiniRae PID to obtain reading. Place probe into soil sample bag and record the highest
				reading.

Table 7A Analytical SOPs and Referenced Methods

• This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-VO-002	S-VO-002	GC/MS VOLATILES ANALYSIS BASED ON EPA
•		METHODS 8260B AND 624 PREPARED BY EPA
	<u> </u>	METHODS 5030B, 5035 AND 3585
S-SV-021	S-SV-021	GC/MS ANALYSIS BASED ON EPA METHOD
		8270D PREPARED BY EPA METHODS 3520C,
	· · · · · · · · · · · · · · · · · · ·	3550C AND 3580A
S-SV-012	S-SV-012	GC/ECD ANALYSIS OF EDB AND DBCP BASED
		ON METHOD 8011 & 504.1
S-IM-022	S-IM-022	INDUCTIVELY COUPLED PLASMA ATOMIC
		EMISSION SPECTROSCOPY-PECTROMETRIC
		METHOD for TRACE ELEMENT ANALYSES
		METHOD 6010C
S-IN-009	S-IN-009	FERROUS IRON (PHENANTHROLINE METHOD)
		STANDARD METHOD 3500-Fe D
S-IN-042	S-IN-042	NITRATE+NITRITE NITROGEN BY EPA
		METHOD 353.2, NITRATE NITROGEN BY 353.2
].		SUBTRACTION,
		AND NITRITE NITROGEN BY EPA METHOD
S-IN-010	S-IN-010	353.2
S-11V-010	5-IN-010	INORGANIC ANIONS BY ION
		CHROMATOGRAPHY EPA METHOD 300.0 and SW-846 9056 and
		9056A
S-VO-004	S-VO-004	STANDARD OPERATING PROCEDURE GC
J-VU-UU4	3-40-004	ANALYSIS BASED ON METHOD RSKSOP-175
S-IN-030	S-IN-030	TOTAL ORGANIC CARBON (TOC)
O-114-000	O-114-000	LIGIUE OLIQUIAIO OULDOIA (100)

		WALKLEY-BLACK PROCEDURE
S-SV-001	S-SV-001	GC/FID DIESEL RANGE ORGANICS ANALYSIS BASED ON METHOD 8015B and/or 8015C PREPARED BY EPA METHODS 3520C, 3550C and 3580A
MECI SOP 4.2.2	MECI SOP 4.2.2	Drilling Standard operating procedures
MECI SOP 4.3.6	MECI SOP 4.3.6	Sampling Standard operating procedures

Table 8A SOP Abbreviation Key

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
COC or Sample Receiving issues	Call Client	Sample Receiving Checklist (SRC)	PM – Kelly Maberry kmaberry@shealylab.com
Analytical errors	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum <u>mwoodrum@shealylab.con</u>
QA/QC Failure	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.con QA/QC Officer – Jami Savje Jsavje@shealylab.com
On time delivery	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.cor QA/QC Officer – Jami Savje Jsavje@shealylab.com
PID not functioning propertly	Attempt to clean PID, recalibrate.	Record on field sheets, notify office staff. PID taken rotation until problem identified and corrected.	Field Staff, Field Manager

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
			Tested for	,
DIEVAN LANDEAG	Waters/Soils	Six Weeks	Hazardous	•
BTEX+Naph+MTBE+Oxygenates			Constituents	
<u> </u>			and disposed as	

,			1	
			Hazardous or	,
	_		non-Hazardous	
	. *		waste.	
			Tested for	
			Hazardous	
			Constituents	
DALP	Mataur (Oalla	Six Weeks	and disposed as	
PAH's 😁 🕆	Waters/Soils	SIX AAGGKS	Hazardous or	•
·			non-Hazardous	
	•		waste.	
			L. C.	
,			Tested for	
			Hazardous	
			Constituents	
			and disposed as	·
EDB	Waters/Soils	Six Weeks	Hazardous or	
	•			
[non-Hazardous	
			waste.	
			Tested for	
 			Hazardous	
·	•		Constituents	·
Lead	Waters/Soils	Six Weeks	and disposed as	
	114(0)(0)(0)(0)	OIX TYOOKO	Hazardous or	
			non-Hazardous	
	,		waste.	
			Tested for	
			Hazardous	
			Constituents	. .
Ferrous Iron	Waters/Soils	Six Weeks	and disposed as	
remous non	yvalci 3/30ii3	OIX AAGGV2	Hazardous or	
			non-Hazardous	
			waste.	•
			Tested for	
			Hazardous	
`			Constituents	
Nitrata Cuifata	Manage Colle	Chr Marka	and disposed as	
Nitrate,Sulfate	Waters/Soils	Six Weeks	Hazardous or	
			non-Hazardous	
·			waste.	
			Tested for	
			Hazardous	
•			Constituents	
,			and disposed as	,
Methane	Waters/Soils	Six Weeks	Hazardous or	
			non-Hazardous	
			waste.	
,				
Land Company of the C	· · · · · · · · · · · · · · · · · · ·		Portable	All waste water produced
	,,, ,		Granulated	from sampling and
All .	Water	On-Site	Activated	decontamination
ŧ			Carbon (GAC)	activities will be run
<u> </u>		1	Julion (OAO)	

<u> </u>	 	
 • • •	Unit	through a GAC unit

Table 10A Disposal Procedures

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
Volatiles Mass Spec	Shealy SOP S- SV-021 Page 7	Change traps, clean ion source, replace filaments	Periodic	Laboratory	MSV Analyst
Semivolatile Mass Specc	Shealy SOP S- SV-021 Page 7	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
ECD GC	Shealy SOP S- SV-012 Page 5	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
Dionex IC	Shealy SOP S- IN-010 Page 6	Replace auto sampler filter, tubing, line filter, sample Line and Waste Line, as needed. Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst
ICP	Shealy SOP S- IM-005 Page 6 & 7	Clean Sample introduction system , auto sampler, torch, Change spray chamber, torch tubing, tubing	Periodic	Laboratory	ICP Analyst
Leeman Mercury Analyzer	Shealy SOP S- IM-006 Page 5	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst

Flow Injection Analysis – Lachat 8000	Shealy SOP S- IN-042 Page 5	Replace sample and reagent lines, replace light source, re-wrap heating coil, replace column	Periodic/As Needed	Laboratory	Nitrate Analyst
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace probe tip	Yearly	Order from YSI	B. Kelly
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace batteries	As Needed	in stock at office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
. YSI 63	09C 101302, 10K 101895, 07M 100905	Check buffer solutions for expiration	Weekly	In stock at office	B. Kelly
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace membrane	4 to 8 weeks	In stock at office	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace batteries	As Needed	In stock at office	Field Staff
		General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
Electronic Water Level Indicator	WLI-1, WLI-2, WLI-3	Inspection	Weekly	N/A	Field Staff
Oil/Water Interface probe	PLI-1, PLI-2, PLI-3, PLI-4	Inspection	Weely	N/A	Field Staff
MiniRae 3000	592-902491	Cleaning	Weekly	N/A	B. Kelly
MiniRae 3000	592-902491	Parts Inspection	As Needed	In stock at office	Field Staff

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
Volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi-volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC Shealy SOP S-SV-012 Page 5	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument maintenance
Dionex IC Shealy SOP S-IN-010 Page	Daily calibration check	Method Requirements	IC Analyst	Recalibration or instrument

6				maintenance
ICP Shealy SOP S-IM-005 Page 6 & 7	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument maintenance
Leeman Mercury Analyzer Shealy SOP S-IM-006 Page 5	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000 Shealy SOP S-IN-042 Page 5	Daily and continuing calibration check	See calibration criteria	Nitrate Analyst	Recalibration or instrument maintenance
YSI 63 - 09C 101302, 10K 101895, 07M 100905	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
YSI 550A - 04L 2026AK, 08B 101407, 04A 0912AI	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
MiniRae 3000 – 592-902491	Weekly calibration check	Within 5 ppm of 100 ppm standard. MiniRae 3000 does not need daily calibration according to Manufacturers guidelines	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
Electronic Water Level Indicator	Monthly	Checked vs. Standard - +/- 0.01 foot per 10 foot length	Field Staff	Ship off for service by manufacturer
Oil/Water Interface probe	Monthly	Checked vs. Standard - +/- 0.01 foot per 10 foot length	Field Staff	Ship off for service by manufacturer

Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

- 1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
- 2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
- 3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
Volatiles Mass Spec	Minimum of 5 calibration	When indicated by continuous	Method Criteria	Detailed in SOP	MSV Analyst	S-VO-002

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
	standards for all compounds	calibration verification standard				
Semi-volatile Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-SV-021
GC ECD	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-SV-012
Dionex IC	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-IN-010
ICP ·	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst	S-IM-022
Cetac Mercury Analyzer	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-IM-006
Lacaht QuickChem 8000	Minimum of 5 calibration standards	Daily or when indicated by calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-IN-042
YSI 63	pH Calibration	Daily	+/- 0.2 pH units	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 63	Conductivity Calibration	As directed by manufacturer	+/- 10 uS	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 550A	DO calibration	Daily	+/- 0.25 mg/l	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 550A	Temperature Calibration	Daily	+/- 1 °C	clean/replace probe tip, recalibrate	Field Staff	4.3.6
MiniRae 3000	PID Calibration	Weekly	+/- 5 ppm	clean, recalibrate	Field Staff	***
Electronic Water Level Indicator	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***
Oil/Water Interface probe	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	±irit

Table 13A Instrument Calibration Criteria and Corrective Action

B8 Inspection/Acceptance Requirements for Supplies and Consumables

- 1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
- 2. Identify the individual(s) responsible for this.

item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Laboratory Chemicals	Fisher,VWR	Certificates of analysis and laboratory testing	Laboratory storage	Receiving and laboratory personnel
Laboratory standards	O2Si, Restek, High Purity, VHG, Supelco	Certificates of analysis and laboratory verifications	Vendor specific storage conditions	Laboratory Analysts
Sample Containers	Daniels Scientific, QEC	Certificates of analysis and laboratory testing	Bottle storage area	Sample receiving personnel
Clear, Disposable polyethylene Bailers	Preferred Pump	Individual sleeves intact, ball valve operational	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
Nylon Rope	Preferred Pump	Covered with plastic	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
Nitrile Gloves	Preferred Pump	Unopened box, no holes	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
40 mL HCL preserved amber vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
250 mL HNO3 preserved metals vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
Coolers	Shealy Environmental Services	Intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
pH Buffer	TRS Environmental, Enviroequipment	Within expiration date	Stored in calibration room	B. Kelly, Field Staff
Conductivity Standard	TRS Environmental, Enviroequipment	Within expiration date	Stored in calibration room	B. Kelly, Field Staff
DO Membranes	YSI, Enviroequipment	Clean, in box	Stored in calibration room	B. Kelly, Field Staff
Batteries	Any Store	Not previously used	Stored in calibration room	B. Kelly, Field Staff
PID Calibration Gas – Isobutylene	Enviroequipment	Not Depleted, within expiration date	Stored in calibration room	B. Kelly, Field Staff

Table 14A List of Consumables and Acceptance Criteria

^{*} This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

B9 Data Acquisition Requirements (Non-Direct Measurements)

- 1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
- 2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
- 3. Indicate the acceptance criteria for these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments
IGWA Report or information pertaining to nearby LUST Sites.	Historic groundwater and CoC concentration data. Lithology and well construction data from previous MWI's	Establish the type of drilling rig required, time for sampling and any other potential problems that may be encountered.	1903 forms from previous monitoring well installations will be used to estimate depth of the newly installed monitoring wells installed in conjunction with the Tier I Assessment.

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed.

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab. This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures."

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. .

Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager.

2. The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?

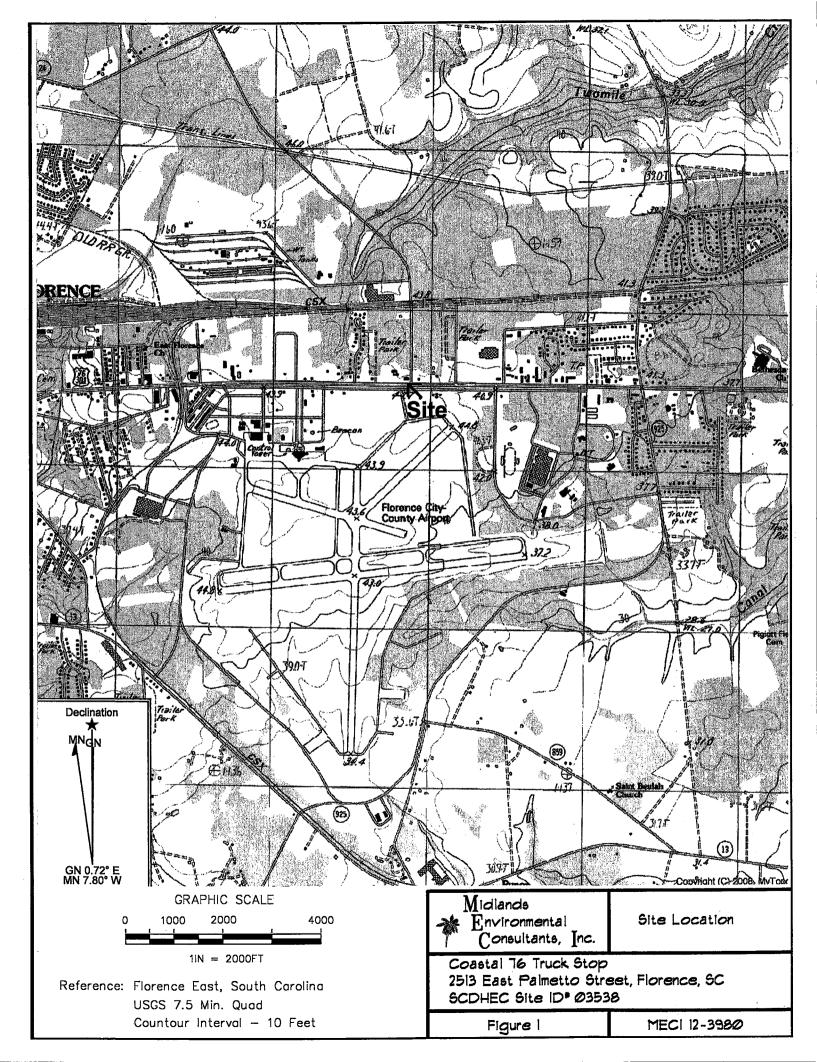
The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification.

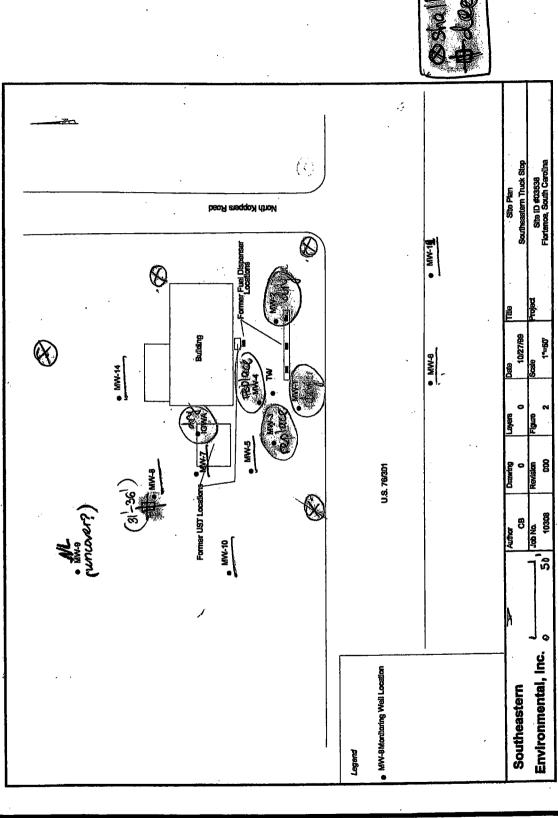
C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

All field and laboratory data will be checked and verified by the project verifier (Brendon Kelly) prior to submission to SCDHEC.





Shallbu welle



Chain of Custody Record

Shealy Environmental Services, Inc. 106 Vantage Point Drive West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 11725

											W	ww.shea												
Client				Report to C	ontac	t							Sampler (Printed Name)								Quote No.			
Address Telephone No. / Fax No.			Fax No. / Email				Waybill No.								Page of									
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Midlands Environmental Consultants, Inc.

Ms. Maia Milenkova, Hydrogeologist Assessment Section Assessment and Corrective Action Division Underground Storage Tank Program Bureau of Land and Waste Management South Carolina Department of Health and Environmental Control 2600 Bull Street Columbia, South Carolina 29201



Subject:

QAPP Contractor Addendum - Revision 1

Coastal 76 Truck Stop Florence, South Carolina

SCDHEC Site ID Number 03538 MECI Project Number 12-3980

Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Milenkova,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

On May 15, 2012, MECI personnel performed a site visit to the subject site to evaluate site conditions, attempt to locate monitoring wells and identify potential problems for future assessment activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,

Midlands Environmental Consultants, Inc.

Courtney M. Sanders Staff Biologist

Senior Scientist

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Coastal 76 Truck Stop, SCDHEC Site ID# 03538

2513 East Palmetto Street, Florence, South Carolina

Prepared by:

Jeff L. Coleman

Senior Scientist

Midlands Environmental Consultants, Inc.

(Certified Site Rehabilitation Contractor UCC-0009)

235-B Dooley Road

Lexington, SC 29073

(803)808-2043

Date: May 25, 2012

Approvals

Maia Milenkova
SC DHEC Project Manager

Brendon P. Kelly
Contractor QA Manager

Bryan T. Shane, P.G.
Site Rehabilitation Contractor

Michael Woodrum
Laboratory Director

Date 5/30/12

Signature

Date 5/30/12

Date 5-25-17

Signature

Date May 25, 2012

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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Maia Milenkova	SC DHEC Technical Project Manager	Technical Project Division, 2600 Bull St., Columbia,		803-896- 6245	milenkmp@dhec.sc.gov
Bryan T. Shane, P.G.	Site Rehabilitation Contractor	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808- 2048	bts@meci.net
Brendon P. Kelly	Quality Assurance Officer	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808- 2048	bpk@meci.net
Jeff L. Coleman	Field Manager	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808- 2048	jlc@meci.net
Michael Woodrum	Laboratory Director	Shealy Environmental Services,Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791- 9111	mwoodrum@shealylab.com
Tommy Bolyard	Well Services/Driller	Environmental Probing and Drilling Services 17538 Greenhill Road Charlotte, NC 28278	704-607-7529	803-548- 2233	EDPS@comporium.net

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephon e Number	Fax Number	Email Address
Project Manager	Maia Milenkova	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896- 6664	803-896- 6245	milenkmp@dhec.sc.gov
Site Rehabilitation Contractor	Bryan T. Shane, P.G.	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	bts@meci.net
Quality Assurance Officer	Brendon P. Kelly	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	bpk@meci.net
Field Manager	Jeff L. Coleman	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	jlc@meci.net
Analytical Laboratory Director	Michael Woodrum	Shealy Environmental Services,Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791- 9700	803-791- 9111	mwoodrum@shealylab.com
Soil Boring and Monitoring Well Driller	Tommy Bolyard	Environmental Probing and Drilling Services 17538 Greenhill Road Charlotte, NC 28278	704-607- 7529	803-548- 2233	EDPS@comporium.net

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephon e Number	Fax Number	Email Address
Registered Land Surveyor	Jay S. Joshi	Construction Support Services, Inc. 1318 RL Coward Road Hopkins, SC 29061	803-776- 9909	803-776- 2688	jsjoshi@constructionsupportsc.com
Disposal Facility	Carol Weldon	Waste Management, Inc. Richland Landfill 1047 Highway Church Road Elgin, SC 29045	803-744- 3346	866-904- 7194	Not Available
Project Verifier	Courtney M. Sanders or Brendon P. Kelly	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808- 2043	803-808- 2048	cms@meci.net

Table 2A Addendum Role Identification and Contact Information

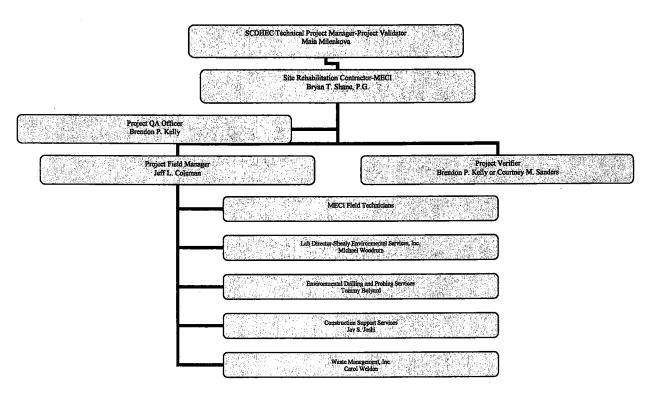


Figure 1A Organizational Chart

Project Manager (Maia Milenkova) – The project manager is responsible for direct oversight of contractors conducting assessment and site rehabilitation of releases at UST sites.

Site Rehabilitation Contractor (Bryan T. Shane, P.G.) – The Site Rehabilitation Contractor is an independent contractor responsible for managing and coordinating field and office activities needed for assessments or cleanup.

-Final Review of all work produced for a scope of work.

-Final say on technical interpretation of data.

Quality Assurance Officer (Brendon P. Kelly) – The Quality Assurance Officer is responsible for the oversight of all quality assurance activities associated with projects performed by the Site Rehabilitation Contractor.

- -In charge of producing and maintaining the QAPPA for MECI.
- -Reviews (and Audits, if necessary) all work produced in conjunction with a scope of work.
- -Quality control of data entry and report preparation.

Field Manager (Jeff L. Coleman) - The field manager will oversee all work done on any given project.

- -Assign, direct and oversee all field personnel working on each project.
- -Responsible for coordinating with the SCDHEC project manager, should any problems or clarifications arise.
- -Responsible for all reporting done in conjunction with field work.

Project Verifier (Courtney M. Sanders) – The project verifier is responsible for verifying the quality of data produced during a scope of work. This includes review of field work and laboratory reports for potential quality issues.

Well Driller (Tommy Bolyard) – The well driller is responsible for installing monitoring wells according to South Carolina Well Standards, R.61-71. The well driller is a subcontractor for MECI.

Field Technicians (various employees) – Responsible for all field activities for a given scope of work.

- -Conduct all initial site visit, and record findings
- -Conduct all field activities associated with a scope of work. All work will be conducted according to the MECI SOP. Will be responsible for reporting any potential problems are inconsistencies found during assessment activities.
- -Completes the chain of custody upon completion of sampling event and delivers samples to lab or office for later lab pick-up

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

The subject site (Costal 76 Truck Stop) is located at 2513 East Palmetto Street, Florence, Florence County, South Carolina. The subject site formally maintained four underground storage tanks (UST's), including 1-2,000 gallon gasoline UST, 1-3,000 gallon gasoline UST, and 1-2,000 gallon diesel UST. These UST's were abandoned by removal from ground in August of 1995. The South Carolina Department of Health and Environmental Control reported a release of petroleum product for the subject UST's in September of 1995 and confirmed this release in August of 1997. The subject site is currently rated a Class 3BA.

The site is being assessed in conjunction with the SCDHEC Small Scope Assessment Contract (Solicitation # IFB-5400003229, PO# 4600117789).

Please answer the following: Does this project fall under UST or Brownfields area?

Underground Storage Tank Division

A6 Project/Task Description

1. Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).

The scope of this assessment will be to install nine (9) watertable bracketing monitoring wells and one (1) double cased "Deep" monitoring well (Total of 10 Monitoring Wells). During the installation of the "Deep" monitoring well, a grain size/hydrometer sample will be collected from within the screened interval and associated slug test performed. Following the well installation, the entire monitoring well network will be sampled for BTEX, Napth, MTBE, 1,2-DCA, 8-oxygenates, ethanol (8260-B), EDB (8011), and Total Lead (EPA Method 6010).

A comprehensive survey will be conducted by Construction Support Services to locate the vertical and horizontal positions of the newly installed monitoring wells.

Reporting will include tax map data and geologic cross sections.

- 2. The work will begin within fourteen (14) days of receipt of approved QAPP contractors addendum after cost approval and the scope of work should be complete by sixty (60) days of receipt of approved QAPP contractors addendum.
- 3. Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site is located at 2513 East Palmetto Street, Florence, Florence County, South Carolina. The site is currently an abandoned gas station. All work will be conducted on the subject property.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Principal	D T. Chana D.O.	Professional	40/00/4002	State of South	1100
Geologist	Bryan T. Shane, P.G.	Geologist	10/30/1993	Carolina	1102

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Senior		OSHA 40 hr			
Scientist	Jeff Coleman	HAZWOPER	7/27/2007	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	7/27/2011	N/A	N/A
Project		OSHA 40 hr			4 4 5 2
Scientist	Brendon Kelly	HAZWOPER	8/21/2009	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/14/2010	N/A	N/A
Staff		OSHA 40 hr			
Geologist	John Bryant	HAZWOPER	4/17/2009	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/14/2010	N/A	N/A
Field		OSHA 40 hr			
Technician	Brian Owen	HAZWOPER	8/21/2009	N/A	N/A
		OSHA 8 hr			
		HAZWOPER			
		refresher	12/14/2010	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Courtney Sanders	HAZWOPER	12/10/2010	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Kyle Pudney	HAZWOPER	12/10/2010	N/A	N/A
Staff	-	OSHA 40 hr			
Biologist	Chris Lashley	HAZWOPER	12/10/2010	N/A	N/A
Staff		OSHA 40 hr			
Biologist	Gavin Globensky	HAZWOPER	7/29/2011	N/A	N/A
Staff	·	OSHA 40 hr			
Biologist	Ryan Ariail	HAZWOPER	9/23/2011	N/A	N/A
Lab Manager	Michael Woodrum	***	***	Lab	SC 32010
				Certification	
Surveying	Jay S. Joshi	Tier A Land	6/1/1992	PLS	14811
Services		Surveyor			
		Certification			
Drilling	Tommy Bolyard -	SC Drillers	8/24/2004	В	01846
Services	EDPS	Certification			

Table 3A Required Training and Licenses

<u>Brendon P. Kelly of Midlands Environmental Consultants, Inc.</u> is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location:235-B Dooley Road, Lexington, SC 29073.

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the LaboratoryShealy Environmental Services, Inc Name of Lab DirectorMichael Woodrum
SC DHEC Certification Number32010
Parameters this Lab will analyze for this project:
- The entire monitoring well network will be sampled for BTEX, Napth, MTBE, 1,2-DCA, 8-oxygenates, ethanol (8260-B), EDB (8011), and Total Lead (EPA Method 6010).
Full Name of the LaboratorySchnabel Engineering Name of Lab DirectorMickey Edwards SC DHEC Certification NumberN/A Parameters this Lab will analyze for this project:
Grain size distribution test will be performed by Schnabel Engineering in accordance with ASTM Method D-1140.
Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.
A9 Documents and Records
Personnel will receive the most current version of the QAPP Addendum via: (Check all that apply)
US MailCourier _X_ Hand delivered
Other (please specify): E-mailed electronic copies

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Instrument Raw Data	Target, Thermospec, or Iteva software	Hardcopy and Electronic	Hardcopy: Offsite storage for 7 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs	Yes
Final Reports	LIMS	Electronic	Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years	Yes
Field Work	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Chain of Custody	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
QAPP Addendum	Brendon Kelly	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
Internal QC record	Brendon Kelly	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Sampling Report	Brendon Kelly	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
1903 Water Well Record Form	EDPS	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

ltem	Start Date	End Date	Comments
Site Reconnaissance	5/15/2012	5/15/2012	Already Completed
QAPP preparation	5/15/2012	5/17/2012	In progress
QAPP approval	5/17/2012	6/7/2012	Assuming three week turnaround
PUPs Request	6/7/2012	6/11/2012	Give 72 hours until PUPs ticket active
Monitoring Well			
Installation	6/11/2012	6/25/2012	2 Weeks to mobilize Drill Rig.
Monitoring well Sampling	6/25/2012	7/2/2012	Week to mobilize sampling crew. Standard Day Turn Around Time on analytical (2 Weeks)
Report Preparation	7/2/2012	7/23/12	Three weeks to prepare/submit report
	·		

Table 5A Sampling Activities

B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

Estimate the number of samples of each matrix that are expected to be collected:

Soil	1
Ground Water from monitoring wells	19
From Drinking/Irrigation water wells	
Field Duplicate Collection	1
Field Blank Collection	1
Trip Blank	1
From surface water features	·
Total number of samples	23

The samples will be (check as many as apply):	Homogenized	Split
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Notes:

- -Nineteen (19) water samples will be collected from monitoring well network and be analyzed for BTEX, Napth, MTBE, 1,2-DCA, 8-oxygenates, ethanol (8260-B), EDB (8011), and Total Lead (EPA Method 6010).
- -It is anticipated that one (1) field duplicate will be sampled. One duplicate will be collected during the monitoring well sampling event.
- -It is anticipated that one (1) field blank will be collected. One field blank will be collected during the monitoring well sampling event.
- It is anticipated that one (1) trip blank will be analyzed (1 per cooler utilized during Assessment activities).

 One cooler will be collected during the monitoring well sampling event.

Environmental Drilling and Probing Services (EDPS) will mobilize a Canterra CT-450 drilling rig to the subject site. All drilling activities will be performed under the supervision of a South Carolina Certified Well Driller and MECI field personnel (Tommy Bolyard, #B 01846).

Wells and temporary borings will be installed according to MECI Standard Operating Procedures (4.1.1, 4.1.5, 4.2.1, 4.2.2, & 4.2.4) and in accordance with South Carolina Well Standards, R.61-71.

Monitoring wells will be purged/sampled in accordance with MECI SOP # 4.3.1 through 4.3.5.

For the sample matrices indicated above, please describe how samples will be collected and the equipment needed.

Please see MECI SOP 4.1.1 (Soil Screening and Sampling), 4.2 (Monitoring Well Installation), 4.3 (Monitoring Well Sampling) for field procedures that we be utilized during the subject assessment.

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable?

All equipment, excluding electronic water level indicators and field probes, is disposable.

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination.

Prior to usage of non-disposable equipment, it is decontaminated with isopropanol applied by a Teflon squeeze bottle and rinsed with analyte free water. This rinse water is collected and run through a portable GAC (granulated activated carbon) unit.

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

Coastal 76 Truck Stop – QAPP Addendum Revision 1 Florence., SC SCDHEC Site ID# 03538

Environmental Drilling and Probing Services (EDPS) will mobilize a Canterra CT-450 drilling rig to the subject site. All drilling activities will be performed under the supervision of a South Carolina Certified Well Driller and MECI field personnel (Tommy Bolyard, #B 01846).

Wells will be installed according to MECI Standard Operating Procedures (4.2., 4.2.2, 4.2.3 & 4.2.4) and in accordance with South Carolina Well Standards, R.61-71.

Drill cuttings will be disposed of by MECI personnel at Waste Management Richland County Landfill in Elgin, SC.

All samples (if needed) will be shipped to the lab via lab courier or delivered directly to the lab by MECI personnel.

Following monitoring well installation a subsequent survey will be conducted by MECI personnel.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Unable to gain access to drilling location	Attempt to create path to well location through vegetation, Utilize plywood boards to cross soft ground, contact SCDHEC project manager to discuss a potential change to the well location.	Record on field sheets, notify SCDHEC and Office.	Field Staff, Field Manager
Hitting a Utility Line while Drilling	Contact PUPS (Palmetto Utilities Protection Service), contact appropriate utility (if gas line is hit, notify fire department)	Record in field sheets, on PUPS ticket in office. Contact SCDHEC project manager to inform them of problem.	Field Staff, Field Manager
Drilling rig breaks down	Attempt to correct problem. If the problem cannot be determined, or cannot be fixed, discontinue drilling for the day. Drilling can continue once drill rig has been fixed, or new drill rig is mobilized to the site	Record on field sheet, notify office staff.	Field Staff, Drill rig operator
Property Owner will not allow access onto property for drilling activities	Stop drilling. Attempt to discuss with property owner the need for the work. Inform SCDHEC project manager of the access issue. If no resolution can be made, discontinue drilling on the disputed property until access can be obtained or new well location is determined.	Document on field sheets (or QAPP, if access denied during QAPP site visit). Inform SCDHEC project manager immediately if any disputes arise.	Field Staff, Field Manager

Table 6A Field Corrective	ve Action	<u> </u>	

B3 Sample Handling and Custody

1. How will the samples get from the Site to the Lab to ensure holding requirements are met?

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. How will the contactors cool the samples and keep the samples cool?

All samples are kept on wet ice, obtained from MECI office.

3. How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?

A calibrated thermometer and temperature blank will be used to document sample temperature. The temperature blank is immediately checked by the sample receiving technician upon arrival at the laboratory.

4. Where will the samples be stored in the Lab once they are received?

All samples are stored in clean refrigeration units monitored and maintained at 4 degrees C + or - 2 degrees. Volatile organic samples are stored separately form all other samples.

5. Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.

A chain of custody (COC) will be filled out for each sampling event at each project site. COC to be signed by MECI and Shealy Environmental technician at time physical transfer of samples occurs to courier. Shealy uses the following COC procedures to protect sample integrity following pickup by their courier: A full time Sample Receiving Technician receives all samples and completes a Sample Receipt Checklist (SRC), which will identify any anomalies, if any exist the Sample Receiving Technician or Project Manager must resolve the deviation internally and/or notify the client to resolve the anomaly.

B4 Analytical Methods

1. Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:

Parameter	SOP ID*	Method Referenced	Equipment	Comments
BTEX+Naph+MTBE+Oxygentaes	S-VO-002	8260B	GC/MS	
PAH's	S-SV-021	8270D	GC/MS	
EDB	S-SV-012	8011	GC	
Lead,T.	S-IM-022	6010C	ICP	
Ferrous Iron	S-IN-009	SM 3500-FED	Spectrophotometer	
Nitrate	S-IN-042	353.2	Auto- analyzer/Lachate	
Sulfate	S-IN-010	300.0	Ion Chromatograph	
Methane	S-VO-004	RSK-175	GC	
TOC	S-IN-030	Walkley-Black	N/A	·
DRO - TPH	S-SV-001	8015C	GC	
pH	Standard	MECI SOP 4.3.6	YSI 63	Place probe in
Conductivity	Standard	MECI SOP 4.3.6	YSI 63	sample and allow to
Dissolved Oxygen	Standard	MECI SOP 4.3.6	YSI 550A	equilibrate before
Temperature	Standard	MECI SOP 4.3.6	YSI 550A	recording reading
PID reading	MECI SOP 4.2.2			Use MiniRae PID to obtain reading. Place probe into soil sample bag and record the highest reading.

Table 7A Analytical SOPs and Referenced Methods

• This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-VO-002	S-VO-002	GC/MS VOLATILES ANALYSIS BASED ON EPA
		METHODS 8260B AND 624 PREPARED BY EPA
		METHODS 5030B, 5035 AND 3585
S-SV-021	S-SV-021	GC/MS ANALYSIS BASED ON EPA METHOD
		8270D PREPARED BY EPA METHODS 3520C,
		3550C AND 3580A
S-SV-012	S-SV-012	GC/ECD ANALYSIS OF EDB AND DBCP BASED
		ON METHOD 8011 & 504.1
S-IM-022	S-IM-022	INDUCTIVELY COUPLED PLASMA ATOMIC
		EMISSION SPECTROSCOPY-PECTROMETRIC
		METHOD for TRACE ELEMENT ANALYSES
		METHOD 6010C
S-IN-009	S-IN-009	FERROUS IRON (PHENANTHROLINE METHOD)
		STANDARD METHOD 3500-Fe D
S-IN-042	S-IN-042	NITRATE+NITRITE NITROGEN BY EPA
		METHOD 353.2, NITRATE NITROGEN BY 353.2
•		SUBTRACTION,
		AND NITRITE NITROGEN BY EPA METHOD
 		353.2
S-IN-010	S-IN-010	INORGANIC ANIONS BY ION
		CHROMATOGRAPHY
		EPA METHOD 300.0 and SW-846 9056 and

		9056A
S-VO-004	S-VO-004	STANDARD OPERATING PROCEDURE GC ANALYSIS BASED ON METHOD RSKSOP-175
S-IN-030	S-IN-030	TOTAL ORGANIC CARBON (TOC) WALKLEY-BLACK PROCEDURE
S-SV-001	S-SV-001	GC/FID DIESEL RANGE ORGANICS ANALYSIS BASED ON METHOD 8015B and/or 8015C PREPARED BY EPA METHODS 3520C, 3550C and 3580A
MECI SOP 4.2.2	MECI SOP 4.2.2	Drilling Standard operating procedures
MECI SOP 4.3.6	MECI SOP 4.3.6	Sampling Standard operating procedures

Table 8A SOP Abbreviation Key

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
COC or Sample Receiving issues	Call Client	Sample Receiving Checklist (SRC)	PM – Kelly Maberry kmaberry@shealylab.com
Analytical errors	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com
QA/QC Failure	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum mwoodrum@shealylab.com QA/QC Officer – Jami Savje Jsavje@shealylab.com
On time delivery	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director -Michael Woodrum mwoodrum@shealylab.com QA/QC Officer - Jami Savje Jsavje@shealylab.com
PID not functioning propertly	Attempt to clean PID, recalibrate.	Record on field sheets, notify office staff. PID taken rotation until problem identified and corrected.	Field Staff, Field Manager

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis Matrix	Schedule for disposal	Method for disposal	Comments
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BTEX+Naph+MTBE+Oxygenates	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
PAH's	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
EDB	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
Lead	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
Ferrous Iron	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
Nitrate,Sulfate	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
Methane	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.

			Portable	All waste water produced
			Granulated	from sampling and
All	Water	On-Site	Activated	decontamination
			Carbon (GAC)	activities will be run
			Unit	through a GAC unit

Table 10A Disposal Procedures

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
Volatiles Mass Spec	Shealy SOP S- SV-021 Page 7	Change traps, clean ion source, replace filaments	Periodic	Laboratory	MSV Analyst
Semivolatile Mass Specc	Shealy SOP S- SV-021 Page 7	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
ECD GC	Shealy SOP S- SV-012 Page 5	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
Dionex IC	Shealy SOP S- IN-010 Page 6	Replace auto sampler filter, tubing, line filter, sample Line and Waste Line, as needed. Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst
ICP	Shealy SOP S- IM-005 Page 6 & 7	Clean Sample introduction system , auto sampler, torch, Change spray chamber, torch tubing, tubing	Periodic	Laboratory	ICP Analyst

Leeman Mercury Analyzer	Shealy SOP S- IM-006 Page 5	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst
Flow Injection Analysis – Lachat 8000	Shealy SOP S- IN-042 Page 5	Replace sample and reagent lines, replace light source, re-wrap heating coil, replace column	Periodic/As Needed	Laboratory	Nitrate Analyst
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace probe tip	Yearly	Order from YSI	B. Kelly
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace batteries	As Needed	In stock at office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Check buffer solutions for expiration	Weekly	In stock at office	B. Kelly
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace membrane	4 to 8 weeks	In stock at office	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace batteries	As Needed	In stock at office	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	General inspection for wear and tear on equipment	Daily	Major fixes will be done out of office	Field Staff
Electronic Water Level Indicator	WLI-1, WLI-2, WLI-3	Inspection	Weekly	N/A	Field Staff
Oil/Water Interface probe	PLI-1, PLI-2, PLI-3, PLI-4	Inspection	Weely	N/A	Field Staff
MiniRae 3000	592-902491	Cleaning	Weekly	N/A	B. Kelly
MiniRae 3000	592-902491	Parts Inspection	As Needed	In stock at office	Field Staff

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
Volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi-volatiles Mass Spec Shealy SOP S-SV-021 Page 7	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC Shealy SOP S-SV-012 Page	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument

SCDHEC Site ID# 03538

5				maintenance
Dionex IC Shealy SOP S-IN-010 Page 6	Daily calibration check	Method Requirements	IC Analyst	Recalibration or instrument maintenance
ICP Shealy SOP S-IM-005 Page 6 & 7	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument maintenance
Leeman Mercury Analyzer Shealy SOP S-IM-006 Page 5	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000 Shealy SOP S-IN-042 Page 5	Daily and continuing calibration check	See calibration criteria	Nitrate Analyst	Recalibration or instrument maintenance
YSI 63 - 09C 101302, 10K 101895, 07M 100905	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
YSI 550A - 04L 2026AK, 08B 101407, 04A 0912AI	Daily calibration check	See calibration criteria	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
MiniRae 3000 – 592-902491	Weekly calibration check	Within 5 ppm of 100 ppm standard. MiniRae 3000 does not need daily calibration according to Manufacturers guidelines	Field Staff	Recalibrate, general maintenance then recalibrate. Ship off for service by manufacturer
Electronic Water Level Indicator	Monthly	Checked vs. Standard - +/- 0.01 foot per 10 foot length	Field Staff	Ship off for service by manufacturer
Oil/Water Interface probe	Monthly	Checked vs. Standard - +/- 0.01 foot per 10 foot length	Field Staff	Ship off for service by manufacturer

Table 12A Instrument and Equipment Inspection

B7 Instrument Calibration and Frequency

- 1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
- 2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
- 3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
Volatiles Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by continuous calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst	S-VO-002
Semi-volatile Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-SV-021
GC ECD	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-SV-012
Dionex IC	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-IN-010
ICP	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst	S-IM-022
Cetac Mercury Analyzer	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-IM-006
Lacaht QuickChem 8000	Minimum of 5 calibration standards	Daily or when indicated by calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-IN-042
YSI 63	pH Calibration	Daily	+/- 0.2 pH units	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 63	Conductivity Calibration	As directed by manufacturer	+/- 10 uS	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 550A	DO calibration	Daily	+/- 0.25 mg/l	clean/replace probe tip, recalibrate	Field Staff	4.3.6
YSI 550A	Temperature Calibration	Daily	+/- 1 °C	clean/replace probe tip, recalibrate	Field Staff	4.3.6
MiniRae 3000	PID Calibration	Weekly	+/- 5 ppm	clean, recalibrate	Field Staff	***
Electronic Water Level Indicator	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***
Oil/Water Interface probe	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff	***

Table 13A Instrument Calibration Criteria and Corrective Action

B8 Inspection/Acceptance Requirements for Supplies and Consumables

- 1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
- 2. Identify the individual(s) responsible for this.

Item Vendor		Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Laboratory Chemicals	I Figher V/A/P 1		Laboratory storage	Receiving and laboratory personnel
Laboratory standards	O2Si, Restek, High Purity, VHG, Supelco	Certificates of analysis and laboratory verifications	Vendor specific storage conditions	Laboratory Analysts
Sample Containers	Daniels Scientific, QEC	Certificates of analysis and laboratory testing	Bottle storage area	Sample receiving personnel
Clear, Disposable polyethylene Bailers	Preferred Pump	Individual sleeves intact, ball valve operational	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
Nylon Rope	Preferred Pump	Covered with plastic	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
Nitrile Gloves	Preferred Pump	Stored in Vehicle		B. Kelly, Field Staff
40 mL HCL preserved amber vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
250 mL HNO3 preserved metals vials	Shealy Environmental Services	Custody seal intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
Coolers	Shealy Environmental Services	Intact	Stored in Vehicle Bay, Off of the ground	B. Kelly, Field Staff
pH Buffer	TRS Environmental, Enviroequipment	Within expiration date	Within expiration date Stored in calibration room	
Conductivity Standard	uctivity TRS Uctivity Environmental Within expiration date Stored in			B. Kelly, Field Staff
DO Membranes	YSI, Enviroequipment	Clean, in box	Stored in calibration room	B. Kelly, Field Staff
Batteries	Any Store	Not previously used	Stored in calibration room	B. Kelly, Field Staff
PID Calibration	Enviroequipment	Not Depleted, within expiration	Stored in	B. Kelly, Field Staff

^{*} This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.

l a			
Gas – Isobutylene	date	l calibration room	•
040 100041310110	auto		

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

- 1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
- 2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
- 3. Indicate the acceptance criteria for these data sources and/or models.

		Justification for use in this project	Comments				
IGWA Report or information pertaining to nearby LUST Sites.	Historic groundwater and CoC concentration data. Lithology and well construction data from previous MWI's	Establish the type of drilling rig required, time for sampling and any other potential problems that may be encountered.	1903 forms from previous monitoring well installations will be used to estimate depth of the newly installed monitoring wells installed in conjunction with the Tier I Assessment.				

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed.

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab. This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures."

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. .

Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager.

The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other Coastal 76 Truck Stop – QAPP Addendum Revision 1 Florence,, SC SCDHEC Site ID# 03538

than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?

The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

All field and laboratory data will be checked and verified by the project verifier (Brendon Kelly) prior to submission to SCDHEC.



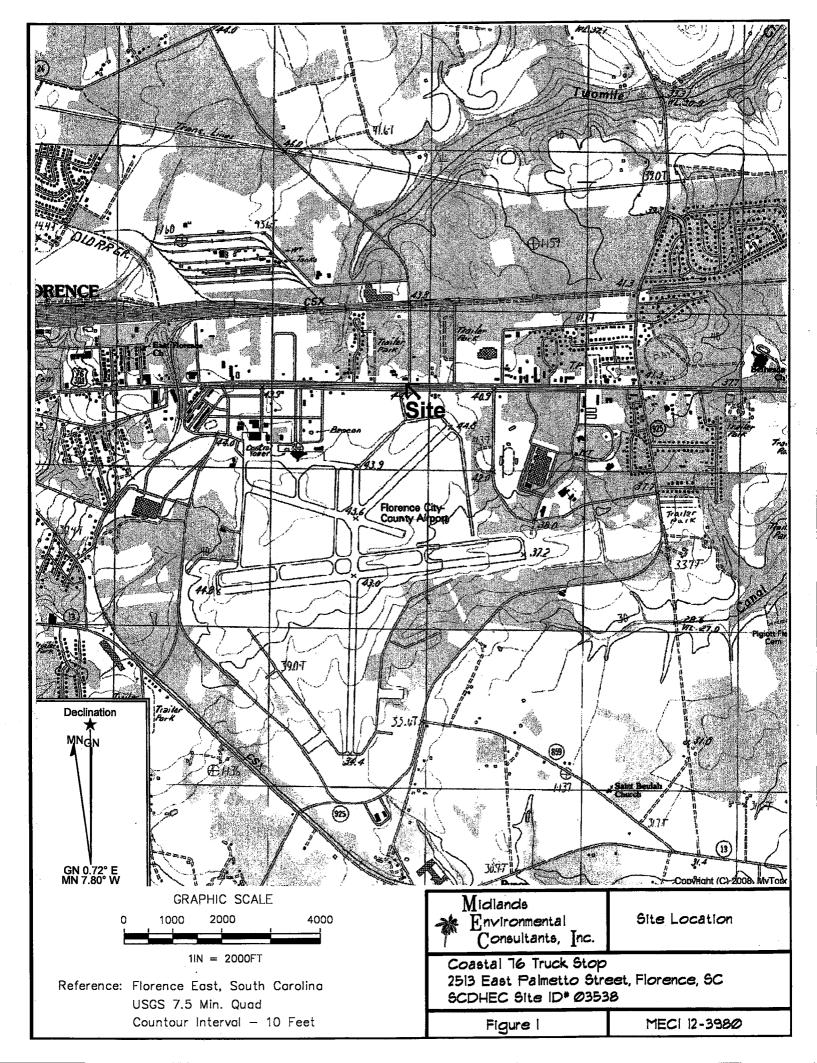
ASSESSMENT COMPONENT INVOICE CONTRACT PO NUMBER 4600117789 SOUTH CAROLINA

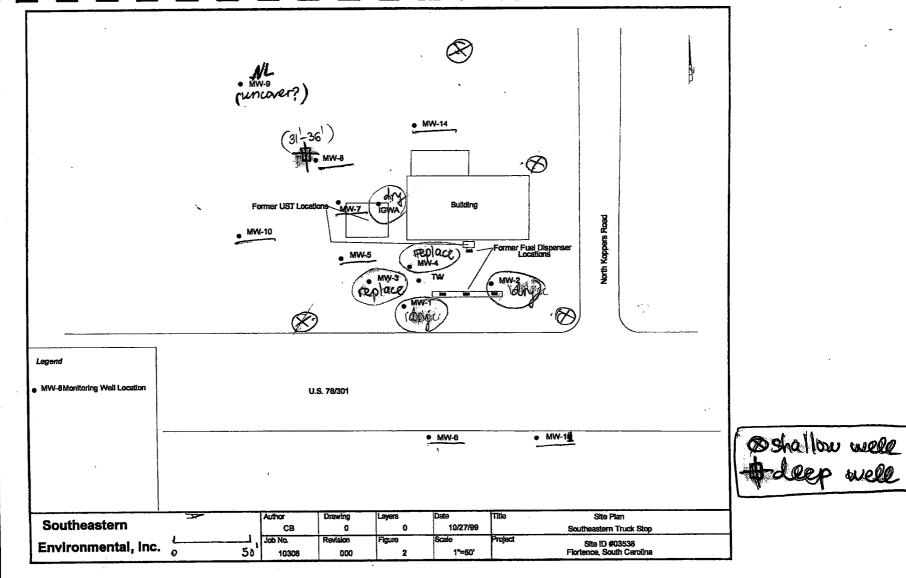
Department of Health and Environmental Control
Underground Storage Tank Management Division
State Underground Petroleum Environmental Response Bank Account

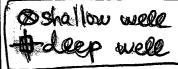
Facility Name: Costal 76 Truck Stop NA Cost Agreement #: UST Permit #: 03538 TOTAL QUANTITY UNIT PRICE ITEM UNIT 1. Plan* \$10.00 \$10.00 1 X B. Tax Map \$100.00 \$100.00 1 C. MW Installation or Comp. Plan/QAPP Appendix B X 3. Survey (500 x 500 feet) \$1,000.00 \$1,000.00 1 A. Comprehensive Survey x 4. Mob/Demob (Each) \$100.00 \$100.00 1 A. Equipment x \$300.00 \$100.00 B. Personnel 3 X \$0.00 x \$1.00 C. Adverse Terrain Vehicle to install wells \$0.00 \$2.00 feet 5. Soil Borings (hand auger)* (Feet) 6. Soil Borings (drilled)--Not to be used for Field Screening \$0.00 \$6.00 feet A. Standard X 9. Well Installation* (per foot) \$0.00 \$6.00 feet Х A. Water Table (hand augered) \$3,150.00 \$14.00 225 feet Х B. Water Table (drill rig) \$1,120.00 \$28.00 C. Telescoping/ Pit Cased 40 feet X 00.02 feet \$23.00 X D. Rock Drilling 00.02 \$7.00 G. Rock Multi-sampling ports/screens feet \$0.00 \$25.00 H. Recovery Well (4 inch diameter) each x 10. Groundwater Sample Collection / Gauge Depth to Water or Product (Each) \$70.00 \$5.00 A. Groundwater Purge, Duplicate Sample each x \$5.00 \$0.00 samples x C. Water Supply/Surface Water \$35.00 \$5.00 samples x D. Groundwater No Purge, Field Blank or Duplicate \$0.00 \$5.00 per well x E. Gauge Well only \$0.00 \$5.00 wells x F. Sample Below Product \$0.00 \$25.00 each x G. Pasive Diffusion Bag 11. Laboratory Analyses-Groundwater (Each Sample) \$48.00 \$1,056.00 22 samples x A1. BTEXNM + Oxygenates + 1,2-DCA + Ethanol \$0.00 \$12.00 samples x AA. Lead, Filtered \$0.00 \$48.00 samples x D. PAH's \$252.00 \$12.00 21 samples x E. Lead, Unfiltered \$525.00 samples x \$25.00 21 F. EDB by EPA 8011 \$0.00 \$50.00 samples x G. 8 RCRA Metals \$0.00 samples x \$35.00 H. TPH (9070) \$0.00 \$1.00 samples x P. 8 Oxyenates \$0.00 samples x \$1.00 P1. Ethanol 11. Analyses-Soil (Each Sample) \$0.00 \$32.00 samples x Q. BTEX + Naphth.+ MTBE \$0.00 \$50.00 samples x R. PAH's \$0.00 \$50.00 samples x S. 8 RCRA Metals \$0.00 samples x \$40.00 U. TPH-DRO (3550B/8015B) \$0.00 samples x \$40.00 V. TPH-GRO (5030B/8015B) \$99.00 \$99.00 1 samples x W. Grain size/hydrometer \$0.00 samples x \$25.00 X. Total Organic Carbon 11. Analyses-Free Phase Product (Each Sample) \$0.00 \$300.00 samples x Z. Hydrocarbon Fuel Identification (age and Type).

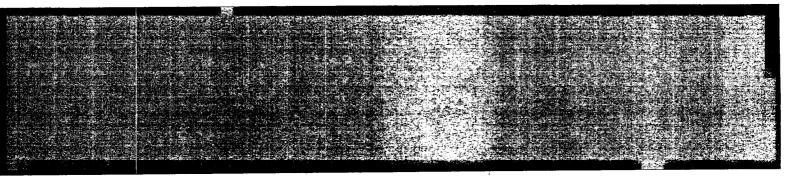
12. Aquifer Characterization*	1			
B. Slug Test*	1	tests x	\$35.00	\$35.00
13. Free Product Recovery Rate Test* (Each)		tests x	\$35.00	\$0.00
16. Subsequent Survey*		X	\$150.00	\$0.00
17. Disposal* (gallons or tons)				
A. Wastewater	60	gailons x	\$0.30	\$18.00
B1. Free Product		gallons x	\$0.30	\$0.00
C. Soil Treatment/Disposal	4	tons x	\$50.00	\$200.00
D. Drilling fluids		gallons x	\$ 0.10	\$0.00
18. Miscellaneous (attach receipts)				
A. Abandonment 4 inch well or smaller	İ	feet x	\$2.75	\$0.00
B. Analyses-Soil Lead		each x	\$12.00	\$0.00
C. High-Strength Well Pad Replacement	-	each x	\$72.00	\$0.00
	1	each x	\$0.00	\$0.00
		each x	\$0.00	\$0.00
25. Well Repair				
A. Additional Copies of the Report Delivered	,	each x	\$0.00	\$0.00
B. Repair 2x2 MW pad		each x	\$50.00	\$0.00
C. Repair 4x4 MW pad	•	each x	\$72.00	\$0.00
D. Repair well vault		each x	\$50.00	\$0.00
F. Replace well cover bolts	į.	each x	\$10.00	\$0.00
G. Replace locking well cap & lock		each x	\$4.00	\$0.00
H. Replace/Repair stick-up		each x	\$80.00	\$0.00
I. Convert Flush-mount to Stick-up		each x	\$90.00	\$0.00
J. Convert Stick-up to Flush-mount		each x	\$75.00	\$0.00
K. Replace missing/illegible well ID plate		each x	\$6.00	\$0.00
Report Prep & Project Management		х		
TOTAL				\$8,070.00

^{*}The appropriate mobilization cost can be added to complete these tasks, as necessary









SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.

106 Vantage Point Drive

West Columbia, South Carolina 29172

Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Number 11725

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Catherine B. Templeton, Director Promoting and protecting the health of the public and the environment

JUN 0 8 2012

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071-0854

Re:

Notice to Proceed for MW Installation/QAPP Contractor Addendum Approval

Solicitation # 5400003229, PO# 4600117789

Coastal 76 Truck Stop, 2513 E. Palmetto Street, Florence, SC UST Permit #03538; CA# 43863; MWA#UMW-24603 OAPP Contractor Addendum received May 18,2012

Florence County

Dear Mr. Shane:

In accordance with the referenced bid solicitation # IFB-5400003229 the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Contractor Addendum has been reviewed and approved. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken and the results must be included in the final report submitted to the UST Management Division.

A report, contractor verification checklist and invoice are due sixty (60) days from the date of this letter. Monitoring well approval for ten monitoring wells is enclosed for your records. Please note that all applicable South Carolina certification requirements regarding laboratory analyses, well installation, and report preparation must be met in accordance with the referenced solicitation. All shallow wells are to be installed with screen intervals that bracket the water table. The final report should contain the requirements of Section 3.10 (IGWA), 3.11 (Tier I) or 3.12 (Well Installation) of the bid solicitation. The final report should be submitted to Minda Hornosky, the contract manager.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Division grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

If you have any site-specific questions, please contact me at (803) 896-6664 or via e-mail at milenkmp@dhec.sc.gov. If you have any contract specific questions, please contact Minda Hornosky at (803) 896-6395 or via e-mail at hornosms@dhec.sc.gov.

Sincerely, Carolales

Maia Milenkova Assessment Section

UST Management Division

Bureau of Land & Waste Management

enc: Approved QAPP Contractor Addendum Signature Page

Approved Cost Agreement Monitoring Well Approval

cc: Minda Hornosky, Assessment Section, UST Management Division

Technical File (with enc)



Catherine B. Templeton, Director Promoting and protecting the health of the public and the environment

Monitoring Well Approval Form

Approval is hereby granted to:

Midlands Environmental Consultants, Inc.

Facility:

Coastal 76 Truck Stop, 2513 E. Palmetto Street, Florence, SC

UST Permit Number:

03538

County:

Florence

This approval is for the installation of ten (nine shallow and one deep) monitoring wells. The monitoring wells are to be installed in the approved location. Monitoring wells are to be installed following the South Carolina Well Standards, R.61-71, and the applicable guidance documents.

Please note that R.61-71 requires the following:

- 1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
- 2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
- 3. A Water Well Record Form or other form provided or approved by the Agency shall be completed and submitted to the Agency within 30 days after well completion or abandonment unless another schedule has been approved by the Agency. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
- 4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Agency within 30 days of receipt of laboratory results unless another schedule has been approved by the Agency as required by R.61-71.H.1.d.
- 5. If any of the information provided to the Agency changes, notification to Maia Milenkova (tel: 803 896-6664 or e-mail: milenkmp@dhec.sc.gov) shall be provided a minimum of twenty-four (24) hours prior to well construction as required by R.61-71.H.1.a.
- 6. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c. All other wells shall be properly developed per R.61-71.H.2.d.
- 7. Approval from the Agency is required prior to abandonment of all monitoring wells as required by R.61-71.H.1.a.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and R.61-71 of the South Carolina Well Standards and Regulations, dated April 26, 2002. A copy of this approval should be on the site during well installation.

Date of Issuance:

May 30, 2012

Approval #: UMW- 24603

Maia Milenkova, Hydrogeologist

Assessment Section

UST Management Division

Bureau of Land and Waste Management

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Coastal 76 Truck Stop, SCDHEC Site ID# 03538

2513 East Palmetto Street, Florence, South Carolina

Prepared by:

Jeff L. Coleman

Senior Scientist

Midlands Environmental Consultants, Inc.

(Certified Site Rehabilitation Contractor UCC-0009)

235-B Dooley Road

Lexington, SC 29073

(803)808-2043

Date: May 25, 2012

Approvals

Maia Milenkova
SC DHEC Project Manager

Brendon P. Kelly
Contractor QA Manager

Signature

Date 5/31/12

Signature

Signature

Bryan T. Shane, P.G.
Site Rehabilitation Contractor

Signature

Date 5-25-17

Michael Woodrum
Laboratory Director

Date May 25, 2012

Signature

Approved Cost Agreement 43863

Facility: 03538 COASTAL 76 TRUCK STOP

MILENKMP

PO Number:

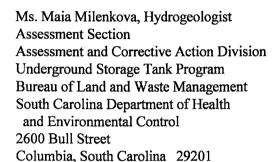
Task / Description Categories	Item Description	Qty / Pct	<u>Unit Price</u>	<u>Amount</u>
01 PLAN				
	B TAX MAPS	1.0000	10.00	10.00
	C TIER II/COMP. PLAN/QAPP APP B	1.0000	100.00	100.00
03 COMPREHENSIVE SURVEY				
	COMPREHENSIVE SURVEY	1.0000	1,000.00	1,000.00
04 MOB/DEMOB				
	A EQUIPMENT	2.0000	100.00	200.00
	B PERSONNEL	4.0000	100.00	400.00
09 WELL INSTALLATION				
	B WATER TABLE (DRILLED)	225.0000	14.00	3,150.00
	C TELESCOPING	40.0000	28.00	1,120.00
10 SAMPLE COLLECTION	-			
	A GROUND WATER	12.0000	5.00	60.00
	D GROUNDWATER NO-PURGE	9.0000	5.00	45.00
11 ANALYSES				
GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	22.0000	48.00	1,056.00
	E LEAD	20.0000	12.00	240.00
,	F EDB	22.0000	25.00	550.00
SOIL SOIL	W GRAIN SIZE/HYDROMETER	1.0000	99.00	99.00
12 AQUIFER CHARACTERIZATION				
	B SLUG TEST	1.0000	35.00	35.00
17 DISPOSAL				
	A WASTEWATER	60.0000	0.30	18.00
	C SOIL (TREATMENT/DISPOSAL)	4.0000	50.00	200.00
		Total Amo	ount	8,283.00

suprcait.rdf

Rev: 1.15

Midlands Environmental Consultants, Inc.

July 17, 2012







Subject:

Report of Monitoring Well Installation, Groundwater Sampling

and Chemical Analyses

Coastal 76 Truck Stop 2513 E. Palmetto Street Florence, South Carolina

SCDHEC Site ID# 03538, CA # 43863

MECI Project Number 12-3980

Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Milenkova,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Monitoring Well Installation, Groundwater Sampling and Chemical Analyses for the referenced site. This report describes assessment activities conducted at the site and results of those activities in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines, including adherence to the UST Division Programmatic Quality Assurance Program Plan (QAPP).

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,

Senior Scientist

Midlands Environmental Consultants, Inc.

Bryan T. Sháne, P.G. Principal Geologist

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1.0 INTRODUCTION

A.	Owner/Operator Information	ation
	Facility Name:	Coastal 76 Truck Stop UST Permit #: 03538
	Facility Address:	2513 E. Palmetto Street
	Name:	Dan McEachin
	Address:	1007 Wentworth Drive
	Telephone #:	Contact: Dan McEachin (803) 651-8835
B.	Property Owner Informa	ation
	Name	Dan McEachin
	Tax Map #:	Florence Co. Tax Map #: 90089-01-006
	Address	1007 Wentworth Drive
	Telephone #	Contact: Dan McEachin (803) 651-8835
C.	Contractor Information	
	Name:	Midlands Environmental Consultants, Inc.
	Certification #:	9
	Address:	P. O. Box 854, Lexington, SC 29071
	Telephone #:	(803) 808-2043
D.	SCDHEC Certified Well	Driller
	Name:	Environmental Drilling & Probing Services, LLC.
	Driller:	Joe Smith
	Certification #:	B 01648
	Address:	17538 Greenhill Road, Charlotte, NC 28278
	Telephone #:	(704) 607-7529
E.	SCDHEC Certified Labo	ratory
	Name:	Shealy Environmental Services, Inc.
	Certification #:	32010
	Address:	106 Vantage Point Drive, West Columbia, SC 29172
	Telephone #:	(803) 791-9700

1.1 QAPP STATEMENT

This report conforms to the SCDHEC UST Management Division Programmatic QAPP. The Report, Tables (Table 1-Soil Analytical Data, Table 2-Field Parameters, Table 3-Groundwater Analytical Results, Table 4-Aquifer Characteristics, and Table 5-Site Conceptual Model), Figures (Figure 1-Topographic Map, Figure 2-Site Features, Figure 3-Soil CoC Site Map, Figure 4-Groundwater CoC Site Map, Figure 5-Groundwater Contour Map, and Figure 6-Geologic Cross Section), and Appendices are presented in accordance with formatting requirements set forth in section A9 of the UST Management Division Programmatic QAPP, Revision 1, June 2011. Some or all of the tables and figures in this report were not applicable to the scope of services presented, however have been included in order to conform to the SCDHEC UST Management Division Programmatic QAPP.

1.2 PROJECT INFORMATION

The subject site (Costal 76 Truck Stop) is located at 2513 East Palmetto Street, Florence, Florence County, South Carolina. The subject site formally maintained four underground storage tanks (UST's), including 1-2,000 gallon gasoline UST, 1-3,000 gallon gasoline UST, 1-1,000 gallon gasoline UST, and 1-2,000 gallon diesel UST. These UST's were abandoned by removal from ground in August of 1995. The South Carolina Department of Health and Environmental Control reported a release of petroleum product for the subject UST's in September of 1995 and confirmed this release in August of 1997. The subject site is currently rated a Class 3BA.

Prior to commencement of the field activities described in this document, a QAPP Contractors Addendum was completed by MECI personnel, submitted to SCDHEC and approved by the SCDHEC project manager.

The above project information is based on MECI field notes and SCDHEC files.

2.0 SURROUNDING PROPERTY USAGE

The subject site is located inside the city limits of Florence, Florence County, South Carolina. South East Palmetto Street (US Highway 76) forms the southern border of the site, beyond which is the Florence County Regional Airport. North Koppers Road (SC State Rd. S-21-176) forms the eastern border of the site, beyond which are commercial properties. Commercial properties border the site to the west. North of the site is wooded and undeveloped.

3.0 FIELD EXPLORATION

Field exploration conducted at the site included:

- construction of five (5) shallow monitoring wells;
- construction of one (1) deep monitoring well;
- collection of one soil sample;
- hydrologic testing of one selected monitoring well;
- sampling and chemical analyses of the entire monitoring well network;
- hydrologic testing of one selected monitoring well; and,
- a comprehensive survey of subject site.

The monitoring well locations were selected based on SCDHEC project manager instructions, existing site conditions, and drilling accessibility.

3.1 MONITORING WELL INSTALLATION

From June 19 to June 21, 2012, five single cased watertable bracketing monitoring wells and one double cased telescoping monitoring well were installed at the subject site. The watertable bracketing monitoring wells (IGWA-R, MW-15, MW-16, MW-17, and MW-18) were installed by

Environmental Drilling and Probing Services, LLC. of Rock Hill, SC (S.C. Driller Certification: Joe Smith # B01648) using an Truck-mounted drilling rig employing 8.0-inch outer diameter hollow stem augers to construct the boreholes.

Monitoring well TW-2 was installed as a double cased telescoping monitoring well. During construction, a 6 1/4-inch outer diameter casing was advanced to the desired depth and grouted in-place. The grout was allowed to cure and the remainder of the depth of the borehole was achieved using mud-rotary techniques. Monitoring well TW-2 was cased to a depth of 25.0 feet below ground surface (BGS) and completed to a total depth of 36.0 feet BGS. This well utilizes a five foot screen.

The following table presents well installation details:

Well Number	Single Cased	Double Cased	Screened Interval (ft)	Total Depth (ft)
IGWA-R	X		11.0-21.0	21.0
MW-15	X		10.0-20.0	20.0
MW-16	X		11.0-21.0	21.0
MW-17	X		11.0-21.0	21.0
MW-18	X		11.0-21.0	21.0
TW-2		X	31.0-36.0	36.0

The soils encountered during drilling activities consisted of silty fine to medium grained sands of the Atlantic Coastal Plain Province. The soils encountered in this area are the product of successive advances and retreats of the ocean over the past several million years. Representative portions of soil samples were screened with a Photo Ionization Detector (PID) and classified by MECI personnel. Test boring records showing soil descriptions and screening result are attached in Appendix E.

Drill cuttings were containerized and transported to Waste Management/Richland County Landfill, Elgin, SC by MECI personnel. A total of 3.45 tons was disposed of in this manner. A disposal manifest for these soils is attached at the end of this report.

Following completion of the monitoring wells, the wells were developed by purging until they were determined to be functioning properly and turbidity was reduced. These wells were developed utilizing a Whale-Mega Purger well pump. The drum of purge water was treated by MECI personnel using a granular activated carbon drum. A total of 32.0 gallons of purge/development water was disposed of in this manner. A disposal manifest for the treated purge water is presented in Appendix G.

3.2 SOIL SAMPLING AND CHEMICAL ANALYSES

As requested by SCDHEC, one soil sample was collected from within the screened interval of monitoring well TW-2 during installation. Soil sample TW-2 (36') was analyzed for grain-size/hydrometer (ASTM D1140). The soil was sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Dated June 2011) and MECI's Standard Operating Procedures (MECI SOP, Dated August, 2011). The results of the laboratory analyses are presented in the attached laboratory reports (Appendix B).

Soil samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.

3.3 MONITORING WELL SAMPLING AND CHEMICAL ANALYSES

On June 26, 2012, MECI personnel collected groundwater samples from sixteen (16) monitoring wells at the subject site. Monitoring wells MW-1 and MW-3 were gauged and contained free phase petroleum product. Monitoring well MW-1 contained 0.02 feet and MW-3 contained 0.01 feet of free phase petroleum product. Sampling/purging of all monitoring wells was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. All newly installed monitoring wells and pre-existing monitoring wells which did not bracket the watertable were purged prior to sample collection. Seven (7) monitoring wells were purged prior to sampling. Purging was completed by bailing three to five well volumes of water from the well, until pH, conductivity, dissolved oxygen, and tubidity stabilized to within 10%, or until all available water was evacuated from the well, whichever occurred first. A new set of nitrile gloves were worn at each monitoring well, and at all times samples were handled. Field measurements of turbidity, pH, conductivity, dissolved oxygen, and water temperature were obtained before the well sampling process. MECI utilized YSI550A meters for DO (mg/L) and temperature readings (°C), YSI63 meters for pH and conductivity (uS) readings, and a turbidity tube for turbidity readings (NTU). The attached Field Data Information Sheets presents the results of the field measurements obtained during sampling processes. All wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Dated June 2011) and MECI's Standard Operating Procedures (MECI SOP, Dated February 2012). Groundwater samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Filtered Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)
									Analyte S	ampled				
IGWA-R	X				X	X	X	X	X					
MW-1			X											
MW-2		X			X	X	X	X	X					
MW-3			X											
MW-4		X			X	X	X	Х	X					
MW-5		X			X	X	X	X	X					
MW-6		X			X	X	Х	X	X					
MW-7		X			Х	X	Х	Х	X					
MW-8		X			X	Х	X	X	X					
MW-9				X		,,								
MW-10		X			X	X	X	X	X					
MW-11		X			X	X	Х	X	X					
MW-14		X			Х	х	Х	Х	X					
MW-15	X				Х	х	Х	X	X					

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Filtered Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)
					Analyte Sampled									
MW-16	Х				X	X	X	X	X					<u>.</u>
MW-17	Х				Х	х	X	X	X					
MW-18	Х				X	Х	X	Х	X					
TW-1	X				X	X	X	X	X					
TW-2	X				X	X	X	X	X					
**MW-5 Duplicate					X	Х	х	х	х	-				-
Field Blank					X	X	X	X						
Trip Blank					Х		X	X			<u> </u>			

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

The results of the laboratory analyses are summarized in Table 3 & 3A and presented in Appendix B.

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 30.5 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is presented in Appendix G.

3.4 INFLOW PERMEABILITY TESTS

An inflow permeability test was performed on monitoring well TW-2 on June 26, 2012 to estimate the hydraulic conductivity of the formation materials exposed to the well screen at that location. Inflow test methodology and calculations are included in Appendix C.

3.5 SITE SURVEY

Following the well installation, a comprehensive survey was conducted by Construction Support Services of Columbia, SC (Jay S. Joshi PLS# 14811) dated June 25, 2012 to locate the vertical and horizontal positions of the monitoring wells and relevant structures. A signed/stamped copy of the comprehensive survey is attached in Appendix A. See Table 2 and Figure 5 for monitoring well elevation data.

4.0 AREA GEOLOGY AND HYDROGEOLOGY

The project site is located in the Atlantic Coastal Plain Physiographic Province. The soils in this province are generally interbedded silts, sands and clays that have been deposited during successive advances and retreats of the ocean over the past several million years. This interbedding can cause perched water and makes hydrogeological interpretation difficult.

^{** =} Indicates Field Duplicate

In this geologic setting, the uppermost aquifer is the surficial aquifer of sands with lenses and layers of clays and silts. Water occupies the interstices between the formation particles and is in hydrostatic balance with the atmosphere at the water table surface.

Local precipitation is the source of freshwater recharge to the Coastal Plain formations. Groundwater recharge varies considerably over the region and is attributed to the differences in precipitation and to the variability in the infiltration rates.

Coastal Plain formations generally dip toward the Atlantic Ocean. Consequently, regional groundwater movement is to the southeast. On a regional scale, hydraulic gradients are relatively low.

Locally, in the surficial aquifer, groundwater discharges into streams, lakes or springs where the groundwater table intersects lows occupied by these water bodies. The apparent direction (based on hydraulic gradient) of groundwater flow from the release is to the northeast towards Twomile Creek.

4.1 LOCAL SUBSURFACE CONDITIONS

Coastal plain sediments were encountered during drilling activities conducted at the site. The soils encountered in our borings generally consisted silty and clayey fine to medium grained sands. Test Boring Records, which depict the materials encountered in each boring, are located in Appendix E.

On June 26, 2012, stabilized groundwater levels were measured in the monitoring wells. Depth to groundwater ranged from 12.41 to 14.65 feet below top of casing in the wells measured. The groundwater measurements are summarized in tabular form in Table 2 and on Figure 5. Groundwater levels may fluctuate several feet with seasonal and rainfall variations and with change in the water level of adjacent drainage features. Normally, the highest groundwater levels occur in late winter and spring. The lowest levels occur in late summer and fall.

The above descriptions provide a general summary of the subsurface conditions encountered. The attached Test Boring Records (Appendix E) contain detailed information recorded at each new monitoring well location. The Test Boring Records represent our interpretation of the field logs based on examination of the field samples. The lines designating the interfaces between various strata represent approximate boundaries, and the transition between strata may be gradational.

5.0 TEST RESULTS AND EVALUATION

The following sections discuss groundwater test results for the subject site.

5.1 GROUNDWATER ANALYTICAL RESULTS

As discussed in section 3.3, groundwater samples obtained from the monitoring well network were analyzed for dissolved phase petroleum constituents. Monitoring wells MW-1 and MW-3 were gauged and contained free phase petroleum product. Monitoring well MW-1 contained 0.02 feet and MW-3 contained 0.01 feet of free phase petroleum product. The analytical results indicate petroleum impact to the surficial aquifer, with the highest dissolved concentrations being detected in the area south of the former UST's. Dissolved total BTEX concentrations were detected at levels ranging from below detection limits (BDL) to 49,600 micrograms per liter in monitoring well MW-4. Dissolved Naphthalene concentrations were detected at levels ranging from below detection limits

(BDL) to 1,100 micrograms per liter in monitoring well MW-4. Dissolved MTBE concentrations were detected at levels ranging from below detection limits (BDL) to 1,100 micrograms per liter in monitoring well MW-2. Dissolved EDB concentrations were detected at levels ranging form below detection limits (BDL) to 65 ug/l in monitoring well MW-2. The results of the laboratory analyses are summarized in Table 3 & 3A, and presented in the attached Appendix B.

5.2 HYDRAULIC CONDUCTIVITY

Hydraulic gradient at the site was determined to be 2.66×10^{-3} ft/ft in the local aquifer based on data recorded during field testing. The hydraulic conductivity for TW-2 was 3.46×10^{-4} cm/sec. The test results are as follows:

Well Number		Type of Material Exposed to Screened Interval	Hydraulic Conductivity (K) (cm/sec)				
	TW-2	Clayey SAND	3.46 x 10 ⁻⁴				
Notes: Field tests were reduced and the hydraulic conductivities computed using Techniques described in NAVFAC Soil Mechanics Design Manual 7.1, May, 1982 TW-2 Condition C							

5.3 GROUNDWATER MOVEMENT

Groundwater movement is often related to topography, lithology, and elevation of recharge and discharge areas and man-made influences. Referenced groundwater elevations were determined by measuring the top of the monitoring well casing relative to a nearby datum elevation (see Figure 2) measuring the water level in the monitoring well, and computing the reference elevation of the groundwater at the time of measurement. Groundwater levels typically fluctuate with seasonal and rainfall variations.

Directions of groundwater flow were interpolated between monitoring wells by comparing the groundwater elevations at those locations considering the factors listed above. Locally, in the surficial aquifer, groundwater discharges into streams, lakes or springs where the groundwater table intersects lows occupied by these water bodies.

Groundwater elevation data from the June 26, 2012 gauging event was plotted and a groundwater contour map of the surficial aquifer was prepared. The data used to prepare the groundwater contour map (groundwater elevations in site monitoring wells) are summarized on Figure 5.

The average hydraulic gradient at the site was computed to be approximately 2.66×10^{-3} ft/ft for the "deep zone" aquifer. In addition to hydraulic gradients (i), the rates of groundwater movement (v) are a function of hydraulic conductivity (k) and effective porosity (ne), as indicated by the equation v = ki/ne. The effective porosity can be expected to be approximately twenty-five percent for Clayey SAND. Based on those parameters, the average lateral groundwater movement in the "deep zone" aquifer at the site can be expected to be approximately 3.82 feet per year. The rate of migration of the dissolved organic constituent(s), however, may be substantially slower than groundwater itself, due to retardation (Freeze and Cherry, 1979, pp. 402-408) and intrinsic aerobic biodegredation (Bucheck et. al., 1993). The hydraulic gradient and groundwater velocity calculations are provided in Appendix F.

6.0 ASSESSMENT SUMMARY & RECOMMENDATIONS

Based on the results of our assessment activities, it appears that impact to the surficial aquifer has occurred due to a release of petroleum hydrocarbons. The highest concentrations of dissolved phase contaminants are located in the area south of the former UST's. Groundwater appears to be moving in a northeastern direction towards Twomile Creek.

Monitoring well MW-1 contained 0.02 feet and MW-3 contained 0.01 feet of free phase petroleum product. Dissolved total BTEX concentrations were detected at levels ranging from below detection limits (BDL) to 49,600 micrograms per liter in monitoring well MW-4. Dissolved Naphthalene concentrations were detected at levels ranging from below detection limits (BDL) to 1,100 micrograms per liter in monitoring well MW-4. Dissolved MTBE concentrations were detected at levels ranging from below detection limits (BDL) to 1,100 micrograms per liter in monitoring well MW-2. Dissolved EDB concentrations were detected at levels ranging from below detection limits (BDL) to 65 ug/l in monitoring well MW-2. Analytical data is presented on Table 3 & 3A and in the attached Appendix B.

Figure 4 depicts graphically the concentrations of Total BTEX in the monitoring wells which bracket the watertable at the site. Figure 4A depicts graphically the concentrations of Naphthalene in the monitoring wells which bracket the watertable at the subject site. Figure 4B depicts graphically the concentrations of EDB in the monitoring wells which bracket the watertable at the subject site. Figure 4C presents the 8-Oxygenates in the groundwater at the subject site. MTBE concentrations were isolated to monitoring well MW-2 and an isopleth map was not produced.

Analytical results indicate that the contaminant plume is not currently defined. Additional assessment is required to define the extent of the dissolved phase contaminants to the northeast, north, and northwest. MECI recommends that a series of AFVR events be conducted to remove free phase petroleum product and to reduce dissolved CoC concentrations in the areas of monitoring wells MW-1, MW-2, MW-3 and MW-4.

7.0 QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Contents of this report are intended for the sole use of SCDHEC under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

TABLE 1 SOIL ANALYTICAL RESULTS SITE NAME SITE LOCATION, SOUTH CAROLINA MECI PROJECT NUMBER ##-### SCDHEC SITE ID NUMBER

						Total		
Boring	Sample	Depth	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene
Number	Date	(feet BGS)	(μg/kg)	(μg/kg)	(μ g/kg)	(μg/kg)	(μ g/kg)	(μ g/kg)

Soil Samples for chemical analysis were not obtained during this assessment. In order to conform with formatting guidelines provided by the SCDHEC UST Management Division Programmatic Quality Assurance Program Plan (QAPP), this filler table is included to provide report continuity.

Notes:

^{1.} BGS = Below Ground Surface

^{2.} µg/kg = micrograms per kilogram

[&]quot;J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).

Soil Samples collected from discrete split samples during installation of Monitoring wells.

TABLE 2 JUNE 26, 2012 SAMPLING EVENT POTENTIOMETRIC DATA COASTAL 76 TRUCK STOP FLORENCE, SOUTH CAROLINA MECI PROJECT NUMBER 12-3980 SCDHEC SITE ID NUMBER 03538

	CODITED CITE ID ICOMPERCOCCO										
Well Number	Sample Date	Screened Interval	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Well-head Elevation	Groundwater Elevation				
IGWA'R'	6/26/2012	11-21	***	14.10	***	100.84	86.74				
MW-1	6/26/2012	TD: 17.80	14.70	14.72	0.02	101.48	86.78				
MW-2	6/26/2012	TD: 18.30	***	14.04	***	100.81	86.77				
MW-3	6/26/2012	TD: 18.20	14.19	14.20	F0.0	101.09	86.90				
MW-4	6/26/2012	TD: 18.35	***	14.35	***	101.13	86.78				
MW-5	6/26/2012	8.29-18.29		13.90		100.71	86.81				
MW-6	6/26/2012	8.29-18.29	***	14.65	***	101.65	87.00				
- MW-7	6/26/2012	8.38-18.38	***	13,45		100.23	86.78				
MW-8	6/26/2012	8.29-18.29	***	12.62	***	99.40	86.78				
MW-9	6/26/2012	8.33-18.33	***	NL NL	***	NE L	NL L				
MW-10	6/26/2012	TD: 18.25	***	12.41	***	99.44	87.03				
MW-11	6/26/2012	8.42-18.42		14,39		101.25	86.86				
MW-14	6/26/2012	8.29-18.29	***	13.42	***	99.96	86.54				
MW-15	6/26/2012	10-20	***	12.78		99.19	86.41				
MW-16	6/26/2012	11-21	***	13.43	***	99.94	86.51				
MW-17	6/26/2012	11-21		13.96		100.64	86.68				
MW-18	6/26/2012	11-21	***	14.44	***	101.38	86.94				
TW-1	6/26/2012	31-36	**************************************	14.65		101.17	86.52				
TW-2	6/26/2012	31-36	***	13.95	***	99.65	85.70				

Notes:

^{1.} Elevations based on assumed site datum.

^{2.} Groundwater depths were measured from the top of the PVC riser pipe.

^{3.} Groundwater levels measured on 6/26/2012.

^{4.} NL = Not Located

^{5.} TD = Total Depth

Groundwater elevation for MW-1 and MW-3 corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85.

TABLE 3 GROUNDWATER ANALYTICAL RESULTS JUNE 26, 2012 SAMPLING EVENT COASTAL 76 TRUCK STOP FLORENCE, SOUTH CAROLINA MECI PROJECT NUMBER 12-3980 SCDHEC ID NUMBER 03538

Well Number	Sample Date	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)	1,2 DCA (ug/l)	EDB (ug/l)	Total Lead □ (ug/l) ≟
IGWA'R'	6/26/12	130	790	180	980	2,080	160	<25	<25	0.71	0.0090J
	15/25/12	i i i i i i i i i i i i i i i i i i i		A PRODUCTION		THE REPORT OF THE PARTY.				HEROSIA	PER PER PER PER PER PER PER PER PER PER
MW-2	6/26/12	9,800	17,000	1,300	11,000	39,100	370	1,100	240J	65	0.39
MW-3	6/28/, 2	PROD	RODE	FROE HE		er eroende	AND RECEIPED	मा दिस्कृत	PHRODER		PROD
MW-4	6/26/12	8,500	22,000	2,100	17,000	49,600	1,100	<500	<500	14	0.44
	6/28/12		7/200	47500		FFE CLAN			₹200	0.88	0.037
MW-6	6/26/12	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	0.0097J
	6/26/12	390	3,000	1910/1865/60	7/500	12,520	500	## #200		0.0637	0.025
MW-8	6/26/12	<5.0	<5.0	6.9	29	35.9	20	<5.0	<5.0	<0.021	0.020
will be a MW. \$	6/26/12	FENER				NL.	N. C. N.		NL PHO	PPNE D	
MW-10	6/26/12	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	0.011
	6/26/12	### # # # 570	460	45.0	55 10	BDL	1 55(0)	≥ 5.0	K 6.0	≥0.020	00018
MW-14	6/26/12	13	16	73	49	151	46	<5.0	<5.0	<0.019	0.0030J
IMW-15	6/26/12	92 F	280	140	380	892	67		25	0.050	0.00864
MW-16	6/26/12	180	580	83	380	1,223	39	5.4J	<25	0.59	0.016
	6/26/12	880	1,500	### (#500	5/700	9,580	######################################	201	* /100	2.8	0.035
MW-18	6/26/12	<5.0	<5.0	<5.0	14	14	<5.0	<5.0	<5.0	<0.020	0.011
	6/26/12	₹ 5,0		\$5.0	430		<5.0	€0	. √85.0	₹0,020 +	0 003451
TW-2	6/26/12	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020	0.011B
MW#5((Duplicate))	6/26/12	920	9/100	1800 H	117000	2260	ETO PELLE	<50	19	0.90	00433
Field Blank	6/26/12	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
wit unindislank	6/26/12	25.0 mm		7 5(i)	30		≥50	## * 50	## #	L. NT	NT PART

Notes:

^{1.} BDL = Below Practical Quantitative Limits

^{2.} ug/l = micrograms per liter

^{3.} MTBE = Methyl-Tertiary-Butyl Ether

^{4. 1,2} DCA = 1,2-Dichloroethane 5. EDB = 1,2 - Dibromoethane

^{6.} NL = Not Located

^{7.} NT = Not Tested

PROD = Free Phase Petroleum Product
 B = Detected in Method Blank

^{10. &}quot;J" Values included in Total BTEX Calculations.

^{11. &}quot;J" values report concentrations above the method

detection limits (MDL) and below actual reporting limit (RL).

12. "P" Indicates the Relative Percent Difference (RPD) is greater than 40% between the two Gas Chromatograph columns.

TABLE 3A GROUNDWATER ANALYTICAL RESULTS (OXYGENATES) JUNE 26, 2012 SAMPLING EVENT COASTAL 76 TRUCK STOP FLORENCE, SOUTH CAROLINA MECI PROJECT NUMBER 12-3980 SCDHEC SITE ID NUMBER 03538

Well Number	Sample Date	DIPE (μg/l)	Ethanol (µg/l)	3,3-Dimethyl-1-butanol (μg/l)	ETBE (µg/l)	ΤΑΑ (μg/l)	TAME (µg/l)	TBA (μg/l)	ТВF (µg/l)
IGWA'R'	6/26/12	<50	<5,000	<500	<500	460J	<50	<500	<500
WW-1	6/26/12	PROD	PROD	PROD	PROD	PROD	PROD	PROD 1	PROD :
MW-2	6/26/12	<500	<50,000	<5,000	<5,000	16,000	15J	570J	<5,000
MW-3	6/26/12	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD Will
MW-4	6/26/12	<1,000	<100,000	<10,000	<10,000	10,000	<1,000	<10,000	<10,000
MW-5	6/26/12	<400 M	<40,000	<4,000	<4,000	700J	<400	<4,000	<4,000
MW-6	6/26/12	<10	<1,000	<100	<100	<100	<10	<100	<100
MW-7	6/26/12	<400	<40,000	<4,000	<4,000	390J	<400	<4,000	<4,000
MW-8	6/26/12	<10	<1,000	<100	<100	41 J	<10	130	<100
MW-9	6/26/12	NETER	NL	NL "	NL NL	NL NL	NL NL	NL NL	NL L
MW-10	6/26/12	<10	<1,000	<100	<100	<100	<10	<100	<100
MW-11	6/26/12	<10	<1,000	<100	<100	<100 <100	<10 ≤ 10	<100	<100
MW-14	6/26/12	<10	<1,000	<100	<100	39 J	<10	25 J	<100
MVV-16	6/26/112	<50	<5,000 ⋅⋅	<500	<500	140J	<50	<500	<500
MVV-16	6/26/12	<50	<5,000	<500	<500	380J	<50	<500	<500
MW-17	6/26/12	<200	<20,000	<2,000	<2,000	2,300	<200	<2,000	± 1 ≤2,000 ± 1
MW-18	6/26/12	<10	<1,000	<100	<100	<100	<10	<100	<100
F TW-1	6/26/12	<10	<1,000	<100	<100	<100	<10	<100	<100
TW-2	6/26/12	<10	<1,000	<100	<100	<100	<10	<100	<100
MW-5 (Duplicate)	6/26/12	<10	<1,000	<100	<100	760J	<10	170	<100
Field Blank	6/26/12	<10	<1,000	<100	<100	<100	<10	<100	<100
Trip Blank	6/26/12	<10	<1,000	<100 .	<100	<100	<10	<100	<100

Notes:

^{1.} ug/l = micrograms per liter

^{2.} DIPE = Diisopropyl Ether

^{3.} ETBE = Ethyl ter-butyl Ether

^{4.} TAA = tert-Amyl Alcohol

^{5.} TAME = tert-Amyl Methyl Ether

^{6.} TBA = ter-Butyl Alcohol

^{7.} TBF = tert-Butyl Formate

^{8.} NL = Not Located

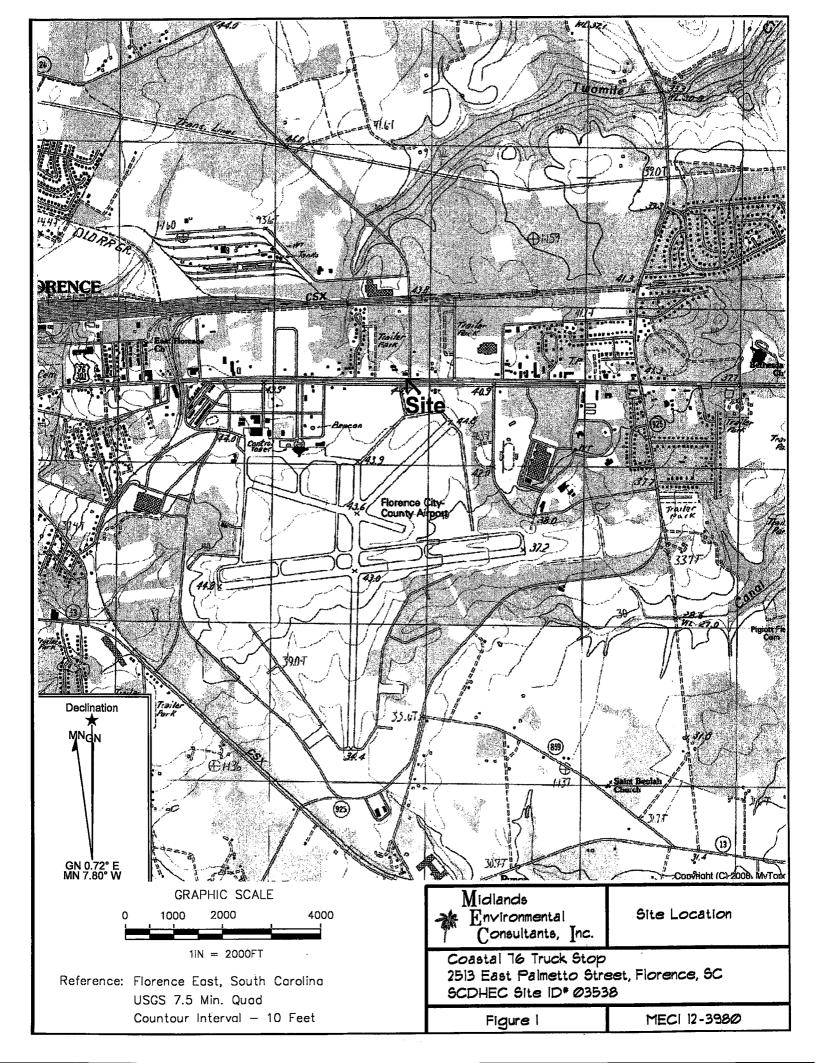
 [&]quot;J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).

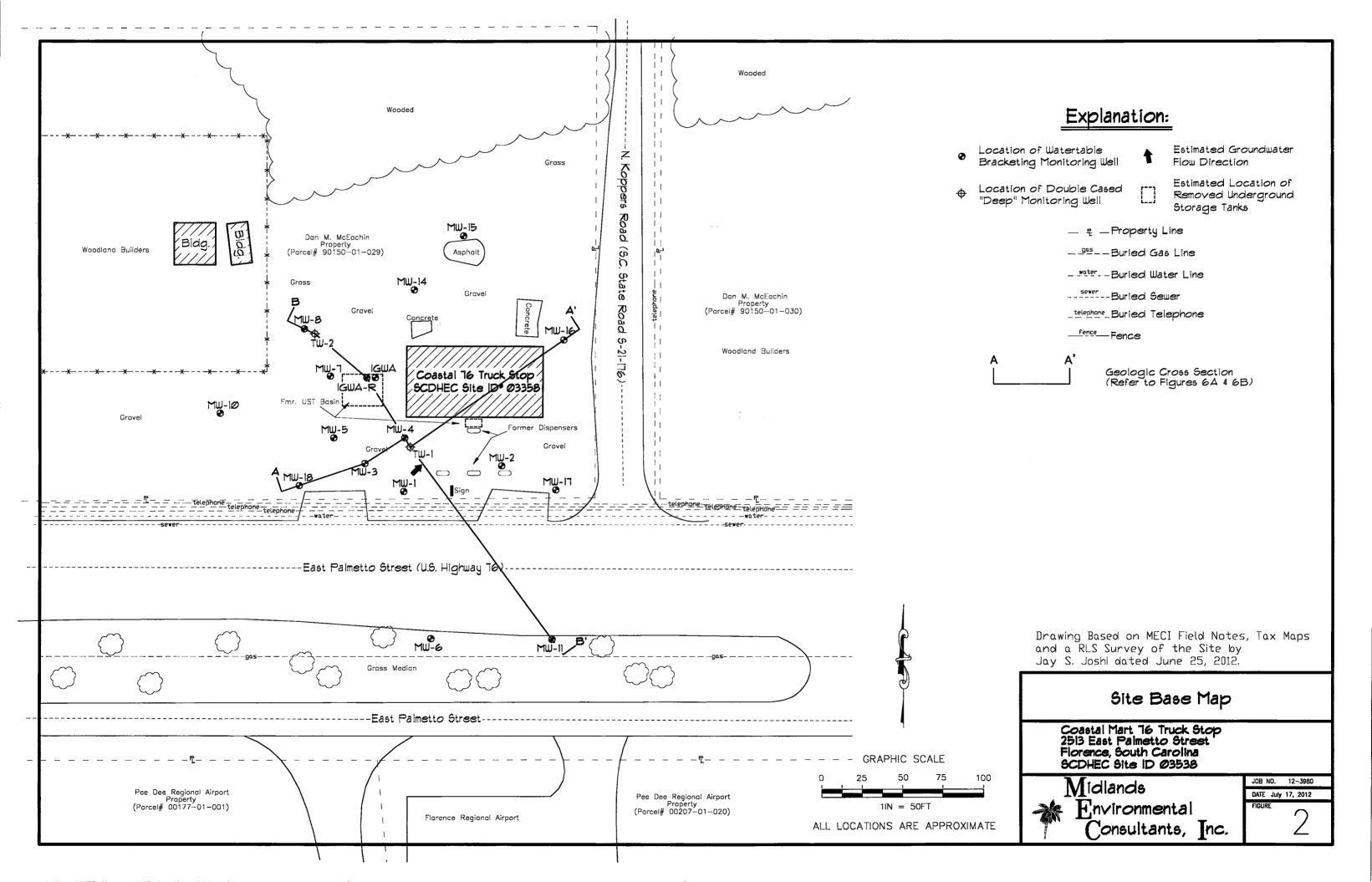
	SUMMARY o	f SLUG TES	ST (Page 1	of 2)		
	SC Department of Health	OUTH CARC and Enviro		ntrol (DHEC)	
Site Data		·				
SITE ID#	03538	COUNTY		Florence		
FACILITY NAME	Coasta	l Mart 76 Tr	uck Stop			
SLUG DATA		_				
Water Level Recover (Herm Complete the followir	level logs, etc.)(Complete y Data was measured by it Data Logger, Manually w ng table for each well tested	rith Water Le	ORS Interfevel Indicato	ace Probe r, etc.)(List I	·	surements.
COMF	PLETE A SECOND SHEET	IF MORE T	HAN FOUR	WELLS AF	RE TESTED	
Slug Test Conducted Initial Rise/Drawdowr Radius of well casing Effective Radius of W Static Saturated Aqui Length of Well Scree Static Height of Wate	n in well (feet) (feet) /ell (feet) fer Thickness (feet) n (feet)	TW-2 3.17 0.083 0.33 23.01 5 23.01				
Calculations						
See Appendix The method for aquifi Calculated values by Slug Test Conducted Hydraulic Conductivit	well were as follows: in Well(s) number	Figure NAVFAC TW-2 3.46E-04		for calculat		cm/sec
The aquifer is SEE S	ifer used to calculate hydra confinedSHEET 3	_semi-confi	ned	water table	(Check as A	
	ge velocity is 3.82 c, a hydraulic gradient of ayey SAND soil.		ear based or _ <u>ft/ft,</u> and a	•	conductivity	of
	SUMN	MARY of SL	UG TEST			

G	roundwate	er Seepage Velocity Calculation	ons (Page 2 of 2)
	Touridwate	- Seepage Velocity Calculation	ons (rage 2 or 2)
	Departmer	SOUTH CAROLINA at of Health and Environmental (Control (DHEC)
Site Data			
SITE ID#	03538	COUNTY	Florence
FACILITY NAME		Coastal Mart 76 Truc	k Stop
Hydraulic Conductivi	ty (average	9)	
Hydraulic Conductivity (TW-2)	Average =	3.46E-04 cm/sec 9.81E-01 ft./day	
		6.81E-04 ft./min	
Groundwater Seepag	e Velocity	·	
V = (Ki)/(Ne) (ft./day)	where:	* Enter Values in Shaded Areas Only	
	wildio.	K = Hydraulic Conductivity (ft./ft.) I = Hydraulic Gradient (ft./ft.) Ne = Effective Permeability	day)
K = I = Ne =	9.81E-01 2.67E-03 0.25	•	
V =	1.0E-02	_ft./day 3.82 ft./year	
	Grou	ndwater Seenage Velocity Ca	lculations

TABLE 5 SITE CONCEPTUAL MODEL AND POSSIBLE EXPOSURE POINTS (CURRENT LAND USE)

Potentially Exposed Population	Exposure Route, Medium, and Exposure Point	Pathway Selected for Evaluation?	Reason for Selection or Nonselection
Off-site Resident	Ingestion of groundwater from impacted water well		
	Direct contact with surface soil		
	Inhalation while showering	A Site Conce	entual Model was not
	Dermal contact while showering		eptual Model was not art of this assessment.
	Inhalation of volatiles		nform with formatting es provided by the
	Ignition of vapors	SCDHEC	UST Management
	Dermal contact with surface water	Assurance Pr	ogrammatic Quality rogram Plan (QAPP),
On-site Resident	Ingestion of groundwater		table is included to report continuity.
	Direct contact with surface soil Inhalation while showering	<u>Diovido</u> .	topoit continuity.
	Dermal contact while showering		
	Inhalation of volatiles		
	Ignition of vapors		
Worker	Ingestion of ground water		
	Direct contact with surface soil		
	Inhalation while showering		
	Dermal contact while showering		
	Inhalation of volatiles		
	Ignition of vapors		
Visitor	Ingestion of ground water		
	Direct contact with surface soil		
	Inhalation while showering		
	Dermal contact while showering		
	Inhalation of volatiles		
	Ignition of vapors		
	Dermal contact with surface water		





Soil Samples for chemical analysis were not obtained during this assessment. In order to conform with formatting guidelines provided by the SCDHEC UST Management Division Programmatic Quality Assurance Program Plan (QAPP), this filler Figure is included to provide report continuity.

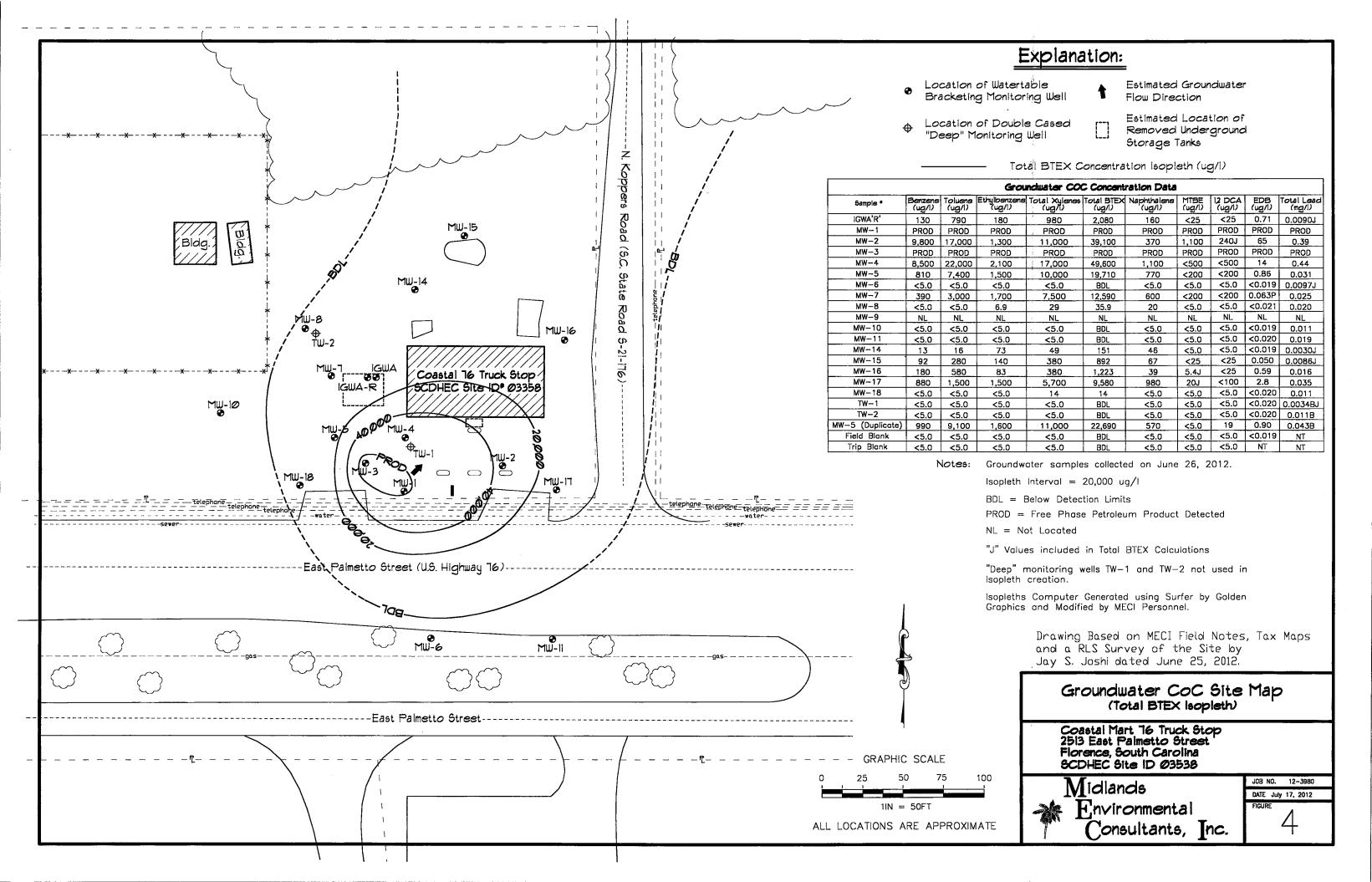
Midlands
Finvironmental
Consultants, Inc.

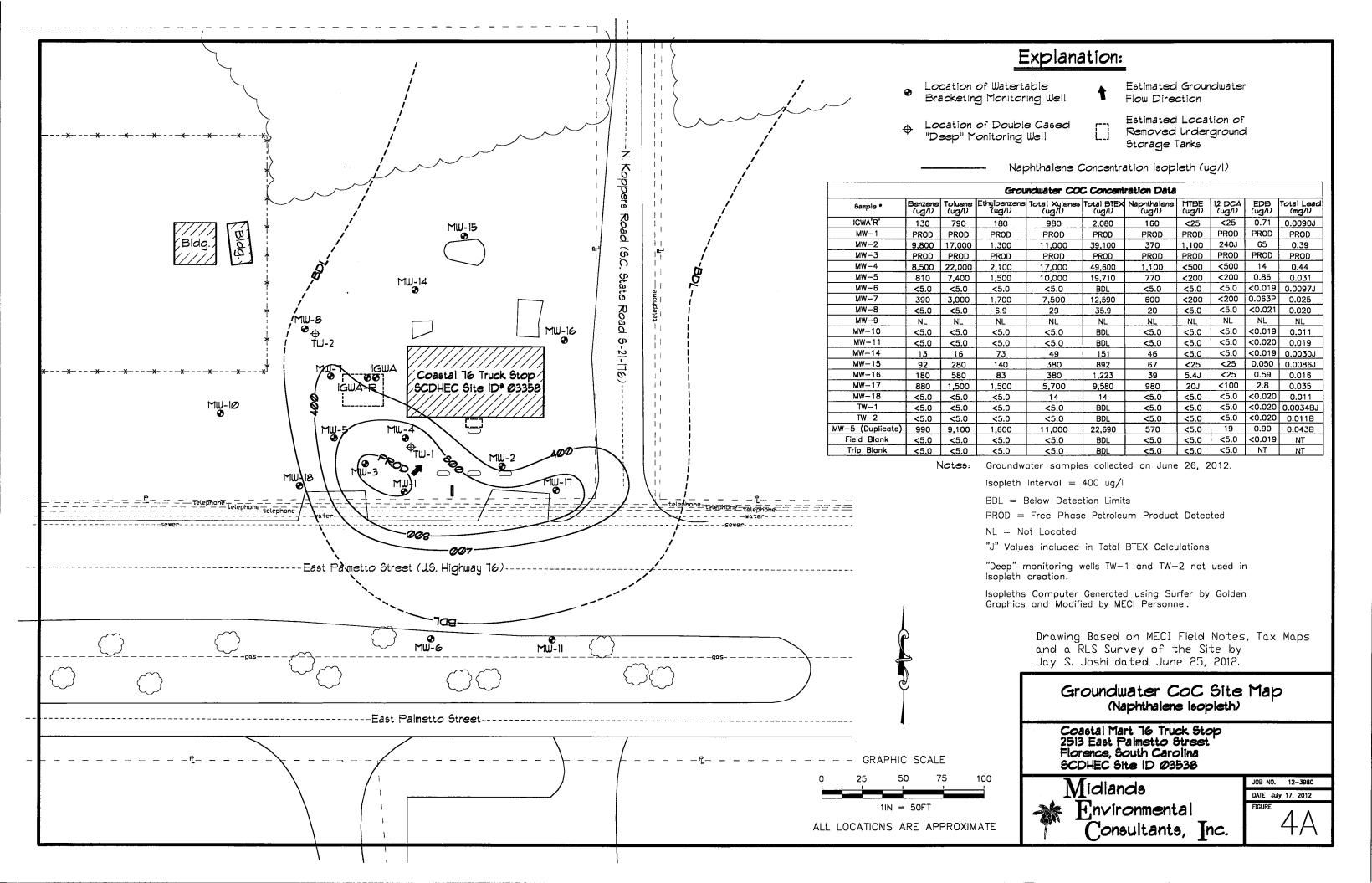
Soil CoC Site Map

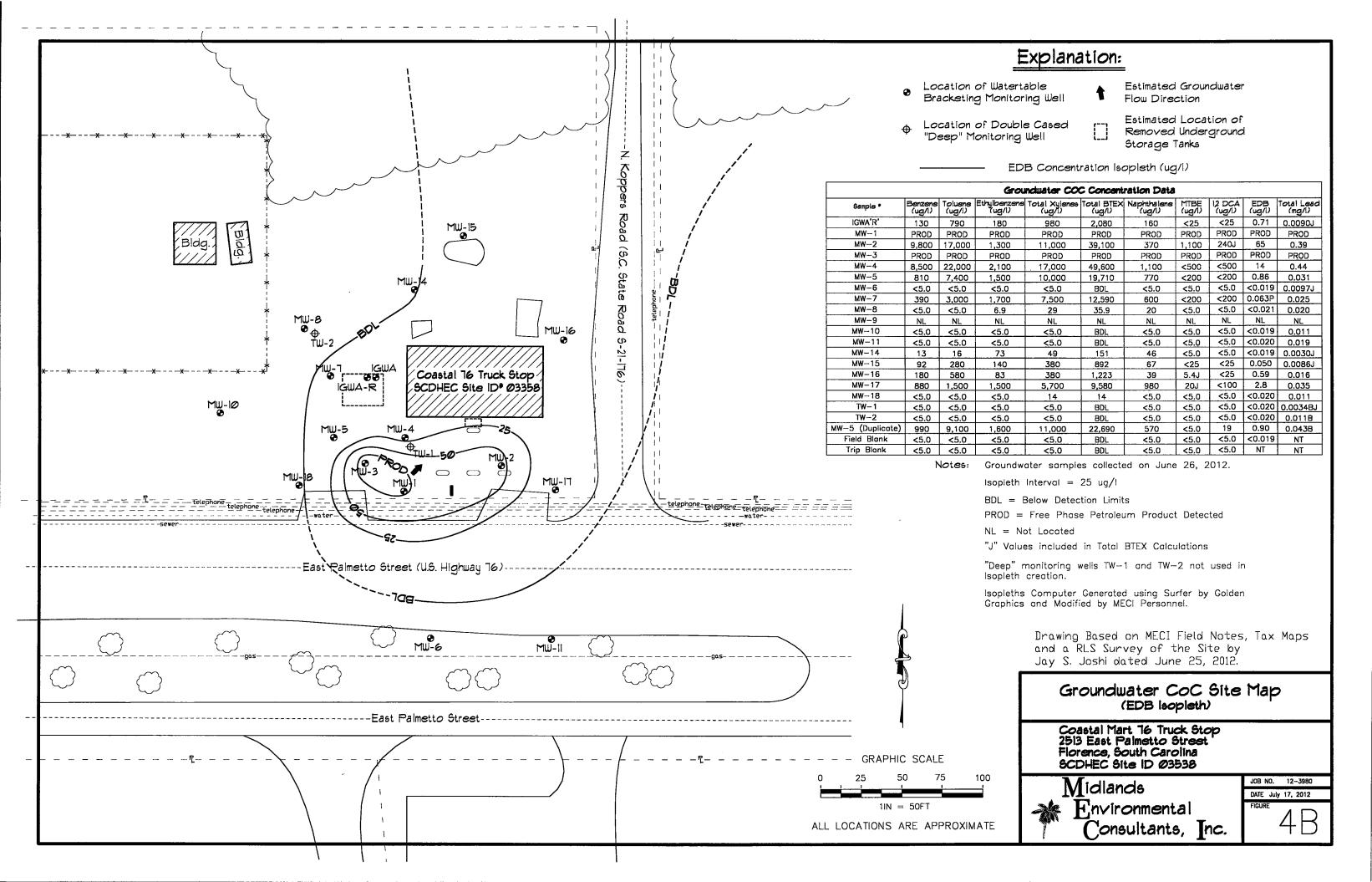
Site Name
Site Location, South Carolina
SCDHEC Site ID:

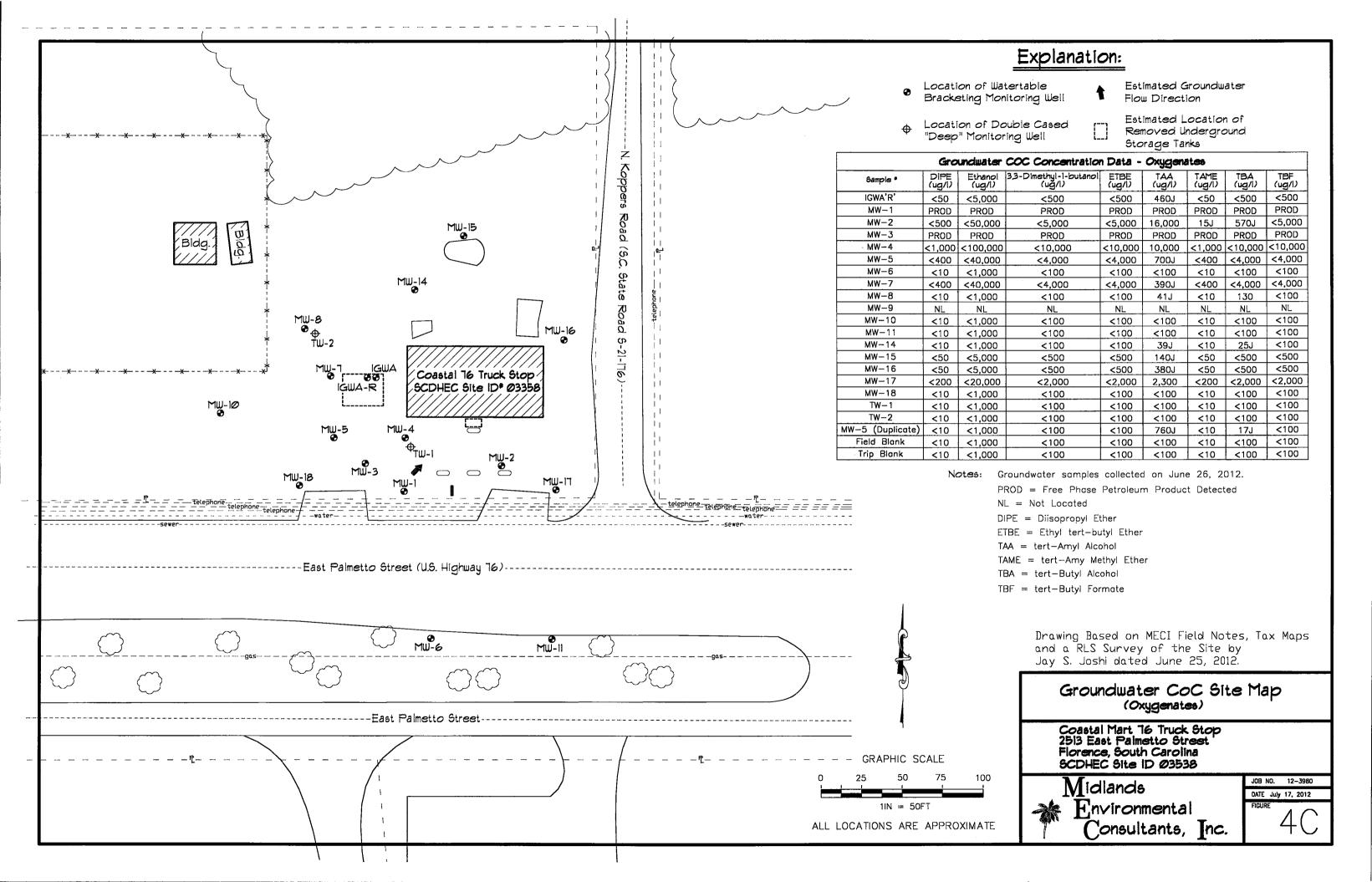
Figure 3

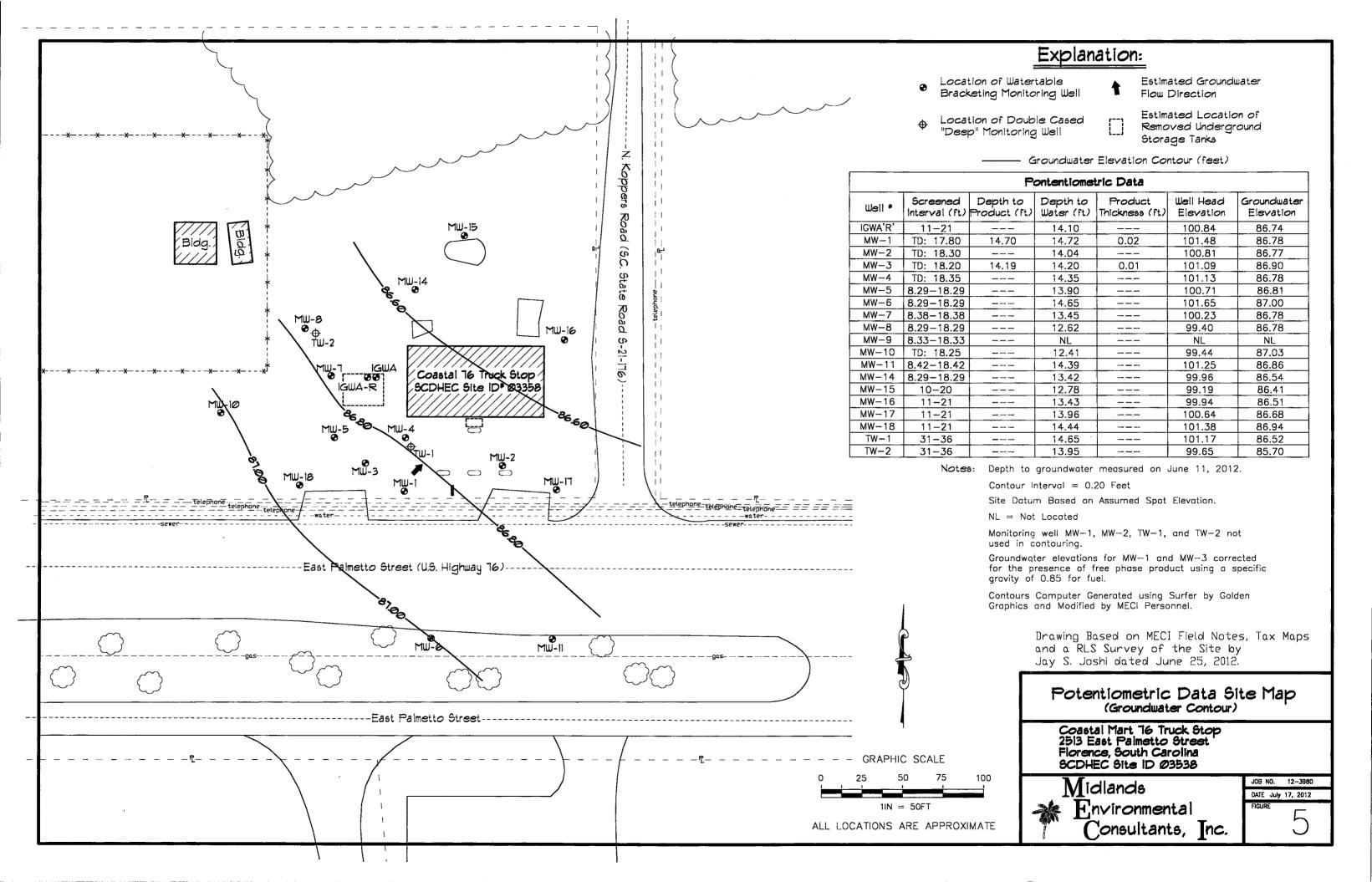
MECI **- ****

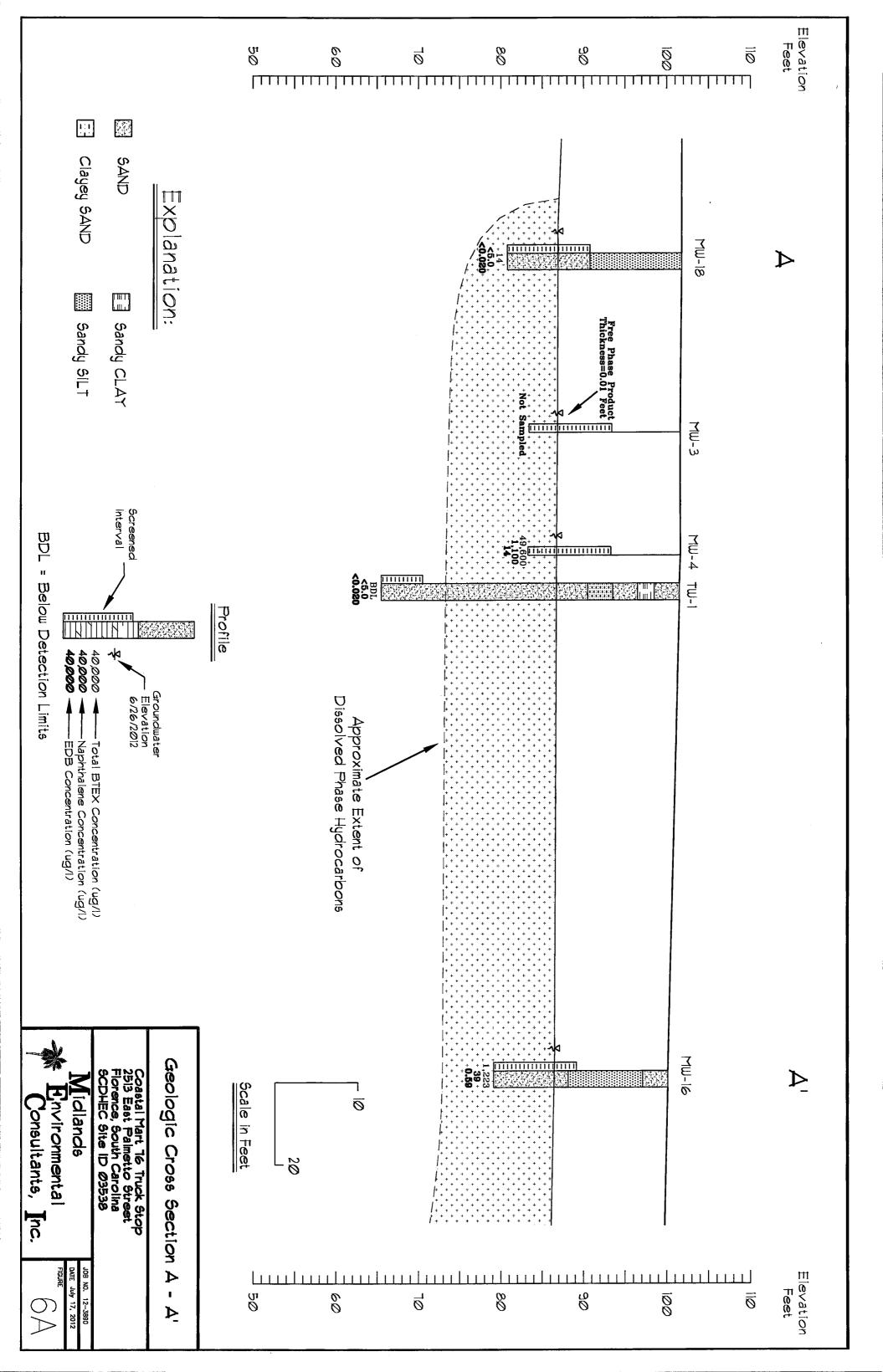


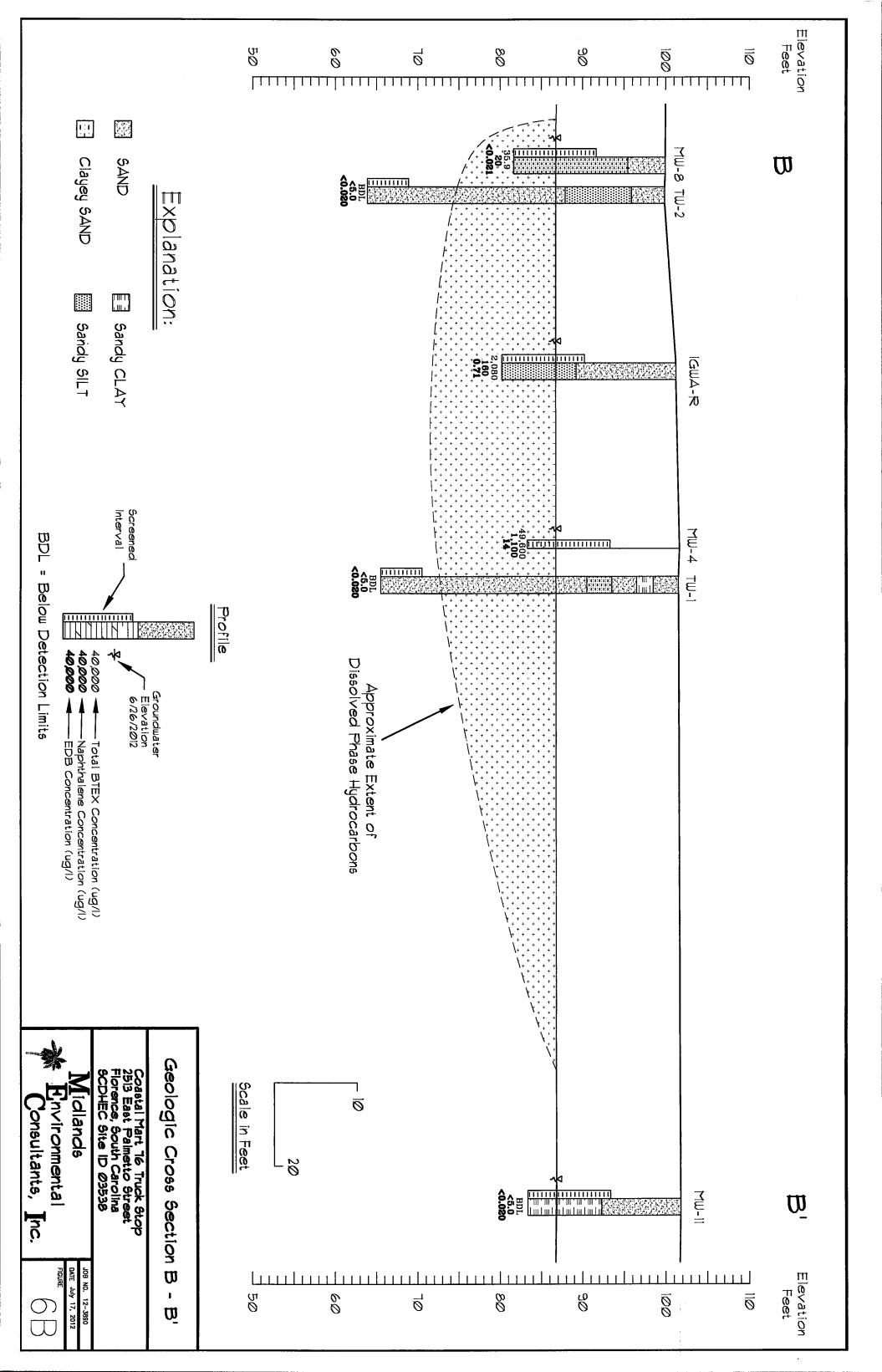




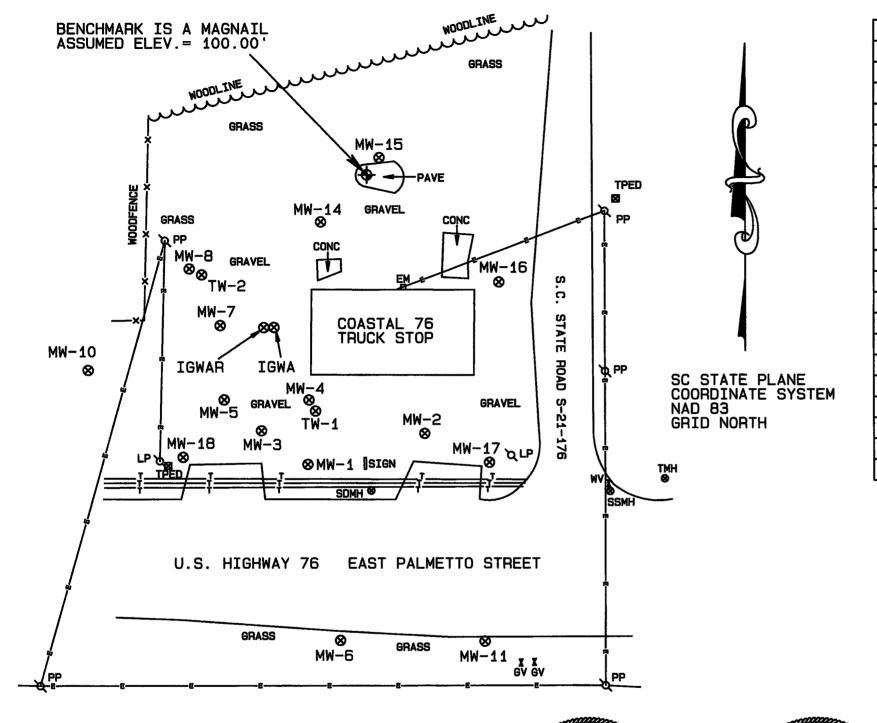








SPESURVA



N.	MONITOR WELL	.s
WELL	TOL ELEV.	TOC ELEV.
IGWA	101.26	100.86
IGWAR	101.22	100.84
MW-1	101.81	101.48
MW-2	101.31	100.81
MW-3	101.64	101.09
MW-4	101.66	101.13
MW-5	101.13	100.71
MW-6	102.05	101.65
MW-7	100.66	100.23
MM-8	99.94	99.40
MW-9	NOT F	OUND
MW-10	99.86	99.44
MW-11	101.80	101.25
MW-14	100.30	99.96
MW-15	99.67	99.19
MW-16	100.14	99.94
MW-17	101.08	100.64
MW-18	101.81	101.38
TW-1	101.53	101.17
TW-2	99.88	99.65

	LEGEND	AND ABBREVIATIONS:
٠.	⊗ MW	= MONITORING WELL
	⊕ вм	= BENCHMARK
	TPEDH SDMH EM SSMH EM WY PP LP GV SIGN PAVE	= TELEPHONE MAN HOLE = ELECTRIC METER = WATER VALVE
	$\xrightarrow{\times}$	= WOOD LINE = FENCE LINE

COMPREHENSIVE SITE SKETCH OF

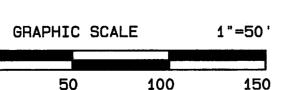
COASTAL 76 TRUCK STOP

2513 EAST PALMETTO STREET FLORENCE, FLORENCE COUNTY, SC SCOHEC SITE ID #03538 PREPARED FOR

MIDLANDS ENVIRONMENTAL CONSULTANTS, INC.

THIS PARCEL MAY BE SUBJECT TO EASEMENT AND/OR RIGHT-OF-WAYS NOT SHOWN. FINAL RESULTS, CONCLUSIVE OF TITLE SEARCH

0





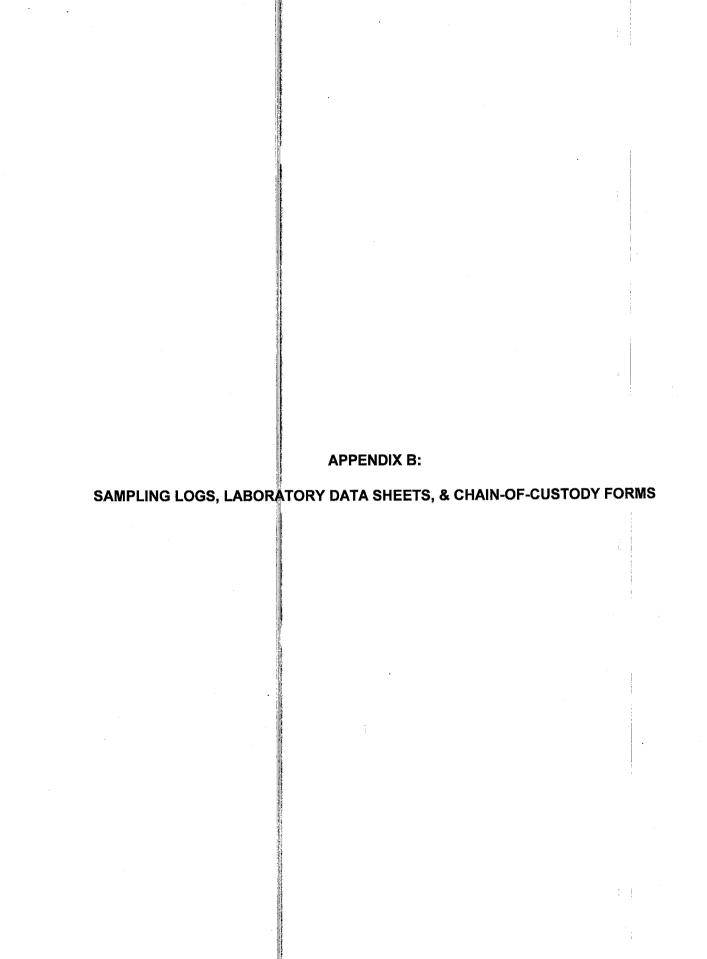
NOTE: NOT FOR THE PURPOSE OF RECORDATION AT COUNTY, COURTHOUSE OR THE CONVEYANCE OF PROPERTY.



NOTE: I HEREBY CERTIFY THAT THE FIELD WORK, CALCULATIONS, AND DRAFTING WERE DONE UNDER MY DIRECT SUPERVISION.

P.O. BOX 90408, COLUMBIA, SC, 29290 JOB #062512B DATE: JUNE 25, 2012

PLS # 14811 803-776-9909



Date (mm/dd/yy):	6/26/2012						
Field Personnel:	Ryan Ariail, I	Darcie Odom	n				
General Weather C	onditions:	Partly Cloudy					
Ambient Air Tempe	erature:	32.0 °C					
	Quality A	Assurance					
pH/Conductivity M	<u>eter</u>	DO Meter					
YSI 63		YSI 550A					
09C 101302		04L 2026AK					
10K 101895	X	08B 101895	X				
07M 100905	<u> </u>	04A 0912AI					
Calibration Buffer:	4, 7, & 10						
	Chain of	Custody					
Relinquished by	Date/Time	Received by	Date/Time				

Site ID#: 03538		Monitori	ng Well #	IGWA-R
Water Supply Well	Public	-	Private	
Monitoring Well Diameter (D):	•···	2	inches	
Conversion Factor (C): 3.14 x (I	$(D/2)^2$		ch well C=0.	
* Free Product Thickness:	,			feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	14.10			feet
Total Well Depth (TWD)	21.10			_ feet
Length of the water column (LV	VC=TWD-D	GW)	,	7 feet
1 casing volume (CV=LWC X C	C)= X	0.16	53 1.14	gallons
3 casing volume (3 X CV)=			3 3.42	gallons
Total Volume of Water Purged *If free product is present over 1/8	-	•	3 required	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	ampling
Time (military)	13:00	13:03	13:05					
pH (s.u.)	5.16	4.82	4.70				<u> </u>	
Specific Conductivity (µmhos/cm)	21.2	19.0	19.3					
Water Temperature (°C)	21.4	21.5	21.8					
Dissolved Oxygen	5.51	5.03	4.74					
Turbidity (NTU)	150	150	240+					
PID readings, if required								

Remarks:	Sample Time:	13:05	Dry @ 3.0 Gallons	

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy):	6/26/2012			Facility Name:	Coastal 76 T	ruck Stop		
Field Personnel: Ry	yan Ariail, Darc	ie Odom		Site ID#: 03538		Mo	nitoring Well#	MW-1
General Weather Condi	itions: F	Partly Cloudy		Water Supply Well	P	ublic	Private	e
Ambient Air Temperatu	ure:	32.0 °C		Monitoring Well Dia	ameter (D):		2 inches	
pH/Conductivity Meter	Quality Assur	rance OO Meter		Conversion Factor (C): 3.14 x (D/2)		a 2 inch well C= a 4 inch well C=	
YSI 63		/SI 550A		* Free Product Thick	cness:	0.02		feet
09C 101302	C	4L 2026AK		Depth to Free Produ	ct (DFP)	14.70		feet
10K 101895	<u>x</u> 0	8B 101895	X	Depth to Ground Wa	ater (DGW)	14.72		feet
07M 100905		4A 0912AI		Total Well Depth (T	WD)	17.80		feet
Calibration Buffer: 4,	7, & 10			Length of the water	column (LWC=	TWD-DGW)	3	.08 feet
				1 casing volume (CV	/=LWC X C)=	X	<u>0.163</u> 0.50	gallons
	Chain of Cus	stody		3 casing volume (3 2	X CV)=		3 1.51	gallons
				Total Volume of Wa	iter Purged Befo	ore Sampling	0	gals.
Relinquished by Da	ate/Time F	Received by	Date/Time	*If free product is pres	sent over 1/8 inch	n, sampling will	l not be required.	

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	N/S						
pH (s.u.)	PROD						
Specific Conductivity (µmhos/cm)	PROD						
Water Temperature (°C)	PROD						
Dissolved Oxygen	PROD						
Turbidity (NTU)	PROD						
PID readings, if required							
Remarks: Sample Time:	PROD = FREE PHASE PRODUCT DETECTED						

N/S = NOT SAMPLED

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 6/26/2012	Facility Name: Coastal 76 Truck Stop
Field Personnel: Ryan Ariail, Darcie Odom	Site ID#: 03538 Monitoring Well # MW-2
General Weather Conditions: Partly Cloudy	Water Supply Well Public Private
Ambient Air Temperature: 32.0 °C	Monitoring Well Diameter (D): 2 inches
Quality Assurance pH/Conductivity Meter DO Meter	Conversion Factor (C): 3.14 x (D/2) ² for a 2 inch well C=0.163 for a 4 inch well C=0.652
YSI 63 YSI 550A	* Free Product Thickness: feet
09C 101302 04L 2026AK	Depth to Free Product (DFP) feet
10K 101895 X 08B 101895 X	Depth to Ground Water (DGW) 14.04 feet
07M 100905 04A 0912AI	Total Well Depth (TWD) 18.30 feet
Calibration Buffer: 4, 7, & 10	Length of the water column (LWC=TWD-DGW) 4.26 feet
	1 casing volume (CV=LWC X C)= X 0.163 0.69 gallons
Chain of Custody	3 casing volume (3 X CV)= 3 2.08 gallons
Relinquished by Date/Time Received by Date/T	Total Volume of Water Purged Before Sampling 0 gals. *If free product is present over 1/8 inch, sampling will not be required.
Cumulative Volume Purged (gallons)	Inital 1st Vol 2nd Vol 3rd Vol 4th Vol 5th Vol Post Sampling
Time (military)	11:18
pH (s.u.)	Sheen
Specific Conductivity (µmhos/cm)	Sheen
Water Temperature (°C)	Sheen
Dissolved Oxygen	Sheen

<5

Turbidity (NTU)

PID readings, if required

Remarks:

Sample Time:

11:18

Date (mm/dd/yy):	6/26/2012							
Field Personnel:	Ryan Ariail, D	Ryan Ariail, Darcie Odom						
General Weather Co	onditions:	Partly Cloudy						
		,						
Ambient Air Tempe	rature:	32.0 °C						
	Quality A	ssurance						
pH/Conductivity Me	<u>ter</u>	DO Meter						
YSI 63		YSI 550A						
09C 101302		04L 2026AK						
10K 101895	<u> </u>	08B 101895	X					
07M 100905		04A 0912AI						
Calibration Buffer:	4, 7, & 10							
	Chain of	Custody						
Relinquished by	Date/Time	Received by	Date/Time					

Facility Name:	Coastal 76 Truck Ste	ор		·····
Site ID#: 03538		Monitorin	g Well #	MW-3
Water Supply Well	Public		_Private	
Monitoring Well Diam	neter (D):	2	_inches	
Conversion Factor (C): 3.14 x (D/2) ²	for a 2 inch		
* Free Product Thick	ness: 0.0	1		feet
Depth to Free Produc	(DFP) 14.1	9		feet
Depth to Ground War	er (DGW) 14.2	:0		_ feet
Total Well Depth (TV	VD) 18.2	:0		feet
Length of the water c	olumn (LWC=TWD-I	OGW)	2	feet
1 casing volume (CV	=LWC X C)=	X <u>0.163</u>	0.65	gallons
3 casing volume (3 X	CV)=	3	1.96	gallons
Total Volume of Wat *If free product is prese	•		0 required.	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling
Time (military)	N/S						
pH (s.u.)	PROD						
Specific Conductivity (µmhos/cm)	PROD						
Water Temperature (°C)	PROD						
Dissolved Oxygen	PROD						
Turbidity (NTU)	PROD						
PID readings, if required							

Remarks:	Sample Time:	PROD = FREE PHASE PRODUCT DETECTED
		N/S = NOT SAMPLED

Field Data Information Sheet for Groundwater Sampling

Facility Name:

Site ID#: 03538

6/26/2012

Ryan Ariail, Darcie Odom

Date (mm/dd/yy):

Field Personnel:

Coastal 76 Truck Stop

Monitoring Well #

MW-4

General Weather Conditions: Partly Cloudy	.	Water Sup	ply Well		Public		_Private	
Ambient Air Temperature: 32.0 °C		Monitoring	g Well Dian	neter (D):	-	2	inches	
Quality Assurance		Conversion	n Factor (C)	: 3.14 x (D	•	for a 2 inch		
pH/Conductivity Meter		* Free Proc	luct Thickn	ecc.		101 a 4 men	wence o.c	feet
09C 101302 04L 2026AK			ree Product					feet
		•	round Wate	• •	14.35			feet
10K 101895 X 08B 101895 X 07M 100905 04A 0912AI	·	•	Depth (TW		18.35			feet
Calibration Buffer: 4, 7, & 10					C=TWD-DC	GW)	4	feet
_ 		1 casing vo	olume (CV=	LWC X C)	= X	0.163	0.65	gallons
Chain of Custody		3 casing vo	olume (3 X	CV)=		3	1.96	gallons
Cumulative Volume Purged (gallons)		1 nd 37-1	2md 37-1	2 md 3/-1	4th Vol	5th Vol	Post S	ampling
	Inital	1st Vol	2nd Vol	3rd Vol	4th V01	Stil voi	Post S	ampinig
Time (military)	11:18			<u> </u>			ļ	
pH (s.u.)	Sheen						ļ	
Specific Conductivity (µmhos/cm)	Sheen							`
Water Temperature (°C)	Sheen							
Dissolved Oxygen	Sheen							
Turbidity (NTU)	15							
PID readings, if required								

Date (mm/dd/yy):	6/26/2012			Fac
Field Personnel:	Ryan Ariail, I	Darcie Odom		Site
General Weather C	onditions:	Partly Cloudy		Wa
Ambient Air Tempe	rature:	32.0 °C	· · ·	Mor
	Quality A	Assurance		Con
pH/Conductivity M	eter	DO Meter		
YSI 63		YSI 550A		* Fr
09C 101302		04L 2026AK		Dep
10K 101895	X	08B 101895	X	Dep
07M 100905		04A 0912AI		Tota
Calibration Buffer:	4, 7, & 10			Leng
				1 ca
	Chain of	Custody		3 ca
				Tota
Relinquished by	Date/Time	Received by	Date/Time	*If f

Facility Name: Coastal 76	5 Truck Stop	
Site ID#: 03538	Monitorin	ng Well # MW-5
Water Supply Well	Public	Private
Monitoring Well Diameter (D):	2	inches
Conversion Factor (C): 3.14 x (E		ch well C=0.163 ch well C=0.652
* Free Product Thickness:		feet
Depth to Free Product (DFP)		feet
Depth to Ground Water (DGW)	13.90	feet
Total Well Depth (TWD)	18.29	feet
Length of the water column (LW	C=TWD-DGW)	4.39 feet
1 casing volume (CV=LWC X C)= X <u>0.16</u>	63 0.72 gallons
3 casing volume (3 X CV)=		3 2.15 gallons
Total Volume of Water Purged E *If free product is present over 1/8 i		0 gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	mpling
Time (military)	11:53							
pH (s.u.)	5.33							
Specific Conductivity (µmhos/cm)	88.5							
Water Temperature (°C)	21.8							
Dissolved Oxygen	6.42							
Turbidity (NTU)	10							
PID readings, if required	,							

Remarks:	Sample Time:	11:53		 				
	`						1	
			 <u> </u>	 	 	······································		

Date (mm/dd/yy):	6/26/2012		
Field Personnel:	Ryan Ariail, D	arcie Odom	
General Weather C	onditions:	Partly Cloudy	
Ambient Air Tempe	rature:	32.0 °C	
	Quality As	ssurance	
pH/Conductivity Mo	<u>eter</u>	DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		
	Chain of	Custody	
Relinquished by	Date/Time	Received by	Date/Time

Site ID#: 03538	_	Monitorin	ıg Well#	MW-6
Water Supply Well	Public		_Private	
Monitoring Well Diameter (D):	,	2	_inches	
Conversion Factor (C): 3.14 x (D)/2) ²		h well C=0.1	
k Tuur Burdeek 77htalanaan		for a 4 incl	h well C=0.6	_
* Free Product Thickness:				feet
Depth to Free Product (DFP)		· · ·		feet
Depth to Ground Water (DGW)	14.65			_ feet
Total Well Depth (TWD)	18.29			_feet
Length of the water column (LW)	C=TWD-DC	GW)	3.64	feet
l casing volume (CV=LWC X C))= X	0.16	3 0.59	gallons
3 casing volume (3 X CV)=		:	3 1.78	gallons
Total Volume of Water Purged B	-f C1	·_ ~	0	gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	mpling
Time (military)	13:37							
pH (s.u.)	2.64							
Specific Conductivity (µmhos/cm)	183.0							
Water Temperature (°C)	22.0							
Dissolved Oxygen	4.84							
Turbidity (NTU)	15							
PID readings, if required		İ						

Date (mm/dd/yy):	6/26/2012		
Field Personnel:	Ryan Ariail, I	Darcie Odom	
General Weather C	onditions:	Partly Cloudy	
Ambient Air Tempe	erature:	32.0 °C	
	Quality A	Assurance	
pH/Conductivity M	<u>eter</u>	DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		
	Chain of	Custody	
Relinquished by	Date/Time	Received by	Date/Time

Facility Name	: Coastal	76 Truck Stop)		
Site ID#:0	3538		Monitori	ng Well #	MW-7
Water Supply	Well	Public		Private	
Monitoring We	ell Diameter (D):		2	inches	
Conversion Fa	ctor (C): 3.14 x ($(D/2)^2$		ch well C=0.1	
* Free Product	Thickness:				feet
Depth to Free l	Product (DFP)				feet
Depth to Groun	nd Water (DGW	13.45			feet
Total Well Dep	oth (TWD)	18.38			feet
Length of the v	water column (L'	WC=TWD-D	GW)	4.93	feet
1 casing volum	e (CV=LWC X	C)= X	0.16	0.80	gallons
3 casing volum	ne (3 X CV)=			3 2.41	gallons
	of Water Purged is present over 1/8	-	-	0 e required.	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	ampling
Time (military)	13:12							
pH (s.u.)	5.17							
Specific Conductivity (µmhos/cm)	130.9							
Water Temperature (°C)	21.2							
Dissolved Oxygen	3.74		,					
Turbidity (NTU)	75							
PID readings, if required								

Remarks:	Sample Time:	13:12	
-			

Date (mm/dd/yy):	6/26/2012		
Field Personnel:	Ryan Ariail, D	arcie Odom	
General Weather Co	onditions:	Partly Cloudy	<u>.</u>
Ambient Air Tempe	rature:	32.0 °C	
	Quality A	ssilrance	
pH/Conductivity Me		DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905	·	04A 0912AI	
Calibration Buffer:	4, 7, & 10		
	Chain of	Custody	
Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Coas	stal 76 Truck Sto	р		
Site ID#: 03538		Monitori	ng Well#	
Water Supply Well	Public	-,	Private	
Monitoring Well Diameter	(D):	2	inches	
Conversion Factor (C): 3.1	4 x (D/2) ²		ch well C=0.1	
* Enga Dua desat Thislemann		tor a 4 inc	ch well C=0.6	_
* Free Product Thickness:				_feet
Depth to Free Product (DF)				_ feet
Depth to Ground Water (De				_feet
Total Well Depth (TWD)	18.2			_feet
Length of the water column	ı (LWC=TWD-I	OGW)	5.67	feet _
1 casing volume (CV=LWC	C X C)= >	ζ <u>0.16</u>	<u>63</u> 0.92	gallons
3 casing volume (3 X CV)=	:		3 2.77	gallons
Total Volume of Water Pur *If free product is present ove	_		0	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	mpling
Time (military)	12:44							
pH (s.u.)	4.80							
Specific Conductivity (µmhos/cm)	103.3							
Water Temperature (°C)	21.4				,			
Dissolved Oxygen	4.53							
Turbidity (NTU)	240+							
PID readings, if required						1		

Remarks:	Sample Time:	12:44			
			·	 ****	

General Weather Conditions Ambient Air Temperature:		Partly Cloudy 32.0 °C	
Ambient Air Temperature:			
•		32.0 °C	
			i
<u>Qu</u>	ality A	<u>Assurance</u>	
pH/Conductivity Meter		DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895 X		08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer: 4, 7, &	10	•	
<u>Ch</u>	nain of	f Custody	
Relinquished by Date/Ti	me	Received by	Date/Time

Site ID#: 03538		Monitori	ng Well#	MW-10
Water Supply Well	Public		Private	
Monitoring Well Dia	meter (D):	2	inches	
Conversion Factor (C	S): 3.14 x (D/2) ²		ch well C=0.	
* Free Product Thick	ness.	ior a 4 iii	ch well C=0.0	652 feet
Depth to Free Produc		· · · · · · · · · · · · · · · · · · ·	·	feet
Depth to Ground Wa	` · · · · · · · · · · · · · · · · · · ·	·1		– feet
Total Well Depth (TV	· · · -	25		_ feet
Length of the water of	olumn (LWC=TWD-I	OGW)	5.84	feet
1 casing volume (CV	=LWC X C)=	X <u>0.16</u>	<u>63</u> 0.95	gallons
3 casing volume (3 X	(CV)=		3 2.86	gallons
	er Purged Before Sament over 1/8 inch, sampli		0 e required.	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	mpling
Time (military)	12:54							
pH (s.u.)	4.53							
Specific Conductivity (µmhos/cm)	76.0							
Water Temperature (°C)	22.3							
Dissolved Oxygen	8.59							
Turbidity (NTU)	175							
PID readings, if required	•							

Remarks:	Sample Time:	12:54	

Date (mm/dd/yy):	6/26/2012		
Field Personnel:	Ryan Ariail, I	Darcie Odom	
General Weather Co	onditions:	Partly Cloudy	
		····	
Ambient Air Tempe	rature:	32.0 °C	
pH/Conductivity Me		Assurance DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		
	Chain of	Custody	
Relinquished by	Date/Time	Received by	Date/Time

Facility Name:	Coastal 76 Truck St	top		
Site ID#: 03538		Monitori	ng Well#	MW-11
Water Supply Well	Public		Private	
Monitoring Well Dia	meter (D):	2	inches	
Conversion Factor (C	E): 3.14 x (D/2) ²		ch well C=0.	
* Free Product Thick	ness:			feet
Depth to Free Produc	t (DFP)			_ feet
Depth to Ground Wa	ter (DGW) 14.	39		feet
Total Well Depth (TV	WD) 18.	42		feet
Length of the water c	olumn (LWC=TWD-	DGW)	4.0	3 feet
1 casing volume (CV	=LWC X C)=	X <u>0.16</u>	0.66	gallons
3 casing volume (3 X	(CV)=		3 1.97	gallons
Total Volume of Wat *If free product is prese	_		0 e required.	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	mpling
Time (military)	13:44							
pH (s.u.)	3.77							
Specific Conductivity (µmhos/cm)	43.8							
Water Temperature (°C)	21.5				_			
Dissolved Oxygen	3.66							
Turbidity (NTU)	240+							
PID readings, if required	•.							

Remarks:	Sample Time:	13:44

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy):	6/26/2012		
Field Personnel:	Ryan Ariail, I	Darcie Odom	<u></u>
General Weather Co	onditions:	Partly Cloudy	
Ambient Air Tempe	rature:	32.0 °C	
	Quality A	assurance	
pH/Conductivity Me	<u>eter</u>	DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		,
	Chain of	Custody	
Relinquished by	Date/Time	Received by	Date/Time

Sample Time:

Remarks:

10:45

Facility Na	03538	Truck Stop			MW-14
Site ID#: _	03338	-	Monitoring	y ven #	101 00 - 14
Water Sup	ply Well	Public		Private	
Monitoring	Well Diameter (D):		2	inches	
Conversion	Factor (C): 3.14 x (D)/2) ²	for a 2 inch for a 4 inch		
* Free Produ	uct Thickness:		ioi a 4 ilicii	Well C 0.0	feet
	ee Product (DFP)				feet
•	ound Water (DGW)	13.42			feet
Total Well I	Depth (TWD)	18.29			feet
Length of th	e water column (LW	C=TWD-DO	GW)	4.87	feet
1 casing vol	ume (CV=LWC X C))= X	0.163	0.79	gallons
i vasing voi	ume (3 X CV)=		3	2.38	gallons

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	ampling
Time (military)	10:45							
pH (s.u.)	5.44							
Specific Conductivity (µmhos/cm)	293.0							
Water Temperature (°C)	22.2							
Dissolved Oxygen	4.04							
Turbidity (NTU)	<5							
PID readings, if required								

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy):	6/26/2012		
Field Personnel:	Ryan Ariail, I	Darcie Odom	
General Weather C	onditions:	Partly Cloudy	
Ambient Air Tempe	rature:	32.0 °C	
	Quality A	ssurance	
pH/Conductivity Mo	<u>eter</u>	DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		
	Chain of	Custody	
Relinquished by	Date/Time	Received by	Date/Time

Sample Time:

Remarks:

10:37

Site ID#:	03538	_	Monitorin	ng Well #	MW-15
Water Sup	ply Well	Public		_ Private	
Monitoring	Well Diameter (D):		2	inches	
Conversion	Factor (C): 3.14 x (D) /2) ²		h well C=0.1 h well C=0.6	
* Free Prod	uct Thickness:		ior a 4 mc	n wen C-0.0	feet
Depth to Fr	ee Product (DFP)				feet
•	round Water (DGW)	12.78			feet
Total Well	Depth (TWD)	20.35			feet
Length of the	ne water column (LW	C=TWD-DC	GW)	7.57	feet
	lume (CV=LWC X C	s)= X	0.16	3 1.23	gallons
1 casing vo				3 3.70	gallons

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampli	
Time (military)	10:35	10:37						
pH (s.u.)	4.86	4.88						
Specific Conductivity (µmhos/cm)	93.5	60.0						
Water Temperature (°C)	21.6	22.5						
Dissolved Oxygen	8.80	9.04						
Turbidity (NTU)	15	240+						_
PID readings, if required								

Dry @ 1.5 Gallons

Date (mm/dd/yy):	6/26/2012		
Field Personnel:	Ryan Ariail, I		
General Weather C	onditions:	Partly Cloudy	
Ambient Air Tempe	erature:	32.0 °C	
	Quality A	<u> Assurance</u>	
pH/Conductivity M	<u>eter</u>	DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895	x	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		
	Chain of	Custody	
Relinquished by	Date/Time	Received by	Date/Time

	Monitori	ng Well#	MW-16
Public		Śrivate	
neter (D):	2	inches	
): 3.14 x (D/2) ²			
ness:	101 4 111	on won e o.	feet
			- feet
	13	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	_ feet
`	0		_ feet
olumn (LWC=TWD-	DGW)	7.6	7 feet
=LWC X C)=	X <u>0.16</u>	1.25	gallons
CV)=		3 3.75	gallons
1	neter (D): (): 3.14 x (D/2) ² ness: t (DFP) ter (DGW) 13.4 WD) 21.1 olumn (LWC=TWD-	Public meter (D): 2 1): 3.14 x (D/2) ² for a 2 incomplete for a 4 i	Public Private meter (D): 2 inches 1): 3.14 x (D/2) ² for a 2 inch well C=0. for a 4 inch well C=0. for a 4 inch well C=0. for a 5 inch well C=0. for a 6 inch well C=0. for a 6 inch well C=0. for a 7 inch well C=0. for a 8 inch well C=0. for a 9 inc

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post S	ampling
Time (military)	10:54	10:56	10:58					
pH (s.u.)	5.97	5.95	5.69					
Specific Conductivity (µmhos/cm)	68.1	70.5	42.5					
Water Temperature (°C)	22.3	21.6	21.6				·	
Dissolved Oxygen	4.65	4.41	4.56					
Turbidity (NTU)	150	200	175					
PID readings, if required								

Remarks:	Sample Time:	10:58	Dry @ 3.0 Gallons	

Date (mm/dd/yy):	6/26/2012		
Field Personnel:	Ryan Ariail, I		
General Weather C	onditions:	Partly Cloudy	
Ambient Air Tempe	erature:	32.0 °C	
	Quality A	Assurance	
pH/Conductivity M	<u>eter</u>	DO Meter	
YSI 63		YSI 550A	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		 -
	Chain of	Custody	
		Received by	Date/Time

Site ID#:	03538	_	Monitori	ng Well #	MW-17
Water Sup	pply Well	Public		Private	
Monitoring	Well Diameter (D):	-	2	inches	
Conversion	Factor (C): 3.14 x (E	$(2)^2$		h well C=0.	
* Eraa Droc	luct Thickness:		tor a 4 inc	h well C=0.	feet
	ree Product (DFP)				feet
•	round Water (DGW)	13.96			feet
•	Depth (TWD)	21.35			- feet
	he water column (LW	C=TWD-DO	GW)	7.39	e feet
	lume (CV=LWC X C	E)=X	0.16	1.20	gallons
I casing vo	lume (3 X CV)=			3 3.61	gallons

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	ampling
Time (military)	11:09	11:11						
pH (s.u.)	5.27	5.18						
Specific Conductivity (µmhos/cm)	63.2	52.4						
Water Temperature (°C)	21.9	22.0					<u> </u>	
Dissolved Oxygen	4.96	5.54		·				
Turbidity (NTU)	10	240+						
PID readings, if required								

Remarks:	Sample Time:	11:11	Dry @ 1.0 Gallons	
<u></u>				

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy):	6/26/2012							
Field Personnel:	Ryan Ariail, Darcie Odom							
General Weather C	onditions:	Partly Cloudy						
Ambient Air Tempe	erature:	32.0 °C						
Quality Assurance pH/Conductivity Meter DO Meter								
YSI 63 09C 101302 10K 101895 07M 100905 Calibration Buffer:	X 4, 7, & 10	YSI 550A 04L 2026AK 08B 101895 04A 0912AI	X					
Chain of Custody								
Relinquished by	Date/Time	Received by	Date/Time					

Sample Time:

Remarks:

13:22

Facility Name: Coastal 76	Truck Stop)	7.400	
Site ID#: 03538	_	Monitoring	g Well #	MW-18
Water Supply Well	Public		Private	
Monitoring Well Diameter (D):		2	inches	
Conversion Factor (C): 3.14 x (D	0/2)2	for a 2 inch for a 4 inch		
* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	14.44			feet
Total Well Depth (TWD)	21.30			feet
Length of the water column (LW	C=TWD-D	GW)	6.86	feet
1 casing volume (CV=LWC X C)= X	<u>0.163</u>	1.12	gallons
3 casing volume (3 X CV)=		3	3.35	gallons
Total Volume of Water Purged E *If free product is present over 1/8 i	-	•	1.0 equired.	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post S	ampling
Time (military)	13:20	13:22						
pH (s.u.)	5.44	4.74			_			
Specific Conductivity (µmhos/cm)	58.4	42.0						
Water Temperature (°C)	21.8	21.6						
Dissolved Oxygen	6.80	5.89						
Turbidity (NTU)	100	240+						
PID readings, if required								ł

Dry @ 1.0 Gallons

Date (mm/dd/yy):	6/26/2012						
Field Personnel:	Ryan Ariail, Darcie Odom						
General Weather C	onditions:	Partly Cloudy					
Ambient Air Tempe	erature:	32.0 °C					
	Quality A	Assurance					
pH/Conductivity Mo	<u>eter</u>	DO Meter					
YSI 63		YSI 550A					
09C 101302		04L 2026AK					
10K 101895	X	08B 101895	X				
07M 100905		04A 0912AI					
Calibration Buffer:	4, 7, & 10						
	Chain of	Custody					
Relinquished by	Date/Time	Received by	Date/Time				

Facility Name: Coastal 70	Truck Stop)		
Site ID#: 03538		Monitorin	g Well#	TW-1
Water Supply Well	Public		Private	****
Monitoring Well Diameter (D):		2	_inches	
Conversion Factor (C): 3.14 x (I	D/2) ²	for a 2 inch for a 4 inch		
* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	14.65	-		feet
Total Well Depth (TWD)	36.00			feet
Length of the water column (LW	C=TWD-D	GW)	21.35	feet
1 casing volume (CV=LWC X C	()= X	<u>0.163</u>	3.48	gallons
3 casing volume (3 X CV)=		3	10.44	gallons
Total Volume of Water Purged F *If free product is present over 1/8 i	-	•	11.0 required.	_gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	mpling
Time (military)	14:19	14:23	14:26	14:29				
pH (s.u.)	4.16	5.18	4.98	4.84				
Specific Conductivity (µmhos/cm)	30.7	24.1	23.9	23.6				
Water Temperature (°C)	22.1	21.8	21.5	21.6				
Dissolved Oxygen	6.58	6.51	6.73	6.62				
Turbidity (NTU)	<5	240+	240+	240+				
PID readings, if required								

Remarks:	Sample Time:	14:29	 	 	

Date (mm/dd/yy):	6/26/2012							
Field Personnel:	d Personnel: Ryan Ariail, Darcie Odom							
General Weather C	onditions:	Partly Cloudy	·					
Ambient Air Tempe	rature:	32.0 °C						
	Quality A	Assurance						
pH/Conductivity Mo	<u>eter</u>	DO Meter						
YSI 63		YSI 550A						
09C 101302		04L 2026AK						
10K 101895	X	08B 101895	X					
07M 100905		04A 0912AI						
Calibration Buffer:	4, 7, & 10							
	Chain of	Custody						
Relinquished by	Date/Time	Received by	Date/Time					

Facility Name:	Coastal 76	Truck Stop			
Site ID#: 035	38	_	Monitoring	Well#	TW-2
Water Supply W	'ell	Public		Private	
Monitoring Well	Diameter (D):		2	inches	
Conversion Facto	r (C): 3.14 x (D	0/2)2	for a 2 inch for a 4 inch		
* Free Product Th	ickness:				feet
Depth to Free Pro	duct (DFP)				feet
Depth to Ground	Water (DGW)	13.95			feet
Total Well Depth	(TWD)	33.65			feet
Length of the wat	er column (LW	C=TWD-DO	GW)	19.7	feet
1 casing volume (CV=LWC X C)= X	0.163	3.21	gallons
3 casing volume ((3 X CV)=		3	9.63	gallons
Total Volume of *If free product is p	Ū	^			gals.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sa	ampling
Time (military)	13:59	14:02	14:05	14:09				
pH (s.u.)	4.71	5.20	4.96	4.84				
Specific Conductivity (µmhos/cm)	32.3	52.3	24.5	43.5				
Water Temperature (°C)	21.5	20.3	20.1	20.1				
Dissolved Oxygen	7.90	7.33	6.98	7.52				
Turbidity (NTU)	150	240+	240+	240+				
PID readings, if required								İ

Remarks:	Sample Time:	14:09		

Report of Analysis

Midlands Environmental Consultants, Inc.

235 Dooley Rd Lexington, SC 29073 Attention: Bryan Shane

Project Name: Coastal Mart 76

Project Number:12-3980

Lot Number: NF21037
Date Completed: 06/22/2012

Kelly M. Maberry
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

* NF21037*

SC DHEC No: 32010 NELAC No: E87653 NC DENR No: 329

Case Narrative Midlands Environmental Consultants, Inc.

Lot Number: NF21037

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Receiving Collection time taken from sample container label.

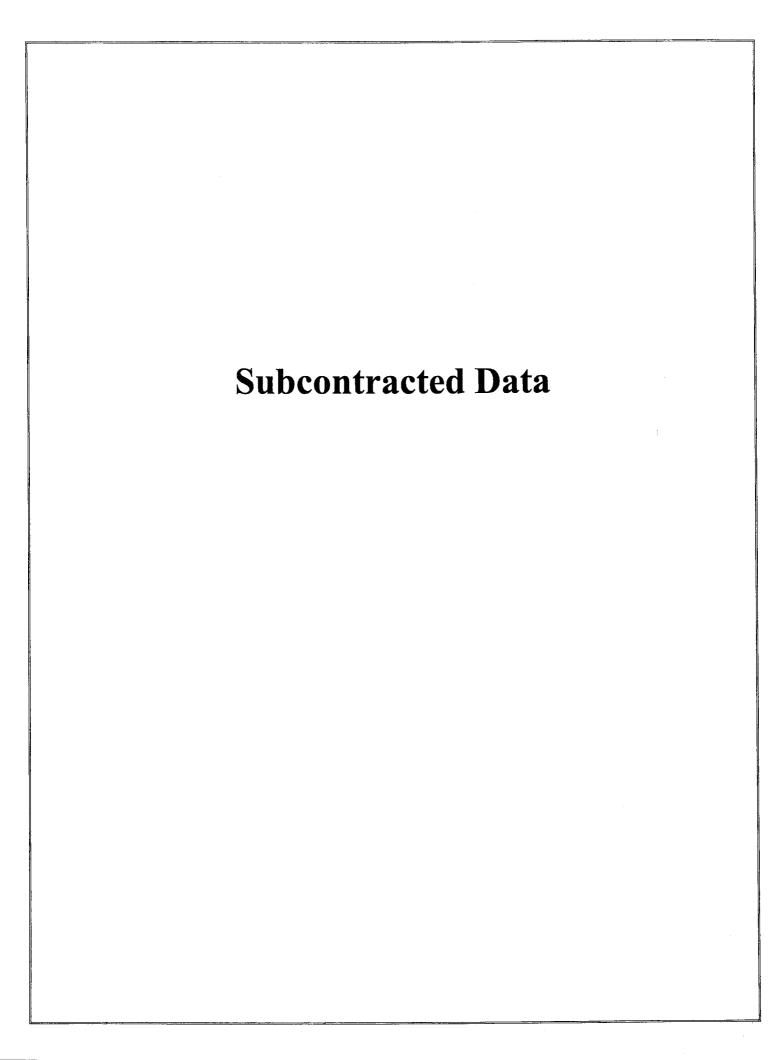
Sample Summary

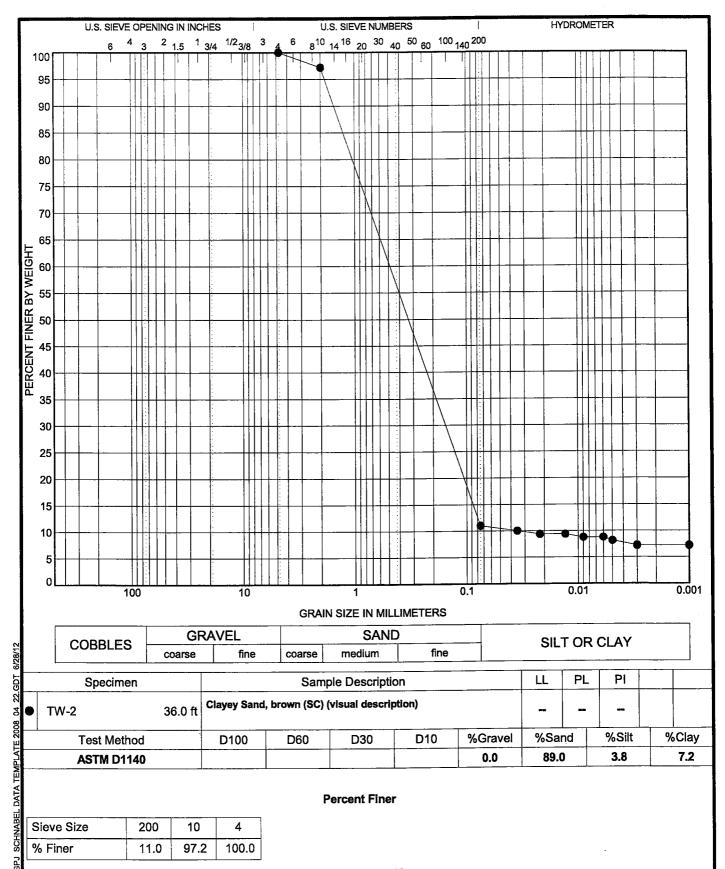
Midlands Environmental Consultants, Inc.

Lot Number: NF21037

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	TW-2 (36')	Solid	06/20/2012 1030	06/21/2012

(1 sample)





Tested By	Tested Date	Reviewed By	Calc By
MDE	6/25/12	SRH	MDE



GRADATION CURVE

Project: Shealy Laboratory

NF21037

Contract: 08190058.00.133

CWA / NPDES 106 Van

Chain of Custody Record

Shealy Environmental Services, Inc. 106 Vartage Point Drive West Columba, South Carolina 29172 Teleptona No. (803) 791-9111

Number 13250

		TECCE (DESALERATE META)	
Main Res	and la Contact	Sampler (Printed Martie)	Quote Ma
	35	John C. Bryant	
	Tologicans No. 1 Fav No. 1 femail	Field Parameters (i.e., p.H. temp, DO) can baroconded in chack Page	arcounded in about Page
7	Orosontaliva	T. C. C. C. C. C. C. C. C. C. C. C. C. C.	Namber of Containers
7.02	Carried Automatical Section of the Control of the C		Rollin (See Instructions on back)
	M S.H.C.		Preservative
			Loi Mô.
her .	#F		
Sample ID / Description (Curratives for each sample may be 77, 24	AHOUR SE COURCE	(MASSISS. S.	Homenho, Cooler ID
Start	5		
TESS .			
15141			
DES			
		100 May 100 Ma	
Start			Additional Property of the Control o
The state of the s			
Shart-			
16:41			
Then Amon Then Seguined (Pate in approved required for expedited TAT)	Sample Disposel	OC Requirements (Scecty) Possible Hazard dentification	,
C Standard : Bush (Please Specify)	C. Return to Crami C. Diaposol by Lab	A CONTRACTOR CFILE	non-klazaro of lammable of Skin Indian I Indian I III Res ova
1. Relixed by / Bample:	05:01 21/0/2		1030 Tim 1030
THE PORT OF THE PO	0811011890	2 December on	17330
3. Reinquished by	Dake	A Reconstrated by	Date Time
4. Whysical and M.	Jan 19750	4. Lationatory Received th	Date 1 1 Time 13 W
Note: All samples are retained for six	weeks from receipt are made.	LAB USE ONLY Hereword in Inn (Think) Prins 3 No cake Pack Rese	Peosipi eng 1.0 °C Temp. Blank 1.0 Y. John
	The state of the s		

Sheak linvinonanental Services, Inc. Document Stumber, F-AD-916 devision Sumber, 9 Page 1 of 1 Replaces Date: 05/06/11 Effective Date: 10/11/11

ri s	* 8 3	Sample Receipt Checklist (SRC)
Client: ME	CC	Cooler Inspected by/date: WIL /WILL Lot #: UF21637
£		
Means of reco	eipt: Z SESI	☐ Client ☐ UPS ☐ LedUx ☐ Airborne Exp ☐ Other
ŧ	· []	Were custody seals present on the cooler?
Y 29 No		2. If custody seals were present, were they intact and unbroken?
Cooler ID/ten	nperature upon	
	Temperature	The state of the s
Method of co	olam: - W	
If response is	No (or Yes for	14, 15, 16), an explanation/resolution must be provided.
		3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified?
Yes D No	D NA-	PM notified by SRC, phone, note (circle one), other:
		coolers received via commercial courier, PMs are to be notified immediately.
Yes No		4. Is the commercial courier's packing slip attached to this form?
Yes No		5. Were proper custody procedures (relinquishest/received) followed?
Yes Ne		5a Were samples retinquished by client to commercial courier? 6. Were sample IDs listed?
Yes No		7. Was collection the stime listed? They have a large and they are
Yes N		8. Were tests to be performed listed on the COC?
Yes.E No		9. Did all samples arrive in the proper containers for each test?
Yes TN		10. Did all container label information (ID, date, time) agree with COC?
Yes No	> <u> </u>	11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes T No) <u> </u>	12. Was adequate sample volume available?
YES- 10	<u>ъ</u>	13. Were all samples received within ½ the holding time or 48 hours, whichever
		comes first?
		14. Were any samples comainers missing?
Yes No	<u> </u>	15. Were there any excess samples not listed on COC?
Yes I No	o□ NA-B	16. Were bubbles present >"pca-size" (¼"or 6mm in diameter) in any VOA vials?
Nes I No	O NA D	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes No	O NA D	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes No		19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb
		(<0.2mg/L) samples free of residual chlorine?
Yes No	O NA CL	20. Were collection temperatures documented on the COC for NC samples?
Yes No	O NALL	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations,
Samuela Dana		etc) correctly transcribed from the COC into the comment section in LIMS?
Sample Pres	CLAMBION (AND	st be completed for any sample(s) incorrectly preserved or with headspace.) were received incorrectly preserved and were adjusted
	n sumple receiv	ing with (H ₂ SO ₄ ,HNO ₂ ,HCl,NaOH) with the SR # (number)
100001101111011011	it attrigate receiv	ing with the title of a financial fi
Sample(s)		were received with bubbles >6 mm in diameter.
Sample(s)		were received with TRC >0.2 mg/L for NH3/
TKN eyanide	/BNA/pest/PCI	l/herb.
	tion taken, if n	
	ified: Yes	
		Date of response:
Comments:		
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***************************************	renewed common and property of the second se	
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Report of Analysis

Midlands Environmental Consultants, Inc.

235 Dooley Rd Lexington, SC 29073 Attention: Bryan Shane

Project Name: Coastal 76 Truck Stop

Project Number:12-3980

Lot Number: NF27024
Date Completed: 07/06/2012

Kelly M. Maberry
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

* NF27024*

SC DHEC No: 32010 NELAC No: E87653 NC DENR No: 329

Case Narrative Midlands Environmental Consultants, Inc.

Lot Number: NF27024

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Receiving

Samples -003, -007, -018 and -019 for volatiles analysis contained vials with air bubbles greater than $\frac{1}{2}$ " or 6mm in diameter. The laboratory uses these vials for screening and the vials without bubbles for analysis whenever possible. Condition of samples is documented on the Sample Receipt Checklist (SRC).

GC/MS Volatiles

The LCS/LCSD associated with batch 88444 had 3,3-dimethyl-1-butanol and ethanol recovered above the acceptance limits. This demonstrates a high bias on analytical results. There were no detections for these compounds in the samples associated with this batch; therefore, data quality is not impacted.

The LCS/LCSD associated with batch 88445 had tert-amyl alcohol, 3,3-dimethyl-1-butanol, ethanol and tert-butyl alcohol recovered above the acceptance limits. This demonstrates a high bias on analytical results. There were no detections for these compounds in the samples associated with this batch; therefore, data quality is not impacted.

The MS associated with sample -005 had several compounds recovered outside of the acceptance limits. This demonstrates a matrix effect and data quality is not impacted.

EDB/DBCP

The sample result for -006 has a P qualifier because the relative percent difference (RPD) between the two dissimilar phase GC columns exceeds 40%. Section 7.10.4 of SW-846 method 8000B states the higher of the two results is reported; however the lower result is reported for this sample. The higher result for sample -006 was 0.13 ug/L.

Due to high detections for target compounds, samples -002 and -003 were diluted 100X and 20X, respectively. As a result, the associated surrogates were recovered outside of the acceptance limits. No corrective action was required, as dilutions of 5X and greater may impact surrogate recoveries.

Inorganic Metals

The method blank associated with samples -015, -016 and -017 had lead detected at a concentration that was above the MDL but below ½ the PQL. All samples associated with this method blank that have detections for lead have been flagged with a "B".

Sample Summary Midlands Environmental Consultants, Inc.

Lot Number: NF27024

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	IGWA-R	Aqueous	06/26/2012 1305	06/27/2012
002	MW-2	Aqueous	06/26/2012 1118	06/27/2012
003	MW-4	Aqueous	06/26/2012 1138	06/27/2012
004	MW-5	Aqueous	06/26/2012 1153	06/27/2012
005	MW-6	Aqueous	06/26/2012 1337	06/27/2012
006	MW-7	Aqueous	06/26/2012 1312	06/27/2012
007	MW-8	Aqueous	06/26/2012 1244	06/27/2012
008	MW-10	Aqueous	06/26/2012 1254	06/27/2012
009	MW-11	Aqueous	06/26/2012 1344	06/27/2012
010	MW-14	Aqueous	06/26/2012 1045	06/27/2012
011	MW-15	Aqueous	06/26/2012 1037	06/27/2012
012	MW-16	Aqueous	06/26/2012 1058	06/27/2012
013	MW-17	Aqueous	06/26/2012 1111	06/27/2012
014	MW-18	Aqueous	06/26/2012 1322	06/27/2012
015	TW-1	Aqueous	06/26/2012 1429	06/27/2012
016	TW-2	Aqueous	06/26/2012 1409	06/27/2012
017	MW-5 Dup	Aqueous	06/26/2012 1153	06/27/2012
018	Field Blank	Aqueous	06/26/2012 1045	06/27/2012
019	Trip Blank	Aqueous	06/26/2012 1145	06/27/2012

(19 samples)

Executive Summary Midlands Environmental Consultants, Inc.

Lot Number: NF27024

Sample	e Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	IGWA-R	Aqueous	Benzene	8260B	130		ug/L	7
001	IGWA-R	Aqueous	Ethylbenzene	8260B	180		ug/L	7
001	IGWA-R	Aqueous	Naphthalene	8260B	160		ug/L	7
001	IGWA-R	Aqueous	Toluene	8260B	790		ug/L	7
001	IGWA-R	Aqueous	Xylenes (total)	8260B	980		ug/L	7
001	IGWA-R	Aqueous	tert-Amyl alcohol (TAA)	8260B	460	J	ug/L	7
001	IGWA-R	Aqueous	1,2-Dibromoethane (EDB)	8011	0.71		ug/L	8
001	IGWA-R	Aqueous	Lead	6010C	0.0090	J	mg/L	8
002	MW-2	Aqueous	Benzene	8260B	9800		ug/L	9
002	MW-2	Aqueous	1,2-Dichloroethane	8260B	240	J	ug/L	9
002	MW-2	Aqueous	Ethylbenzene	8260B	1300		ug/L	9
002	MW-2	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	1100		ug/L	9
002	MW-2	Aqueous	Naphthalene	8260B	370		ug/L	9
002	MW-2	Aqueous	Toluene	8260B	17000		ug/L	9
002	MW-2	Aqueous	Xylenes (total)	8260B	11000		ug/L	9
002	MW-2	Aqueous	tert-Amyl alcohol (TAA)	8260B	16000		ug/L	. 9
002	MW-2	Aqueous	tert-Amyl methyl ether (TAME)	8260B	15	J	ug/L	9
002	MW-2	Aqueous	tert-butyl alcohol (TBA)	8260B	570	J	ug/L	9
002	MW-2	Aqueous	1,2-Dibromoethane (EDB)	8011	65		ug/L	10
002	MW-2	Aqueous	Lead	6010C	0.39		mg/L	10
003	MW-4	Aqueous	Benzene	8260B	8500		ug/L	11
003	MW-4	Aqueous	Ethylbenzene	8260B	2100		ug/L	11
003	MW-4	Aqueous	Naphthalene	8260B	1100		ug/L	11
003	MW-4	Aqueous	Toluene	8260B	22000		ug/L	11
003	MW-4	Aqueous	Xylenes (total)	8260B	17000		ug/L	11
003	MW-4	Aqueous	tert-Amyl alcohol (TAA)	8260B	10000		ug/L	11
003	MW-4	Aqueous	1,2-Dibromoethane (EDB)	8011	14		ug/L	12
003	MW-4	Aqueous	Lead	6010C	0.44		mg/L	12
004	MW-5	Aqueous	Benzene	8260B	810		ug/L	13
004	MW-5	Aqueous	Ethylbenzene	8260B	1500		ug/L	13
004	MW-5	Aqueous	Naphthalene	8260B	770		ug/L	13
004	MW-5	Aqueous	Toluene	8260B	7400		ug/L	13
004	MW-5	Aqueous	Xylenes (total)	8260B	10000		ug/L	13
004	MW-5	Aqueous	tert-Amyl alcohol (TAA)	8260B	700	J	ug/L	13
004	MW-5	Aqueous	1,2-Dibromoethane (EDB)	-8011	0.86		ug/L	14
004	MW-5	Aqueous	Lead	6010C	0.031		mg/L	14
005	MW-6	Aqueous	Lead	6010C	0.0097	J	mg/L	16
006	MW-7	Aqueous	Benzene	8260B	390		ug/L	17
006	MW-7	Aqueous	Ethylbenzene	8260B	1700		ug/L	17
006	MW-7	Aqueous	Naphthalene	8260B	600		ug/L	17
006	MW-7	Aqueous	Toluene	8260B	3000		ug/L	17
006	MW-7	Aqueous	Xylenes (total)	8260B	7500		ug/L	17
006	MW-7	Aqueous	tert-Amyl alcohol (TAA)	8260B	390	J	ug/L	17
006	MW-7	Aqueous	•	8011	0.063	Р	ug/L	18
000		,	1,2 2.5.0				•	

Executive Summary (Continued)

Lot Number: NF27024

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
007	MW-8	Aqueous	Ethylbenzene	8260B	6.9		ug/L	19
007	MW-8	Aqueous	Naphthalene	8260B	20		ug/L	19
007	MW-8	Aqueous	Xylenes (total)	8260B	29		ug/L	19
007	MW-8	Aqueous	tert-Amyl alcohol (TAA)	8260B	41	J	ug/L	19
007	MW-8	Aqueous	tert-butyl alcohol (TBA)	8260B	130		ug/L	19
007	MW-8	Aqueous	Lead	6010C	0.020		mg/L	20
800	MW-10	Aqueous	Lead	6010C	0.011		mg/L	22
009	MW-11	Aqueous	Lead	6010C	0.019		mg/L	24
010	MW-14	Aqueous	Benzene	8260B	13		ug/L	25
010	MW-14	Aqueous	Ethylbenzene	8260B	73		ug/L	25
010	MW-14	Aqueous	Naphthalene	8260B	46		ug/L	25
010	MW-14	Aqueous	Toluene	8260B	16		ug/L	25
010	MW-14	Aqueous	Xylenes (total)	8260B	49		ug/L	25
010	MW-14	Aqueous	tert-Amyl alcohol (TAA)	8260B	39	J	ug/L	25
010	MW-14	Aqueous	tert-butyl alcohol (TBA)	8260B	25	J	ug/L	25
010	MW-14	Aqueous	Lead	6010C	0.0030	J	mg/L	26
011	MW-15	Aqueous	Benzene	8260B	92		ug/L	27
011	MW-15	Aqueous	Ethylbenzene	8260B	140		ug/L	27
011	MW-15	Aqueous	Naphthalene	8260B	67		ug/L	27
011	MW-15	Aqueous	Toluene	8260B	280		ug/L	27
011	MW-15	Aqueous	Xylenes (total)	8260B	380		ug/L	27
011	MW-15	Aqueous	tert-Amyl alcohol (TAA)	8260B	140	J	ug/L	27
011	MW-15	Aqueous	1,2-Dibromoethane (EDB)	8011	0.050		ug/L	28
011	MW-15	Aqueous	Lead	6010C	0.0086	J	mg/L	28
012	MW-16	Aqueous	Benzene	8260B	180		ug/L	29
012	MW-16	Aqueous	Ethylbenzene	8260B	83		ug/L	29
012	MW-16	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	5.4	J	ug/L	_ 29
012	MW-16	Aqueous	Naphthalene	8260B	39		ug/L	29
012	MW-16	Aqueous	Toluene	8260B	580		ug/L	29
012	MW-16	Aqueous	Xylenes (total)	8260B	380		ug/L	29
012	MW-16	Aqueous	tert-Amyl alcohol (TAA)	8260B	380	J	ug/L	29
012	MW-16	Aqueous	1,2-Dibromoethane (EDB)	8011	0.59		ug/L	30
012	MW-16	Aqueous	Lead	6010C	0.016		mg/L	30
013	MW-17	Aqueous	Benzene	8260B	880		ug/L	31
013	MW-17	Aqueous	Ethylbenzene	8260B	1500		ug/L	31
013	MW-17	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	20	J	ug/L	31
013	MW-17	Aqueous	Naphthalene	8260B	980		ug/L	31
013	MW-17	Aqueous	Toluene	8260B	1500		ug/L	31
013	MW-17	Aqueous	Xylenes (total)	8260B	5700		ug/L	31
013	MW-17	Aqueous	tert-Amyl alcohol (TAA)	8260B	2300		ug/L	31
013	MW-17	Aqueous	1,2-Dibromoethane (EDB)	8011	2.8		ug/L	32
013	MW-17	Aqueous	Lead	601 <u>,</u> 0C	0.035		mg/L	32
014	MW-18	Aqueous	Xylenes (total)	8260B	14		ug/L	33
014	MW-18	Aqueous	Lead	6010C	0.011		mg/L	34
015	TW-1	Aqueous	Lead	6010C	0.0034	BJ	mg/L	36
016	TW-2	Aqueous	Lead	6010C	0.011	В	mg/L	38
017	MW-5 Dup	Aqueous	Benzene	8260B	990		ug/L	39
							ug/L	39

Executive Summary (Continued)

Lot Number: NF27024

Sample	e Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
017	MW-5 Dup	Aqueous	Ethylbenzene	8260B	1600		ug/L	39
017	MW-5 Dup	Aqueous	Naphthalene	8260B	570		ug/L	39
017	MW-5 Dup	Aqueous	Toluene	8260B	9100		ug/L	39
017	MW-5 Dup	Aqueous	Xylenes (total)	8260B	11000		ug/L	39
017	MW-5 Dup	Aqueous	tert-Amyl alcohol (TAA)	8260B	760	J	ug/L	39
017	MW-5 Dup	Aqueous	tert-butyl alcohol (TBA)	8260B	17	j	ug/L	39
017	MW-5 Dup	Aqueous	1,2-Dibromoethane (EDB)	8011	0.90		ug/L	40
017	MW-5 Dup	Aqueous	Lead	6010C	0.043	В	mg/L	40

(101 detections)

Description: IGWA-R

Date Sampled:06/26/2012 1305 Date Received: 06/27/2012

Laboratory ID: NF2/024-001

Matrix: Aqueous

Run Pr 1	ep Method 5030B	Analytical N	lethod 8260B	Dilution 5	Analysis 07/05/201		Analyst AAC	Prep I	Date	Batch 88450			
Parameter					CAS Number		lytical ethod	Result	Q	PQL	MDL	Units	Run
Benzene					71-43-2		8260B	130		25	1.0	ug/L	1
1,2-Dichlor	roethane				107-06-2		8260B	ND		25	1.5	ug/L	1
Ethylbenz					107-00-2		8260B	180		25	8.5	ug/L	1
=	iary butyl ether	(MTRE)			634-04-4		8260B	ND		25	2.0	ug/L	1
Naphthale		(MIDE)			91-20-3		8260B	160		25	8.5	ug/L	1
Naphthale Toluene	iii e				91-20-3 108-88-3		8260B	790		25	8.5	ug/L	1
Xylenes (t	otal)				330-20-7		8260B	980		25	8.5	ug/L	1
	·		•	Run '	і Ассер	tance	02005					3	·
Surrogate			Q	% Recov						-			
•	oethane-d4			88	70-							•	
Bromofluoi				96	70-								
Toluene-da	5			102	70-	130							
			Vol	latile O	rganic	Comi	nounds	s by G	C/MS	5			
Run Pi	rep Method	Analytical I		Dilution			Analyst	Prep		Batch			
1	5030B	Analytical	8260B	5	07/05/201		AAC			88450			
									_				
Paramete	r				CAS Number		lytical ethod	Result	Q	PQL	MDL	Units	Run
Diisopropy	l ether (IPE)			**	108-20-3		8260B	ND		50	2.0	ug/L	1
Ethanol	` ,				64-17-5		8260B	ND		5000	170	ug/L	1
3,3-Dimeth	nyl-1-butanol				624-95-3		8260B	ND		500	5.0	ug/L	1
Ethyl-tert-b	outyl ether (ETE	BE)			637-92-3		8260B	ND		500	1.0	ug/L	1
tert-Amyl	alcohol (TAA)	·			75-85-4		8260B	460	J	500	34	ug/L	1
-	nethyl ether (TA	AME)			994-05-8		8260B	ND		50	1.0	ug/L	1
=	Icohol (TBA)	•			75-65-0		8260B	ND		500	34	ug/L	1
tert-Butyl f	ormate (TBF)				762-75-4		8260B	ND		500	5.0	ug/L	1
Surrogate			Q	Run % Reco									
Bromofluo				96		130							
	robenzene roethane-d4			88		130							
Toluene-di				102		130							
				,52									
				EDB 8	DBCP	by M	licroex	tractio	n				
Run Pi	rep Method	Analytical	Method	Dilution			Analyst	Prep		Batch			
1	8011	•	8011	1	06/30/201		AMB	06/28/2	012 16	47 88021			
		**									****		
Paramete	r				CAS		ılytical ethod	Result	Q	PQL	MDL	Units	Rur
- aramete					Number	IVI	etnoa	TOOUT					
											1		
POL - Proc	tical quantitation limi	t	B = Detecte	ed in the metho	od blank		E = Quantil	ation of com	pound ex	ceeded the calibra	ation range	H = Out of he	olding tim

Description: IGWA-R

Date Sampled:06/26/2012 1305 Date Received: 06/27/2012

Laboratory ID: NF2/024-001

Matrix: Aqueous

	EDB & DBCP by Microextraction										
Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis 06/30/2012	•	Prep 06/28/2	Date 012 1647	Batch 88021			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Di	bromoethane (EDB)			106-93-4	8011	0.71		0.020	0.020	ug/L	1
Surro	gate	Q	Run % Reco								

1,1,1,2-Tetrachloroethane

115 57-137

IC	Ρ	-A	Ε	S
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Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis I 06/28/2012		nalyst CDF	Prep 06/27/2	Date 012 1930	Batch 87912			
Paran	eter			CAS Number	Analyti Meth		Result	Q	PQL	MDL	Units	Run
l ead			7.	430-02-1	601	nc	0.0090	J	0.010	0.0019	ma/L	1

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-2

Date Sampled:06/26/2012 1118 Date Received: 06/27/2012

Laboratory ID: NF2/024-002

Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Met 82	t hod 60B		Analysis D 7/05/2012		•	Date	Batch 88450			
Param	eter			Nı	CAS umber	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benze	ne			71	1-43-2	8260B	9800		250	10	ug/L	1
1,2-Di	chloroethane			107	7-06-2	8260B	240	J	250	15	ug/L	1
Ethylb	Ethylbenzene			100-41-4		8260B	1300		250	85	ug/L	1
Methyl tertiary butyl ether (MTBE)			1634	4-04-4	8260B	1100		250	20	ug/L	1	
Napht	halene			9,	1-20-3	8260B	370		250	85	ug/L	1
Tolue	ne			108-88-3		8260B	17000		250	85	ug/L	1
Xylen	es (total)			1330	0-20-7	8260B	11000		250	85	ug/L	1
Surro	gate		Q	Run 1 % Recover	Accepta y Limit						****	
1,2-Di	chloroethane-d4			91	70-13	30						
Bromo	fluorobenzene			98	70-13	30						
Toluer	ne-d8			101	70-13	30						

Volatile Organic Compounds by GC/MS

Run Prep Method 1 5030B		Analytical Method 8260B	Dilution 50	Analysis 07/05/20		Analyst AAC	Prep l	Date	Batch 88450			
Param	eter			CAS Number		alytical ethod	Result	Q	PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)			108-20-3		8260B	ND		500	20	ug/L	1
Ethano	ol			64-17-5		8260B	ND		50000	1700	ug/L	1
3,3-Di	methyl-1-butanol			624-95-3		8260B	ND		5000	50	ug/L	1
Ethyl-t	ert-butyl ether (ETB	E)		637-92-3		8260B	ND		5000	10	ug/L	1
tert-A	myl alcohol (TAA)			75-85-4		8260B	16000		5000	340	ug/L	1
tert-A	myl methyl ether (1	AME)		994-05-8		8260B	15	J	500	10	ug/L	1
tert-bu	ityl alcohol (TBA)			75-65-0		8260B	570	J	5000	340	ug/L	1
tert-Bu	ityl formate (TBF)			762-75-4		8260B	ND		5000	50	ug/L	1
Surro	gate	Q	Run % Reco		otance nits							
Bromo	fluorobenzene		98	70	-130							
1,2-Di	chloroethane-d4		91	70	-130							
Toluer	ne-d8		101	70	-130							

PQL	=	Practical	c	uantitation	limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

 $J = Estimated result < PQL and <math>\geq MDL$ Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" P = The RPD between two GC columns exceeds 40% * = Reportable result (only when report all runs)

N = Recovery is out of criteria

ND = Not detected at or above the MDL

Shealy Environmental Services, Inc.

Q

% Recovery

104

Description: MW-2

Surrogate

1,1,1,2-Tetrachloroethane

Date Sampled:06/26/2012 1118 Date Received: 06/27/2012

Laboratory ID: NF2/U24-UU2

Matrix: Aqueous

Run Prep Method 1 8011 2 8011		Analytical Method 8011	Dilution 1	Analysis I 06/30/2012	-		Date 2012 1647	Batch 88021			
		8011	100	07/02/2012	1249 AMB	06/28/	2012 1647	88021			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Rur
1,2-Di	bromoethane (EDB)			106-93-4	8011	65		2.0	2.0	ug/L	2
			Run	1 Accepta	ınce	Run 2 A	cceptance	•			

Limits

57-137

EDB & DBCD by Microsytraction

ICP-AES

% Recovery

0.00

57-137

Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis D: 06/28/2012	•	Prep 06/27/2		Batch 87912			
Paran	neter		•	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead			7-	439-92-1	6010C	0.39	· ·	0.010	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soll sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

N = Recovery is out of criteria

Description: MW-4

Toluene-d8

Date Sampled:06/26/2012 1138 Date Received: 06/27/2012

Laboratory ID: NF2/024-003

Matrix: Aqueous

		Vo	latile O	rganic (Compound	s by G	C/MS	3			
Run 1	Prep Method Analytical Method 5030B 8260B		Dilution 100	Analysis I 07/05/2012	-	Prep I	Date	Batch 88450			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benze	Benzene			71-43-2	8260B	8500		500	20	ug/L	1
1,2-Dichloroethane		1	107-06-2	8260B	ND		500	30	ug/L	1	
Ethylk	enzene		1	100-41-4	8260B	2100		500	170	ug/L	1
Methy	l tertiary butyl ether	(MTBE)	16	634-04-4	8260B	ND		500	40	ug/L	1
Napht	halene			91-20-3	8260B	1100		500	170	ug/L	1
Tolue	ne		1	108-88-3	8260B	22000		500	170	ug/L	1
Xylen	es (total)		1;	330-20-7	8260B	17000		500	170	ug/L	1
Surro	gate	Q	Run 1 % Recov								
1,2-Di	chloroethane-d4	- "	90	70-1	30						
Bromo	ofluorobenzene		99	70-1	30						

Volatile Organic Compounds by GC/MS

70-130

101

Run 1	Prep Method 5030B	Analytical Method Dilution Analysis Date Analyst Prep 8260B 100 07/05/2012 1710 AAC		Prep	Date	Batch 88450						
Paran	neter			C. Numb		alytical Method	Result	Q	PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)		-	108-20)-3	8260B	ND		1000	40	ug/L	1
Ethan				64-17	'-5	8260B	ND		100000	3300	ug/L	1
3,3-Di	methyl-1-butanoi			624-95	i-3	8260B	ND		10000	100	ug/L	1
Ethyl-	tert-butyl ether (ETBE)		637-92	2-3	8260B	ND		10000	20	ug/L	1
tert-A	myl alcohol (TAA)	,		75-85	5-4	8260B	10000		10000	670	ug/L	1
tert-A	nyl methyl ether (TAM	ME)		994-05	5-8	8260B	ND		1000	20	ug/L	1
tert-bu	ityl alcohol (TBA)	,		75-65	5-0	8260B	ND		10000	670	ug/L	1
tert-Bı	utyl formate (TBF)			762-75	5-4	8260B	ND		10000	100	ug/L	1
Surro	gate	Q	Run % Reco		cceptance Limits							
Bromo	ofluorobenzene	<u> </u>	99		70-130							
1,2-Di	chloroethane-d4		90		70-130							
Tolue	ne-d8		10	i	70-130							

PQL	=	Practical	quantitation limit	

H = Out of holding time

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

 $J = Estimated result < PQL and <math>\geq MDL$

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-4

Lead

Date Sampled:06/26/2012 1138

Laboratory ID: NF2/024-003 Matrix: Aqueous

Date Received: 06/27/2012

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	06/30/2012 0205	AMB	06/28/2012 1647	88021
2	8011	8011	20	07/03/2012 0938	AMB	06/28/2012 1647	88021

Parameter			CAS A Number		cal od Resi	ılt Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	•	106-9	3-4	80	11	14	0.41	0.41	ug/L	2
Surrogate	Q	Run 1 / % Recovery	Acceptan Limits		Run 2 % Recover	Accepta y Limit				
1,1,1,2-Tetrachloroethane		77	57-137	7 N	55	57-1	37			

ICP-AES

Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis I 06/28/2012		Analyst CDF	06/27/20		87912				
Param	eter			CAS Number	Anaiy	ytical thod	Result	Q	PQL	MDL	Units	Run	

7439-92-1

6010C

0.44

0.010

0.0019

mg/L

PQL = Practical quantitation limit

B = Detected in the method blank

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-5

Date Sampled:06/26/2012 1153 Date Received: 06/27/2012

Laboratory ID: NF2/024-004

Matrix: Aqueous

		V	olatile C	rganic	Compound	s by G	C/IVIS	<u> </u>			
Run 1	Prep Method 5030B	Analytical Method 8260B		Analysis 07/05/201		Prep	Date	Batch 88450			
Param	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benze	ne			71-43-2	8260B	810		200	8.0	ug/L	1
1,2-Die	chloroethane			107-06-2	8260B	ND		200	12	ug/L	1
Ethylk	enzene			100-41-4	8260B	1500		200	68	ug/L	. 1
Methy	I tertiary butyl ether	(MTBE)	1	1634-04-4	8260B	ND		200	16	ug/L	1
Napht	halene			91-20-3	8260B	770		200	68	ug/L	1
Tolue	ne			108-88-3	8260B	7400		200	68	ug/L	1
Xylen	es (total)		1	330-20-7	8260B	10000		200	68	ug/L	1
Surro	gate		Run Reco						····		
1,2-Di	chloroethane-d4		90	70-	130						
Bromo	ofluorobenzene		98	70-	130						
Toluer	ne-d8		101	1 70-	130						

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 40	Analysis 07/05/201	•	Prep I	Date	Batch 88450			
Param	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)			108-20-3	8260B	ND		400	16	ug/L	1
Ethane	ol			64-17-5	8260B	ND		40000	1300	ug/L	1
3,3-Di	methyl-1-butanol			624-95-3	8260B	ND		4000	40	ug/L	1
Ethyl-t	ert-butyl ether (ETBE)		637-92-3	8260B	ND		4000	8.0	ug/L	1
tert-A	myl alcohol (TAA)			75-85-4	8260B	700	J	4000	270	ug/L	1
tert-Ar	nyi methyl ether (TAM	1E)		994-05-8	8260B	ND		400	8.0	ug/L	1
tert-bu	tyl alcohol (TBA)			75-65-0	8260B	ND		4000	270	ug/L	1
tert-Bu	ityl formate (TBF)			762-75-4	8260B	ND		4000	40	ug/L	1
Surro	gate	Q	Run % Reco								
Bromo	fluorobenzene	_	98	70-	130						
1,2-Di	chloroethane-d4		90	70-	130						
Toluer	ne-d8		101	70-	130						

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis D : 06/30/2012 0	•	Prep Dat 06/28/2012		Batch 88021			
Parame	eter		· · · · · · · · · · · · · · · · · · ·	CAS Number	Analytical Method	Result Q	1	PQL	MDL	Units	Run

PQL	=	Practical	quanti	tation	limit	

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

Description: MW-5

Run

1

Parameter

Date Sampled:06/26/2012 1153 Date Received: 06/27/2012

Prep Method

1,2-Dibromoethane (EDB)

8011

Laboratory ID: NF2/024-004

Matrix: Aqueous

	EDB &	DBCP	by M	icroex	tractio	n	·			
Analytical Method 8011	Dilution 1	Analysis 06/30/2012		Analyst AMB	Prep 06/28/2	Date 012 1647	Batch 88021			
		CAS Number		lytical ethod	Result	Q .	PQL	MDL	Units	Run
		106-93-4		8011	0.86		0.019	0.019	ug/L	1

Acceptance Limits Run 1 Q Surrogate % Recovery

1,1,1,2-Tetrachloroethane 107 57-137

ICP-AES

Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis I 06/28/2012	Analyst CDF	Prep 06/27/2	Date 012 1930	Batch 87912			
Paran	neter			CAS Number	ilytical ethod	Result	Q	PQL	MDL	Units	Run
Lead			7-	439-92-1	6010C	0.031		0.010	0.0019	mg/L	1

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-6

Date Sampled:06/26/2012 1337 Date Received:06/27/2012 Laboratory ID: NF2/024-005

Matrix: Aqueous

		Vo	latile O	rganic (Compound	s by G	C/MS		 		
Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/2012		Prep [Date	Batch 88445			
Paran	neter			CAS Number	Analytical Method	Result	Q .	PQL	MDL	Units	Run
Benze	ene			71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Di	chloroethane			107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylb	enzene			100-41-4	8260B	ND		5.0	1.7	ug/L	1.
Methy	tertiary butyl ether	(MTBE)	1	634-04-4	8260B	ND		5.0	0.40	ug/L	1
Napht	halene			91-20-3	8260B	ND		5.0	1.7	ug/L	1
Tolue	ne			108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylen	es (total)		1	330-20-7	8260B	ND		5.0	1.7	ug/L	1
Surro	gate	Q	Run %								
1,2-Di	chloroethane-d4		98	70-1	30	-					
Bromo	ofluorobenzene		102	70-1	30						
Tolue	ne-d8		93	70-1	30						
		Vo	latile O	rganic (Compound	s by G	C/MS				
Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/2012		Prep l	Date	Batch 88445			
Paran	notor		****	CAS	Analytical	Result	Q	PQL	MDL	Units	· Rur
				Number	Method	ND		10	0.40	ug/L	1
	propyl ether (IPE)			108-20-3	8260B			1000	33		1
Ethan				64-17-5	8260B	ND ND		1000	33 1.0	ug/L ug/L	1
3,3-DI	imethyl-1-butanol			624-95-3	8260B	ND		100	1.0	ug/L	1

Parameter		Nui	mberl	Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)		108-	-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol		64-	-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol		624-	-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)		637-	-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)		75-	-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)		994-	-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)		75-	-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)		762-	-75-4	8260B	ND		100	1.0	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits					. <u> </u>		
Bromofluorobenzene		102	70-130							
1,2-Dichloroethane-d4		98	70-130							
Toluene-d8		93	70-130							

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Analysis Dat 06/30/2012 02	•	Prep 06/28/2	Date 012 1647	Batch 88021			
Param	eter		 CAS ,	Analytical Method	Result	Q	PQL	MDL	Units	Run

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-6

Date Sampled:06/26/2012 1337

Laboratory ID: NF2/024-005 Matrix: Aqueous

Date Received: 06/27/2012

EDB & DBCP by Microextraction											
Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis 06/30/201	•	Prep 06/28/2	Date 012 1647	Batch 88021			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Di	bromoethane (EDB)			106-93-4	8011	ND		0.019	0.019	ug/L	1
Surro	gate	Q	Run ' % Recov							·	
4 4 4 4	O T-4		- 04	,,,	407						

1,1,1,2-Tetrachloroethane

91 57-137

				ICI	P-AES						
Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis D 06/28/2012	-	Prep 06/27/2	Date 012 1930	Batch 87912			
Param	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead			7/	439-92-1	6010C	0.0097	J	0.010	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

 $J = Estimated result < PQL and <math>\geq MDL$

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Description: MW-7

Date Sampled:06/26/2012 1312 Date Received: 06/27/2012

Laboratory ID: NF2/024-006 Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B		alysis Date 05/2012 1617	Analyst AAC	Prep D	ate	Batch 88450			•
Param	neter				ılytical	Result	Q	PQL	MDL	Units	Run
Benze	ne		71-	43-2	8260B	390	,	200	8.0	ug/L	1
1,2-Dic	chloroethane		107-0	06-2	8260B	ND		200	12	ug/L	1
Ethylb	enzene		100~	11-4	8260B	1700		200	68	ug/L	1
Methyl	l tertiary butyl ether	(MTBE)	1634-	04-4	8260B	ND		200	16	ug/L	1
Napht	halene		91-	20-3	8260B	600		200	68	ug/L	1
Tolue	ne		108-	38-3	8260B	3000		200	68	ug/L	1
Xylene	es (total)		1330-	20-7	8260B	7500		200	68	ug/L	1
Surro	gate	Q	Run 1 % Recovery	Acceptance Limits							_
1,2-Di	chloroethane-d4		90	70-130							
Bromo	ofluorobenzene		97	70-130							
Toluer	ne-d8		101	70-130							

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B			alysis Date 05/2012 1617	Analyst AAC	Prep l	Date	Batch 88450			
Param	eter					alytical lethod	Result	Q	PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)			108-2	20-3	8260B	ND		400	16	ug/L	1
Ethano	ol			64-	17-5	8260B	ND		40000	1300	ug/L	1
3,3-Di	methyl-1-butanol			624-9	95-3	8260B	ND		4000	40	ug/L	1
Ethyl-t	ert-butyl ether (ETBE))		637-9	92-3	8260B	ND		4000	8.0	ug/L	1
tert-A	myl alcohol (TAA)			75-	85-4	8260B	390	J	4000	270	ug/L	1
tert-Ar	nyl methyl ether (TAM	IE)		994-(05-8	8260B	ND		400	8.0	ug/L	1
tert-bu	tyl alcohol (TBA)			75-6	65-0	8260B	ND		4000	270	ug/L	1
tert-Bu	ityl formate (TBF)			762-7	75-4	8260B	ND		4000	40	ug/L	1
Surro	gate	(n 1 covery	Acceptance Limits							
Bromo	fluorobenzene		9	97	70-130							
1,2-Di	chloroethane-d4		9	90	70-130							
Toluer	ne-d8		1	01	70-130							

FDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis Date 06/30/2012 03	•	Prep I 06/28/2	Date 012 1647	Batch 88021			
Param	eter			CAS A	nalytical Method	Result	Q	PQL	MDL	Units	Run

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

J = Estimated result < PQL and ≥ MDL

* = Reportable result (only when report all runs)

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-7

Date Sampled:06/26/2012 1312 Date Received: 06/27/2012 Laboratory ID: NF2/024-006

Matrix: Aqueous

EDB 8	& DBCP	by Micr	oextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis I 06/30/2012	•	Prep 06/28/2		Batch 88021			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Di	bromoethane (EDB	3)		106-93-4	8011	0.063	Р	0.020	0.020	ug/L	1

Surrogate Run 1 Acceptance Q % Recovery Limits

1,1,1,2-Tetrachloroethane 105 57-137

ICP-AES

				IGF	ALS						
Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis D 06/28/2012	-	•	Date 012 1930	Batch 87912			
Param	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead			7-	439-92-1	6010C	0.025		0.010	0.0019	mg/L	1

E = Quantitation of compound exceeded the calibration range P = The RPD between two GC columns exceeds 40%

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-8

Date Sampled:06/26/2012 1244 Date Received: 06/27/2012

Laboratory ID: NF2/024-00/

Matrix: Aqueous

		Vo	latile O	rganic	Com	pounds	s by G	C/MS	3			
Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysi 07/05/20		Analyst AAC	Prep	Date	Batch 88444			
Param	neter			CAS Number		llytical ethod	Result	Q	PQL	MDL	Units	Run
Benze	ne			71-43-2		8260B	ND		5.0	0.20	ug/L	1
1,2-Di	chloroethane			107-06-2		8260B	ND		5.0	0.30	ug/L	1
Ethylk	enzene			100-41-4		8260B	6.9		5.0	1.7	ug/L	1
Methy	l tertiary butyl ether	(MTBE)	1	634-04-4		8260B	ND		5.0	0.40	ug/L	1
Napht	halene			91-20-3		8260B	20		5.0	1.7	ug/L	1
Toluer	ne			108-88-3		8260B	ND		5.0	1.7	ug/L	1
Xylen	es (total)		1	330-20-7		8260B	29		5.0	1.7	ug/L	1
Surro	gate	Q	Run ' % Recov		ptance nits							
1,2-Di	chloroethane-d4		104	70	-130							
Bromo	ofluorobenzene		104	70	-130							
Toluer	ne-d8		109	70	-130							

Volatile Organic Compounds by GC/MS

		10	iuliic O	igamo oom	pourido	by Comine	·	
Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	
1	5030B	8260B	1	07/05/2012 1947	AAC		88444	
2	5030B	8260B	1	07/06/2012 0957	AAC		88561	

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	. ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	. 8260B	41	J	100	6.7	ug/L	1 .
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	130		100	6.7	ug/L	2
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	· ug/L	1

Surrogate	Q	Run 1 A % Recovery	Acceptance Limits	Q	Run 2 A	Cceptance Limits
Bromofluorobenzene		104	70-130		103	70-130
1,2-Dichloroethane-d4		104	70-130		98	70-130
Toluene-d8		109	70-130		102	70-130

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-8

Date Sampled:06/26/2012 1244 Date Received: 06/27/2012

Laboratory ID: NF2/024-00/

Matrix: Aqueous

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst		Batch
1	8011	8011	1	06/30/2012 0330	AMB	06/28/2012 1647	88021

Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)		106-93-4	8011	ND		0.021	0.021	ug/L	1
Surrogate	Q	Run 1 Accept							

1,1,1,2-Tetrachloroethane 57-137

ICP-AES

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	3005A	6010C	1	06/28/2012 1653	CDF	06/27/2012 1930	87912		
								 	 -
				CAR A	1-411				

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Lead	7439-92-1	6010C	0.020		0.010	0.0019	mg/L	1	

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-10

Date Sampled:06/26/2012 1254 Date Received: 06/27/2012

Laboratory ID: NF2/024-008

Matrix: Aqueous

Volatile	Organic	Com	pounds	by GC	:/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/2012	•	Prep Date	Batch 88445			
Param	eter			CAS Number	Analytical Method	Result Q	PQL	MDL	Units	Run
Benzei	ne			71-43-2	8260B	ND	5.0	0.20	ug/L	1
1,2-Dic	chloroethane		1	07-06-2	8260B	ND	5.0	0.30	ug/L	1
Ethylbe	enzene		1	00-41-4	8260B	ND	5.0	1.7	ug/L	1
Methyl	tertiary butyl ether	(MTBE)	16	34-04-4	8260B	ND	5.0	0.40	ug/L	1
Naphth	nalene			91-20-3	8260B	ND	5.0	1.7	ug/L	1
Toluen	ie		1	08-88-3	8260B	ND	5.0	1.7	ug/L	1
Xylene	es (total)		13	330-20-7	8260B	ND	5.0	1.7	ug/L	1
Surrog	gate	Q	Run 1 % Recov	•						
1,2-Dic	chloroethane-d4		98	70-1	130					
Bromo	fluorobenzene		103	70-1	130					
Toluen	ie-d8		92	70-1	130					

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/201	-	Prep Dat	Batch 88445			
Param	eter			CAS Number	Analytical Method	Result Q	PQL	MDL	Units	Run
Diisopi	ropyl ether (IPE)			108-20-3	8260B	ND	10	0.40	ug/L	1
Ethano	ol			64-17-5	8260B	ND	1000	33	ug/L	1
3,3-Dir	nethyl-1-butanol		(624-95-3	8260B	ND	100	1.0	ug/L	1
Ethyl-to	ert-butyl ether (ETBI	≣)	(637-92-3	8260B	ND	100	0.20	ug/L	1
tert-An	nyl alcohol (TAA)			75-85-4	8260B	ND	100	6.7	ug/L	1
tert-An	nyl methyl ether (TA	ME)	9	994-05-8	8260B	ND	10	0.20	ug/L	1
tert-bu	tyl alcohol (TBA)			75-65-0	8260B	ND	100	6.7	ug/L	1
tert-Bu	tyl formate (TBF)		-	762-75-4	8260B	ND	100	1.0	ug/L	1
Surrog	gate	Q	Run 1 % Recov							
Bromo	fluorobenzene		103	70-	130					
1,2-Dic	chloroethane-d4		98	70-	130					
Toluen	ie-d8		92	70-	130					

FDR & DRCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Analysis Da 06/30/2012 0	-	Prep 06/28/2	Date 012 1647	Batch 88021			
Paran	neter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-10

Date Sampled:06/26/2012 1254 Date Received: 06/27/2012

Laboratory ID: NF2/024-008

Matrix: Aqueous

EDB & DBCP by Microextraction											
Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis 06/30/2013	•	Prep 06/28/2	Date 012 1647	Batch 88021			
Param	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dil	bromoethane (EDB)			106-93-4	8011	ND		0.019	0.019	ug/L	1
Surro	gate	Q	Run % Reco								
1,1,1,2	2-Tetrachloroethane		85	57-1	137						,

ICP-AES											
Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution Analysi 1 06/28/20	_	Prep 06/27/2	Date 012 1930	Batch 87912			,	
Param	neter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Lead		· · · · · · · · · · · · · · · · · · ·	7439-92-1	6010C	0.011	(0.010	0.0019	mg/L	1	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

 $J = Estimated result < PQL and <math>\geq MDL$

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Description: MW-11

Date Sampled:06/26/2012 1344 Date Received: 06/27/2012

Laboratory ID: NF2/024-009 Matrix: Aqueous

Volatile Organic Compounds by GC/MS Analytical Method **Analysis Date** Analyst Prep Date Batch **Prep Method** Dilution Run 5030B 8260B 07/05/2012 1229 AAC 88445 1 CAS **Analytical** Result Q PQL MDL Units Run **Parameter** Number Method ND 5.0 0.20 ug/L 1 71-43-2 8260B Renzene 5.0 0.30 ug/L 1 ND 1,2-Dichloroethane 107-06-2 8260B ND 5.0 1.7 ug/L 1 8260B Ethylbenzene 100-41-4 5.0 0.40 ug/L 1 Methyl tertiary butyl ether (MTBE) 1634-04-4 8260B ND ND 5.0 1.7 ug/L 1 8260B Naphthalene 91-20-3 5.0 ug/L 1 1.7 8260B ND Toluene 108-88-3 ug/L ND 5.0 1.7 Xylenes (total) 1330-20-7 8260B Run 1 **Acceptance** Surrogate % Recovery Limits 1,2-Dichloroethane-d4 98 70-130 Bromofluorobenzene 70-130 100 70-130 Toluene-d8 92

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/201	•	Prep [Date	Batch 88445			
Param	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL.	Units	Run
Diisopi	ropyl ether (IPE)		1	08-20-3	8260B	ND		10	0.40	ug/L	1
Ethano	ol			64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dir	nethyl-1-butanol		6	24-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-t	ert-butyl ether (ETBI	≣)	6	37-92-3	8260B	ND		100	0.20	ug/L	1
tert-An	nyl alcohol (TAA)	·		75-85-4	8260B	ND		100	6.7	ug/L	1
	nyl methyl ether (TAI	ME)	9	94-05-8	8260B	ND		10	0.20	ug/L	1
tert-bu	tyl alcohol (TBA)	•		75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Bu	ityl formate (TBF)		7	62-75-4	8260B	ND		100	1.0	ug/L	1
Surro	gate	Q	Run 1 % Recove					<u>-</u>			
Bromo	fluorobenzene	,	100	70-	130						
1,2-Did	chloroethane-d4		98	70-	130						
Toluer	ne-d8		92	70-	130						

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis [06/30/2012	Analyst AMB	Prep 1 06/28/2	Date 012 1647	Batch 88021			
Parame	eter			CAS Number	lytical ethod	Result	Q	PQL	MDL	Units	Run

PQL =	Practical	quantitation	limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

H = Out of holding time N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-11

1,1,1,2-Tetrachloroethane

Lead

Dana Made a d

Date Sampled:06/26/2012 1344 Date Received: 06/27/2012

Laboratory ID: NF2/024-009 Matrix: Aqueous

EDB	&	DB	CP	by	Microextractio	n

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis I 06/30/2012	•	Prep 06/28/2	Date 012 1647	Batch 88021			
Parar	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-D	bromoethane (EDB)			106-93-4	8011	ND		0.020	0.020	ug/L	1
Surro	gate	Q	Run % Reco								

ICP-AES

57-137

90

7439-92-1

Run 1	3005A	6010C	Dilution 1	06/28/2012 1	•	06/27/2012 1930	87912			
Param	eter			CAS Number	Analytical Method	Result Q	PQL	MDL	Units	Run

6010C

0.019

0.010

0.0019

1

mg/L

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-14

Date Sampled:06/26/2012 1045 Date Received: 06/27/2012

Laboratory ID: NF2/024-010

Matrix: Aqueous

Volatile Organic Compounds by GC/MS **Prep Date** Batch **Prep Method Analytical Method** Dilution **Analysis Date** Analyst Run 88450 5030B 8260B 07/05/2012 1737 AAC 1 CAS **Analytical** MDL Units PQL Run Q **Parameter** Result Number Method ug/L 5.0 0.20 1 8260B 13 Benzene 71-43-2 1,2-Dichloroethane 8260B ND 5.0 0.30 ug/L 1 107-06-2 1.7 ug/L 1 Ethylbenzene 8260B 73 5.0 100-41-4 ND 5.0 0.40 ug/L Methyl tertiary butyl ether (MTBE) 1634-04-4 8260B 1.7 ug/L 1 5.0 Naphthalene 91-20-3 8260B 46 ua/L 1 16 5.0 1.7 Toluene 108-88-3 8260B **Xylenes (total)** 1330-20-7 8260B 49 5.0 1.7 ug/L 1 Run 1 Acceptance Surrogate Q % Recovery Limits 1,2-Dichloroethane-d4 70-130 91 Bromofluorobenzene 98 70-130 Toluene-d8 70-130 102

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/201		alyst Prep AC	Date	Batch 88450			
Param	neter			CAS Number	Analytic Metho	D 14	Q	PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)			108-20-3	826	DB ND		10	0.40	ug/L	1
Ethano	ol			64-17-5	826	DB ND		1000	33	ug/L	1
3,3-Di	methyl-1-butanol			624-95-3	826	DB ND		100	1.0	ug/L	1
Ethyl-t	ert-butyl ether (ETBE))		637-92-3	826	DB ND		100	0.20	ug/L	1
tert-A	myl alcohol (TAA)			75-85-4	826	OB 39	J	100	6.7	ug/L	1
tert-Ar	nyl methyl ether (TAM	E)		994-05-8	826	DB ND		10	0.20	ug/L	1
tert-bu	utyl alcohol (TBA)			75-65-0	826	DB 25	J	100	6.7	ug/L	1
tert-Bu	ityl formate (TBF)			762-75-4	826	DB ND		100	1.0	ug/L	1
Surro	gate	Q	Run % Reco								
Bromo	fluorobenzene		98	70-	130						
1,2-Di	chloroethane-d4		91	70-	130						
Toluer	ne-d8		102	70-	130						

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis D 06/30/2012	•	Prep D 06/28/20		Batch 88021			
Parame	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run

PQL = Practical q	uantitation limit
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B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 40% * = Reportable result (only when report all runs)

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: MW-14

Date Sampled:06/26/2012 1045 Date Received: 06/27/2012

Laboratory ID: NF2/024-010

Matrix: Aqueous

	EDB & DBCP by Microextraction													
Run 1	Prep Method Analytical Method 8011 8011		Dilution Analysis Date 1 06/30/2012 0434		•	Prep Date 06/28/2012 1647		Batch 88021						
Param	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run			
1,2-Dii	bromoethane (EDB)			106-93-4	8011	ND		0.019	0.019	ug/L	1			
Surro	gate	Q	Run ' % Recov											
1,1,1,2	2-Tetrachloroethane		94	57-1	37									

Run 1	3005A 6010C 1 06/28/2012 1712 CDF 06/27/2012 1930		Batch 87912							
Paran	neter		CAS Number	lytical ethod	Result	Q	PQL	MDL	Units	Run
Lead		74	439 - 92-1	6010C	0.0030	J	0.010	0.0019	mg/L	1

ICP-AES

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and \geq MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Description: MW-15

Date Sampled:06/26/2012 1037 Date Received: 06/27/2012

Laboratory ID: NF2/024-011 Matrix: Aqueous

Run 1	Prep Method 5030B	Analytical Method 8260B		Analysis I 07/05/2012		Prep		Batch 88450			
Parame	eter			CAS	Analytical	Result	Q	PQL	MDL.	Units	Run
Benzer		· · · · · · · · · · · · · · · · · · ·		Number 71-43-2	Method 8260B	92		25	1.0	ug/L	1
	hloroethane		4	07-06-2	8260B	ND		25	1.5	ug/L	1
	enzene			00-41-4	8260B	140		25	8.5	ug/L	1
•	tertiary butyl ether (M	MTRE)		34-04-4	8260B	ND		25	2.0	ug/L	1
Naphth			• • • • • • • • • • • • • • • • • • • •	91-20-3	8260B	67		25	8.5	ug/L	1
Toluen			1	08-88-3	8260B	280		25	8.5	ug/L	1
	es (total)			330-20-7	8260B	380		25	8.5	ug/L	1
Surrog	•	•	Run 1	Accept	ance						
		Q	% Recov					···			
•	chloroethane-d4		87	70-1							
	fluorobenzene		96 400	70-1							
Toluen	c-uo		100	70-1	30						
		_		_	_			•			
D	Duon Moth - d		**		Compound	s by G Prep		Batch			
Run 1	Prep Method 5030B	Analytical Method 8260B	5	Analysis 07/05/2012		r rep		88450	_		
Dorom	otor			CAS	Analytical	Posult	0	P ∩I	MDI	Unite	Run
				Number	Method	Result	Q	PQL 50	MDL	Units	
Diisopr	ropyl ether (IPE)		·······	Number 108-20-3	Method 8260B	ND	Q	50	2.0	ug/L	1
Diisopr Ethano	ropyl ether (IPE)			Number 108-20-3 64-17-5	Method 8260B 8260B	ND ND	Q	50 5000	2.0 170	ug/L ug/L	1
Diisopr Ethano 3,3-Din	ropyl ether (IPE) ol nethyl-1-butanol	1	(Number 108-20-3 64-17-5 624-95-3	Method 8260B 8260B 8260B	ND ND ND	Q	50 5000 500	2.0 170 5.0	ug/L ug/L ug/L	1 1 1
Diisopr Ethano 3,3-Din Ethyl-te	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE)	(Number 108-20-3 64-17-5 624-95-3 637-92-3	8260B 8260B 8260B 8260B	ND ND ND ND		50 5000 500 500	2.0 170 5.0 1.0	ug/L ug/L ug/L ug/L	1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-A n	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA)		(Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4	8260B 8260B 8260B 8260B 8260B	ND ND ND ND 140	Q	50 5000 500 500 500	2.0 170 5.0 1.0 34	ug/L ug/L ug/L ug/L u g/L	1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-A n tert-An	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAM		(Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8	8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 140		50 5000 500 500	2.0 170 5.0 1.0	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-An tert-An	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE) nyl alcohol (TAA) nyl methyl ether (TAM tyl alcohol (TBA)		9	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND		50 5000 500 500 500 500	2.0 170 5.0 1.0 34 1.0	ug/L ug/L ug/L ug/L u g/L	1 1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-An tert-An	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAM		9	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 140 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-A n tert-Arr tert-but tert-Bu	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE) myl alcohol (TAA) nyl methyl ether (TAM tyl alcohol (TBA) tyl formate (TBF)		9	Number 108-20-3 64-17-5 524-95-3 537-92-3 75-85-4 994-05-8 75-65-0 762-75-4	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 140 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-An tert-but tert-But tert-Bu	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE) myl alcohol (TAA) nyl methyl ether (TAM tyl alcohol (TBA) tyl formate (TBF)	1 €)	9 9 Run 1	Number 108-20-3 64-17-5 524-95-3 537-92-3 75-85-4 994-05-8 75-65-0 762-75-4	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 140 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-An tert-An tert-but tert-Bu Surrog Bromot 1,2-Dio	ropyl ether (IPE) ol methyl-1-butanol ert-butyl ether (ETBE; myl alcohol (TAA) nyl methyl ether (TAM tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4	1 €)	Run 1 % Recov 96 87	Number 108-20-3 64-17-5 524-95-3 537-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accept rery Limi	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 140 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Ethano 3,3-Din Ethyl-te tert-An tert-Ar tert-but tert-Bu Surrog	ropyl ether (IPE) ol methyl-1-butanol ert-butyl ether (ETBE; myl alcohol (TAA) nyl methyl ether (TAM tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4	1 €)	Run 1 % Recov	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accept ery Limi	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 140 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-An tert-An tert-but tert-Bu Surrog Bromot 1,2-Dio	ropyl ether (IPE) ol methyl-1-butanol ert-butyl ether (ETBE; myl alcohol (TAA) nyl methyl ether (TAM tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4	1 €)	Run 1 % Recov 96 87 100	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accept Accept To-1 70-1	Method 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND 140 ND ND ND	J	50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-An tert-An tert-but tert-Bu Surrog Bromot 1,2-Dio	ropyl ether (IPE) ol methyl-1-butanol ert-butyl ether (ETBE; myl alcohol (TAA) nyl methyl ether (TAM tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4	1 €)	Run 1 % Recov 96 87 100	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accept Accept To-1 70-1	## Method 8260B 826	ND ND ND 140 ND ND ND	J	50 5000 500 500 500 500 500	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Diisopr Ethano 3,3-Din Ethyl-te tert-An tert-An tert-but tert-Bu Surrog Bromo 1,2-Dio Toluen	ropyl ether (IPE) ol methyl-1-butanol ert-butyl ether (ETBE myl alcohol (TAA) nyl methyl ether (TAM tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4 ne-d8	Analytical Method	Run 1 % Recov 96 87 100 EDB &	Number 108-20-3 64-17-5 524-95-3 537-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accept rery Limi 70-1 70-1 70-1 DBCP Analysis	## Method 8260B 826	ND ND ND 140 ND ND ND	J On Date	50 5000 500 500 500 500 500	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1

PQL = Practical quantitation limit
ND = Not detected at or above the

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-15

Date Sampled:06/26/2012 1037

Date Received: 06/27/2012

Laboratory ID: NF2/024-011

Matrix: Aqueous

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis Da 06/30/2012 0	•	Prep 06/28/2	Date 012 1647	Batch 88021			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Di	bromoethane (EDB)			106-93-4	8011	0.050		0.020	0.020	ug/L	1
Surro	gate	Q	Run 1 % Recov								

1,1,1,2-Tetrachloroethane

111 57-137

ICP-AE

Run 1	Prep Method Analytical Method Diluti 3005A 6010C 1		Dilution 1	n Analysis Date 06/28/2012 1716		Analyst CDF			Batch 87912			
Paran	neter			CAS Number		llytical ethod	Result	Q	PQL	MDL	Units	Run
Lead			7	439-92-1		6010C	0.0086	J (0.010	0.0019	mg/L	1

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-16

Date Sampled:06/26/2012 1058 Date Received: 06/27/2012

Laboratory ID: NF2/024-012

Matrix: Aqueous

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 5	Analysis D 07/05/2012	ate Analyst 1431 AAC	Prep	Date	Batch 88450			
Darama	otor	·		CAS	Analytical	Result	Q	PQL	MDL	Units	Run
Parameter				Number	Method						1
Benzene 1.2 Displace there				71-43-2	8260B	180		25 25	1.0 1.5	ug/L	1
1,2-Dichloroethane			•	07-06-2	8260B	ND		25 25	8.5	ug/L	1
Ethylbenzene Mothyl tertians butsl other (MTRE)			100-41-4 1634-04-4		8260B	83		25 25	2.0	ug/L ug/L	1
Methyl tertiary butyl ether (MTBE)					8260B	5.4	J	25 25	2.0 8.5	ug/∟ ug/L	1
Naphthalene Taluana			91-20-3		8260B	39 500			8.5		1
Toluene			108-88-3		8260B	580		25 25	8.5	ug/L ug/L	1
Xylene	s (total)			330-20-7	8260B	380		25	6.5	ug/L	,
Surrog	ate	Q	Run 1 % Recov								
1,2-Dicl	hloroethane-d4		90	70-13	30						
Bromof	fluorobenzene		98	70-13	30						
Toluene-d8			101	70-13	30						
Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 5	Analysis E 07/05/2012	-	Prep	————	Batch 88450			
Parame	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
		,		CAS Number 08-20-3	Analytical Method 8260B	Result	Q	PQL 50	MDL 2.0	Units ug/L	Run 1
Diisopro	opyl ether (IPE)		1	Number	Method		Q				
Diisopro Ethanol	opyl ether (IPE)		1	Number 08-20-3	Method 8260B	ND	Q	50	2.0	ug/L	1
Diisopro Ethanol 3,3-Dim	opyl ether (IPE) il nethyl-1-butanol	E)	1	Number 08-20-3 64-17-5	Method 8260B 8260B	ND ND	Q	50 5000	2.0 170	ug/L ug/L	1
Diisopro Ethanol 3,3-Dim Ethyl-te	opyl ether (IPE) il nethyl-1-butanol ert-butyl ether (ETBE	E)	1	Number 08-20-3 64-17-5 624-95-3	8260B 8260B 8260B	ND ND ND	Q	50 5000 500	2.0 170 5.0	ug/L ug/L ug/L	1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-A m	opyl ether (IPE) il nethyl-1-butanol		1 6 6	Number 08-20-3 64-17-5 624-95-3 637-92-3	8260B 8260B 8260B 8260B 8260B	ND ND ND ND		50 5000 500 500	2.0 170 5.0 1.0	ug/L ug/L ug/L ug/L	1 1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am	opyl ether (IPE) il nethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA)		1 6 6	Number 08-20-3 64-17-5 624-95-3 637-92-3 75-85-4	8260B 8260B 8260B 8260B 8260B	ND ND ND ND		50 5000 500 500 500	2.0 170 5.0 1.0 34	ug/L ug/L ug/L ug/L u g/L	1 1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAN		1 6 6	Number 08-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8	8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 380 ND		50 5000 500 500 500 500	2.0 170 5.0 1.0 34 1.0	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am tert-but tert-But	ropyl ether (IPE) Il nethyl-1-butanol Inethyl-1-butanol Inethyl ether (ETBE Inethyl alcohol (TAA) Inyl methyl ether (TAA) Ityl alcohol (TBA) Ityl formate (TBF)	ME)	1 6 9 7 Run 1	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accepta	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 380 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am tert-but tert-But	ropyl ether (IPE) olinethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAN tyl alcohol (TBA) tyl formate (TBF)		1 6 9 7 Run 1 % Recov	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accepta ery Limit	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 380 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am tert-but tert-But Surrog Bromof	ropyl ether (IPE) il nethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAN tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene	ME)	1 6 9 7 Run 1 % Recov	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accepta ery Limit	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 380 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am tert-but tert-But tert-But Tert-But 1,2-Dic	ropyl ether (IPE) olinethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAN tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4	ME)	1 6 9 7 Run 1 % Recov	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accepta ery Limit	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND ND 380 ND		50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am tert-but tert-But tert-But Surrog Bromof 1,2-Dic	ropyl ether (IPE) olinethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAN tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4	ME)	98 90 101	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accepta ery Limit 70-13 70-13	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND 380 ND ND ND	J	50 5000 500 500 500 50 50	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am tert-But tert-But Surrog Bromof 1,2-Dicl Toluene	ropyl ether (IPE) ol nethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAN tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4 e-d8	ΛE)	98 90 101	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0 762-75-4 Accepta ery Limit 70-13 70-13	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND 380 ND ND ND	J	50 5000 500 500 500 500 500	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1 1
Diisopro Ethanol 3,3-Dim Ethyl-te tert-Am tert-Am tert-but tert-But Surrog Bromof 1,2-Dic	ropyl ether (IPE) olinethyl-1-butanol ert-butyl ether (ETBE nyl alcohol (TAA) nyl methyl ether (TAN tyl alcohol (TBA) tyl formate (TBF) gate fluorobenzene chloroethane-d4	ME)	98 90 101	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 1994-05-8 75-65-0 762-75-4 Accepta ro-13 70-13 70-13	8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B 8260B	ND ND ND 380 ND ND ND	J	50 5000 500 500 500 500 500 500	2.0 170 5.0 1.0 34 1.0 34	ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1 1

PQL = Practical quantitation limit

ND = Not detected at or above the MDL

E = Quantitation of compound exceeded the calibration range

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" $\,$

B = Detected in the method blank

J = Estimated result < PQL and ≥ MDL

Description: MW-16

Date Sampled:06/26/2012 1058

Laboratory ID: NF2/024-012 Matrix: Aqueous

Date Received: 06/27/2012

EDB & DBCP by Microextraction													
Run 1	Prep Method 8011	Analytical M	lethod 8011	Dilution 1		sis Date 2012 0559	Analyst AMB	Prep 06/28/2		Batch 647 88021			
Paran	neter		, ,		CAS Numbe		ialytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Di	bromoethane (EDB)		·	1	106-93-4	,	8011	0.59		0.019	0.019	ug/L	1
Surro	gate		Q	Run 1 % Recov		eptance .imits	_						
1.1.1.	2-Tetrachloroethane			100	į	57-137							

				101	-ALU						
Run	Prep Method	Analytical Method	Dilution	Analysis D	ate Analyst	Prep	Date	Batch			
1	3005A	6010C	1	06/28/2012	1720 CDF	06/27/2012 1930		87912			
				CAS	Analytical					1114-	
Paran	neter			Number	Method	Result	Q	PQL	MDL	Units	Run
Lead			7	439-92-1	6010C	0.016		0.010	0.0019	mg/L	1

ICP-AFS

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

Description: MW-17

Date Sampled:06/26/2012 1111
Date Received: 06/27/2012

Laboratory ID: NF2/024-013

Matrix: Aqueous

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 20	Analysis Date 07/05/2012 1524	Analyst AAC	Prep Da	te Batch 88450			
				CAS Ana	alytical	D	no.	MDL	Units	Run
aran					lethod	Result C				
Benze				71-43-2	8260B	880	100	4.0 6.0	ug/L	1 1
•	chloroethane			107-06-2	8260B	ND 4500	100 100	34	ug/L ug/ L	1
•	oenzene	(MTDC)		100-41-4	8260B 8260B	1500 20 J		8.0	ug/L ug/L	1
-	'l tertiary butyl ether	(MIBE)	7	634-04-4 91-20-3	8260B	980	100	34	ug/L ug/L	1
vapni Tolue	halene			91-20-3 108-88-3	8260B	1500	100	34	ug/L ug/L	1
	es (total)			330-20-7	8260B	5700	100	34	ug/L	1
Surro			Run	1 Acceptance	0_00_				-	
		Q	% Recov				· ·			
•	chloroethane-d4 ofluorobenzene		91 98	70-130 70-130						
Bromo Toluei			101	70-130 70-130						
		Vo	latile O	rganic Com	pounds	s by GC	/MS			
Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 20	Analysis Date 07/05/2012 1524	Analyst AAC	Prep Da	te Batch 88450			
				CAS An	alytical		<u>.</u>		······································	
aran	neter				lethod	Result (Q PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)			108-20-3	8260B	ND	200	8.0	ug/L	1
Ethan	ol			64-17-5	8260B	ND	20000	660	ug/L	1
3,3-Di	methyl-1-butanol			624-95-3	8260B	ND	2000	20	ug/L	1
•	tert-butyl ether (ETBE	Ξ)		637-92-3	8260B	ND	2000	4.0	ug/L	1
	myl alcohol (TAA)			75-85-4	8260B	2300	2000	130	ug/L	1
	myl methyl ether (TAN	ΛE)		994-05-8	8260B	ND	200	4.0	ug/L	1
	ıtyl alcohol (TBA)			75-65-0	8260B	ND	2000	130	ug/L	1
tert-B	utyl formate (TBF)			762-75-4	8260B	ND	2000	20	ug/L	1
Surro	gate	Q	Run % Reco			<u></u>				
Bromo	ofluorobenzene	•	98	70-130						
•	chloroethane-d4		91	70-130						
Tolue	ne-d8		101	70-130						
			EDD 9		liorooy	traction	•			
	Dron Mathad	Amplitation Hathard		Applysic Date		Prep Da			<u> </u>	
Run 2	Prep Method 8011	Analytical Method 8011	5	Analysis Date 07/02/2012 1332	Anaiyst 2 AMB	06/28/20°				
					alytical Method	Result	Q PQL	MDL	Units	Run
Parar				Number N		ARSUIL '	- FWL	IVILLE	J.1112	ILWII

ND = Not detected at or above the MDL.

PQL = Practical quantitation limit

H = Out of holding time

N = Recovery is out of criteria

E = Quantitation of compound exceeded the calibration range

P = The RPD between two GC columns exceeds 40%

* = Reportable result (only when report all runs)

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

B = Detected in the method blank

J = Estimated result < PQL and ≥ MDL

Description: MW-17

Date Sampled:06/26/2012 1111

Date Received: 06/27/2012

Laboratory ID: NF2/024-013

Matrix: Aqueous

		EDB &	DBCP	by Microex	tractio	<u>n</u>		·		
Prep Method 8011	Analytical Method 8011	Dilution 5	•	•	•		Batch 88021			
eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
bromoethane (EDB)		•	106-93-4	8011	2.8		0.098	0.098	ug/L	2
gate	Q									
?-Tetrachloroethane		86	57-1	37						
	8011 eter bromoethane (EDB)	8011 8011 neter bromoethane (EDB) gate Q	Prep Method Analytical Method Dilution 8011 8011 5 seter bromoethane (EDB) gate Q % Recovery	Prep Method Analytical Method Dilution Analysis 8011 8011 5 07/02/2012 CAS Number bromoethane (EDB) 106-93-4 Run 2 Accept gate Q % Recovery Limi	Prep Method Analytical Method Bilution Analysis Date Analyst 8011 5 07/02/2012 1332 AMB CAS Analytical Number Method Promoethane (EDB) 106-93-4 8011 Run 2 Acceptance gate Q % Recovery Limits	Prep Method Analytical Method Dilution Analysis Date Analyst Prep I 8011 8011 5 07/02/2012 1332 AMB 06/28/20 CAS Analytical Number Method Result bromoethane (EDB) 106-93-4 8011 2.8 Run 2 Acceptance gate Q % Recovery Limits	Result R	Prep Method 8011 Bollution Analysis Date Analyst Prep Date 8021 CAS Analytical Result Q PQL bromoethane (EDB) 106-93-4 8011 2.8 0.098 Run 2 Acceptance gate Q % Recovery Limits	Prep Method 8011 8011 5 07/02/2012 1332 AMB 06/28/2012 1647 88021 CAS Analytical Number Method Result Q PQL MDL 106-93-4 8011 2.8 0.098 0.098 Run 2 Acceptance gate Q % Recovery Limits	Prep Method Analytical Method 8011 5 07/02/2012 1332 AMB 06/28/2012 1647 88021 CAS Analytical Number Method Result Q PQL MDL Units bromoethane (EDB) 106-93-4 8011 2.8 0.098 0.098 ug/L Run 2 Acceptance gate Q % Recovery Limits

IC	P-A	\ES
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Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis 06/28/2012		Analyst CDF	06/27/2	012 1930	87912	_		
Param	neter			CAS Number	Analy Met	ytical thod	Result	Q	PQL	MDL	Units	Run
Load			7	A30_02_1	81	0100	0.035		0.010	0.0019	ma/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

 $J = Estimated result < PQL and <math>\geq MDL$

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: MW-18

Date Sampled:06/26/2012 1322 Date Received: 06/27/2012 Laboratory ID: NFZ/024-014

Matrix: Aqueous

Volatile Organic Compounds by GC/MS												
lethod 5030B	Analytical	Method 8260B	Dilution 1			Analyst AAC	Prep I	Date	Batch 88445			
				CAS Number		•	Result	Q	PQL	MDL	Units	Run
				71-43-2		8260B	ND		5.0	0.20	ug/L	1.
ane			•	107-06-2	;	8260B	ND		5.0	0.30	ug/L	1
			•	100-41-4	1	8260B	ND		5.0	1.7	ug/L	1
outyl ether (MTBE)		16	34-04-4	i	8260B	ND		5.0	0.40	ug/L	1
				91-20-3		8260B	ND		5.0	1.7	ug/L	1
			•	108-88-3		8260B	ND		5.0	1.7	ug/L	1
			1;	330-20-7	;	8260B	14		5.0	1.7	ug/L	1
		Q										
ane-d4			99	70-	130							
nzene			103	70-	130							
			92	70-	130							
	ane outyl ether (ane outyl ether (MTBE) ane-d4	ane Q ane-d4	ane outyl ether (MTBE) 10 Run 1 Q % Recoverage ane-d4 page 103	CAS Number 71-43-2 107-06-2 100-41-4 104-04-4 91-20-3 108-88-3 130-20-7 Run 1 Accep Q % Recovery Lim ane-d4 99 70-120-9 103 70-	CAS Analysis Date 1		Prep	Prep Date South	Prep Date Batch 8260B	Number Method South So	

Volatile	Organic	Compounds	s by GC/MS
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Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/201	-	Prep I	Date	Batch 88445			
Param	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)			108-20-3	8260B	ND		10	0.40	ug/L	1
Ethano	ol			64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Di	methyl-1-butanol			624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-t	ert-butyl ether (ETBE)		(637-92-3	8260B	ND		100	0.20	ug/L	1
tert-An	nyl alcohol (TAA)			75-85-4	8260B	ND		100	6.7	.ug/L	1
tert-An	nyl methyl ether (TAM	E)		994-05-8	8260B	ND		10	0.20	ug/L	1
tert-bu	tyl alcohol (TBA)			75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Bu	ityl formate (TBF)			762-75-4	8260B	ND		100	1.0	ug/L	1
Surro	gate	. Q	Run ' % Reco								
Bromo	fluorobenzene		103	70-	130						
1,2-Di	chloroethane-d4		99	70-	130						
Toluer	ne-d8		92	70-	130						

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis Date 06/30/2012 064	•	Prep Date 06/28/2012 1647	Batch 88021			
Parame	eter				nalytical Method	Result Q	PQL	MDL	Units	Run

PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	H = Out of holding time
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%	N = Recovery is out of criteria
Where applicable, all soil sample analysis are rep	orted on a dry weight basis unless flagged with a "W"	* = Reportable result (only when report all runs)	

Description: MW-18

Date Sampled:06/26/2012 1322

Date Received: 06/27/2012

Laboratory ID: NF2/024-014

Matrix: Aqueous

EDB & DBCP by Microextraction

Run Prep Method 1 8011		Analytical Method 8011	• • • • • • • • • • • • • • • • • • • •	Analysis I 06/30/2012	•	Prep D 06/28/20		Batch 88021			
Param	ieter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dil	bromoethane (EDB)			106-93-4	8011	ND		0.020	0.020	ug/L	1

Run 1 **Acceptance** % Recovery Limits

1,1,1,2-Tetrachloroethane

Surrogate

57-137 83

ICP-AES

Run 1	Prep Method 3005A	•	Analysis Date A 06/28/2012 1727		Analyst CDF	Prep Date 06/27/2012 1930		Batch 87912				
Param	ieter			CAS Number		lytical ethod	Result	Q	PQL	MDL	Units	Run
l ead			7,	439-92-1		6010C	0.011		0.010	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: TW-1

Bromofluorobenzene

Toluene-d8

Date Sampled:06/26/2012 1429

Date Received: 06/27/2012

Laboratory ID: NF2/024-015

Matrix: Aqueous

Volatile Organic Compounds by GC/MS Analytical Method Dilution **Analysis Date** Analyst **Prep Date Batch** Run **Prep Method** 88445 07/05/2012 1319 AAC 1 5030B 8260B CAS **Analytical PQL** MDL Units **Parameter** Result Run Number Method 5.0 0.20 ug/L 1 Benzene 71-43-2 8260B ND 1,2-Dichloroethane 107-06-2 8260B ND 5.0 0.30 ug/L 1 5.0 1.7 ug/L ND 1 Ethylbenzene 100-41-4 8260B 5.0 0.40 ug/L 1 ND Methyl tertiary butyl ether (MTBE) 8260B 1634-04-4 5.0 ug/L 1 Naphthalene 91-20-3 8260B ND 1.7 ND 5.0 1.7 ug/L 1 Toluene 108-88-3 8260B ug/L 1 8260B ND 5.0 1.7 Xylenes (total) 1330-20-7 Run 1 Acceptance Surrogate Q % Recovery Limits 1,2-Dichloroethane-d4 70-130 96

Volatile Organic Compounds by GC/MS

70-130 70-130

103

93

Run 1	Prep Method 5030B	Analytical Met 826	hod 60B	Dilution 1	Analysi 07/05/20		Analyst AAC	Prep I	Date	Batch 88445			
Param	neter				CAS Number		ilytical ethod	Result	Q	PQL	MDL	Units	Run
Diisopi	ropyl ether (IPE)			1	08-20-3		8260B	ND		10	0.40	ug/L	1
Ethano	ol				64-17-5		8260B	ND		1000	33	ug/L	1
3,3-Dir	methyl-1-butanol			6	24-95-3		8260B	ND		100	1.0	ug/L	1
Ethyl-t	ert-butyl ether (ETB	E)		6	37-92-3		8260B	ND		100	0.20	ug/L	1
tert-An	nyl alcohol (TAA)				75-85-4		8260B	ND		100	6.7	ug/L	1
tert-An	nyl methyl ether (TA	ME)		ç	94-05-8		8260B	ND		10	0.20	ug/L	1
tert-bu	tyl alcohol (TBA)	•			75-65-0		8260B	ND		100	6.7	ug/L	1
tert-Bu	ıtyi formate (TBF)			7	62-75-4		8260B	ND		100	1.0	ug/L	1
Surro	gate		Q	Run 1 % Recov		ptance nits							
Bromo	ofluorobenzene			103	70	-130		<u>,,</u>					
1,2-Di	chloroethane-d4			96	70	-130							
Toluer	ne-d8			93	70	-130							

FDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis Date 06/30/2012 070	Analyst 2 AMB	Prep I 06/28/2		Batch 88021			
Paran	neter				nalytical Method	Result	0	PQL	MDL	Units	Run

PQL = Practical quantitation limit	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	H = Out of holding time
ND = Not detected at or above the MDL	J = Estimated result < PQL and ≥ MDL	P = The RPD between two GC columns exceeds 40%	N = Recovery is out of criteria
Where applicable, all soil sample analysis are rep	orted on a dry weight basis unless flagged with a "W"	* = Reportable result (only when report all runs)	•

Description: TW-1

Date Sampled:06/26/2012 1429

Laboratory ID: NF2/024-015 Matrix: Aqueous

Date Received: 06/27/2012

	EDB & DBCP by Microextraction											
Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Dilution Analysis Date 1 06/30/2012 0702		Prep Date 06/28/2012 1647		Batch 88021				
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-D	bromoethane (EDB)			106-93-4	8011	ND		0.020	0.020	ug/L	1	
Surro	gate	Q	Run % Reco									
1,1,1,	2-Tetrachloroethane		74	57-1	37							

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Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis [06/29/2012	•	•	Date 012 1700	Batch 88108			
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead			7.	439-92-1	6010C	0.0034	ВЈ	0.010	0.0019	mg/L	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Page: 36 of 65

Description: TW-2

Date Sampled:06/26/2012 1409
Date Received: 06/27/2012

Laboratory ID: NF2/024-016

Matrix: Aqueous

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution	rganic C Analysis I 07/05/2012		Prep Date	Batch 88445			
Paran	neter			CAS Number	Analytical Method	Result Q	PQL	MDL	Units	Run
Benze	ne			71-43-2	8260B	ND	5.0	0.20	ug/L	1
1,2-Di	chloroethane			107-06-2	8260B	ND	5.0	0.30	ug/L	1
Ethylb	enzene			100-41-4	8260B	ND	5.0	1.7	ug/L	1
Methy	l tertiary butyl ether	(MTBE)	1	634-04-4	8260B	ND	5.0	0.40	ug/L	1
Napht	halene			91-20-3	8260B	ND	5.0	1.7	ug/L	1
Toluer	ne			108-88-3	8260B	ND	5.0	1.7	ug/L	1
Xylene	es (total)		1:	330-20-7	8260B	ND	5.0	1.7	ug/L	1
Surro	gate	Q	Run ' % Recov							
1,2-Di	chloroethane-d4		94	70-1	30					
Bromo	ofluorobenzene		101	70-1	30					
Toluer	ne-d8		91	70-1	30					
		Vo	latile O	rganic (Compound	s by GC/N	IS			
Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis I 07/05/2012		Prep Date	Batch 88445			
Paran	neter			CAS Number	Analytical Method	Result Q	PQL	MDL	Units	Run

1 5030B	8260B	1 0	7/05/2012	2 1344 AAC			88445			
Parameter		N	CAS umber	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)		10	8-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol		6	4-17-5	8260B	· ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol		62	4-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)		63	7-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)		7	5-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)		99	4-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)		7	5-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)		76	2-75-4	8260B	ND		100	1.0	ug/L	1
Surrogate	Q	Run 1 % Recove	Accept ry Limi							
Bromofluorobenzene		101	70-1	30						
1,2-Dichloroethane-d4		94	70-1	30						
Toluene-d8		91	70-1	30						

EDB & DBCP by Microextraction Prep Method Analytical Method Dilution **Analysis Date** Analyst **Prep Date Batch** Run 06/28/2012 1647 88021 8011 06/30/2012 0723 **AMB** CAS **Analytical**

Method

Number

PQL = Practical quantitation limit

Parameter

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

PQL

MDL

H = Out of holding time

Units

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report ail runs)

Result Q

Run

Description: TW-2

Date Sampled:06/26/2012 1409 Date Received: 06/27/2012

Laboratory ID: NF2/024-016

Matrix: Aqueous

EDB & DBCP by Microextraction											
Run 1	Prep Method 8011	Analytical Method 8011	•		alysis Date Analyst 80/2012 0723 AMB		Prep Date 06/28/2012 1647				
Paran	neter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Di	bromoethane (EDB)			106-93-4	8011	ND		0.020	0.020	ug/L	1
Surro	gate	Q	Run % Reco								
1,1,1,	2-Tetrachioroethane		99	57-1	37						

IC	D	Λ	ᆮ	c
	Г	-A	ㄷ	S

Run 1	Prep Method 3005A	Analytical Method 6010C		Analysis D 06/29/2012	_	Prep Date 06/29/2012 1700		Batch 88108			
Paran	neter		ı	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Lead			74	39-92-1	6010C	0.011	В	0.010	0.0019	mg/L	1

E = Quantitation of compound exceeded the calibration range

P = The RPD between two GC columns exceeds 40%

Description: MW-5 Dup

Laboratory ID: NF2/024-01/ Matrix: Aqueous

Date Sampled:06/26/2012 1153 Date Received: 06/27/2012

		V	olati	ile Org	ganic (om	poun	ds by (GC/MS				
Run 1	Prep Method 5030B	Analytical Method 8260B	Di		Analysis [07/05/2012		Analy AAC	-	p Date	Batch 88445			
2	5030B	8260B		50 0	07/06/2012	0445	DD			88473			
Param	eter			N	CAS lumber		alytical ethod	Resul	t Q	PQL.	MDL	Units	Run
Benze	ne			7	1-43-2		8260B	990	0	250	10	ug/L	2
1,2-Di	chloroethane			10	7-06-2		8260B	19	9	5.0	0.30	ug/L	1
Ethylk	enzene			10	0-41-4		8260B	1600	0	250	85	ug/L	2
Methy	tertiary butyl ether	(MTBE)		163	34-04-4		8260B	N	D	5.0	0.40	ug/L	1
Napht	halene			9	1-20-3		8260B	570	0	250	85	ug/L	2
Tolue	ne			10	8-88-3		8260B	910	0	250	85	ug/L	2
Xylen	es (total)			133	30-20-7		8260B	11000	0	250	85	ug/L	2
Surro	gate	G	%	Run 1 Recove	Accepta ry Limit		Q %	Run 2 / Recovery	Acceptanc Limits	e			
1,2-Di	chloroethane-d4			91	70-1	30		108	70-130				
Bromo	fluorobenzene			100	70-1	30		106	70-130				
Toluer	ne-d8			98	70-1	30		109	70-130				

Volatile Organic Compounds by GC/MS

		10	uille o	igaine com	poundo	by contine		
Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	
1	5030B	8260B	1	07/05/2012 1409	AAC		88445	
2	5030B	8260B	50	07/06/2012 0445	DD		88473	

CAS Numb <u>er</u>	Analytical Method	Result	Q	PQL	MDL	Units	Run
108-20-3	8260B	ND		10	0.40	ug/L	1
64-17-5	8260B	ND		1000	33	ug/L	1
624-95-3	8260B	ND		100	1.0	ug/L	1
637-92-3	8260B	ND		100	0.20	ug/L	1
75-85 - 4	8260B	760	J	5000	340	ug/L	2
994-05-8	8260B	ND		10	0.20	ug/L	1
75-65-0	8260B	17	J	100	6.7	ug/L	1
762-75-4	8260B	ND		100	1.0	ug/L	1
	Number 108-20-3 64-17-5 624-95-3 637-92-3 75-85-4 994-05-8 75-65-0	Number Method 108-20-3 8260B 64-17-5 8260B 624-95-3 8260B 637-92-3 8260B 75-85-4 8260B 994-05-8 8260B 75-65-0 8260B	Number Method Result 108-20-3 8260B ND 64-17-5 8260B ND 624-95-3 8260B ND 637-92-3 8260B ND 75-85-4 8260B 760 994-05-8 8260B ND 75-65-0 8260B 17	Number Method Result Q 108-20-3 8260B ND 64-17-5 8260B ND 624-95-3 8260B ND 637-92-3 8260B ND 75-85-4 8260B 760 J 994-05-8 8260B ND 75-65-0 8260B 17 J	Number Method Result Q PQL 108-20-3 8260B ND 10 64-17-5 8260B ND 1000 624-95-3 8260B ND 100 637-92-3 8260B ND 100 75-85-4 8260B 760 J 5000 994-05-8 8260B ND 10 75-65-0 8260B 17 J 100	Number Method Result Q PQL MDL 108-20-3 8260B ND 10 0.40 64-17-5 8260B ND 1000 33 624-95-3 8260B ND 100 1.0 637-92-3 8260B ND 100 0.20 75-85-4 8260B 760 J 5000 340 994-05-8 8260B ND 10 0.20 75-65-0 8260B 17 J 100 6.7	Number Method Result Q PQL MDL Units 108-20-3 8260B ND 10 0.40 ug/L 64-17-5 8260B ND 1000 33 ug/L 624-95-3 8260B ND 100 1.0 ug/L 637-92-3 8260B ND 100 0.20 ug/L 75-85-4 8260B 760 J 5000 340 ug/L 994-05-8 8260B ND 10 0.20 ug/L 75-65-0 8260B 17 J 100 6.7 ug/L

Surrogate	Q	Run 1 / % Recovery	Acceptance Limits	Q	Run 2 A % Recovery	cceptance Limits
Bromofluorobenzene		100	70-130		106	70-130
1,2-Dichloroethane-d4		91	70-130		108	70-130
Toluene-d8		98	70-130		109	70-130

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Description: MW-5 Dup

Date Sampled:06/26/2012 1153

Prep Method

8011

Run

1

Lead

Parameter

Date Received: 06/27/2012

Laboratory ID: NF2/024-01/

Matrix: Aqueous

0.0019

0.010

mg/L

1

	FDR &	DRCL	Dy IVI	ICTOEX	tractio	n				
Analytical Method 8011	Dilution 1	Analysis 06/30/2012		Analyst AMB	Prep 06/28/2	Date 012 1647	Batch 88021			
		CAS Number		lytical ethod	Result	Q	PQL	MDL	Units	Run
		106-03-4		8011	n 90		n n19	0.019	ua/L	1

0.043 B

Acceptance Limits Run 1 Q % Recovery Surrogate

1,1,1,2-Tetrachloroethane

1,2-Dibromoethane (EDB)

57-137

7439-92-1

97

ICP-AES

Run 1	Prep Method 3005A	Analytical Method 6010C	Dilution 1	Analysis Dat 06/29/2012 23	•	Prep Da 06/29/201	-	Batch 88108				
Parame	eter		'	CAS ,	Analytical Method	Result C		PQL	MDL	Units	Run	

6010C

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

 $J = Estimated result < PQL and <math>\geq MDL$

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

* = Reportable result (only when report all runs)

Description: Field Blank

Date Received: 06/27/2012

Date Sampled:06/26/2012 1045

Laboratory ID: NF2/024-018

Matrix: Aqueous

		Vo	latile O	rganic (Compound	s by GC	C/MS			
Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/2012	-	Prep D	Batch 88445			
Paran	neter		-	CAS Number	Analytical Method	Result	Q PQL	MDL	Units	Run
Benze	ne			71-43-2	8260B	ND	5.0	0.20	ug/L	1
1,2-Di	chloroethane		1	07-06-2	8260B	ND	5.0	0.30	ug/L	1
Ethylb	enzene		1	00-41-4	8260B	ND	5.0	1.7	ug/L	1
Methy	l tertiary butyl ether	(MTBE)	16	34-04-4	8260B	ND	5.0	0.40	ug/L	1
Napht	halene			91-20-3	8260B	ND	5.0	1.7	ug/L	1
Toluer	ne		1	108-88-3	8260B	ND	5.0	1.7	ug/L	1
Xylene	es (total)		·13	330-20-7	8260B	ND	5.0	1.7	ug/L	1
Surro	gate	Q	Run 1 % Recov							
1,2-Di	chloroethane-d4		96	70-1	30					
Bromo	ofluorobenzene		103	70-1	30					
Toluer	ne-d8		91	70-1	130					

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/201	-	Prep D)ate	Batch 88445			
Param	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisop	ropyl ether (IPE)		1	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethano	ol			64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Di	methyl-1-butanol		e	324-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-t	ert-butyl ether (ETBE))	6	37-92-3	8260B	ND		100	0.20	ug/L	1
tert-An	nyl alcohol (TAA)			75-85-4	8260B	ND		100	6.7	ug/L	1
tert-An	nyl methyl ether (TAM	IE)	9	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-bu	tyl alcohol (TBA)			75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Bu	ityl formate (TBF)		7	762-75-4	8260B	ND		100	1.0	ug/L	1
Surro	gate	Q	Run 1 % Recov								
Bromo	fluorobenzene		103	70-	130						
1,2-Di	chloroethane-d4		96	70-	130						
Toluer	ne-d8		91	70-	130						

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution 1	Analysis Date 06/30/2012 0806	Analyst 6 AMB	Prep I 06/28/2	-	Batch 88021			
Param	eter				alytical Method	Result	Q	PQL	MDL	Units	Run

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL.

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

* = Reportable result (only when report all runs)

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Description: Field Blank

Date Sampled:06/26/2012 1045 Date Received: 06/27/2012

Laboratory ID: NF2/024-018

Matrix: Aqueous

EDB & DBCP by Microextraction

Run 1	Prep Method 8011	Analytical Method 8011	Dilution, 1	Analysis I 06/30/2012	•	Prep 06/28/2	Date 012 1647	Batch 88021			
Param	eter			CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dil	oromoethane (EDB)			106-93-4	8011	ND		0.019	0.019	ug/L	1
Surro	gate	Q	Run % Reco								

1,1,1,2-Tetrachloroethane

57-137

E = Quantitation of compound exceeded the calibration range

P = The RPD between two GC columns exceeds 40%

ND = Not detected at or above the MDL

Description: Trip Blank

Date Sampled:06/26/2012 1145 Date Received: 06/27/2012

Laboratory ID: NF2/024-019

Matrix: Aqueous

Volatile Organic Compounds by GC/MS

Run 1	Prep Method 5030B	Analytical Method 8260B	Dilution 1	Analysis I 07/05/2012	•	Prep D	Date Batc 8844			
Param	neter			CAS Number	Analytical Method	Result	Q PQL	MDL	Units	Run
Benze	ne			71-43-2	8260B	ND	5.0	0.20	ug/L	1
1,2-Di	chloroethane		1	107-06-2	8260B	ND	5.0	0.30	ug/L	1
Ethylb	enzene		1	100-41-4	8260B	ND	5.0	1.7	ug/L	1
Methy	l tertiary butyl ether	(MTBE)	16	34-04-4	8260B	ND	5.0	0.40	ug/L	1
Naphtl	halene			91-20-3	8260B	ND	5.0	1.7	ug/L	1.
Toluer	ne		1	108-88-3	8260B	ND	5.0	1.7	ug/L	1
Xylene	es (total)		13	330-20-7	8260B	ND	5.0	1.7	ug/L	1
Surro	gate	Q	Run 1 % Recov							
1,2-Di	chloroethane-d4		96	70-1	30					
Bromo	ofluorobenzene		103	70-1	30					
Toluer	ne-d8		91	70-1	30					

Volatile Organic Compounds by GC/MS

Run Prep 1	Method 5030B	Analytical Method 8260B	Dilution 1	Analysis 07/05/2012	_	Prep D	ate Batch 88445			
Parameter		*****		CAS Number	Analytical Method	Result	Q PQL	MDL	Units	Run
Diisopropyl e	ther (IPE)			108-20-3	8260B	ND	10	0.40	ug/L	1
Ethanol				64-17-5	8260B	ND	1000	33	ug/L	1
3,3-Dimethyl-	-1-butanol			624-95-3	8260B	ND	100	1.0	ug/L	1
Ethyl-tert-but	tyl ether (ETBE)			637-92-3	8260B	ND	100	0.20	ug/L	1
tert-Amyl alco	ohol (TAA)			75-85-4	8260B	ND	100	6.7	ug/L	1
tert-Amyl me	thyl ether (TAM	E)		994-05-8	8260B	ND	10	0.20	ug/L	1
tert-butyl alco	ohol (TBA)			75-65-0	8260B	ND	100	6.7	ug/L	1
tert-Butyl for	mate (TBF)			762-75-4	8260B	ND	100	1.0	ug/L	1
Surrogate		Q	Run % Reco							
Bromofluorol	benzene		103	3 70-1	130					
1,2-Dichloroe	ethane-d4		96	70-1	130					
Toluene-d8			91	70-1	130					

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

^{* =} Reportable result (only when report all runs)

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88444-001

Batch: 88444 Analytical Method: 8260B Matrix: Aqueous Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	07/05/2012 1150
tert-Amyl methyl ether (TAME)	ND		· 1	10	0.20	ug/L	07/05/2012 1150
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	07/05/2012 1150
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	07/05/2012 1150
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	07/05/2012 1150
Ethanol	ND		1	1000	33	ug/L	07/05/2012 1150
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	07/05/2012 1150
Surrogate	Q % R		Acceptance Limit				·
Bromofluorobenzene	100)	70-130				
1,2-Dichloroethane-d4	102	2	70-130				

Volatile Organic Compounds by GC/MS - LCS

70-130

Sample ID: NQ88444-002

Batch: 88444

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Toluene-d8

Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1000	1300		1	127	70-130	07/05/2012 1007
50	47		1	93	70-130	07/05/2012 1007
250	280		1	112	70-130	07/05/2012 1007
50	55		1	111	70-130	07/05/2012 1007
1000	1400	N	1	139	70-130	07/05/2012 1007
5000	12000	N	1	233	70-130	07/05/2012 1007
50	59		1	119	70-130	07/05/2012 1007
Q % Rec	-					
105	70-13	30				
111	70-13	30				÷
108	70-13	30				
	Amount (ug/L) 1000 50 250 50 1000 5000 50 Q % Rec 105 111	Amount (ug/L) 1000 1300 50 47 250 280 50 55 1000 1400 5000 12000 50 59 Accepta Limi 105 70-13	Amount (ug/L) Q 1000 1300 50 47 250 280 50 55 1000 1400 N 5000 12000 N 50 59 Acceptance Limit 105 70-130 111 70-130	Amount (ug/L) Result (ug/L) Q Dil 1000 1300 1 50 47 1 250 280 1 50 55 1 1000 1400 N 1 5000 12000 N 1 50 59 1 Acceptance Limit 105 70-130 111 70-130	Amount (ug/L) Result (ug/L) Q Dil % Rec 1000 1300 1 127 50 47 1 93 250 280 1 112 50 55 1 111 1000 1400 N 1 139 5000 12000 N 1 233 50 59 1 119 Acceptance Limit 105 70-130 1 70-130	Amount (ug/L) Result (ug/L) Q Dil % Rec Limit 1000 1300 1 127 70-130 50 47 1 93 70-130 250 280 1 112 70-130 50 55 1 111 70-130 1000 1400 N 1 139 70-130 5000 12000 N 1 233 70-130 50 59 1 119 70-130 Acceptance Limit 105 70-130 111 70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDi.

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ88444-003

Batch: 88444

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1200		1	124	2.6	70-130	20	07/05/2012 1033
tert-Amyl methyl ether (TAME)	50	49		1	98	4.8	70-130	20	07/05/2012 1033
tert-Butyl formate (TBF)	250	290		1	116	4.0	70-130	20	07/05/2012 1033
Diisopropyl ether (IPE)	50	58		1	116	4.4	70-130	20	07/05/2012 1033
3,3-Dimethyl-1-butanol	1000	1400	N	1	136	2.5	70-130	20	07/05/2012 1033
Ethanol	5000	11000	N	1	228	1.9	70-130	20	07/05/2012 1033
Ethyl-tert-butyl ether (ETBE)	50	63		1	126	6.1	70-130	20	07/05/2012 1033
Surrogate	Q % Rec	Ac	ceptance Limit						
Bromofluorobenzene	102		70-130						
1,2-Dichloroethane-d4	110		70-130						
Toluene-d8	105		70-130						

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88444-001

Batch: 88444

Analytical Method: 8260B

Matrix: Aqueous Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	<u>Units</u>	Analysis Date
Benzene	ND	***	1	5.0	0.20	ug/L	07/05/2012 1150
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	07/05/2012 1150
Ethylbenzene	ND		1	5.0	1.7	ug/L	07/05/2012 1150
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/05/2012 1150
Naphthalene	ND		1	5.0	1.7	ug/L	07/05/2012 1150
Toluene	ND		1	5.0	1.7	ug/L	07/05/2012 1150
Xylenes (total)	ND		1	5.0	1.7	ug/L	07/05/2012 1150
Surrogate	Q %1	Rec	Acceptance Limit				· · · <u>· · · · · · · · · · · · · · · · </u>
Bromofluorobenzene	10	00	70-130				
1,2-Dichloroethane-d4	10)2	70-130				
Toluene-d8	10)2	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ88444-002

Batch: 88444

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	52	1	104	70-130	07/05/2012 1007
1,2-Dichloroethane	50	56	1	111	70-130	07/05/2012 1007
Ethylbenzene	50	49	1	97	70-130	07/05/2012 1007
Methyl tertiary butyl ether (MTBE)	50	57	1	114	70-130	07/05/2012 1007
Naphthalene	50	52	1	105	70-130	07/05/2012 1007
Toluene	50	51	1	103	70-130	07/05/2012 1007
Xylenes (total)	100	99	1	99	70-130	07/05/2012 1007
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	105	70-130				
1,2-Dichloroethane-d4	111	70-130				
Toluene-d8	108	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ88444-003

Batch: 88444

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	55	1	110	5.6	70-130	20	07/05/2012 1033
1,2-Dichloroethane	50	58	1	116	4.1	70-130	20	07/05/2012 1033
Ethylbenzene	50	52	1	103	6.2	70-130	20	07/05/2012 1033
Methyl tertiary butyl ether (MTBE)	50	59	1	117	2.8	70-130	20	07/05/2012 1033
Naphthalene	50	52	1	103	1.7	70-130	20	07/05/2012 1033
Toluene	50	55	1	110	6.9	70-130	20	07/05/2012 1033
Xylenes (total)	100	100	1	104	4.9	70-130	20	07/05/2012 1033
Surrogate	Q % Rec	Acceptance Limit						
Bromofluorobenzene	102	70-130						
1,2-Dichloroethane-d4	110	70-130						
Toluene-d8	105	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88445-001

Batch: 88445 Analytical Method: 8260B Matrix: Aqueous Prep Method: 5030B

Parameter Result Q **PQL** MDL Units **Analysis Date** Dil 07/05/2012 0845 tert-Amyl alcohol (TAA) ND 1 100 6.7 ug/L ug/L 07/05/2012 0845 tert-Amyl methyl ether (TAME) ND 1 10 0.20 tert-Butyl formate (TBF) ND 1 100 1.0 ug/L 07/05/2012 0845 Diisopropyl ether (IPE) 0.40 ug/L 07/05/2012 0845 ND 10 1 3,3-Dimethyl-1-butanol ND 1.0 ug/L 07/05/2012 0845 1 100 ND 1000 33 ug/L 07/05/2012 0845 07/05/2012 0845 Ethyl-tert-butyl ether (ETBE) ND 100 0.20 ug/L 07/05/2012 0845 tert-butyl alcohol (TBA) ND 100 6.7 ug/L

Surrogate	Q % Rec	Acceptanc Limit
Bromofluorobenzene	104	70-130
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	93	70-130

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ88445-002

Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1300		1	129	70-130	07/05/2012 0704
tert-Amyl methyl ether (TAME)	50	47		1	95	70-130	07/05/2012 0704
tert-Butyl formate (TBF)	250	290		1	117	70-130	07/05/2012 0704
Diisopropyl ether (IPE)	50	53		1	106	70-130	07/05/2012 0704
3,3-Dimethyl-1-butanol	1000	1300		1	129	70-130	07/05/2012 0704
Ethanol	5000	7600	N	1	152	70-130	07/05/2012 0704
Ethyl-tert-butyl ether (ETBE)	50	51		1	102	70-130	07/05/2012 0704
tert-butyl alcohol (TBA)	1000	1300		1	128	70-130	07/05/2012 0704
Surrogate	Q % Rec	Acceptan Limit	ce				
Bromofluorobenzene	101	70-130)				÷
1,2-Dichloroethane-d4	98	70-130)				
Toluene-d8	, 96	70-130)			-	

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ88445-003

Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1300	N	1	133	3.5	70-130	20	07/05/2012 0729
tert-Amyl methyl ether (TAME)	50	46		1	91	3.7	70-130	20	07/05/2012 0729
tert-Butyl formate (TBF)	250	280		1	114	2.6	70-130	20	07/05/2012 0729
Diisopropyl ether (IPE)	50	50		1	100	5.6	70-130	20	07/05/2012 0729
3,3-Dimethyl-1-butanol	1000	1400	N	1	137	6.0	70-130	20	07/05/2012 0729
Ethanol	5000	8600	N	1	172	12	70-130	20	07/05/2012 0729
Ethyl-tert-butyl ether (ETBE)	50	49		1	97	5.1	70-130	20	07/05/2012 0729
tert-butyl alcohol (TBA)	1000	1300	N	1	132	2.8	70-130	20	07/05/2012 0729
Surrogate	Q %	Rec A	cceptance Limit						
Bromofluorobenzene	1	01	70-130						
1,2-Dichloroethane-d4	9	93	70-130						
Toluene-d8	g	97	70-130						

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: NF27024-008DU

Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Result (ug/Ľ)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Diisopropyl ether (IPE)	ND	ND		1	0.00	20	07/05/2012 1755
Ethanol	ND	590	J	1	0.00	20	07/05/2012 1755
3,3-Dimethyl-1-butanol	ND	ND		1	0.00	20	07/05/2012 1755
Ethyl-tert-butyl ether (ETBE)	ND	ND		1	0.00	20	07/05/2012 1755
tert-Amyl alcohol (TAA)	ND	ND		1	0.00	20	07/05/2012 1755
tert-Amyl methyl ether (TAME)	ND	ND		1	0.00	20	07/05/2012 1755
tert-butyl alcohol (TBA)	ND	ND		1	0.00	20	07/05/2012 1755
tert-Butyl formate (TBF)	ND	ND		1	0.00	20	07/05/2012 1755
Surrogate	Q % Rec	Acceptano Limit	ce				
Bromofluorobenzene	101	70-130	•				
1,2-Dichloroethane-d4	96	70-130					
Toluene-d8	91	70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - MS

Sample ID: NF27024-005MS

Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Diisopropyl ether (IPE)	ND	50	52		1	103	70-130	07/05/2012 1820
Ethanoi	ND	5000	6800	N	1	135	70-130	07/05/2012 1820
3,3-Dimethyl-1-butanol	ND	1000	1500	N	1	154	70-130	07/05/2012 1820
Ethyl-tert-butyl ether (ETBE)	ND	50	50		1	99	70-130	07/05/2012 1820
tert-Amyl alcohol (TAA)	ND	1000	1500	N	1	147	70-130	07/05/2012 1820
tert-Amyl methyl ether (TAME)	ND	50	48		1	. 96	70-130	07/05/2012 1820
tert-butyl alcohol (TBA)	ND	1000	1600	N	. 1	160	70-130	07/05/2012 1820
tert-Butyl formate (TBF)	ND	250	59	N	1	23	70-130	07/05/2012 1820
Surrogate	Q % Re		eptance Limit					
Bromofluorobenzene	99	7	0-130					
1,2-Dichloroethane-d4	96	7	0-130					
Toluene-d8	93	7	'0-130					

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88445-001

Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	07/05/2012 0845
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	07/05/2012 0845
Ethylbenzene	ND		1	5.0	1.7	ug/L	07/05/2012 0845
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/05/2012 0845
Naphthalene	ND		1	5.0	1.7	ug/L	07/05/2012 0845
Toluene	ND		1	5.0	1.7	ug/L	07/05/2012 0845
Xylenes (total)	ND		1	5.0	1.7	ug/L	07/05/2012 0845
Surrogate	Q %	Rec	Acceptance Limit				
Bromofluorobenzene	10	04	70-130				
1,2-Dichloroethane-d4	9	8	70-130				
Toluene-d8	9	3	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ88445-002 Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	49	1	99	70-130	07/05/2012 0704
1,2-Dichloroethane	50	47	1	94	70-130	07/05/2012 0704
Ethylbenzene	50	50	1	100	70-130	07/05/2012 0704
Methyl tertiary butyl ether (MTBE)	50	53	1	107	70-130	07/05/2012 0704
Naphthalene	50	54	1	107	70-130	07/05/2012 0704
Toluene	50	48	1	95	70-130	07/05/2012 0704
Xylenes (total)	100	100	1	102	70-130	07/05/2012 0704
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	101	70-130				
1,2-Dichloroethane-d4	98	70-130				
Toluene-d8	96	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ88445-003

Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	47	1	93	5.7	70-130	20	07/05/2012 0729
1,2-Dichloroethane	50	45	1	91	2.9	70-130	20	07/05/2012 0729
Ethylbenzene	50	46	1	93	7.3	70-130	20	07/05/2012 0729
Methyl tertiary butyl ether (MTBE)	50	52	1	103	3.2	70-130	20	07/05/2012 0729
Naphthalene	50	52	1	105	2.4	70-130	20	07/05/2012 0729
Toluene	50	44	1	88	8.0	70-130	20	07/05/2012 0729
Xylenes (total)	100	96	1	96	6.6	70-130	20	07/05/2012 0729
Surrogate	Q % Rec	Acceptance Limit	•					
Bromofluorobenzene	101	70-130						
1,2-Dichloroethane-d4	93	70-130						
Toluene-d8	97	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: NF27024-008DU

Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Dil	% RPD	% RPD Limit	Analysis Date
Benzene	ND	ND	1	0.00	20	07/05/2012 1755
1,2-Dichloroethane	ND	ND	1	0.00	20	07/05/2012 1755
Ethylbenzene	ND	ND	1	0.00	20	07/05/2012 1755
Methyl tertiary butyl ether (MTBE)	ND	ND	1	0.00	20	07/05/2012 1755
Naphthalene	ND	ND	1	0.00	20	07/05/2012 1755
Toluene	.ND	ND	1	0.00	20	07/05/2012 1755
Xylenes (total)	ND	ND	1	0.00	20	07/05/2012 1755
Surrogate	Q % Rec	Acceptance Limit				
1,2-Dichloroethane-d4	96	70-130				
Bromofluorobenzene	101	70-130				
Toluene-d8	91	70-130				

Volatile Organic Compounds by GC/MS - MS

Sample ID: NF27024-005MS

Batch: 88445

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	ND	50	51		1	101	70-130	07/05/2012 1820
1,2-Dichloroethane	ND	50	49		1	99	70-130	07/05/2012 1820
Ethylbenzene	ND	50	52		1	104	70-130	07/05/2012 1820
Methyl tertiary butyl ether (MTBE)	ND	50	54		1	109	70-130	07/05/2012 1820
Naphthalene	ND	50	70	N	1	139	70-130	07/05/2012 1820
Toluene	ND	50	49		1	98	70-130	07/05/2012 1820
Xylenes (total)	ND	100	100		1	105	70-130	07/05/2012 1820
Surrogate	Q % Re		ceptance Limit				·	
1,2-Dichloroethane-d4	96		70-130					
Bromofluorobenzene	99		70-130					
Toluene-d8	93		70-130					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88450-001

Batch: 88450 Analytical Method: 8260B Matrix: Aqueous Prep Method: 5030B

Q PQL MDL Units **Analysis Date** Parameter Result Dil 07/05/2012 0845 6.7 ug/L tert-Amyl alcohol (TAA) ND 1 100 07/05/2012 0845 0.20 ug/L 10 tert-Amyl methyl ether (TAME) ND 1 07/05/2012 0845 tert-Butyl formate (TBF) ND 1 100 1.0 ug/L 07/05/2012 0845 0.40 ug/L 10 Diisopropyl ether (IPE) ND 1 07/05/2012 0845 100 1.0 ug/L 3,3-Dimethyl-1-butanol ND 1 ug/L 07/05/2012 0845 33 ND 1000 0.20 ua/L 07/05/2012 0845 Ethyl-tert-butyl ether (ETBE) ND. 1 100 07/05/2012 0845 6.7 ug/L tert-butyl alcohol (TBA) ND 1 100 Acceptance Surrogate Q % Rec Limit 99 70-130 Bromofluorobenzene 1,2-Dichloroethane-d4 98 70-130

Volatile Organic Compounds by GC/MS - LCS

70-130

Sample ID: NQ88450-002

Batch: 88450

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Toluene-d8

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1100	1	112	70-130	07/05/2012 0713
tert-Amyl methyl ether (TAME)	50	52	1	104	70-130	07/05/2012 0713
tert-Butyl formate (TBF)	250	270	1	109	70-130	07/05/2012 0713
Diisopropyl ether (IPE)	50	53	1	107	70-130	07/05/2012 0713
3,3-Dimethyl-1-butanol	1000	1200	1	116	70-130	07/05/2012 0713
Ethanol	5000	5500	1	110	70-130	07/05/2012 0713
Ethyl-tert-butyl ether (ETBE)	50	48	1	97	70-130	07/05/2012 0713
tert-butyl alcohol (TBA)	1000	· 1100	1	106	70-130	07/05/2012 0713
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	99	70-130				
1,2-Dichloroethane-d4	97	70-130				
Toluene-d8	100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ88450-003

Batch: 88450 Analytical Method: 8260B Matrix: Aqueous Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1100	1	107	4.9	70-130	20	07/05/2012 0736
tert-Amyl methyl ether (TAME)	50	51	1	101	2.6	70-130	20	07/05/2012 0736
tert-Butyl formate (TBF)	250	260	1	105	3.6	70-130	20	07/05/2012 0736
Diisopropyl ether (IPE)	50	51	1	102	4.6	70-130	20	07/05/2012 0736
3,3-Dimethyl-1-butanol	1000	1100	1	108	7.2	70-130	20	07/05/2012 0736
Ethanol	5000	4900	1	99	10	70-130	20	07/05/2012 0736
Ethyl-tert-butyl ether (ETBE)	50	46	1	93	4.4	70-130	20	07/05/2012 0736
tert-butyl alcohol (TBA)	1000	1000	1	100	6.4	70-130	20	07/05/2012 0736
Surrogate	Q % Rec	Acceptance Limit					· · · · · · · · · · · · · · · · · · ·	
Bromofluorobenzene	98	70-130	· · · · ·	<u>.</u>				
1,2-Dichloroethane-d4	94	70-130						
Toluene-d8	99	70-130						

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88450-001

Batch: 88450

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	07/05/2012 0845
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	07/05/2012 0845
Ethylbenzene	ND		1	5.0	1.7	ug/L	07/05/2012 0845
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	07/05/2012 0845
Naphthalene	ND		1	5.0	1.7	ug/L	07/05/2012 0845
Toluene	ND		1	5.0	1.7	ug/L	07/05/2012 0845
Xylenes (total)	ND		1	5.0	1.7	ug/L	07/05/2012 0845
Surrogate	Q % Re		eptance Limit				- <u></u>
Bromofluorobenzene	99	7	70-130				
1,2-Dichloroethane-d4	98	7	70-130				
Toluene-d8	100	7	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ88450-002

Batch: 88450 Analytical Method: 8260B Matrix: Aqueous Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% _. Rec	% Rec Limit	Analysis Date
Benzene	50	48	1	96	70-130	07/05/2012 0713
1,2-Dichloroethane	50	45	1	91	70-130	07/05/2012 0713
Ethylbenzene	50	49	1	97	70-130	07/05/2012 0713
Methyl tertiary butyl ether (MTBE)	50	52	1	103	70-130	07/05/2012 0713
Naphthalene	50	50	1	99	70-130	07/05/2012 0713
Toluene	50	48	1	96	70-130	07/05/2012 0713
Xylenes (total)	100	99	1	99	70-130	07/05/2012 0713
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	99	70-130				
1,2-Dichloroethane-d4	97	70-130				
Toluene-d8	100	70-130				

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ88450-003

Batch: 88450

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	Dil	% Rec	% RPD_	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	47	1	93	3.0	70-130	20	07/05/2012 0736
1,2-Dichloroethane	50	44	1	88	3.8	70-130	20	07/05/2012 0736
Ethylbenzene	50	48	1	96	1.2	70-130	20	07/05/2012 0736
Methyl tertiary butyl ether (MTBE)	50	49	1	98	5.5	70-130	20	07/05/2012 0736
Naphthalene	50	49	1	98	1.1	70-130	20	07/05/2012 0736
Toluene	50	46	1	92	3.7	70-130	20	07/05/2012 0736
Xylenes (total)	100	96	1	96	3.1	70-130	20	07/05/2012 0736
Surrogate	Q % Rec	Acceptance Limit						
Bromofluorobenzene	98	70-130	•					
1,2-Dichloroethane-d4	94	70-130						
Toluene-d8	99	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88473-001

Batch: 88473

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND	1	100	6.7	ug/L	07/05/2012 2315
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	105	70-130				
1,2-Dichloroethane-d4	106	70-130				
Toluene-d8	108	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ88473-002

Batch: 88473

Matrix: Aqueous

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spi Amo (ug	unt	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	100	0	1200		1	124	70-130	07/06/2012 0834
Surrogate	Q	% Rec	Accepta Limit					
Bromofluorobenzene		104	70-13	0	·			
1,2-Dichloroethane-d4		105	70-13	0				
Toluene-d8		106	70-13	0				

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: NF27024-017DU

Matrix: Aqueous

Batch: 88473

Analytical Method: 8260B

Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	760	690	J	50	9.5	20	07/06/2012 0717
Surrogate	Q % Rec	Acceptance Limit					
Bromofluorobenzene	103	70-1	30				
1,2-Dichloroethane-d4	99	70-1	30				
Toluene-d8	107	70-1	30				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - MS

Sample ID: NF27024-017MS

Batch: 88473

Matrix: Aqueous

Analytical Method: 8260B

Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	760	50000	64000		50	126	70-130	07/06/2012 0743
Surrogate	Q % Re		ptance imit					
Bromofluorobenzene	104	70	0-130		-			
1,2-Dichloroethane-d4	106	70	0-130					
Toluene-d8	108	70	0-130					

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88473-001

Batch: 88473

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q DII	PQL	MDL	Units	Analysis Date
Benzene	ND	1	5.0	0.20	ug/L	07/05/2012 2315
Ethylbenzene	ND	1	5.0	1.7	ug/L	07/05/2012 2315
Naphthalene	ND	1	5.0	1.7	ug/L	07/05/2012 2315
Toluene	ND	1	5.0	1.7	ug/L	07/05/2012 2315
Xylenes (total)	ND	1	5.0	1.7	ug/L	07/05/2012 2315
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	105	70-130	· · · · · · · · · · · · · · · · · · ·			
1,2-Dichloroethane-d4	106	70-130				
Toluene-d8	108	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ88473-002

Batch: 88473 Analytical Method: 8260B Matrix: Aqueous

Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dii	% Rec	% Rec Limit	Analysis Date
Benzene	50	55		1	111	70-130	07/06/2012 0834
Ethylbenzene	50	50		1	100	70-130	07/06/2012 0834
Naphthalene	50	50		1	100	70-130	07/06/2012 0834
Toluene	50	54		1	108	70-130	07/06/2012 0834
Xylenes (total)	100	100		1	101	70-130	07/06/2012 0834

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ88473-002

Batch: 88473

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Surrogate	Q % Rec	Acceptance Limit	
Bromofluorobenzene	104	70-130	
1,2-Dichloroethane-d4	105	70-130	,
Toluene-d8	106	70-130	

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: NF27024-017DU

Batch: 88473 Analytical Method: 8260B Matrix: Aqueous

h: 88473 Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Result (ug/L) Q	Dil	% RPD	% RPD Limit	Analysis Date
Benzene	990	960	50	2.6	20	07/06/2012 0717
Ethylbenzene	1600	1500	50	1.2	20	07/06/2012 0717
Naphthalene	570	600	50	5.3	20	07/06/2012 0717
Toluene	9100	8900	50	2.3	20	07/06/2012 0717
Xylenes (total)	11000	11000	50	0.54	20	07/06/2012 0717
Surrogate	Q % Rec	Acceptance Limit				
1,2-Dichloroethane-d4	99	70-130				
Bromofluorobenzene	103	70-130				
Toluene-d8	107	70-130				

Volatile Organic Compounds by GC/MS - MS

Sample ID: NF27024-017MS

Batch: 88473

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	990	2500	4000		50	122	70-130	07/06/2012 0743
Ethylbenzene	1600	2500	4400		50	112	70-130	07/06/2012 0743
Naphthalene	570	2500	3300		50	108	70-130	07/06/2012 0743
Toluene	9100	2500	12000		50	114	70-130	07/06/2012 0743
Xvlenes (total)	11000	5000	16000		50	107	70-130	07/06/2012 0743

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Volatile Organic Compounds by GC/MS - MS

Sample ID: NF27024-017MS

Batch: 88473

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		108	70-130

Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ88561-001

Batch: 88561

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q DII	PQL	MDL	Units	Analysis Date
tert-butyl alcohol (TBA)	ND	1	100	6.7	ug/L	07/06/2012 0917
Surrogate	Q % Rec	Acceptance Limit				
Bromofluorobenzene	98	70-130				
1,2-Dichloroethane-d4	98	70-130				
Toluene-d8	100	70-130				

Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ88561-002

Batch: 88561

Matrix: Aqueous Prep Method: 5030B

Analytical Method: 8260B

1,2-Dichloroethane-d4

Toluene-d8

Spike % Rec Amount Result % Rec Limit **Analysis Date** Q **Parameter** (ug/L) (ug/L) Dil 98 70-130 07/06/2012 0748 1 tert-butyl alcohol (TBA) 1000 980 Acceptance Surrogate Q % Rec Limit 100 70-130 Bromofluorobenzene

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

70-130

70-130

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ88561-003

Batch: 88561

Matrix: Aqueous

Analytical Method: 8260B

Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L) Q	ı Dii	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-butyl alcohol (TBA)	1000	1100	1	105	6.7	70-130	20	07/06/2012 0810
Surrogate	Q % Rec	Accepta Limi						
Bromofluorobenzene	100	70-13	30					
1,2-Dichloroethane-d4	100	70-13	30					
Toluene-d8	102	70-13	30					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

EDB & DBCP by Microextraction - MB

Sample ID: NQ88021-001

Batch: 88021

Analytical Method: 8011

Matrix: Aqueous Prep Method: 8011

Prep Date: 06/28/2012 1647

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	06/30/2012 0019
Surrogate	Q % Red		eptance Limit				
1,1,1,2-Tetrachloroethane	99		57-137		<u> </u>		

EDB & DBCP by Microextraction - LCS

Sample ID: NQ88021-002

Batch: 88021

Analytical Method: 8011

Matrix: Aqueous Prep Method: 8011

Prep Date: 06/28/2012 1647

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.25		1	99	60-140	06/30/2012 0040
Surrogate	Q % Rec	Acceptar Limit					
1,1,1,2-Tetrachloroethane	100	57-13	7				

EDB & DBCP by Microextraction - MS

Sample ID: NF27024-010MS

Batch: 88021

Matrix: Aqueous

Prep Method: 8011

Analytical Method: 8011

Prep Date: 06/28/2012 1647

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.20		1	83	60-140	06/30/2012 0455
Surrogate	Q % Re		ptance imit					
1,1,1,2-Tetrachloroethane	89	57	'-137	-				-

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

EDB & DBCP by Microextraction - MSD

Sample ID: NF27024-010MD

Batch: 88021

Analytical Method: 8011

Matrix: Aqueous

Prep Method: 8011

Prep Date: 06/28/2012 1647

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPI) Analysis Date
1,2-Dibromoethane (EDB)	ND	0.25	0.23		1	91	12	60-140	20	06/30/2012 0516
Surrogate	Q % Re		ptance mit							
1,1,1,2-Tetrachloroethane	93	57	-137							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES - MB

Sample ID: NQ87912-001

Batch: 87912

Analytical Method: 6010C

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/27/2012 1930

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Lead	ND		1	 0.010	0.0019	mg/L	06/28/2012 1532

ICP-AES - LCS

Sample ID: NQ87912-002

Batch: 87912

Analytical Method: 6010C

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/27/2012 1930

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date	
Lead	0.40	0.43		1	108	80-120	06/28/2012 1536	

ICP-AES - LCSD

Sample ID: NQ87912-003

Batch: 87912

Analytical Method: 6010C

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/27/2012 1930

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
l ead	0.40	0.43		1	107	0.68	80-120	20	06/28/2012 1540

ICP-AES - MS

Sample ID: NF27024-001MS

Batch: 87912

Analytical Method: 6010C

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/27/2012 1930

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	0.0090	0.40	0.43		1	105	75-125	06/28/2012 1618

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ICP-AES - MSD

Sample ID: NF27024-001MD

Batch: 87912

Analytical Method: 6010C

Matrix: Aqueous

Prep Method: 3005A

Prep Date: 06/27/2012 1930

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPI Limit) Analysis Date
Lead	0.0090	0.40	0.44		1	109	3.7	75-125	20	06/28/2012 1622

ICP-AES - MS

Sample ID: NF27024-002MS

Batch: 87912

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/27/2012 1930

Analytical Method: 6010C

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	0.39	0.40	0.83		1	110	75-125	06/28/2012 1634

ICP-AES - MB

Sample ID: NQ88108-001

Batch: 88108

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/29/2012 1700

0.010

Analytical Method: 6010C

Parameter

Lead

PQL MDL Units Analysis Date

mg/L

0.0019

06/29/2012 2251

ICP-AES - LCS

Dil

Sample ID: NQ88108-002

Batch: 88108

Analytical Method: 6010C

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/29/2012 1700

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	0.40	0.46		1	114	80-120	06/29/2012 2255

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Result

0.0046

Q

Page: 64 of 65 Level 1 Report v2.1

ICP-AES - LCSD

Sample ID: NQ88108-003

Batch: 88108

Matrix: Aqueous

Prep Method: 3005A

Analytical Method: 6010C

Prep Date: 06/29/2012 1700

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Lead	0.40	0.45		1	113	1.0	80-120	20	06/29/2012 2259

ICP-AES - MS

Sample ID: NF27024-015MS

Batch: 88108

Analytical Method: 6010C

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/29/2012 1700

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	0.0034	0.40	0.46	* **	1	114	75-125	06/29/2012 2306

ICP-AES - MSD

Sample ID: NF27024-015MD

Batch: 88108

Analytical Method: 6010C

Matrix: Aqueous

Prep Method: 3005A

Prep Date: 06/29/2012 1700

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPI Limit	D Analysis Date
Lead	0.0034	0.40	0.46		1	115	0.53	75-125	20	06/29/2012 2310

ICP-AES - MS

Sample ID: NF27024-016MS

Batch: 88108

Analytical Method: 6010C

Matrix: Aqueous Prep Method: 3005A

Prep Date: 06/29/2012 1700

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Lead	0.011	0.40	0.46		1	111	75-125	06/29/2012 2329

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and > MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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Shortly Environments 105 Vastage Po Most Colorbia South Talephone No. (809) 791-47.00	Dayley Rd 146-23-808-2013/5	2013 Preservativo 1904 1	France Section 1	6/26 1305 G-K	\$ 1	113.4	1337	MW-6 WAN V V	of without consists 1917 Sample Disposal to Capazal Mush in Canada and financial finan	00/1 6/260 100	-	Note: Ali samutes are retained for elx weeks from receipt	unders other arrangements are made.
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K 31 12 CHECK CONTRACTOR 砂塊の場合は learty, Uthurk 09828 38 44 W. 20 1 Farnaba Citimate (C. 2000) @.K.@ 5372 Minnoor Recognitions, 6.0 Possitive Hazard Mentilical un Set e Mary E. No 11 or Park Fax No. (503) 791-8:11. Shealy Environmental Services, Inc. West Columbia, South Carolina 20172 30 Ring, earlands (Sporth) 49 16tor with the supplied for 106 Variage Point Drive 209 Received or his lift recoil www.watesalphelt.com Gros Received by Received by LABURE CINE Telephone No. (803) 791-9707 211 1948 (3-300) (0-3028) 857111 Disgressa, og Lun sisylanA Time Sec receipt 1#UKC 19 Ministry. A SOCIOCAL Note: Afframples are retained for six weeks from Carrie Dayson Testum to Client Ci.920:03 のでは 04/2/V unless other arrangements are made STORY BRIGHT A. 1884 元 (F) Cafe CHERCEING GRAF. -9 The Armen of Contract of the second reference of the second of the secon 15 C M 整定系统 333 14.00 V POH. <u>表</u> 1334 SYS VAN (50) \$02K مجمع أ المحمد المحمد المحمد المحمد Time Chain of Custody Record 10 Kack 200 1 Principle SCIA4013 1 Sundant in the Original Sunday स्ट्राह्म अस्ति स्टान द्वारा स्टान्स् Salam III Clear prom S THE PROPERTY OF THE PARTY. Spiring and the United Relinquished on るころ 37-132 2-32 3-52 \$1.3V 25/37 **20**40回 3 135 -3 S pegas pegas pegas pegas pegas

Shealy Environmental Services, Inc.

106 Vaniage Point Drive West Columbia, South Carolina 29172 Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Chain of Custody Record CWA/NPDES

Number 13286

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Propert Name	**	5 5 5 5	2reservelive
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Note: All samples are retained for six weeks from receipt	A weeks from receipt	LAB USE ONLY Parament on the plane of the Comment of the plane of the Comment of the plane of the comment of the plane of the comment of the	C Territ. Eserie C. Y. J. I.A.
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SHEALY ENVIRONMENTAL SERVICES, INC.

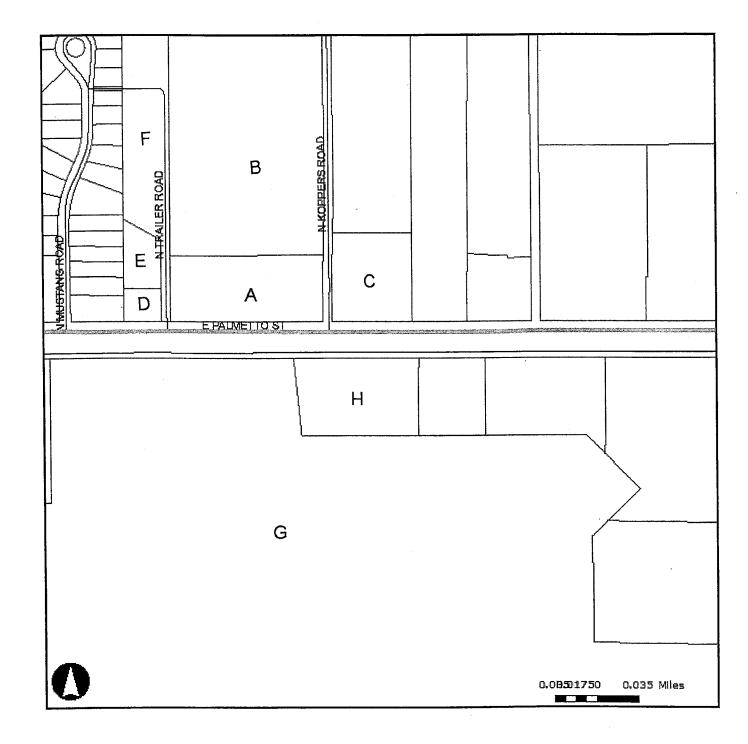
Shell Schollenmental Science, Inc. Jaconson Coundon FeAbetia Tennal Sundon Support	Page 1 of 1 Replaces Date 05:00 1 Effective Date 1001.41
Sample Receipt Checklist (SRC)	
Client MECT Cooler Inspected by date: WHL /27/12 Lot #:	WF17m21
Cooler Inspected avidate: Will Little Land	
Means of sece.pt: SESI Chent UPS FedEx Airporte Exp	Other
Yes No 2. If oustody seals were present, were they intact and unbroke	n?
	<u>``</u>
Cooler ID temperature upon receipt /- 0 °C / C / B/AC / Blank Against Bottles (** P B/AC)	Name and American
Method of coolant: Wet lee Blue lee Dry Ice Name	
If response is Ne for Yes for 14, 15, 16), an explanation/resolution must be provided.	gradient and the second
3. If temperature of any cooler exceeded 6.0°C, was Project by	- denager notified?
Yes No No NA PM notified by SRC, phone, note (circle one), other:	, (For
coolers received via commercial courier, PMs are to be not	
Yes No NA 4. Is the commercial courier's packing slip attached to this fo	rm?
Yes No 5. Were proper costody procedures (relinquished/received) for	oliowed"
Yes No No NA 5a Were samples relinquished by client to commercial cou	mer?
Ves No 6. Were sample IDs listed?	1
Yes No 7. Was collection date & time listed?	Section 2
Yes Z No 8. Were tests to be performed listed on the COC?	
Yes No 9. Did all samples arrive in the proper containers for each tes	
Yes No Did all container label information (II), date, time) agree	WILL COU.
Yes Z No 13. Did all containers arrive in good condition (unbroken, lid	S Chr. Elw. J.
Yes No 12. Was adequate sample volume available? 13. Were all samples received within ½ the holding time or 4	8 hours whichever
Yes No Comes first?	C. Freedom and the last and
Yes No 14. Were any samples containers missing?	
Yes No E 15. Were there any excess samples not listed on COC?	
14 Man hundler recont a nos size " (" or form it sizem to	ar) in any VOA
vials?	
Yes No NA 17. Were all metals C&G/HEM/nutrient samples received at	aphot W
hes No NA 18. Were all evanide and/or sulfide samples received at a pH	317
Yes No NA 19. Were all applicable NHATKN ryanide/phenol/BNA/post	PC3 lists
(Summares free of residual at torthe.	
Yes No NA 20. Were collection temperatures documented on the COC %	ANSII deconstinus
test) correctly transcribed from the COC into the comm	ent section in LIMS?
No. 25 Contraction of the Contra	
	and and were artificing
Sample.s. — 0/b were received incorrectly presert accordingly in sample receiving with	ith the SR # (number)
- 6/8//)	# 63
Sample s = 003 (2) - 60 2 (2) - 019 (2) were focused with hubbles >6 mm	The state of the s
Sample 51 were received with TRC >0.2 r	
HeN a acude BNA pest PCB/herb.	
Corrective Action taken, if necessary:	Total Control
Was effect notified. Yes \(\subseteq No. \subseteq \text{Distribution respond.} \) Yes	☐ No ☐
SPSC employees. [Cate of resemble:	A Company of the Comp
<u>Composits</u>	and the contract of the contra
- Management of the control of the c	

Visit annual or annual control of the state	***

ARIZENDIKES

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<u>ID</u>	Tax Map #	<u>Owner</u>
Α	90150-01-029 Site	Dan M. McEachin 10017 Wentworth Drive
B C	90150-01-043 90150-01-130	Florence, SC 29501
D E	90150-01-041 90150-01-027	Moody Real Estate, Inc. 1609 Elvington Court Lakeview, SC 29563
F	90150-01-028	Wade Lory Rawlinson 220 South White Palm Court Florence, SC 29506
G H	00177-01-001 00207-01-020	Pee Dee Regional Airport 2100 Terminal Drive Florence, SC 29506

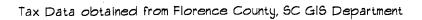
Tax Map Data

Coastal 16 Truck Stop 2513 East Palmetto Street Florence, South Carolina SCDHEC ID • 03538

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Finvironmental
Consultants, Inc.

JOB NO. 12-3980 DATE July 17, 2012

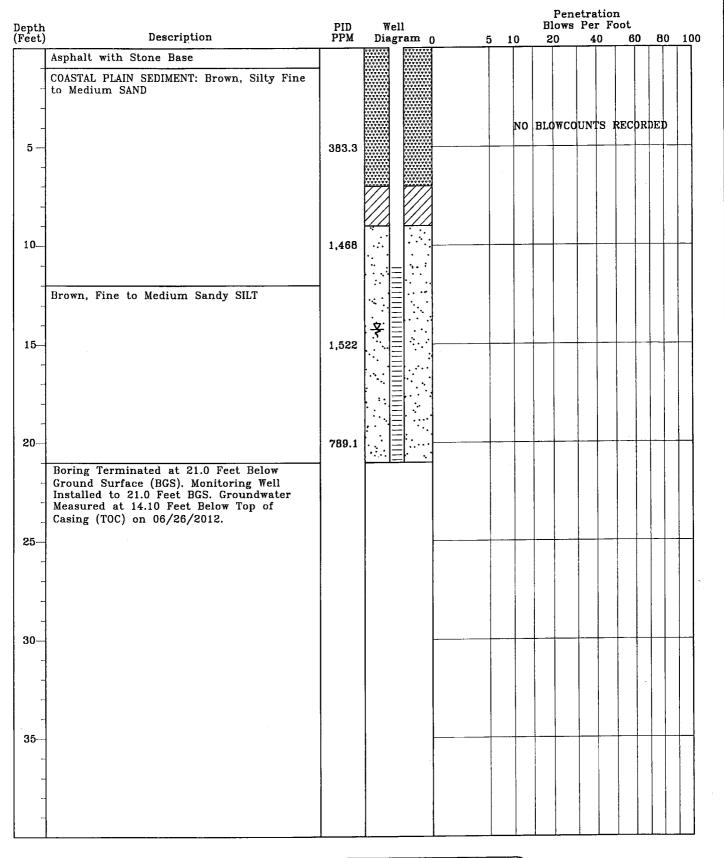
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APPENDIX D:
SOIL BORING/FIELD SCREENING LOGS & 1903 FORMS

This appendix is not applicable to the scope of services presented in the subject report, however this page has been included in order to conform to the SCDHEC UST Management Division Programmatic QAPP and provide report continuity

APPENDIX E: WELL COMPLETION LOGS & 1903 FORMS



TEST BORING RECORD
Coastal 16 Truck Stop
Florence, South Carolina
SCDHEC Site ID* Ø3538
MECI Project Number 12-3980

Boring Number:	IGWA-R (Ø3538)			
Date Drilled:	6/20/2012			
Drilled By: Pro	ironmental Drilling &			

R. Ariail

Logged By:

Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

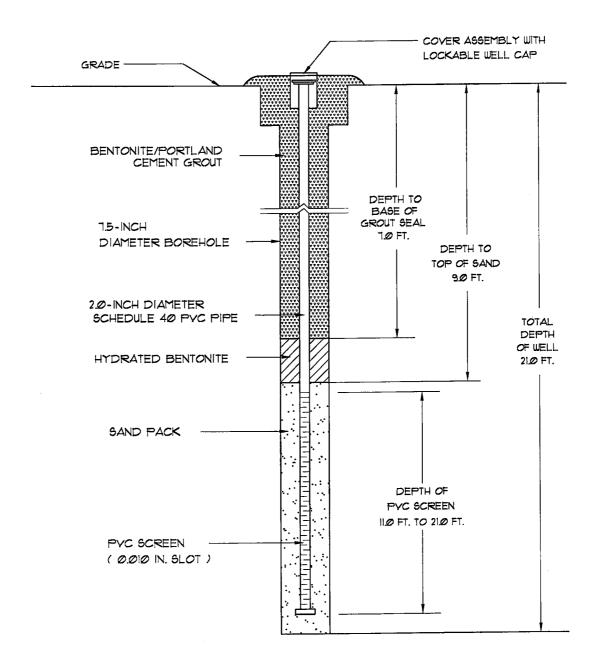
Environmental

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Prepared By:

MONITORING WELL INSTALLATION RECORD

Coastal 16 Truck Stop Florence, South Carolina SCDHEC Site ID* Ø3538 MECI. Project Number 12-3980



Well Number: IGWA-R (03538)

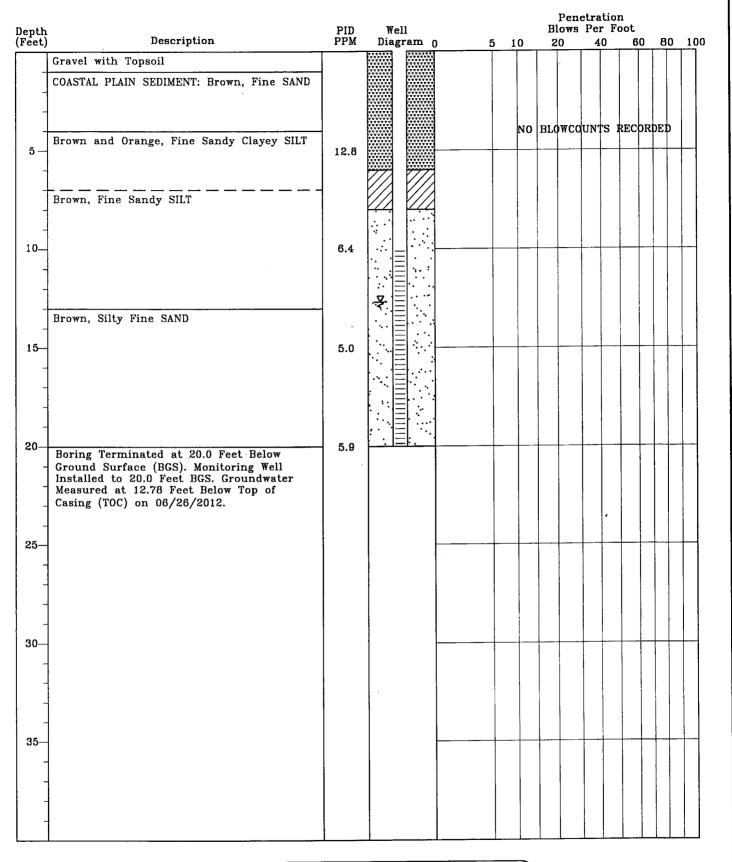
Date Drilled: 6/20/2012

Drilled By: Environmental Drilling & Probing Services, LLC.

Driller: J. Smith S.C. ID. *B 01648

Logged By: R. Ariail

Midlands
Environmental
Consultants, Inc.



TEST BORING RECORD

Coastal 76 Truck Stop

Florence, South Carolina

SCDHEC Site ID* Ø3538

MECI Project Number 12-3980

Boring Number: MW-15 (03538)

Date Drilled: 6/20/2012

Drilled By: Probing Services, LLC.

Logged By:

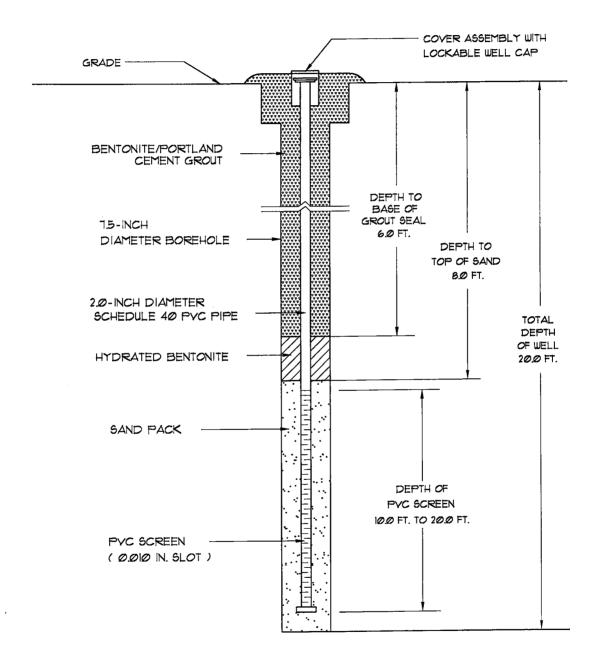
R. Ariail

Prepared By:

Midlands
Environmental
Consultants, Inc.

MONITORING WELL INSTALLATION RECORD

Coastal 76 Truck Stop Florence, South Carolina SCDHEC Site ID* 03538 MECI Project Number 12-3980



Well Number: MW-15 (03538)

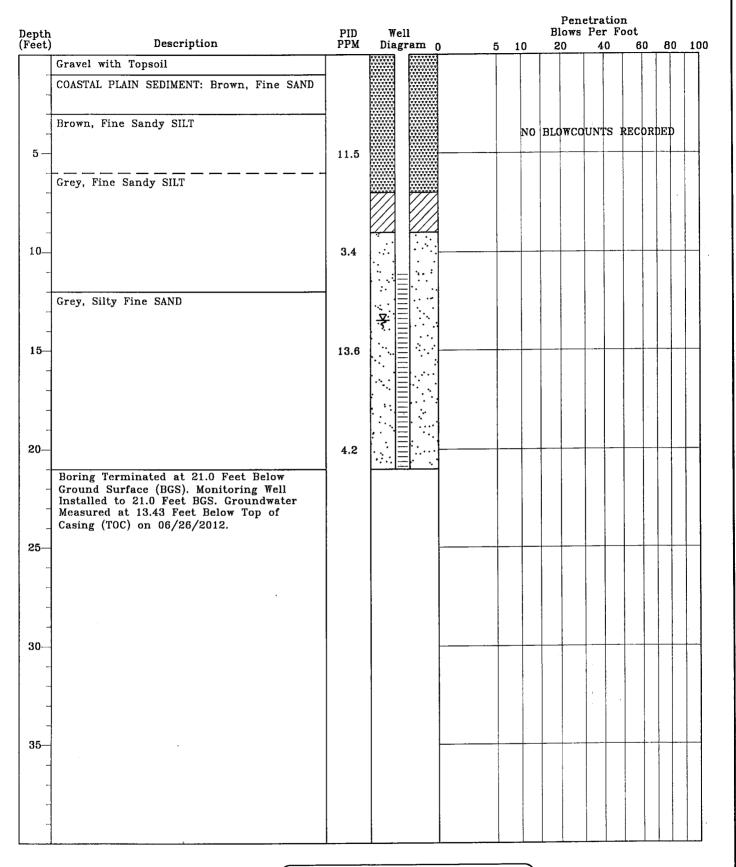
Date Drilled: 6/20/2012

Drilled By: Environmental Drilling & Probing Services, LLC.

Driller: J. Smith S.C. ID. *B 01648

Logged By: R. Ariail

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Consultants, Inc.



TEST BORING RECORD

Coastal 76 Truck Stop

Florence, South Carolina

SCDHEC Site ID* 03538

MECI Project Number 12-3980

Boring Number: MW-16 (03538)

Date Drilled: 6/20/2012

Environmental Drilling & Probing Services, LLC.

Logged By:

R. Ariail

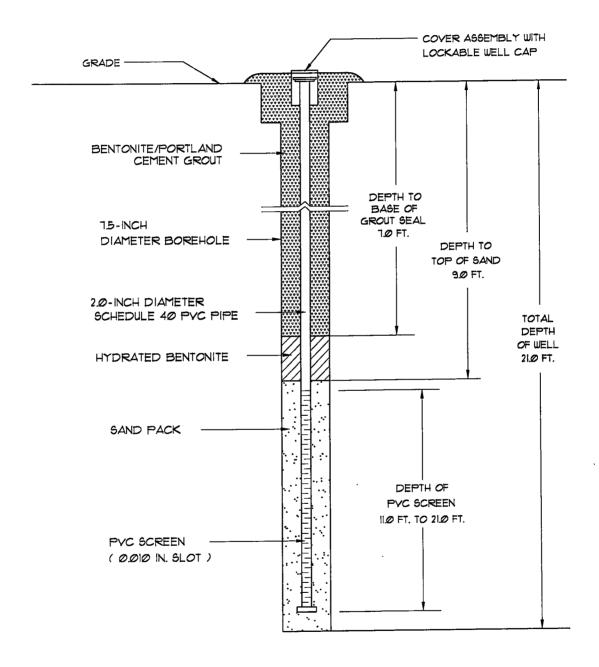
Midlands

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Consultants, Inc.

MONITORING WELL INSTALLATION RECORD

Coastal 76 Truck Stop Florence, South Carolina SCDHEC Site ID* Ø3538 MECI Project Number 12-3980



Well Number: MW-16 (03538)

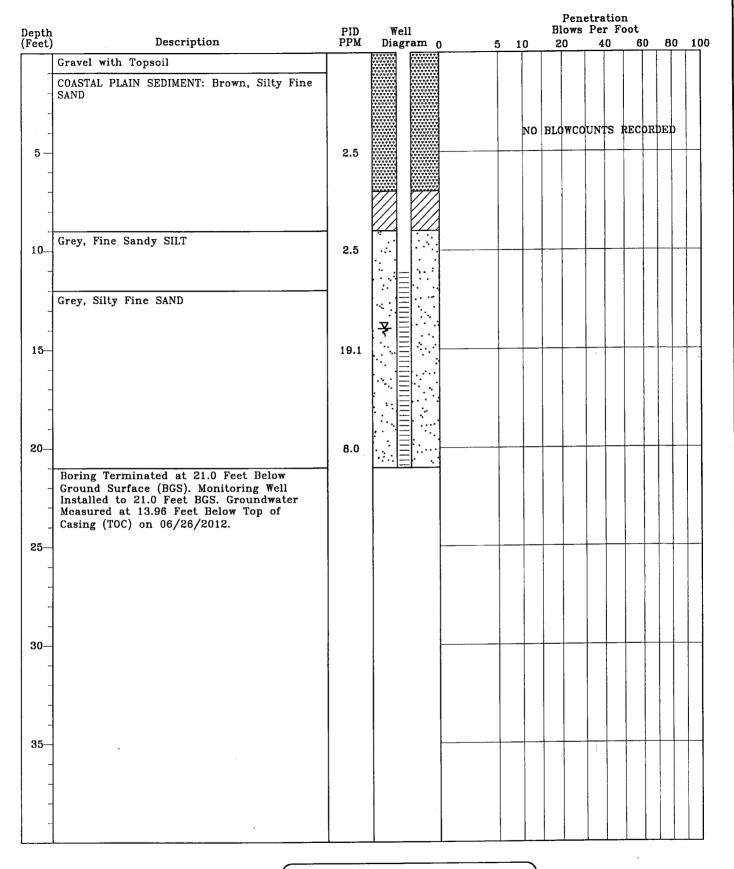
Date Drilled: 6/20/2012

Drilled By: Environmental Drilling & Probing Services, LLC.

Driller: J. Smith S.C. ID. *B 01648

Logged By: R. Ariail

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Consultants, Inc.



TEST BORING RECORD

Coastal 76 Truck Stop

Florence, South Carolina

SCDHEC Site ID* 03538

MECI Project Number 12-3980

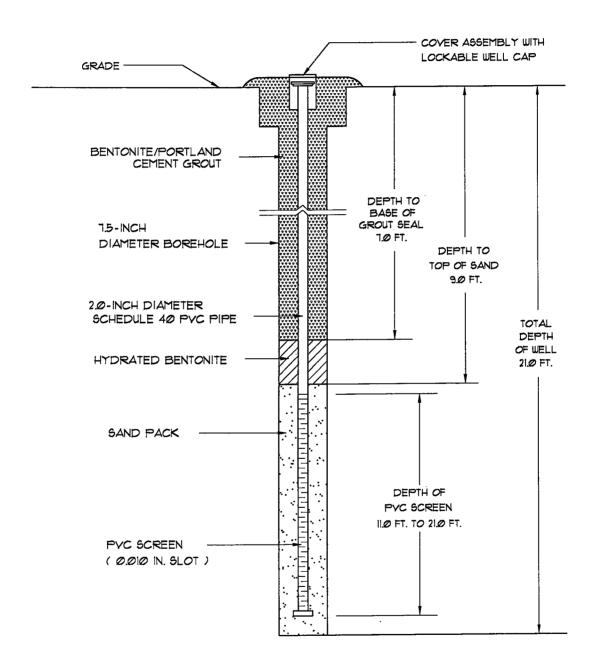
Boring Number:	MW-17 (03538)
Date Drilled:	6/20/2012
Drilled By: Prob	ronmental Drilling & oing Services, LLC.
Logged By:	R. Ariail

Prepared By:

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Consultants, Inc.

MONITORING WELL INSTALLATION RECORD

Coastal 76 Truck Stop Florence, South Carolina SCDHEC Site ID* 03538 MECI Project Number 12-3980



Well Number: MW-17 (03538)

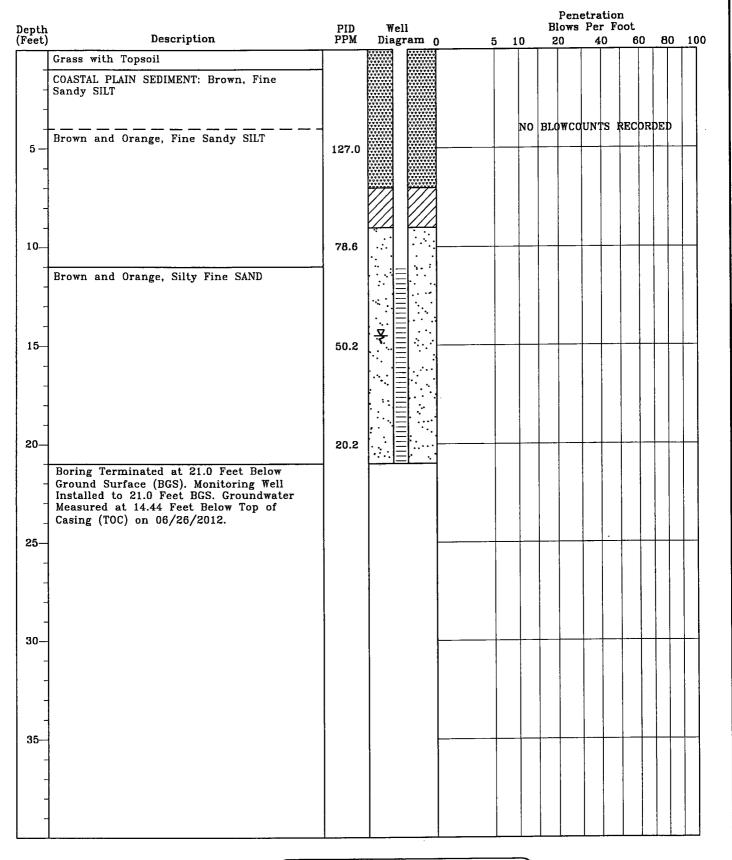
Date Drilled: 6/20/2012

Drilled By: Environmental Drilling 4 Probing Services, LLC.

Driller: J. Smith S.C. I.D. *B 01648

Logged By: R. Ariail

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Environmental
Consultants, Inc.



TEST BORING RECORD

Coastal 76 Truck Stop

Florence, South Carolina

SCDHEC Site ID* 03538

MECI Project Number 12-3980

Boring Number: MW-18 (03538)

Date Drilled: 6/20/2012

Environmental Drilling 4

Drilled By: Probing Services, LLC

Logged By:

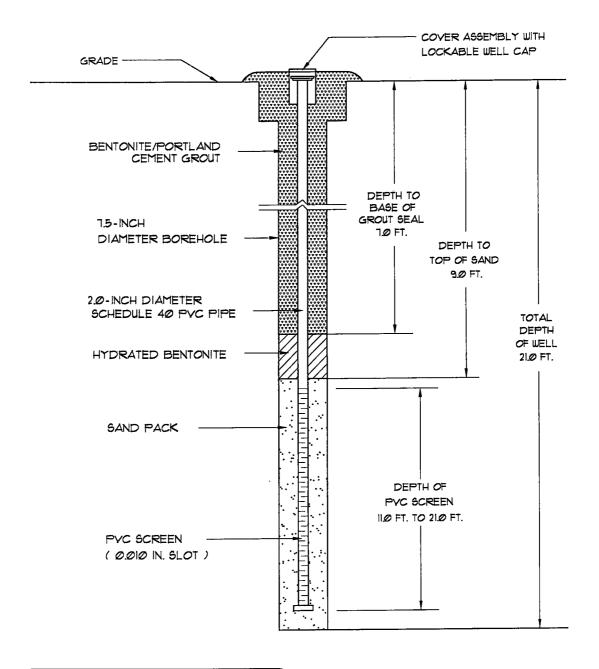
R. Ariail

Prepared By:

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Environmental
Consultants, Inc.

MONITORING WELL INSTALLATION RECORD

Coastal 76 Truck Stop Florence, South Carolina SCDHEC Site ID* 03538 MECI Project Number 12-3980



Well Number: MW-18 (03538)

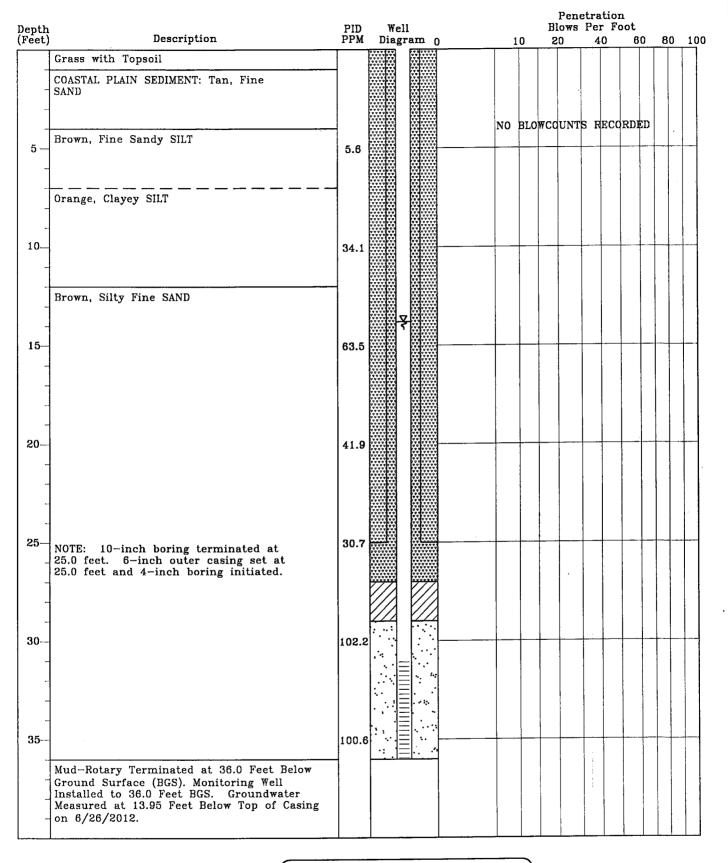
Date Drilled: 6/20/2012

Drilled By: Environmental Drilling 4
Probing Services, LLC.

Driller: J. Smith S.C. I.D. *B 01648

Logged By: R. Ariail

Midlands
Environmental
Consultants, Inc.



TEST BORING RECORD
Coastal 76 Truck Stop
Florence, South Carolina
SCDHEC Site ID* Ø3538
MECI Project Number 12-3980

Boring Number: TW-2 (Ø3538)

Date Drilled:

6/20/2012

Drilled By: Probing Services, LLC.

Logged By:

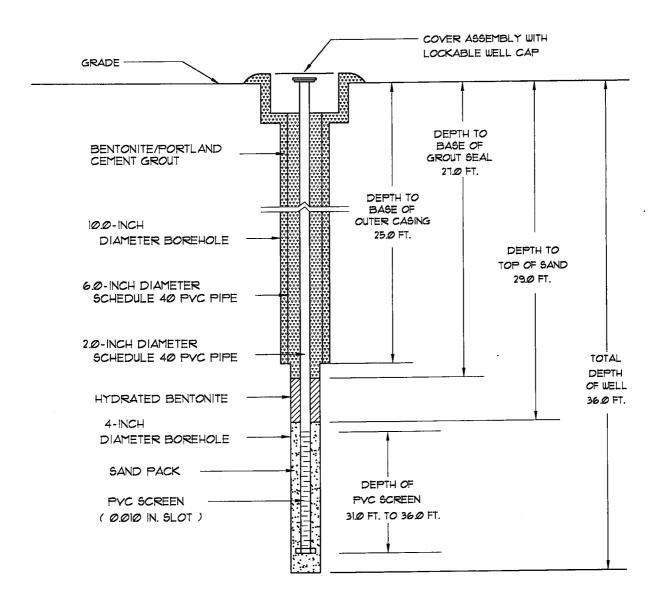
R. Ariail

Prepared By:

Midlands
Environmental
Consultants, Inc.

MONITORING WELL INSTALLATION RECORD

Costal 76 Truck Stop Florencce, South Carolina SCDHEC Site ID* 03538 MECI Project Number 12-3980



Well Number: TW-2 (03538)

Date Drilled: 6/20/2012

Drilled By: Environmental Drilling & Probing Services, LLC.

Driller: J. Smith S.C. I.D. *: B 01648

Logged By: R. Ariail

Prepared By:

Midlands

Environmental

Consultants, Inc.

235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 Tax: 808-2048



Water Well Record Bureau of Water

1. WELL OWNER INFORMATION:			7. PERMIT NUMBER: LIMIN 24603
Name: SCDHEC			UMW-24603
(last)	(firs	it)	8. USE:
Address: 2600 Bull Street			☐ Residential ☐ Public Supply ☐ Process
			☐ Irrigation ☐ Air Conditioning ☐ Emergency
City: Columbia State: SC	Zip: 29	201-1/08	☐ Test Well ☑ Monitor Well ☐ Replacement
Telephone: Work: (803) 898-4300	Home:		9. WELL DEPTH (completed) Date Started: 6/21/2012
2. LOCATION OF WELL: CO	UNTY: Flore	nce	21.0 ft. Date Completed: 6/21/2012
Name: Coastal 76 Truck Stop			10. CASING: ☑ Threaded ☐ Welded
Street Address: 2513 East Palmett	to Street		Diam.: 2 Inch Height: Above /Below
City: Florence	Zip: 29506-3	3809	Type: ☑ PVC ☐ Galvanized Surface 0.0 ft.
		,,,,,	Steel Other Weight lb./ft.
Latitude: Longitude	:		0.0 in. to 11.0 ft. depth Drive Shoe? ☐ Yes ☐ No in. to ft. depth
	BLIC SYSTE		11. SCREEN: Type: Schedule 40 PVC Diam.: 2 Inch
03538	IGWA-R		Slot/Gauge: 0.010 Length: 10.0 Feet
4. ABANDONMENT: ☐ Yes ☑	No		Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS
			ft. and ft. USE SECOND SHEET
Grouted Depth: from f			Sieve Analysis ☐ Yes (please enclose) ☑ No
Franchica December	*Thickness	Depth to	12. STATIC WATER LEVEL 14.10 ft. below land surface after 24 hours
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.
A L-1/C+		0.5	ft. after hrs. Pumping G.P.M.
Asphal/Stone	0.5	0.5	Pumping Test: ☐ Yes (please enclose) ☐ No
Brown, Silty SAND	11.5	12.0	Yield:
Brown, only or its	11.5	12.0	14. WATER QUALITY
Brown, Sandy SILT	9.0	21.0	Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
			Please enclose lab results.
			15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
			Installed from 9.0 ft. to 21.0 ft. Effective size Uniformity Coefficient
			16. WELL GROUTED? ☑ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other
			Depth: From 0.0 ft. to 7.0 ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type
•			Well Disinfected ☐ Yes ☐ No Type: Amount:
			18. PUMP: Date installed: Not installed
			Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648
			Address: (Print) Level: A B C D (circle one)
			17538 Greenhill Road
*Indicate Water Bearing Zones			Charlotte. North Carolina 28278 Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233
molecule Water Bearing Zones			20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under
(Use a 2nd sheet if needed)			my direction and this report true to the best of my knowledge and belief.
5. REMARKS:			
IGWA-R			
			Signed:
•			Signed: Date: 17072012
6. TYPE: ☐ Mud Rotary ☐ Jetted		Bored	
□ Dug □ Air Ro		Driven	If D Level briller, provide supervising driller's name:
☐ Cable tool ☑ Other			



Water Well Record Bureau of Water

1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:
Name: SCDHEC			UMW-24603
(last)	(firs	it)	8. USE:
Address: 2600 Bull Street			☐ Residential ☐ Public Supply ☐ Process
City: Columbia State: SC Zip: 29201-1708			☐ Irrigation ☐ Air Conditioning ☐ Emergency
City: Columbia State: SC	Z1p. Z5	7201-1706	☐ Test Well ☐ Monitor Well ☐ Replacement
Telephone: Work: (803) 898-4300	Home:		9. WELL DEPTH (completed) Date Started: 6/21/2012
2. LOCATION OF WELL: CO	OUNTY: Flore	nce	20.0 ft. Date Completed: 6/21/2012
Name: Coastal 76 Truck Stop			10. CASING: ☑ Threaded ☐ Welded
Street Address: 2513 East Palmet	to Street		Diam.: 2 Inch Height: Above /Below
	Zip: 29506-3	3809	Type: PVC Galvanized Surface 0.0 ft.
Latitude: Longitude	:		in. toft. depth
	DI IO OVOTE		11, SCREEN:
3. PUBLIC SYSTEM NAME: PU 03538	MW-15	M NUMBEK:	Type: Schedule 40 PVC Diam.: 2 Inch
			Slot/Gauge: 0.010 Length: 10.0 Feet
4. ABANDONMENT: ☐ Yes ☑	NO		Set Between: 10.0 ft. and 20.0 ft. NOTE: MULTIPLE SCREENS
Grouted Depth: from1	t to	4	ft. andft. USE SECOND SHEET
Grouted Deptil. Holli	*Thickness	π. Depth to	Sieve Analysis ☐ Yes (please enclose) ☑ No
Formation Description	of	Bottom of	12. STATIC WATER LEVEL 12.78 ft. below land surface after 24 hours
¢	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.
Gravel/Topsoil	0.5	0.5	ft. after hrs. Pumping G.P.M. Pumping Test: Yes (please enclose) No
			Yield:
Brown, SAND	3.5	4.0	14. WATER QUALITY
			Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Brown/Orange, Sandy Clayey SILT	3.0	7.0	Please enclose lab results.
Drawn Candy SH T	6.0	13.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Brown, Sandy SILT	6.0	13.0	Installed from 8.0 ft. to 20.0 ft. Effective size Uniformity Coefficient
Brown, Silty SAND	7.0	20.0	Effective size Uniformity Coefficient
			16. WELL GROUTED? ✓ Yes No
			□ Neat Cement □ Bentonite □ Bentonite/Cement □ Other □
PANTAGE.			Depth: From <u>0.0</u> ft. to <u>6.0</u> ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type Well Disinfected □ Yes □ No Type: Amount:
			18. PUMP: Date installed: Not installed Not installed Mfr. Name: Model No.:
			Mfr. Name: Model No.: H.P. Volts Length of drop pipe ft. Capacity gpm
			TYPE: Submersible Jet (shallow) Turbine
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648
			Address: (Print) Level: A B C D (circle one)
			17538 Greenhill Road
*Indicate Water Bearing Zones	 		Charlotte. North Carolina 28278 Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233
moleate water bearing zones			20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under
(Use a 2nd sheet if needed)			my direction and this report true to the best of my knowledge and belief.
5. REMARKS:			
MW-15			
			Signed:
			Signed: Date: 77.07.2012
6. TYPE: ☐ Mud Rotary ☐ Jetted	П	Bored	If D Level briller, provide supervising driller's name:
☐ Dug ☐ Air Ro		Driven	in Deaver Dillier, provide supervising united a frame.
☐ Cable tool ☑ Other	-		
<u> </u>		····	



Water Well Record Bureau of Water

1. WELL OWNER INFORMATION: Name: SCDHEC			7. PERMIT NUMBER: UMW-24603			
(last) Address: 2600 Bull Street	(firs	it)	8. USE: Residential Public Supply Process			
City: Columbia State: SC	Zip: 29	201-1708	☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☐ Monitor Well ☐ Replacement			
Telephone: Work: (803) 898-4300			9. WELL DEPTH (completed) Date Started: 6/21/2012			
2. LOCATION OF WELL: CO	DUNTY: Flore	nce	21.0 pate Completed: 6/21/2012			
Name: Coastal 76 Truck Stop	_		10. CASING: ☑ Threaded ☐ Welded Diam.: 2 Inch Height: Above /Below			
Street Address: 2513 East Palmet	to Street		Diam.: 2 Inch Height: Above /Below Type: ☑ PVC ☐ Galvanized Surface 0.0 ft.			
City: Florence	Zip: 29506-3	3809				
Latitude: Longitude			□ Steel □ Other Weight ─ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □			
3. PUBLIC SYSTEM NAME: PU		M NUMBER:	11. SCREEN: Type: Schedule 40 PVC Diam.: 2 Inch			
	MW-16		Slot/Gauge: 0.010 Length: 10.0 Feet			
4. ABANDONMENT: ☐ Yes ☑		4	Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS ft. and USE SECOND SHEET			
Grouted Depth: from	t. to *Thickness		Sieve Analysis			
Formation Description	of	Bottom of	12. STATIC WATER LEVEL 13.43 ft. below land surface after 24 hours			
u	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface ft. after hrs. Pumping G.P.M.			
Gravel/Topsoil	0.5	0.5	Pumping Test: Yes (please enclose) No			
Brown, SAND	2.5	3.0	Yield:			
Brown, Sandy SILT	3.0	6.0	Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No Please enclose lab results.			
Grey, Sandy SILT	6.0	12.0	15. ARTIFICIAL FILTER (filter pack)			
Grey, Silty SAND	9.0	21.0				
,,,			16. WELL GROUTED? ☑ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other			
			Depth: From <u>0.0</u> ft. to <u>7.0</u> ft.			
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction Type Well Disinfected Yes No Type: Amount:			
			18. PUMP: Date installed: Not installed [
			Mfr. Name: Model No.:			
			H.PVoltsLength of drop pipett. Capacity gpm TYPE:			
0 000			19. WELL DRILLER: Joe Smith CERT. NO.: 01648			
			Address: (Print) Level: A B C D (circle one)			
			17538 Greenhill Road Charlotte, North Carolina 28278			
*Indicate Water Bearing Zones			Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233			
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This was was drilled under my direction and this report of true to the best of my knowledge and belief.			
5. REMARKS:	<u> </u>					
MW-16			Signed: Date: 7/6/2012			
6. TYPE:		Bored Driven	If D Level Briller, provide supervising driller's name:			



Water Well Record Bureau of Water

1. WELL OWNER INFORMATION:			7. PERMIT NUMBER: UMW-24603
Name: SCDHEC			O191 W -2+003
(last)	(firs	t)	8. USE:
Address: 2600 Bull Street			☐ Residential ☐ Public Supply ☐ Process
City: Columbia State: SC	Zip: 29	201-1708	☐ Irrigation ☐ Air Conditioning ☐ Emergency
			☐ Test Well ☑ Monitor Well ☐ Replacement
Telephone: Work: (803) 898-4300			9. WELL DEPTH (completed) Date Started: 6/21/2012
	UNTY: Flore	nce	21.0 Date Completed: 6/21/2012
Name: Coastal 76 Truck Stop	_		10. CASING: ☑ Threaded ☐ Welded Diam.: ② Inch ☐ Height: Above /Below
Street Address: 2513 East Palmet			Diam.: 2 Inch Type: ☑ PVC ☐ Galvanized
City: Florence	^{Zip:} 29506-3	3809	Steel Other Weight
Latitude: Longitude	:		0.0 in. to 11.0 ft. depth Drive Shoe? \square Yes \square No
			in. to ft. depth
3. PUBLIC SYSTEM NAME: PU	BLIC SYSTE	M NUMBER:	11. SCREEN:
03538	MW-17		Type: Schedule 40 PVC Diam.: 2 Inch Slot/Gauge: 0.010 Length: 10.0 Feet
4. ABANDONMENT: ☐ Yes ☑	No		Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS
	-		ft. andft. USE SECOND SHEET
Grouted Depth: from f			Sieve Analysis ☐ Yes (please enclose) ☑ No
Formation Denovirties	*Thickness	Depth to	12. STATIC WATER LEVEL 13.96 ft. below land surface after 24 hours
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.
Gravel/Topsoil	0.5	0.5	ft. after hrs. Pumping G.P.M.
Graven ropson	0.5	0.5	Pumping Test: ☐ Yes (please enclose) ☐ No
Brown, Silty SAND	8.5	9.0	Yield:
			14. WATER QUALITY
Grey, Sandy SILT	3.0	12.0	Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No Please enclose lab results.
Grey, Silty SAND	9.0	21.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No Installed from 9.0 ft. to 21.0 ft.
			Installed from 9.0 ft. to 21.0 ft. Effective size Uniformity Coefficient
			16. WELL GROUTED? ☑ Yes ☐ No
			☐ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other
			Depth: From <u>0.0</u> ft. to <u>7.0</u> ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type
			Well Disinfected ☐ Yes ☐ No Type: Amount:
		-	18. PUMP: Date installed: Not installed Mfr. Name: Model No.:
			Mfr. Name: Model No.: gpm H.P. Volts Length of drop pipe ft. Capacity gpm
			TYPE: Submersible Jet (shallow) Turbine
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648
			Address: (Print) Level: A B C D (circle one)
			17538 Greenhill Road
*Indicate Water Bearing Zones		<u> </u>	Charlotte. North Carolina 28278 Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233
maloate Water bearing 201165			20. WATER WELL DRILLER'S CERTIFICATION: This way was drilled under
(Use a 2nd sheet if needed)			my direction and this report strue to the best of my knowledge and belief.
5. REMARKS:			
MW-17			
			Signed:
		1	World Diller
6. TYPE: ☐ Mud Rotary ☐ Jetted		Bored	If D Level Driller, provide supervising driller's name:
☐ Dug ☐ Air Ro	tary \square	Driven	
☐ Cable tool ☑ Other			



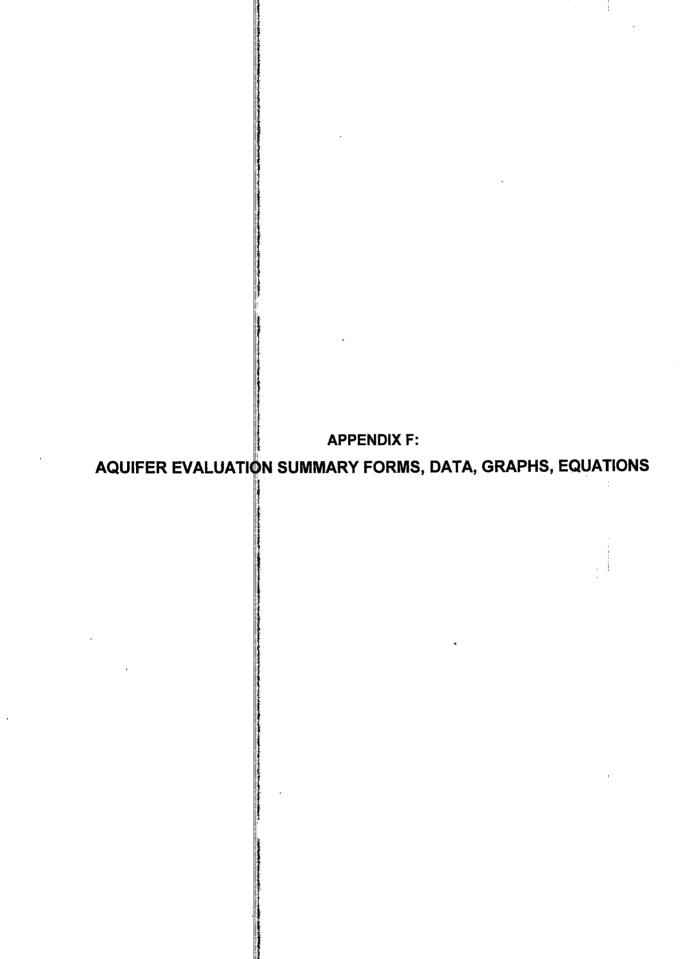
Water Well Record Bureau of Water

1. WELL OWNER INFORMATION:			7. PERMIT NUMBER: UMW-24603
Name: SCDHEC			UIVI W-240U5
(last)	(firs	it)	8. USE:
Address: 2600 Bull Street			☐ Residential ☐ Public Supply ☐ Process
City: Columbia State: SC	Zip: 20	201-1708	☐ Irrigation ☐ Air Conditioning ☐ Emergency
Columbia		201 1700	☐ Test Well ☐ Monitor Well ☐ Replacement
Telephone: Work: (803) 898-4300			9. WELL DEPTH (completed) Date Started: 6/21/2012
2. LOCATION OF WELL: CO	DUNTY: Flore	nce	21.0
Name: Coastal 76 Truck Stop			10. CASING: ☑ Threaded ☐ Welded
Street Address: 2513 East Palmet			Diam.: 2 Inch Height: Above /Below
City: Florence	Zip: 29506-3	3809	Type: ☑ PVC ☐ Galvanized Surface 0.0 ft. ☐ Steel ☐ Other Weight — lb./ft.
f nationalne			0.0 in. to 11.0 ft. depth Drive Shoe?
Latitude: Longitude):		in, toft. depth
3. PUBLIC SYSTEM NAME: PU	IBLIC SYSTE	M NUMBER:	11. SCREEN:
03538	MW-18		Type: Schedule 40 PVC Diam.: 2 Inch
4. ABANDONMENT: ☐ Yes ☑			Slot/Gauge: 0.010 Length: 10.0 Feet
- 103 E	.,,		Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS ft. and ft. USE SECOND SHEET
Grouted Depth: from	ft. to	ft.	T. and T. and T. USE SECOND SHEET Sieve Analysis □ Yes (please enclose) ☑ No
* *************************************	*Thickness	Depth to	12. STATIC WATER LEVEL 14.44 ft. below land surface after 24 hours
Formation Description	of	Bottom of	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface ft. after hrs. Pumping G.P.M.
Grass/Topsoil	0.5	0.5	Pumping Test: Yes (please enclose) No
		4.0	Yield:
Brown, Sandy SILT	3.5	4.0	14. WATER QUALITY
D	7.0	11.0	Chemical Analysis □ Yes □ No Bacterial Analysis □ Yes □ No
Brown/Orange, Sandy SILT	7.0	11.0	Please enclose lab results.
Brown/Orange, Silty SAND	10.0	21.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
· · · · · · · · · · · · · · · · · · ·	10.0		Installed from 9.0 ft. to 21.0 ft. Effective size Uniformity Coefficient
			Effective size Uniformity Coefficient
			16. WELL GROUTED? ☑ Yes ☐ No
			□ Neat Cement □ Bentonite □ Bentonite/Cement □ Other □
			Depth: From <u>0.0</u> ft. to <u>7.0</u> ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
•			Type Well Disinfected ☐ Yes ☐ No Type: Amount:
·			18. PUMP: Date installed: Not installed
			Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			TYPE: Submersible Jet (shallow) Turbine
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648
			Address: (Print) Level: A B C D (circle one)
			17538 Greenhill Road
*Indicate Water Bearing Zones			Charlotte. North Carolina 28278 Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233
			20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under
(Use a 2nd sheet if needed)	<u> </u>		my direction and this report true to the best of my knowledge and belief.
5. REMARKS:			
MW-18			
			Signed:
			Work Offiler
6. TYPE: ☐ Mud Rotary ☐ Jetted		Bored	If D Level Driller, provide supervising driller's name:
☐ Dug ☐ Air Ro	otary 🗆	Driven	
☐ Cable tool ☑ Other			



Water Well Record Bureau of Water

1. WELL OWNER INFORMATION:			7. PERMIT NUMBER: UMW-24603
Name: SCDHEC			UIVI W -24003
(last)	(firs	st)	8. USE:
Address: 2600 Bull Street			☐ Residential ☐ Public Supply ☐ Process
City: Columbia State: SC	Zip: 29	201-1708	☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☐ Monitor Well ☐ Replacement
Telephone: Work: (803) 898-4300	Home:		9. WELL DEPTH (completed) Date Started: 6/21/2012
2. LOCATION OF WELL: CO		nce	36.0 ft. Date Completed: 6/21/2012
Name: Coastal 76 Truck Stop	. 1010		10. CASING: ☑ Threaded ☐ Welded
Street Address: 2513 East Palmett	o Street		Diam.: 6"/2" Height: Above /Below
	Zip: 29506-3	3800	Type: ☑ PVC ☐ Galvanized Surface 0.0 ft.
110101100	47300-3	0009	Steel Other Weight lb./ft.
Latitude: Longitude	:		
3. PUBLIC SYSTEM NAME: PU	BLIC SYSTE	M NUMBER:	11. SCREEN:
03538	TW-2		Type: Schedule 40 PVC Diam.: 2 Inch Slot/Gauge: 0.010 Length: 5.0 Feet
4. ABANDONMENT: ☐ Yes ☑	No		Slot/Gauge: 0.010 Length: 5.5 1661 Set Between: 31.0 ft. and 36.0 ft. NOTE: MULTIPLE SCREENS
			Set Between: 51.0 ft. and 50.0 ft. NOTE: WOLTH-LE SCREENS ft. USE SECOND SHEET
Grouted Depth: from f	t. to	ft.	Sieve Analysis ☐ Yes (please enclose) ☑ No
	*Thickness	Depth to	12. STATIC WATER LEVEL 13.95 ft. below land surface after 24 hours
Formation Description	of Stratum	Bottom of	13. PUMPING LEVEL Below Land Surface.
	Stratum	Stratum	ft. after hrs. Pumping G.P.M.
Grass/Topsoil	0.5	0.5	Pumping Test: ☐ Yes (please enclose) ☐ No
C 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		4.0	Yield:
Tan, SAND	3.5	4.0	14. WATER QUALITY
Brown, Sandy SILT	3.0	7.0	Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No Please enclose lab results.
		10.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Orange, Clayey SILT	5.0	12.0	Installed from 29.0 ft. to 36.0 ft.
Brown, Silty SAND	24.0	36.0	Installed from 29.0 ft. to 36.0 ft. Effective size Uniformity Coefficient
Diown, only dante	ώ¬.∪	50.0	16. WELL GROUTED? ☑ Yes ☐ No
			☐ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other
			Depth: From 0.0 ft. to 27.0 ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			· Type
·			Well Disinfected ☐ Yes ☐ No Type: Amount:
			18. PUMP: Date installed: Not installed
			Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648
			Address: (Print) Level: A B C D (circle one)
			17538 Greenhill Road
			Charlotte. North Carolina 28278
*Indicate Water Bearing Zones			Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233
(I lea a Ond about March 15 at 15			20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under
(Use a 2nd sheet if needed)			my direction and this report true to the best of my knowledge and belief.
5. REMARKS:			
TW-2			
			Signed:
		L	. West Diffier
6. TYPE: \square Mud Rotary \square Jetted		Bored	If D Level Priller, provide supervising driller's name:
□ Dug □ Air Ro	ary 🗆	Driven	
☐ Cable tool ☑ Other			



SUMMARY of SLUG TEST (Page 1 of 2) SOUTH CAROLINA Department of Health and Environmental Control (DHEC) Site Data COUNTY Florence SITE ID# 03538 Coastal Mart 76 Truck Stop FACILITY NAME **SLUG DATA** for a list of all data measurements. See Appendix Table Figure (water level logs, etc.)(Complete as appropriate). ORS Interface Probe Water Level Recovery Data was measured by (Hermit Data Logger, Manually with Water Level Indicator, etc.)(List Method) Complete the following table for each well tested. COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED Slug Test Conducted in well(s) number TW-2 Initial Rise/Drawdown in well (feet) 3.17 Radius of well casing (feet) 0.083 Effective Radius of Well (feet) 0.33 Static Saturated Aquifer Thickness (feet) 23.01 Length of Well Screen (feet) 5 Static Height of Water Column in Well (ft) 23.01 Calculations See Appendix Table for calculations Figure The method for aquifer calculations was **NAVFAC** Calculated values by well were as follows: Slug Test Conducted in Well(s) number TW-2 3.46E-04 cm/sec Hydraulic Conductivity Thickness of the aquifer used to calculate hydraulic conductivity was <u>N/A</u> feet. confined _____ semi-confined _____ water table (Check as Appropriate). The aguifer is **SEE SHEET 3** The estimated seepage velocity is 3.82 feet per year based on a hydraulic conductivity of 1.73E-04 cm/sec, a hydraulic gradient of 2.67E-03 ft/ft, and a porosity of 25 percent for Clayey SAND soil. **SUMMARY of SLUG TEST**

G	roundwate	er Seepage Velocity Calculations (Page 2 of 2)						
	Departmer	SOUTH CAROLINA at of Health and Environmental Control (DHEC)						
Site Data								
SITE ID#	03538	COUNTY Florence						
FACILITY NAME		Coastal Mart 76 Truck Stop						
Hydraulic Conductiv	ity (average	9)						
Hydraulic Conductivity (TW-2)	Average =	3.46E-04 cm/sec						
,		9.81E-01ft./day						
		6.81E-04 ft./min						
Groundwater Seepag	ge Velocity							
V = (Ki)/(Ne) (ft./day)		* Enter Values in Shaded Areas Only						
	where:	K = Hydraulic Conductivity (ft./day) I = Hydraulic Gradient (ft./ft.) Ne = Effective Permeability						
K = ! = Ne =	9.81E-01 2.67E-03 0.25							
V =	1.0E-02	ft./dayft./year						
	Grou	ndwater Seepage Velocity Calculations						

Inflow for Condition C Well TW-2.xls

Inflow Permeability Calculation

Coastal Mart 76 Truck Stop

			Coustai	Trial to Track Stop				
				Test Performed: 6/26/2012				
		TW-2						
Static:	12.99	ft		*Enter Values in Shaded Areas Only				
Time (min)	Depth	delta H	H _t /H _o	Information from data and plot of Ht/H0 vs time				
0.25	16.16	3.17	1.00	Diameter of Intake: 6 in				
0.50	15.95	2.96	0.93	Length of Intake (L): 5 ft				
0.75	15.66	2.67	0.84	Diameter of Standpipe: 2 in				
1.00	15.42	2.43	0.77	* Formation Data Taken From SCDHEC Files				
1.25	15.20	2.21	0.70	Coordinates from Graph for Slope Calc:				
1.50	15.01	2.02	0.64	H ₁ /H _o : 0:77				
1.75	14.80	1.81	0.57	t_1 : 1.00 min				
2.00	14.65	1.66	0.52	H_2/H_0 : 0.26				
2.25	14.50	1.51	0.48	t ₂ : 4.00 min				
2.50	14.35	1.36	0.43	1				
2.75	14,24	1.25	0.39]				
3,00	14.14	1.15	0.36	H_1 : 2.44 H_2 : 0.82				
3,50	13.96	0.97	0.31	t_1 : 1.00 t_2 : 4.00				
4.00	13.80	0.81	0.26	Intake Radius: 4.00 in				
4.50	13.67	0.68	0.21	Intake Radius (rint): 0.33 ft				
5.00	13.56	0.57	0.18	Standpipe Radius: 1.00 in				
6.00	13.39	0.40	0.13	Standpipe Radius (rsp): 0.083 ft				
				<u> </u>				
				2				
				Calc1 = 0.000694 (rsp ²)/2L				
				$Calc2 = 2.70805 \qquad ln(L/rint)$				
				Calc3= 1.085709 $ln(H_1/H_2)$				
				Calc4= 3 (t2-t1)				

K=Calc1*Calc2*(Calc3/Calc4)

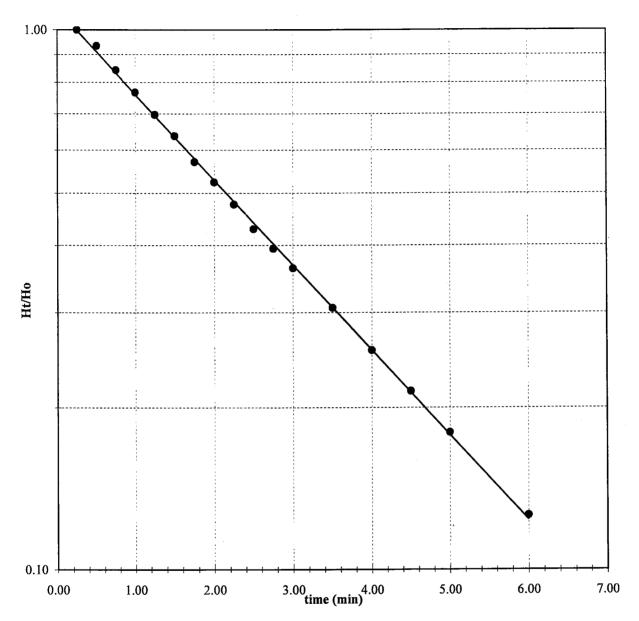
Coeff. of Permeability (K):

6.81E-04 ft/min

9.80E-01 ft/day

3.46E-04 cm/sec

Naval Fac. Engr. Command, Design Manuel 7.01, Soil Mechanics: Condition C



Midlands
Environmental
Consultants, Inc.

235-B Dooley Road, Lexington, SC 29073 (803) 808-2043 fax: 808-2048 APPENDIX G: DISPOSAL MANIFEST



Re:

Treatment of Purge Water Coastal 76 Truck Stop Florence, South Carolina SCDHEC Site ID Number 03538 MECI Project Number 12-3980

To Whom it May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

- 1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
- 2. No free-product was detected in any of the purge water drums.
- 3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
- 4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
- 5. Record of usage is maintained by Contractor.
- 6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
- 7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

32.0 Gallons were treated on June 20, 2012 during the development of the newly installed monitoring wells at the referenced site.

30.5 Gallons was treated on June 26, 2012 during the comprehensive groundwater sampling event conducted at the referenced site.

A total 62.5 gallons was treated during the subject assessment.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,

Midlands Environmental Consultants, Inc.

Staff Biologist



Original

716fet# 1176936

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SPECIAL WASTE MANIFEST

WASTE ID NUMBER		
VA2718		Richland Landfill
		1047 Highway Church Road
EXPIRATION DATE		Elgin, SC 29045
		Special Waste Phone: 803-744-3346
November 17, 2013		Fax: 866-904-7194
	Prepared by:	Karen Truett/Carol Weldon
GENERATOR OF WASTE:	Midlands Env. Consu	iltants, Inc Various
		ACCOUNT NUMBER:
CUSTOMER Midlands Env. Consu	ltants	820-469
LOCATION OF WASTE:	Site Address:	•
CITY: (Illing tan	COUNTY:	den to
J	_	F
PHONE NUN 803-808-2043	-	CONTACT: Bryan Shane
FAX NUMBER:	. 1	\cap
GENERATOR'S SIGNATURE	m Di	DATE: 4/21/12
		, , ,
TRANSPORTER OF WASTE: '/	ueci'	
DATE: 1/2/12	•	TRUCK NUMBER:
	\mathcal{A}	., 0
DRIVER'S SIGNATURE	my X	$\sim \ell$
**** TO DE COMOLEGE	NU DIOTT AND TAN	TOTALL LANGUAGE
**** TO BE COMPLETED DISPOSAL SITE: RIC	BY RICHLAND LAN HLAND LANDFILL 1	
MC	ILLAND LANDEIDE	Waste Class: Soil
DESCRIPTION OF WASTE:	Soil from UST Assess	
4 4	1 451	
TICKET NUMBER:	16736	
Innorman ////	•	
RECEIVED BY:		
<u> </u>		

Coastal No



Richland Count LF 1047 Highway Church Road Elgin, SC, 29045 Ph: (803) 788-3054

Original Ticket# 1178128

Customer Name MIDLANDSENVIRON MIDLANDS ENVI Carrier MIDLANDSENVIRON MIDLANDS ENVIRONMENT

Ticket Date _ 06/27/2012 9ehicle# 2 Volume Payment Type Credit Account

Container Manual Ticketh Driver Hauling Ticket# Check#

Route Billing # 0000469

State Waste Code Sen EPA ID

Manifest

Destination PΠ

Profile VA2718 (SOIL FROM UST ASSESSMENT)

Generator 126-MIDLANDSENVIRONMENTAL MIDLANDS ENVIRONMENTAL

Time 11220 16 Scale ScaleMaster Gross In 06/27/2012 07:14:20 Scalei 8800 16 joyce Tare Out 06/27/2012 07:34:00 Scale2 joyce Net 2420 16 Tone 1.21

Comments

Product	LD%	Qt y	UOM	Rate	Fee	Amount	Origin
1 SOIL-Cont. Soil - 2 FUEL-Fuel Surchar 3 EVF-P-Standard En	'g 100	1.21	Tons % %				32-LEXINGT 32-LEXINGT 32-LEXINGT

Total Fees Total Ticket

403WM

SPECIAL WASTE MANIFEST

WASTE ID NUMBER		
VA2718		Richland Landfill
		1047 Highway Church Road
EXPIRATION DATE		Elgin, SC 29045
November 17, 2013		Special Waste Phone: 803-744-3346 Fax: 866-904-7194
	Prepared by:	Karen Truett/Carol Weldon
GENERATOR OF WASTE:	Midlands Env. Co	onsultants, Inc Various
		ACCOUNT NUMBER:
CUSTOMER Midlands Env. Consu	ltants	820-469
LOCATION OF WASTE:	Site Address:	
CITY: Lexinetan	COUNTY:	exinitor
7		
PHONE NUN 803-808-2043		CONTACT: Bryan Shane
FAX NUMBER:		
GENERATOR'S SIGNATURE	apAi	DATE: 6/27/12
		· · · · · · · · · · · · · · · · · · ·
TRANSPORTER OF WASTE: * /	Meei	
DATE: 6/27/12	- /	TRUCK NUMBER:
DRIVER'S SIGNATURE	en An	- 10
, in the second		
**** TO BE COMPLETE		
DISPOSAL SITE: RIO	CHLAND LANDFII	Waste Class: Soil
DESCRIPTION OF WASTE:	Soil from UST As	
THE CHART AND TH	12178	
TICKET NUMBER:	10100	
RECEIVED BY:	·	
		-117/1

APPENDIX H:
LOCAL ZONING REGULATIONS

This appendix is not applicable to the scope of services presented in the subject report, however this page has been included in order to conform to the SCDHEC UST Management Division Programmatic QAPP and provide report continuity

APPENDIX I:
FATE AND TRANSPORT MODELING

This appendix is not applicable to the scope of services presented in the subject report, however this page has been included in order to conform to the SCDHEC UST Management Division Programmatic QAPP and provide report continuity

APPENDIX L. ACCESS AGREEMENTS

UNDERGROUND STORAGE TANK AND PROPERTY OWNER



PERMISSION FORM - UST Permit #03538

DIVISION OF UNDENGROUND STURNER TANK MONT

If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form.

I, WAN M: FACHIN, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative

for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf contractor services to conduct assessment and corrective action activities

as required, and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these site rehabilitation tasks. The contractor(s) will be designated as my contractor for only the required site rehabilitation activities. Compensation to the contractor(s) will be from the SUPERB Account and I will have no obligation to pay the contractor(s). I understand that SCDHEC will be responsible for notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.
Name of Facility Constal Truck STOP Phone # 843-669-617
Street Address of Facility 2607 E. PACMETTO ST
Town, City, District, Suburb FLORENCE SC
Name of nearest intersecting street, road, highway, alley TOPPEN RO
Is this facility within the city limits? (yes or no)
Is this facility serviced by a public water or sewer utility? (yes or no) \(\sum_{\text{less}} \), if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines \(\text{, phone number} \).
Were underground storage tanks previously removed from the ground at this facility? (yes or no) if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation Phone number 1-800 257 3,33
Is the property currently leased or rented to someone? (yes or no) if yes, please provide their name sign Tysels and phone number yes (wes or no) assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.
NAME of UST/property owner (Please Print): DAN M: EACHIN
Phone Number (home) 843 - 669 6177 (work)
Signature of UST/property Owner:
Witness: Sligsterk & molachen
Date: Month Day 99 Year
Date: Month Day 99 Year Scarned

APPENDIX K:
DATA VERIFICATION CHECKLIST

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Are Facility Name, Permit #, and address provided?	Х		
2	Is UST Owner/Operator name, address, & phone number provided?	х		
3	Is name, address, & phone number of current property owner provided?	Х		
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	Х		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?	Х		
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	х		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?	х		
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?	х		
11	Has the site-specific geology and hydrogeology been described?	х		
12	Has the primary soil type been described?	х		
13	Have field screening results been described?	х		
14	Has a description of the soil sample collection and preservation been detailed?	х		
15	Has the field screening methodology and procedure been detailed?	Х		
16	Has the monitoring well installation and development dates been provided?	Х		
17	Has the method of well development been detailed?	Х		
18	Has justification been provided for the locations of the monitoring wells?	х		
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	Х		
20	Has the groundwater sampling methodology been detailed?	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? (Table 2 & Figure 5)	Х		
22	Has the purging methodology been detailed?	х		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? (Appendix B)	X		
24	If free-product is present, has the thickness been provided?	X		
25	Does the report include a brief discussion of the assessment done and the results?	х		
26	Does the report include a brief discussion of the aquifer evaluation and results?	х		
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			Х
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			х
31	Have recommendations for further action been provided and explained?	х		
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)	Х		
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)	Х		
34	Has the <u>current</u> and historical laboratory data been provided in tabular format? (Tables 3 & 3A)	Х		-
35	Have the aquifer characteristics been provided and summarized on the appropriate form? (Appendix F)	Х		
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			х
37	Has the topographic map been provided with all required elements? (Figure 1)	х		
38	Has the site base map been provided with all required elements? (Figure 2)	х		
39	Have the CoC site maps been provided? (Figures 3, 4)	х		
40	Has the site potentiometric map been provided? (Figure 5)	х		
41	Have the geologic cross-sections been provided? (Figure 6)	х		
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			х
43	Has the site survey been provided and include all necessary elements? (Appendix A)	X		
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	Х	,	
45	Is the laboratory performing the analyses properly certified?	х		
46	Has the tax map been included with all necessary elements? (Appendix C)	X		
47	Have the soil boring/field screening logs been provided? (Appendix D)	х		
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)	Х		
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)	Х		
50	Have the disposal manifests been provided? (Appendix G)	х		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			Х
52	Has all fate and transport modeling been provided? (Appendix I)			Х
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)	X		
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided? (Appendix K)	х		



July 25, 2012



Ms. Maia Milenkova, Hydrogeologist
Assessment Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject:

Revisions to AR Dated July 17, 2012

Report of Monitoring Well Installation, Groundwater Sampling

and Chemical Analyses

Coastal 76 Truck Stop 2513 E. Palmetto Street Florence, South Carolina

SCDHEC Site ID# 03538, CA # 43863

MECI Project Number 12-3980

Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Milenkova,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Revisions to AR Dated July 17, 2012 Report of Monitoring Well Installation, Groundwater Sampling and Chemical Analyses for the referenced site. This report describes assessment activities conducted at the site and results of those activities in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines, including adherence to the UST Division Programmatic Quality Assurance Program Plan (QAPP).

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely.

Midlands Enviropmental Consultants, Inc.

Courtney M. Sand Staff Biologist

1.2 PROJECT INFORMATION

The subject site (Costal 76 Truck Stop) is located at 2513 East Palmetto Street, Florence, Florence County, South Carolina. The subject site formally maintained four underground storage tanks (UST's), including 1-2,000 gallon gasoline UST, 1-3,000 gallon gasoline UST, 1-1,000 gallon gasoline UST, and 1-2,000 gallon diesel UST. These UST's were abandoned by removal from ground in August of 1995. The South Carolina Department of Health and Environmental Control reported a release of petroleum product for the subject UST's in September of 1995 and confirmed this release in August of 1997. The subject site is currently rated a Class 3BA.

Prior to commencement of the field activities described in this document, a QAPP Contractors Addendum was completed by MECI personnel, submitted to SCDHEC and approved by the SCDHEC project manager.

The above project information is based on MECI field notes and SCDHEC files.

2.0 SURROUNDING PROPERTY USAGE

The subject site is located inside the city limits of Florence, Florence County, South Carolina. South East Palmetto Street (US Highway 76) forms the southern border of the site, beyond which is the Florence County Regional Airport. North Koppers Road (SC State Rd. S-21-176) forms the eastern border of the site, beyond which are commercial properties. Commercial properties border the site to the west. North of the site is wooded and undeveloped.

3.0 FIELD EXPLORATION

Field exploration conducted at the site included:

- construction of five (5) shallow monitoring wells;
- construction of one (1) deep monitoring well;
- collection of one soil sample;
- hydrologic testing of one selected monitoring well;
- sampling and chemical analyses of the entire monitoring well network;
- hydrologic testing of one selected monitoring well; and,
- a comprehensive survey of subject site.

The monitoring well locations were selected based on SCDHEC project manager instructions, existing site conditions, and drilling accessibility.

3.1 MONITORING WELL INSTALLATION

From June 19 to June 21, 2012, five single cased watertable bracketing monitoring wells and one double cased telescoping monitoring well were installed at the subject site. The watertable bracketing monitoring wells (IGWA-R, MW-15, MW-16, MW-17, and MW-18) were installed by

Environmental Drilling and Probing Services, LLC. of Rock Hill, SC (S.C. Driller Certification: Joe Smith # B01648) using an Truck-mounted drilling rig employing 8.0-inch outer diameter hollow stem augers to construct the boreholes.

Monitoring well TW-2 was installed as a double cased telescoping monitoring well. During construction, a 6 1/4-inch outer diameter casing was advanced to the desired depth and grouted inplace. The grout was allowed to cure and the remainder of the depth of the borehole was achieved using mud-rotary techniques. Monitoring well TW-2 was cased to a depth of 25.0 feet below ground surface (BGS) and completed to a total depth of 36.0 feet BGS. This well utilizes a five foot screen.

The following table presents well installation details:

Well Number	Single Cased	Double Cased	Screened Interval (ft)	Total Depth (ft)
IGWA-R	X		11.0-21.0	21.0
MW-15	X		10.0-20.0	20.0
MW-16	X		11.0-21.0	21.0
MW-17	X		11.0-21.0	21.0
MW-18	x		11.0-21.0	21.0
TW-2		X	31.0-36.0	36.0

The soils encountered during drilling activities consisted of silty fine to medium grained sands of the Atlantic Coastal Plain Province. The soils encountered in this area are the product of successive advances and retreats of the ocean over the past several million years. Representative portions of soil samples were screened with a Photo Ionization Detector (PID) and classified by MECI personnel. Test boring records showing soil descriptions and screening result are attached in Appendix E.

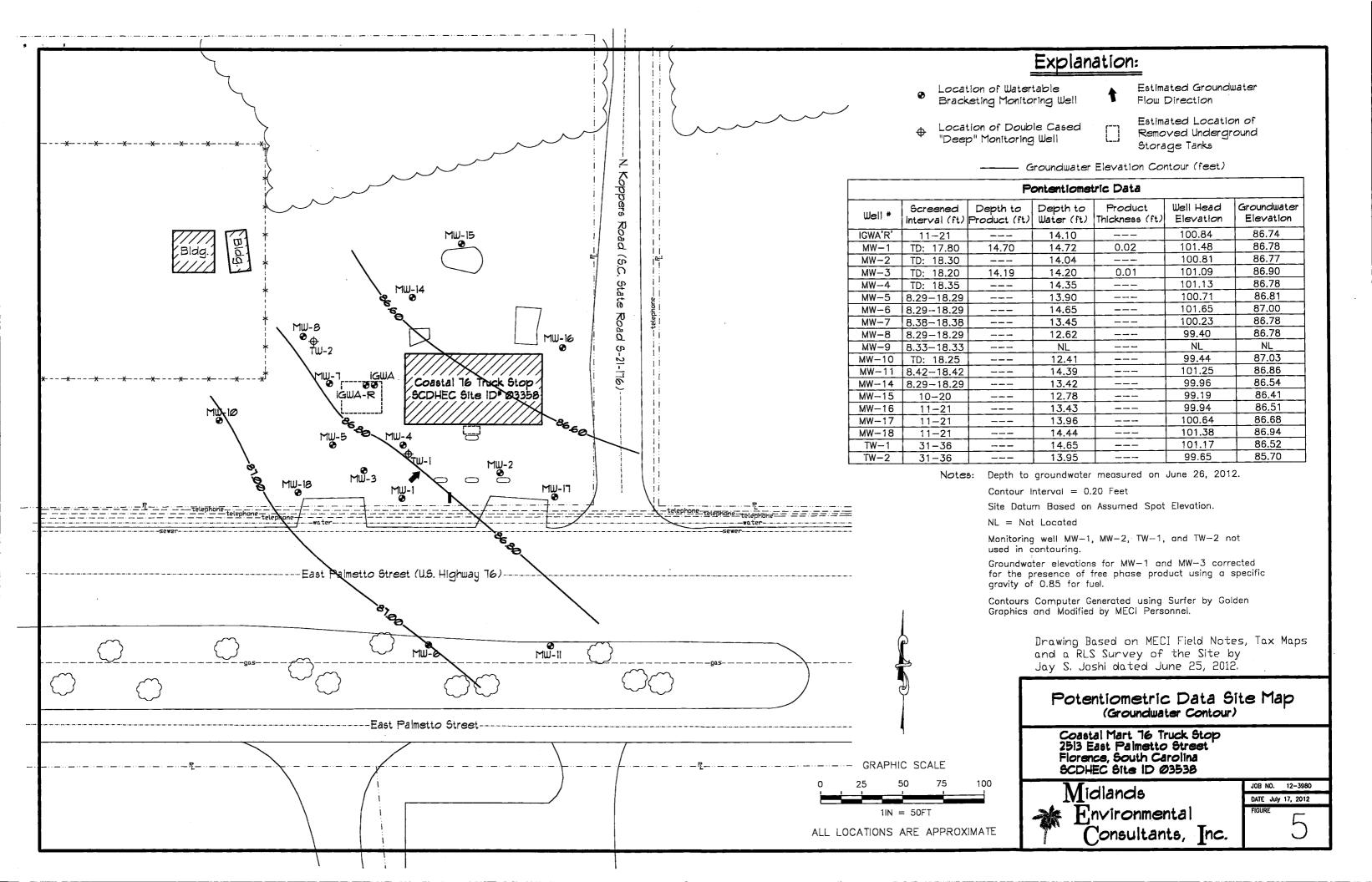
Drill cuttings were containerized and transported to Waste Management/Richland County Landfill, Elgin, SC by MECI personnel. A total of 3.45 tons was disposed of in this manner. A disposal manifest for these soils is attached at the end of this report.

Following completion of the monitoring wells, the wells were developed by purging until they were determined to be functioning properly and turbidity was reduced. These wells were developed on June 21, 2012 utilizing a Whale-Mega Purger well pump. The drum of purge water was treated by MECI personnel using a granular activated carbon drum. A total of 32.0 gallons of purge/development water was disposed of in this manner. A disposal manifest for the treated purge water is presented in Appendix G.

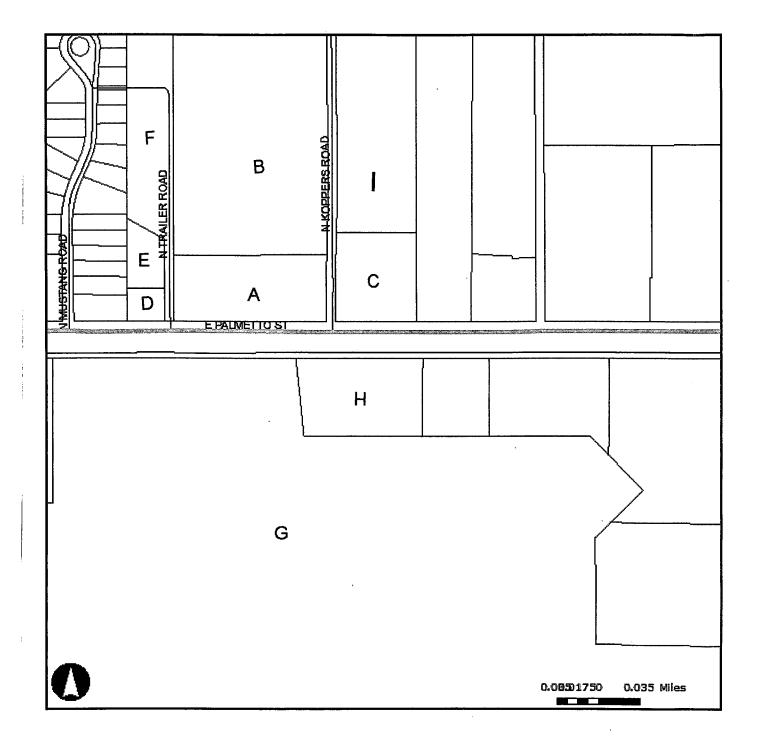
3.2 SOIL SAMPLING AND CHEMICAL ANALYSES

As requested by SCDHEC, one soil sample was collected from within the screened interval of monitoring well TW-2 during installation. Soil sample TW-2 (36') was analyzed for grain-size/hydrometer (ASTM D1140). The soil was sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Dated June 2011) and MECI's Standard Operating Procedures (MECI SOP, Dated August, 2011). The results of the laboratory analyses are presented in the attached laboratory reports (Appendix B).

Soil samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.







<u>ID</u>	Tax Map #	<u>Owner</u>
Α	90150-01-029 Site	Dan M. McEachin 10017 Wentworth Drive
В	90150-01-043	Florence, SC 29501
С	90150-01-030	
I	90150-01-044	
D E	90150-01-041 90150-01-027	Moody Real Estate, Inc. 1609 Elvington Court Lakeview, SC 29563
F	90150-01-028	Wade Lory Rawlinson 220 South White Palm Court Florence, SC 29506
G H	00177-01-001 00207-01-020	Pee Dee Regional Airport 2100 Terminal Drive Florence, SC 29506

Tax Map Data

Coastal 76 Truck Stop 2513 East Palmetto Street Florence, South Carolina SCDHEC ID 9 03538

Midlands
Environmental
Consultants, Inc.

JOB NO. 12-3980 DATE July 17, 2012



1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:
Name: SCDHEC			UMW-24603
(last) (first)			8. USE:
Address: 2600 Bull Street	, -	1	8. USE: ☐ Residential ☐ Public Supply ☐ Process
	4.44	201	☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency
City: Columbia State: SC	Zip: 29	201-1708	☐ Test Well ☐ Monitor Well ☐ Replacement
Telephone: Work: (803) 898-4300 Ho	ome.		9. WELL DEPTH (completed) Date Started: 6/20/2012
	JNTY:Flore	nce	
Name: Coastal 76 Truck Stop	riore	alot	21.0 ft. Date Completed: 6/20/2012 10. CASING: ☑ Threaded ☐ Welded
Street Address: 2513 East Palmetto	Ctunes	1	10. CASING: ☐ Threaded ☐ Welded Diam.: 2 Inch
		1000	Type: ☑ PVC ☐ Galvanized Surface 0.0 ft.
· Protence Zi	^{(ip:} 29506-3	צטסי	
Latitude: Longitude:			0.0 in. to 11.0 ft. depth \square Drive Shoe? \square Yes \square No
Longitude:			in. toft. depth
	LIC SYSTE	M NUMBER:	11. SCREEN: 2 Inch
03538	IGWA-R		Type: Schedule 40 PVC Diam.: 2 Inch
4. ABANDONMENT: Yes I N			Type: Schedule 40 PVC Diam.: 2 Hich Slot/Gauge: 0.010 Length: 10.0 Feet Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS
	-		Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS
Grouted Depth: fromft. f	to		ft. andft. USE SECOND SHEET Sieve Analysis □ Yes (please enclose) ☑ No
	*Thickness		Sieve Analysis ☐ Yes (please enclose) ☑ No 12. STATIC WATER LEVEL 14.10 ft. below land surface after 24 hours
Formation Description	of	Bottom of	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.
Asphal/Stone 0	0.5	0.5	ft. after hrs. Pumping G.P.M. Pumping Test:
			Pumping Test: ☐ Yes (please enclose) ☐ No Yield:
Brown, Silty SAND	11.5	12.0	
			14. WATER QUALITY Chemical Analysis □ Yes □ No Bacterial Analysis □ Yes □ No
Brown, Sandy SILT	9.0	21.0	Chemical Analysis □ Yes □ No Bacterial Analysis □ Yes □ No Please enclose lab results.
		 	
l .	İ	1	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No Installed from 9.0 ft to 21.0 ft.
-		 	Installed from 9.0 ft. to 21.0 ft. Effective size Uniformity Coefficient
l	İ	ļ l	
			16. WELL GROUTED? ☑ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other
		_	Depth: From 0.0 tt. to 7.0 tt.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
		<u> </u>	· Type
			Well Disinfected ☐ Yes ☐ No Type: Amount:
			18. PUMP: Date installed: Not installed _
		ļ	18, PUMP: Date installed: Not installed \(\) Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648
			Address: (Print) Level: A B C D (circle one)
	İ		17538 Greenhill Road
who the second second			Charlotte. North Carolina 28278
*Indicate Water Bearing Zones	i	į į	Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233
(Use a 2nd sheet if needed)	İ	1	20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under my direction and this report of the best of my knowledge and belief.
5. REMARKS:		 	my unoction and this reported true to the best ownly knowledge and belief.
	İ		
IGWA-R	1	[]	A W
	İ	(Signed:
			. West Officer
6. TYPE: ☐ Mud Rotary ☐ Jetted	_	Bored	If Dicevel briller, provide supervising driller's name:
☐ Dug ☐ Air Rotar	ıry 🗆	Driven	
☐ Cable tool			



1. WELL OWNER INFORMATION: Name: SCDHEC			7. PERMIT NUMBER: UMW-24603			
(last) (first)			0 LISE.			
Address: 2600 Bull Street			8. USE: ☐ Residential ☐ Public Supply ☐ Process			
			☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency			
City: Columbia State: SC	Zip: 29	201-1708	☐ Test Well ☐ Monitor Well ☐ Replacement			
Telephone: Work: (803) 898-4300			9. WELL DEPTH (completed) Date Started: 6/20/2012			
	DUNTY: Flore	nce	21.0 pate Completed: 6/20/2012			
Name: Coastal 76 Truck Stop			10. CASING: ☑ Threaded ☐ Welded			
Street Address: 2513 East Palmet			Diam.: 2 Inch Height: Above /Below			
City: Florence	Zip: 29506-3	3809	Type: PVC Galvanized Surface 0.0 ft.			
			□ Steel □ Other Weight □ Ib./ft. 0.0 in. to 11.0 ft. depth □ Drive Shoe? □ Yes □ No			
Latitude: Longitude	:		in. toft. depth			
3. PUBLIC SYSTEM NAME: PU	BLIC SYSTE	M NUMBER:	11. SCREEN:			
03538	IGWA-R		Type: Schedule 40 PVC Diam.: 2 Inch			
4. ABANDONMENT: ☐ Yes ☑	No		Slot/Gauge: 0.010 Length: 10.0 Feet Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS			
			ft. andft. USE SECOND SHEET			
Grouted Depth: fromf			Sieve Analysis ☐ Yes (please enclose) ☑ No			
	*Thickness		12. STATIC WATER LEVEL 13.96 ft. below land surface after 24 hours			
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.			
A1 -1/C/			ft. after hrs. Pumping G.P.M.			
Asphal/Stone	0.5	0.5	Pumping Test: ☐ Yes (please enclose) ☐ No			
Brown, Silty SAND	11.5	12.0	Yield:			
	<u> </u>		14. WATER QUALITY Chaminal Analysis Ci Vos Ci No. Restorial Analysis Ci Vos Ci No.			
Brown, Sandy SILT	9.0	21.0	Chemical Analysis □ Yes □ No Bacterial Analysis □ Yes □ No Please enclose lab results.			
			15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No			
			Installed from 9.0 ft. to 21.0 ft. Effective size Uniformity Coefficient			
			16. WELL GROUTED? ☑ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ Bentonite ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other ☐ Other			
			Depth: From 0.0 ft. to 7.0 ft.			
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction			
			. Type			
			Well Disinfected ☐ Yes ☐ No Type: Amount:			
			18. PUMP: Date installed: Not installed			
			Mfr. Name: Model No.:			
			H.P. Volts Length of drop pipe ft. Capacity gpm			
			TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal			
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648			
			Address: (Print) Level: A B C D (circle one)			
			17538 Greenhill Road			
			Charlotte, North Carolina 28278			
*Indicate Water Bearing Zones			Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233			
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under my direction and this report of true to the best of my knowledge and belief.			
5. REMARKS:	 		ing anochon and this ropolate had to the boat daily followedge and bollon			
IGWA-R	[Signed:			
			Signed: Date: 770/2012			
& TVDE: Mud Beton:		Bored				
6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Dug ☐ Air Ro		Borea Driven	If Dicevel briller, provide supervising driller's name:			
☐ Cable tool ☐ Other	,					
L						



1. WELL OWNER INFORMATION: Name: SCDHEC			7. PERMIT NUMBER: UMW-24603
(last) (first)			8. USE:
Address: 2600 Bull Street			☐ Residential ☐ Public Supply ☐ Process
City: Columbia State: SC	7in: 20	201 1709	☐ Irrigation ☐ Air Conditioning ☐ Emergency
ony-Columbia state. Sc	Z.Ip. 23	201-1700	☐ Test Well ☑ Monitor Well ☐ Replacement
Telephone: Work: (803) 898-4300	Home:		9. WELL DEPTH (completed) Date Started: 6/20/2012
2. LOCATION OF WELL: CO	OUNTY: Flore	nce	20.0 ft. Date Completed: 6/20/2012
Name: Coastal 76 Truck Stop			10. CASING: ☑ Threaded ☐ Welded
Street Address: 2513 East Palmet	to Street		Diam.: 2 Inch Height: Above /Below
City: Florence	^{Zip:} 29506-3	3809	Type: ✓ PVC ☐ Gaivanized Surface 0.0
f additional and the state of			□ Steel □ Other Weight — lb./ft. 0.0 in. to 10.0 ft. depth Drive Shoe? □ Yes □ No
Latitude: Longitude	:		in. toft. depth
3. PUBLIC SYSTEM NAME: PU	BLIC SYSTE	M NUMBER:	11. SCREEN:
03538	MW-15		Type: Schedule 40 PVC Diam.: 2 Inch
4. ABANDONMENT: ☐ Yes ☑	No		Slot/Gauge: 0.010 Length: 10.0 Feet Set Between: 10.0 ft. and 20.0 ft. NOTE: MULTIPLE SCREENS
			Set Between: 10.0 ft. and 20.0 ft. NOTE: MULTIPLE SCREENS ft. andft. USE SECOND SHEET
Grouted Depth: fromf			Sieve Analysis 🔲 Yes (please enclose) 🗹 No
	*Thickness		12. STATIC WATER LEVEL 13.01 ft. below land surface after 24 hours
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.
			ft. after hrs. PumpingG.P.M.
Gravel/Topsoil	0.5	0.5	Pumping Test: 🗌 Yes (please enclose) 🗎 No
Brown, SAND	3.5	4.0	Yield:
	5.5		14. WATER QUALITY
Brown/Orange, Sandy Clayey SILT	3.0	7.0	Chemical Analysis □ Yes □ No Bacterial Analysis □ Yes □ No Please enclose lab results.
Brown, Sandy SILT	6.0	13.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes □ No
Diown, Sandy SiL1	0.0	15.0	Installed from 8.0 ft. to 20.0 ft. Effective size Uniformity Coefficient
Brown, Silty SAND	7.0 20.0		Effective size Uniformity Coefficient
			16. WELL GROUTED? ☑ Yes ☐ No
			□ Neat Cement □ Bentonite □ Bentonite/Cement □ Other
			Depth: From <u>0.0</u> ft. to <u>6.0</u> ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction Type
			Well Disinfected ☐ Yes ☐ No Type: Amount:
			18. PUMP: Date installed: Not installed
			Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648
			Address: (Print) Level: A B C D (circle one)
			17538 Greenhill Road Charlotte. North Carolina 28278
*Indicate Water Bearing Zones			Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233
(Line o Ond short if a select)			20. WATER WELL DRILLER'S CERTIFICATION: This was well was drilled under
(Use a 2nd sheet if needed)			my direction and this report strue to the best of my knowledge and belief.
5. REMARKS:			
MW-15	1		A A A A A A A A A A A A A A A A A A A
			Signed:
	l	L	Worldfiller
6. TYPE: Mud Rotary Jetted	_	Bored	If Dicevel Briller, provide supervising driller's name:
☐ Dug ☐ Air Ro☐ Cable tool ☑ Other	tary 🗀	Driven	



1. WELL OWNER INFORMATION: Name: SCDHEC			7. PERMIT NUMBER: UMW-24603
(last)	(fir:	st)	
Address: 2600 Bull Street			8. USE:
2000 Duli Street			☐ Residential ☐ Public Supply ☐ Process
City: Columbia State: SC	Zip: 29	9201-1708	☐ Irrigation ☐ Air Conditioning ☐ Emergency
			☐ Test Well ☐ Monitor Well ☐ Replacement 9. WELL DEPTH (completed) Date Started: 6/20/2012
Telephone: Work: (803) 898-4300	Home:		
2. LOCATION OF WELL: CO	DUNTY: Flore	ence	21.0 nt. Date Completed: 6/20/2012
Name: Coastal 76 Truck Stop			10. CASING: Threaded Welded
Street Address: 2513 East Palmet			Diam.: 2 Inch Height: Above /Below
City: Florence	Zip: 29506-	3809	Type: PVC Galvanized Surface 0.0 ft.
			□ Steel □ Other Weight — lb./ft. 0.0 in. to 11.0 ft. depth Drive Shoe? □ Yes □ No
Latitude: Longitude) :		in. totr. depth Drive Shoe? Li Yes Li No
O DUDI IO OVOTENI VI	INI 16 61		
	IBLIC SYSTE	M NUMBER:	11. SCREEN: Type: Schedule 40 PVC Diam.: 2 Inch
03538	MW-16		Slot/Geuge: 0.010 Length: 10.0 Feet
4. ABANDONMENT: ☐ Yes ☑	No		Slot/Gauge: 0.010 Length: 10.0 Feet Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS
			ft. and ft. USE SECOND SHEET
Grouted Depth: from	ft. to	ft.	Sieve Analysis 🔲 Yes (please enclose) 🗹 No
F	*Thickness	1	12. STATIC WATER LEVEL 14.02 ft. below land surface after 24 hours
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.
G1751			ft. after hrs. Pumping G.P.M.
Gravel/Topsoil	0.5	0.5	Pumping Test: ☐ Yes (please enclose) ☐ No
December CAND	2.5	20	Yield:
Brown, SAND	2.5	3.0	14. WATER QUALITY
Decree Conducting	2.0	60	Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Brown, Sandy SILT	3.0	6.0	Please enclose lab results.
Grey, Sandy SILT	6.0	12.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
· · · · · · · · · · · · · · · · · · ·	J	12.0	Installed from 9.0 ft. to 21.0 ft. Effective size Uniformity Coefficient
Grey, Silty SAND	9.0	21.0	Effective size Uniformity Coefficient
	ļ		16. WELL GROUTED? ☑ Yes ☐ No
			☐ Neat Cement ☐ Bentonite , ☐ Bentonite/Cement ☐ Other
			Depth: From <u>0.0</u> ft. to <u>7.0</u> ft.
		<u> </u>	17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
		<u> </u>	· Type
			Well Disinfected ☐ Yes ☐ No Type: Amount:
	 		18. PUMP: Date installed: Not installed [
			Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			TYPE: Submersible Jet (shallow) Turbine
		-	☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648
			Address: (Print) Level: A B C D (circle one)
			17538 Greenhill Road
*Indicate Water Bearing Zones		-	Charlotte. North Carolina 28278 Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233
maiodic vvater bedring zones			Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233 20. WATER WELL DRILLER'S CERTIFICATION: This year was drilled under
(Use a 2nd sheet if needed)			my direction and this report of true to the best of my knowledge and belief.
5. REMARKS:			
MW-16			
141 AA - 1.0			7/6/2012
			Signed:
	L	L	. West Offler
6. TYPE: ☐ Mud Rotary ☐ Jetted	_	Bored	If D Level Briller, provide supervising driller's name:
☐ Dug ☐ Air Ro	tary 🗆	Driven	
☐ Cable tool ☑ Other			



1. WELL OWNER INFORMATION: Name: SCDHEC			7. PERMIT NUMBER: UMW-24603		
(last) (first)			8. USE:		
Address: 2600 Bull Street			☐ Residential ☐ Public Supply ☐ Process		
City: Columbia State: SC Zip: 29201-1708		9201-1708	☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement		
Telephone: Work: (803) 898-4300	Home:		9. WELL DEPTH (completed) Date Started: 6/20/2012		
	DUNTY: Flore	nce	21.0 Date Completed: 6/20/2012		
Name: Coastal 76 Truck Stop			10. CASING: Threaded Welded		
Street Address: 2513 East Palmet	to Street		Diam.: 2 Inch Height: Above /Below		
City: Florence	Zip: 29506-	3809	Type: ☑ PVC ☐ Galvanized Surface 0.0 ft.		
Latitude: Longitude	::		in. toft. depth Drive Shoe? ☐ Yes ☐ No in. toft. depth		
	BLIC SYSTE	M NUMBER:	11. SCREEN:		
03538	MW-17		Type: Schedule 40 PVC Slot/Gauge: 0.010 Set Between: 11.0 Type: Schedule 40 PVC Diam.: 2 Inch Length: 10.0 Feet NOTE: MULTIPLE SCREENS		
4. ABANDONMENT: Yes Yes	No		Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS		
			ft. andft. USE SECOND SHEET		
Grouted Depth: from	ft. to		Sieve Analysis ☐ Yes (please enclose) ☑ No		
Formation Description	*Thickness of	Depth to Bottom of	12. STATIC WATER LEVEL 14.03 ft. below land surface after 24 hours		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
Gravel/Topsoil	0.5	0.5	ft. after hrs. PumpingG.P.M.		
Giavon Topson	0.5	0.5	Pumping Test: ☐ Yes (please enclose) ☐ No		
Brown, Silty SAND	8.5	9.0	Yield:		
Grey, Sandy SILT	3.0	12.0	. Chemical Analysis □ Yes □ No Bacterial Analysis □ Yes □ No Please enclose lab results.		
Grey, Silty SAND	9.0	21.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No Installed from 9.0 ft. to 21.0 ft.		
			Installed from 9.0 ft. to 21.0 ft. Effective size Uniformity Coefficient		
			16. WELL GROUTED? ☑ Yes ☐ No		
			☐ Neat Cement ☐ Bentonite . ☐ Bentonite/Cement ☐ Other		
			Depth: From <u>0.0</u> ft. to <u>7.0</u> ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
•			Type Well Disinfected □ Yes □ No Type: Amount:		
			the state of the s		
			18. PUMP: Date installed: Not installed Mfr. Name: Model No.:		
			Mfr. Name: Model No.: ft. Capacity gpm		
	11012		TYPE: Submersible Jet (shallow) Turbine		
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal		
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648		
			Address: (Print) Level: A B C D (circle one)		
			17538 Greenhill Road		
*Indicate Water Bearing Zones			Charlotte. North Carolina 28278 Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233		
			20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under		
(Use a 2nd sheet if needed)			my direction and this report of true to the best of my knowledge and belief.		
5. REMARKS:					
MW-17					
			Signed:		
	<u> </u>		. West Offlier		
6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored			If D Level Briller, provide supervising driller's name:		
☐ Dug ☐ Air Rotary ☐ Driven					
☐ Cable tool ☑ Other					



1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:		
Name: SCDHEC			UMW-24603		
(last) (first) Address: 2600 Bull Street			8. USE:		
2000 Bull Street			☐ Residential ☐ Public Supply ☐ Process		
City: Columbia State: SC Zip: 29201-1708		9201-1708	☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☐ Monitor Well ☐ Replacement		
Telephone: Work: (803) 898-4300	Home:		9. WELL DEPTH (completed) Date Started: 6/20/2012		
2. LOCATION OF WELL: CO	DUNTY: Flore	ence	21.0 pate Completed: 6/20/2012		
Name: Coastal 76 Truck Stop			10. CASING: ☐ Threaded ☐ Welded		
Street Address: 2513 East Palmet	to Street		Diam.: 2 Inch Height: Above /Below		
City: Florence	Zip: 29506-	3809	Type: ☑ PVC ☐ Galvanized Surface 0.0 ft.		
Latitude: Longitude) :		in. to ft. depth Drive Shoe?		
3. PUBLIC SYSTEM NAME: PU	IBLIC SYSTE	M NUMBER:	11. SCREEN:		
03538	MW-18		Type: Schedule 40 PVC Diam.: 2 Inch		
4. ABANDONMENT:	No		Slot/Gauge: 0.010 Length: 10.0 Feet Set Between: 11.0 ft. and 21.0 ft. NOTE: MULTIPLE SCREENS		
Crasshad Dambhy form			ft. and ft. USE SECOND SHEET		
Grouted Depth: from	*Thickness	fl.	Sieve Analysis ☐ Yes (please enclose) ☑ No		
Formation Description	of	Depth to Bottom of	12. STATIC WATER LEVEL 15.11 ft. below land surface after 24 hours		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
Grass/Topsoil	0.5	0.5	ft. after hrs. Pumping G.P.M.		
			Pumping Test: ☐ Yes (please enclose) ☐ No Yield:		
Brown, Sandy SILT	3.5	4.0	14. WATER QUALITY		
Brown/Orange, Sandy SILT	7.0	11.0	Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No		
Diowin Orange, Sandy SiL1	7.0	11.0	Please enclose lab results.		
Brown/Orange, Silty SAND	10.0	21.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No		
•			Installed from 9.0 ft. to 21.0 ft. Effective size Uniformity Coefficient		
			16. WELL GROUTED? ☑ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other		
			Depth: From <u>0.0</u> ft. to <u>7.0</u> ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			Type		
·			Well Disinfected ☐ Yes ☐ No Type: Amount:		
			18. PUMP: Date installed: Not installed		
			Mfr. Name: Model No.:		
			H.P Volts Length of drop pipe ft. Capacity gpm TYPE: □ Submersible □ Jet (shallow) □ Turbine		
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal		
			19. WELL DRILLER; Joe Smith CERT, NO.: 01648		
			Address: (Print) . Level: A B C D (circle one)		
			17538 Greenhill Road		
*Indicate Water Bearing Zones			Charlotte. North Carolina 28278		
mulcate water bearing zones			Telephone No.: 7(14-6()7-7529 Fax No.: 803-548-2233 20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under		
(Use a 2nd sheet if needed)			my direction and this report/ true to the best of my knowledge and belief.		
5. REMARKS:					
MW-18					
			Signed:		
			Signed: Date: Date:		
6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored			if D Kevel Briller, provide supervising driller's name:		
. □ Dug □ Air Rotary □ Driven			provide days vising driller a marrie.		
☐ Cable tool ☐ Other					



PROMOTE PROTECT PROSPER					
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER: UMW-24603		
Name: SCDHEC					
(last) (first)			8. USE:		
Address: 2600 Bull Street			☐ Residential ☐ Public Supply ☐ Process		
City: Columbia State: SC Zip: 29201-1708		9201-1708	☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☐ Monitor Well ☐ Replacement		
Telephone: Work: (803) 898-4300	Home:		9. WELL DEPTH (completed) Date Started: 6/19/2012		
2. LOCATION OF WELL: CO	OUNTY: Flore	nce	36.0 ft. Date Completed: 6/20/2012		
Name: Coastal 76 Truck Stop	TOIC	AICC .	10. CASING: ☑ Threaded ☐ Welded		
Street Address: 2513 East Palmet	to Street		Diam.: 6"/2" Height: Above /Below		
	Zip: 29506-:	2000	Diam.: 6"/2" Height: Above /Below Type: ☑ PVC ☐ Galvanized Surface 0.0 ft.		
- I lotolico	<u> </u>	7007	Steel CO Other Weight — Ib./ft.		
Latitude: Longitude	:		Type:		
· ·			0.0 in. to 31.0 ft. depth		
3. PUBLIC SYSTEM NAME: PU	BLIC SYSTE	M NUMBER:			
03538	TW-2		Type: Schedule 40 PVC Diam.: 2 Inch		
4. ABANDONMENT: ☐ Yes ☑	No		Slot/Gauge: 0.010 Length: 5.0 Feet Set Between: 31.0 ft. and 36.0 ft. NOTE: MULTIPLE SCREENS		
Grouted Depth: from	it. to	ft.	ft. uSE SECOND SHEET Sieve Analysis Yes (please enclose) No		
	*Thickness		12. STATIC WATER LEVEL 14.76 ft. below land surface after 24 hours		
Formation Description	of	Bottom of			
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
Grass/Topsoil	0.5	0.5	ft. after hrs. Pumping G.P.M.		
			Pumping Test: ☐ Yes (please enclose) ☐ No		
Tan, SAND	3.5	4.0	Yield:		
			14. WATER QUALITY Observed Analysis		
Brown, Sandy SILT	3.0	7.0	Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No Please enclose lab results.		
Orange, Clayey SILT	5.0	12.0	15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No		
-	 		Installed from 29.0 ft. to 36.0 ft. Effective size Uniformity Coefficient		
Brown, Silty SAND	24.0	36.0			
	 	l	16. WELL GROUTED? ☑ Yes ☐ No		
			□ Neat Cement □ Bentonite □ Bentonite/Cement □ Other □ Depth: From 0.0 ft. to 27.0 ft.		
	-				
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft, direction		
			Type		
			18. PUMP: Date installed: Not installed		
			Mfr. Name: Model No.: ft. Capacity gpm		
			H.P Volts Length of drop pipe ft. Capacity gpm TYPE: Submersible Jet (shallow) Turbine		
,			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal		
			19. WELL DRILLER: Joe Smith CERT. NO.: 01648		
			Address: (Print) Level: A B C D (circle one)		
			17538 Greenhill Road		
		1	Charlotte, North Carolina 28278		
*Indicate Water Bearing Zones			Telephone No.: 7()4-6()7-7529 Fax No.: 803-548-2233		
			20. WATER WELL DRILLER'S CERTIFICATION: This was drilled under		
(Use a 2nd sheet if needed)			my direction and this report of true to the best of my knowledge and belief.		
5. REMARKS:					
TW-2					
			Signed:		
	<u></u> _		Signed: Date		
6. TYPE: ☐ Mud Rotary ☐ Jetted	П	Bored			
☐ Dug ☐ Air Ro	_	Driven	If D level briller, provide supervising driller's name:		
☐ Cable tool ☑ Other		=			

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

32.0 Gallons were treated on June 21, 2012 during the development of the newly installed monitoring wells at the referenced site.

30.5 Gallons was treated on June 26, 2012 during the comprehensive groundwater sampling event conducted at the referenced site.

A total 62.5 gallons was treated during the subject assessment.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,

Midlands Environmental Consultants, Inc.

Courtney M. Sanders

Staff Biologist



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

TREVER Z SLACK PG
PRINICIPAL HYDROGEOLOGIST
PETRA-TECH ENVIRONMENTAL LLC
2435 E NORTH ST STE 1108-202
GREENVILLE SC 29615-1442

JUN 2 5 2014



Re: Request for Site Specific Work Plan

Solicitation Number IFB-5400005780/3/20/13-EMW, Purchase Order # 4600271461

Notice to Proceed

Dear Mr. Slack:

In accordance with the referenced contract, the Underground Storage Tank (UST) Management Division requests a Tier II Assessment for the following four UST facilities to define the geology and the horizontal and vertical extent of petroleum Chemicals of Concern (CoC) both dissolved and free phase product.

Site name	ID#	County	Priority	Project Manager
Newsome Chevrolet	03285	Florence	3BA	Maia Milenkova
Coastal 76 Truck Stop	03538	Florence	3BA	Maia Milenkova
Fmr. Tri County Tire Company	06209	Marion	3BC	David Orgain
Byrdic's Texaco	09114	Williamsburg	g 3BC	Minda Hornosky
Cox Meat Company	11525	Williamsburg	g 2BB	Minda Hornosky

As outlined in the referenced contract, please submit the Site Specific Work Plan, Tier II Assessment Plan, and Assessment Component Cost Agreement to my attention within thirty (30) days from the date of this correspondence. Plan implementation shall not commence prior to receipt of written technical and financial approval from the Agency. The Tier II Reports must be submitted within 90 days subsequent to the date of the approval letter.

Tier II Assessment Plan, Implementation and Report submittal shall be performed in accordance with the referenced contract. Per Section 3.4.3., a late fee of \$100.00/day may be levied for each report submitted after the deadline established in the Notice to Proceed. On all correspondence, please reference the pertinent UST Permit number.

Sincerely.

Stephanie Briney, Hydrogeologist

Assessment Section

Underground Storage Tank Management Division

Bureau of Land and Waste Management

enc: Five Notice to Proceed Package (UST Permits 03285, 03538, 06209, 09114, and 11525)

cc: Technical Files (without enc.) 03285, 03538, 06209, 09114, and 11525



July 25, 2014

SCDHEC - UST Management Division Assessment Section 2600 Bull Street Columbia, SC 29201-1708

Attention:

Ms. Stephanie Briney

Subject:

Site Specific Work Plan – Tier II Assessment

Revision Number: 0
Coastal 76 Truck Stop
2513 East Palmetto Street
Florence, Florence County, SC
SCDHEC UST Permit #03538

PTE Job No. J14-070-A

Dear Ms. Briney:

Petra-Tech Environmental, LLC submits herein a Site Specific Work Plan for the subject site. This submittal is in response to the South Carolina Department of Health and Environmental Control's (SCDHEC) Site Specific Work Plan Directive dated June 25, 2014.

On July 24, 2014, Petra-Tech Environmental personnel performed a site visit to the subject site to locate existing groundwater monitoring wells and conduct a preliminary site reconnaissance. Depth to groundwater at the site is approximately 9 feet below ground surface (i.e. depth to water in monitoring well 03538-MW01 was 8.43 feet below top of casing on July 24, 2014). Free-Phase petroleum product was not detected in monitoring wells 03538-MW01 or 03538-MW03. It should be noted that groundwater monitoring wells 03538-MW07, 03538-MW10, 03538-TW01, and 03538-TW02 could not be located during the site reconnaissance. However, a significant volume of construction and demolition debris have been scattered across the site making it difficult to locate wells. If these wells cannot be located through additional exploration during the groundwater screening phase of the assessment, they should be replaced during monitoring well installation activities.

The Site Specific Work Plan is contained herein.

Please do not hesitate to contact us at 864.631.2490 if you have any questions concerning this submittal.

Sincerely,

Petra-Tech Environmental

Trever Z. Slack, P.G.

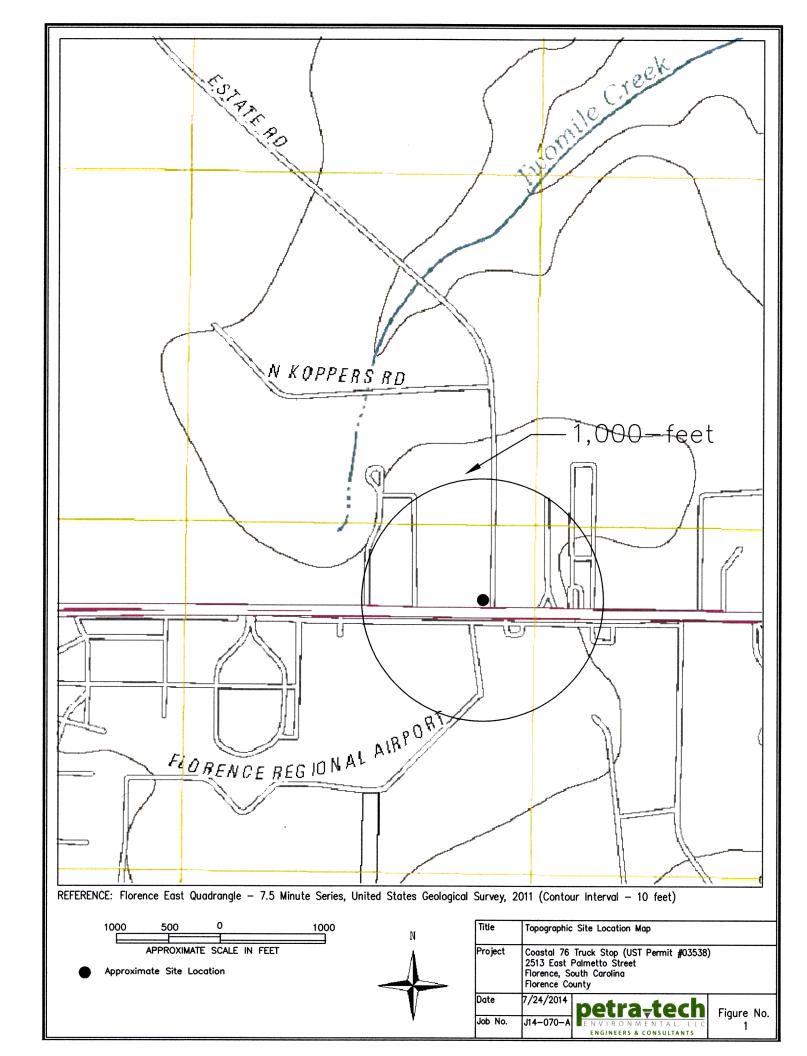
Principal Hydrogeologist

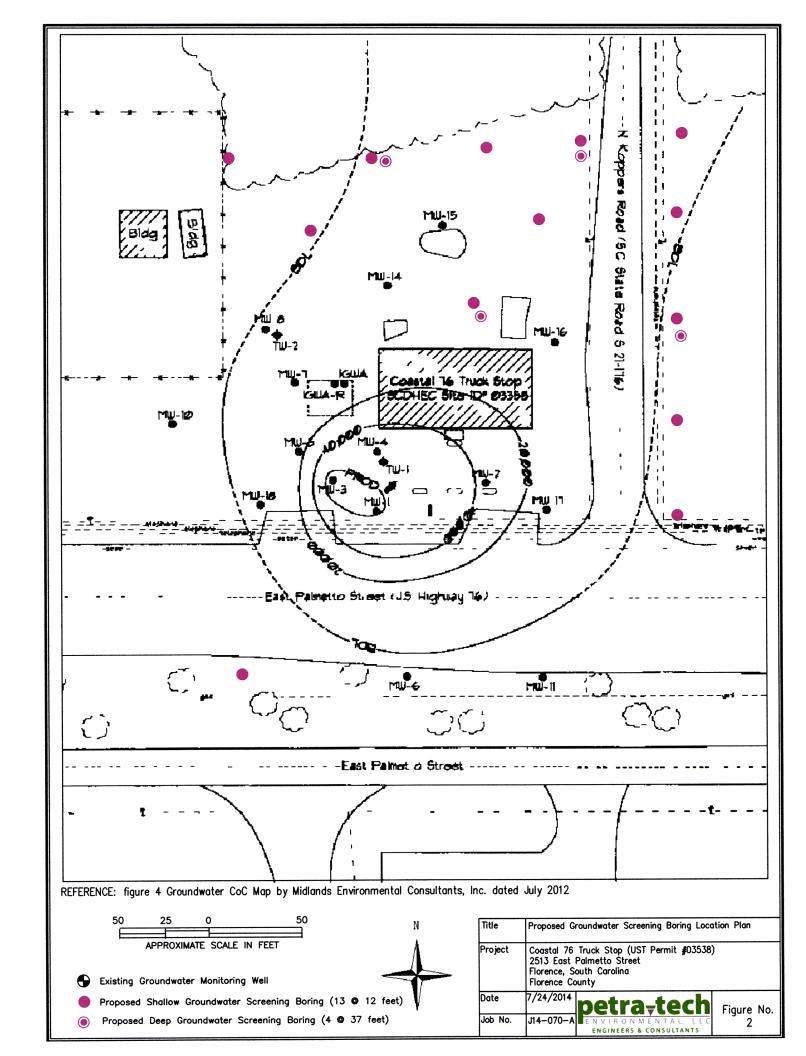


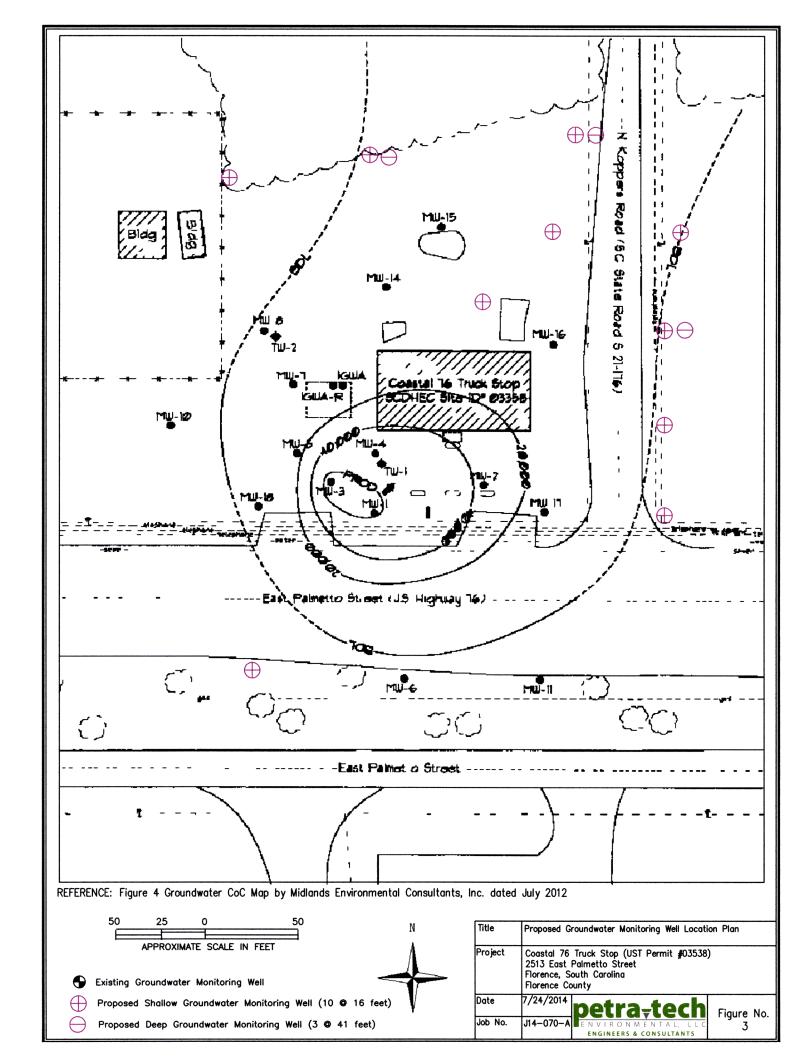
Site-Specific Work Plan for Approved ACQAP Underground Storage Tank Management Division

To: Ms. Maia Milenkova		(SC	DHEC Project Manager)		
From: Trever Slack			tractor Project Manager)		
Contractor: Petra-Tech Enviro		ctor Certification Number: UCC-	136		
Facility Name: Coastal 76 Truck Stop UST Permit #: 03538					
Facility Address: 2513 East F					
Responsible Party: Mceachir	, Dan	Phone: 803.65	1.8835		
	Drive, Florence, South Carolina 29501				
Property Owner (if different):	Same as above				
Property Owner Address: Sa	me as above	for alexander			
Current Use of Property: Va	cant Commercial Property being used	tor storage			
Scope of Work (Please che					
	ïer II	☐ Groundwater Sampling	☐ GAC		
☐ Tier I ☐ M	Monitoring Well Installation	☐ Other			
Analyses (Please check all					
Groundwater/Surface Water					
☑ BTEXNMDCA (8260B)	☑ Lead	□ BOD	☐ Methane		
Oxygenates (8260B)	□ 8 RCRA Metals	☐ Nitrate	☐ Ethanol		
☑ EDB (8011)	□ TPH	☐ Sulfate	□ Dissolved Iron		
☐ PAH (8270D)	□ pH	□ Other			
Soil:					
□ BTEXN	□ 8 RCRA Metals	☐ TPH-DRO (3550B/8015B)			
□ PAH	☐ Oil & Grease (9071)	☐ TPH-GRO (5030B/8015B)	☐ TOC		
Air:					
□ BTEXN					
Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)					
Soil	Water Supply We		Field Blank		
32 Monitoring Wells	Surface Water	2 Duplicate	3 Trip Blank		
Field Consoning Mathedale					
Field Screening Methodolo	·gy ompleted depth for each point, and	l include their proposed locations	on the attached man		
	ompieted deptir for each point, and ⊩ 13	imated Footage: 12 (estimated)	feet per point		
# of shallow points proposed: 13 Estimated Footage: 12 (estimated) feet per # of deep points proposed: 4 Estimated Footage: 37 (estimated) feet per					
Field Screening Methodology: Direct Push with PID field screening and laboratory confirmation of select samples IAW SOP					
Field Scieening Wethodology.					
Permanent Monitoring We					
	ompleted depth for each well, and				
# of shallow wells: 10	feet per point				
# of deep wells: 3	Estimated	d Footage: <u>41</u>	feet per point		
# of recovery wells: Estimated Footage:			feet per point		
	t method (consistent with SOP): S	urging and pumping IAW SOP			
Comments, if warranted: Deep wells installed outside of the source area will be installed as Type II monitoring wells if it is determined by the on-site geologist					
		pe ii monitoring wells it it is determin	ed by the on-site geologist		
that no confining layers are pre	sent.				

UST Permit #: 03538	Facility Name:	Coastal 76 Truck Stop	
Implementation Schedule Field Work Start-Up: 8/27/14 Report Submittal: 11/27/14			rs: 3
Slug test will be completed in elimination of requirements fo	two shallow and one deep mor petroleum impacted water dis	ide explanation below for choice) nitoring well. Slug tests are recommended over sposal. Additionally, slug tests minimize the cone tof petroleum compounds from shallow to deepe	e of depression
Investigation Derived Was	ste Disposal Tons	Purge Water: 200	Gallons
Drilling Fluids: 25	Gallons	Free-Phase Product: 0	Gallons
event, etc. Eighteen existing groundwate	e sampled, wells to be aban r monitoring wells and 13 new the site or within 500-feet of th	ndoned/repaired, well pads/bolts/caps to replay installed groundwater monitoring wells will be see groundwater contaminant plume will also be sa	sampled. Receptors
Yes Laboratory as indicate Name of Laboratory:	ed in ACQAP? (Yes/No)	If no, indicate laboratory information be	elow.
Yes Well Driller as indicate Name of Well Driller SCLLR Certification I		If no, indicate driller information below.	
No Other variations from	ACQAP. Please describe b	pelow.	
. ,	e map. This map must be a flowing: Proposed the proposed	GGS topographic map showing the site location accurately scaled, but does not need to be side monitoring well locations with facility name and address, UST permit not highways (indicate names and numbers) of all present and former ASTs and USTs of all potential receptors	urveyed. The map
2 Assessment Comp	onent Cost Agreement, SC	DHEC Form D-3664	









ASSESSMENT COMPONENT COST AGREEMENT SOUTH CAROLINA

Department of Health and Environmental Control
Underground Storage Tank Management Division
State Underground Petroleum Environmental Response Bank Account
PO#4600271461

Facility Name Coastal Mart 76 Truck Stop

UST Permit #: <u>03538</u>	Cost A	greement #:		
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. Plan Preparation				
A1. Site-specific Work Plan	1	each	\$470.00	\$470.00
B1. Tax Map	1	each	\$600.00	\$600.00
C1. Tier II or Comp. Plan /QAPP Appendix B		each	\$780.00	\$0.00
2. A1. Receptor Survey *	1	each	\$755.00	\$755.00
3. Survey (500 x 500 feet)				
A1. Comprehensive Survey	1	each	\$1,405.00	\$1,405.00
B. Subsurface Geophysical Survey				
1B. < 10 meters below grade		each	\$200.00	\$0.00
2B. > 10 meters below grade		each	\$250.00	\$0.00
C1. Geophysical UST or Drum Survey		each	\$200.00	\$0.00
4. Mob/Demob (Each)				
A1. Equipment	2	each	\$985.00	\$1,970.00
B1. Personnel	5	each	\$955.00	\$4,775.00
C1. Adverse Terrain Vehicle to install wells		each	\$209.00	\$0.00
5. A1. Soil Borings (hand auger)*		feet	\$1.00	\$0.00
6. Soil Borings (requiring equipment, push techn	ology, etc)*			
Field Screening (including water sample, soil		•)*	
A1. Standard	320	per foot	\$3.50	\$1,120.00
C1. Fractured Rock		per foot	\$2.00	\$0.00
7. A1. Soil Leachability Model (Each)		each	\$1.00	\$0.00
8. Abandonment (per foot)*				
A1. 2" diameter or less		per foot	\$0.50	\$0.00
B1. Greater than 2" to 6" diameter		per foot	\$1.00	\$0.00
C1. Dug/Bored well (up to 6 foot diameter)		per foot	\$2.50	\$0.00
9. Well Installation (per foot)*		P 9 9 9 9	7	
A1. Water Table (hand augered)		per foot	\$1.00	\$0.00
B1. Water Table (drill rig)	283	per foot	\$16.25	\$4,598.75
C1. Telescoping/ Pit Cased	2.00	per foot	\$17.50	\$0.00
D1. Rock Drilling		per foot	\$13.00	\$0.00
E1. 2" or 4" Rock Coring		per foot	\$1.00	\$0.00
G1. Rock Multi-sampling ports/screens		per foot	\$5.00	\$0.00
H1. Recovery Well (4 inch diameter)		each	\$11.00	\$0.00
II. Pushed Pre-packed screen (1.25 diameter)		each	\$5.00	\$0.00
J1. Rotosonic (2 inch diameter)		each	\$2.00	\$0.00
K. Re-develop Existing Well		each	\$0.50	\$0.00
10. Groundwater Sample Collection / Gauge Dep	th to Water		40.00	Ψ0.00
A1. Groundwater Purge	32	per well	\$165.00	\$5,280.00
B1. Air or Vapors	\ \frac{\sigma_{2}}{2}	per receptor	\$1.00	\$0.00
C1. Water Supply		per well/receptor	\$115.00	\$0.00
D1. Groundwater No Purge or Duplicate	2	samples	\$50.00	\$100.00
E1. Gauge Well only		per well	\$5.00	\$0.00
F1. Sample Below Product		well well	\$5.00 \$5.00	\$0.00 \$0.00
G1. Pasive Diffusion Bag	1	each	\$1.00 \$1.00	\$0.00
H1. Field Blank	2	each	\$1.00 \$52.00	\$0.00 \$104.00
11. Laboratory Analyses-Groundwater	1 *	00017	\$02.00	Ψ104,00
A2. BTEX+Naphth.+ Oxyg's+ 1,2 DCA + Ethano	39	sample	\$117.00	\$4,563.00
,	33	sample	\$12.00	\$0.00
AA1. Lead, Filtered R2. Bush ERA Mothed 8260B (All of item A.)			\$12.00 \$142.00	\$0.00
B2. Rush EPA Method 8260B (All of item A.)		sample	\$142.00	\$0.00 \$0.00
C2. Trimethal, Butyl, and Isopropyl Benzenes	1	sample		\$0.00 \$0.00
D1. PAH's		sample	\$30.00	
E1. Lead, Unfiltered	36	sample	\$25.00	\$900.00

PROMOTE PROTECT PROSPER South Carolina Department of Health

ASSESSMENT COMPONENT COST AGREEMENT SOUTH CAROLINA

Department of Health and Environmental Control
Underground Storage Tank Management Division

South Carolina Department of Health		State Underground Petro	oleum Environmental Respon	se Bank Account
F1. EDB by EPA 8011	36	sample	\$75.00	\$2,700.00
FF1. EDB by EPA Method 8011 Rush		sample	\$100.00	\$0.00
G1. 8 RCRA Metals		sample	\$25.00	\$0.00
H1. TPH (9070)		sample	\$15.00	\$0.00
II. pH	1	sample	\$5.00	\$0.00
J1. BOD		sample	\$9.00	\$0.00
PP. Ethanol		sample	\$0.10	\$0.00
11. Analyses-Soil	 	Sample	Ψ0.10	\$0.00
Q1. BTEX + Naphth.		sample	\$80.00	\$0.00
R1. PAH's		sample	\$45.00	\$0.00
S1, 8 RCRA Metals		sample	\$20.00	\$0.00
		1 ' 1	\$20.00 \$15.00	\$0.00
U1. TPH-DRO (3550B/8015B)		sample	· · · · · · · · · · · · · · · · · · ·	·
V1. TPH- GRO (5030B/8015B)		sample	\$15.00	\$0.00
W1. Grain size/hydrometer	2	sample	\$55.00	\$110.00
X1. Total Organic Carbon		sample	\$14.00	\$0.00
11. Analyses-Air				
Y1. BTEX + Naphthalene		sample	\$50.00	\$0.00
11. Analyses-Free Phase Product				
Z1. Hydrocarbon Fuel Identification		sample	\$100.00	\$0.00
12. Aquifer Characterization*				
A1. Pumping Test		per hour	\$20.00	\$0.00
B1. Slug Test*	3	per test	\$255.00	\$765.00
C1. Fractured Rock		per test	\$35.00	\$0.00
13. A1. Free Product Recovery Rate Test*		each	\$35.00	\$0.00
14. Fate/Transport Modeling				
A1. Mathematical Model		each	\$5.00	\$0.00
B1. Computer Model		each	\$5.00	\$0.00
15. Risk Evaluation				
B1. Tier II Risk Evaluation		each	\$25.00	\$0.00
16. A1. Subsequent Survey*		each	\$95.00	\$0.00
17. Disposal (gallons or tons)*				
AA. Wastewater	200	gallon	\$0.25	\$50.00
BB. Free Product		gallon	\$0.10	\$0.00
C1. Soil Treatment/Disposal	5	ton	\$35.00	\$175.00
D1. Drilling fluids	25	gallon	\$0.10	\$2.50
18. Miscellaneous (attach receipts)	1	ganon		
Flourescence for Product		each	\$3.00	\$0.00
Video Camera down a well or borehole		each	\$1.00	\$0.00 \$0.00
Viuco Camera down a well of poletiole		each	\$0.00	\$0.00 \$0.00
25. Well Repair*	 	Cacii	Ψ0.00	Ψ0.00
A1. Additional Copies of the Report Delivered	3	each	\$49.00	\$147.00
B1. Repair 2x2 MW pad		each	\$5.00	\$0.00
C1. Repair 4x4 MW pad		each	\$5.00	\$0.00
D1. Repair well vault		each	\$5.00	\$0.00
F1. Replace well cover bolts		each	\$1.00	\$0.00
H1. Replace/Repair stick-up		each	\$5.00	\$0.00
II. Convert Flush-mount to Stick-up		each	\$5.00	\$0.00
J1. Convert Stick-up to Flush-mount	1	each	\$5.00	\$0.00 \$0.00
K1. Replace missing/illegible well ID plate TOTAL	<u>.l</u>	each	\$1.00	\$0.00 \$30,120.25

^{*}The appropriate mobilization cost can be added to complete these tasks, as necessary



DIVISION OF UNDERGROUND STORAGE TANK MANAGEMENT

Phone (803) 898-4350 Fax (803) 898-4330

2600 Bull Street Columbia, SC 29201-1708

> CERTIFIED MAIL Z 178 518 340

JAN 0 4 2000

Mr. Dan McEachin 1007 Wentworth Drive Florence, South Carolina 29501

Re:

Coastal 76 Truck Stop UST Permit #03538 Notice of Violation Florence County

Dear Mr. McEachin:

The Division of Underground Storage Tank (UST) Management of the South Carolina Department of Health and Environmental Control directed you to complete a Rapid Assessment in December, 1998 with the assessment report due in March 1999. An extension was granted to Southeastern Environmental with a revised due date of September 30, 1999. Due to reported problems with the registered surveyed map, a second extension was granted with a newly revised due date of December 16, 1999. To date the required report has not been received. In accordance with Section 280.65 of the South Carolina Underground Storage Tank Regulations the assessment must be conducted as documented chemicals of concern are above the risk-based-screening levels.

The report must be submitted within 15 days from the date of this letter. If the report is not received in accordance with this schedule, enforcement procedures will be initiated.

On all correspondence regarding this site, please reference UST Permit #03538. If you have any questions concerning this correspondence, please call me at (803) 898-4343 or 1-800-826-5435(within South Carolina only).

Sincerely,

Kristen A. Hein, Hydrogeologist Owner/Operator Assistance Section

Assessment and Corrective Action Branch

Division of Underground Storage Tank Management

cc: Technical/Read File

Mr. Bruce Newell, Southeastern Environmental, 323 Main Street, Conway, SC 29526

SCDHEC/UST/010400

ST DOCKET 53 T

969.5 <u>X 17</u> 16481.59 -13575.00	969.5 X14 13575.00	1065.00 V.15. 159.75
2906.5 X .15 435.98 2906.5 150.00 490.98	Field 1224:	
Deny 14.4 Allow 13,5 GUSS	81.5 50 29.00	5.5 allow 510.05 480.98 150.00 1065.00 2906.50 2333.50

Deny - 1065.00 Sampling 159.75 15% marksup

3537.48 458.48 22.50 48239.50 -29.06.50 -2333.50 -360.03Deny 2483.53

Allow for 969.5' for screening hand auger Deny Box boring drilled

To Pay 2906.5 allow deny

1 stuggest 150

3056.5

4.15

458.48 Project management

Total Pay 3514.98

To Pay 969.5 feet @ 141 foot = 13575.00 1 Slug test 150.00 13725.00 X .15 2058.75 L1739.73 2472.15

> - 41585.23 Jumpaid 2887.45 paid

2906.5

45898

453,98

4241.50 249.5 X 17 = 998.00 2495 x 4= BHX, naph, 300.00 360.00 PAH 7422.68 60.00 uad EDB nitrate -7181.17 un payable 105.00 60.00 payable 241.51 60.00 FE (0244.5 936.675 7181.17 Denied

1118.18

150.00 Y.15 22.5 7 172.50 Payable

945.675 7250.18 un payable 9

Southeastern Envir nental

323 Main Street, Conway, S.C. 29526 • (803) 248-3533 • (800) 257-3533 • Fax (803) 248-5034

January 7, 2000

SC DHEC

Attn: Kristen Hein, Project Manager UST Management Division 2600 Bull Street

2600 Bull Street Columbia, SC 29201

Re:

Coastal Truck Stop

Site ID#03538

Mrs. Hein:

Enclosed please find the Rapid Assessment Plan for the above referenced site.

If you have any questions, please do not hesitate to call.

Thank you,

Lori James Grainger

Southeastern Environmental, Inc.

LJG/s

Enclosure(s)

ST DOCKET 54T

JAN 1 1 2000

STUTTING THE ST.

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SOUTHEASTERN ENVIRONMENTAL INC.

323 Main Street

Conway, South Carolina 29526

Phone: (803) 248-3533 FAX: (803) 248-5034 RECEIVI

FAX MESSAGE / COVER SHEET

JAN 2 4 2000

Bureau of Undergrot Storage Tank Manage

Date: 1-24-99

Number of pages including message / cover sheet:

To: Kristen Hein

From: Jares Hendrix (Southeastern Environ., Inc)

Subject: Coastel Truck Stop

CONFIDENTIALITY NOTICE:

The information contained in this transmission is privileged and confidential. It is intended only for the use of the individual or entity named above. If you are not the intended recipient or an authorized agent or employee of the intended recipient who has been authorized to deliver this facsimile, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone, and arrangements will be made to return the message. Thank you!

UST DOCKES 55 T

* Krista

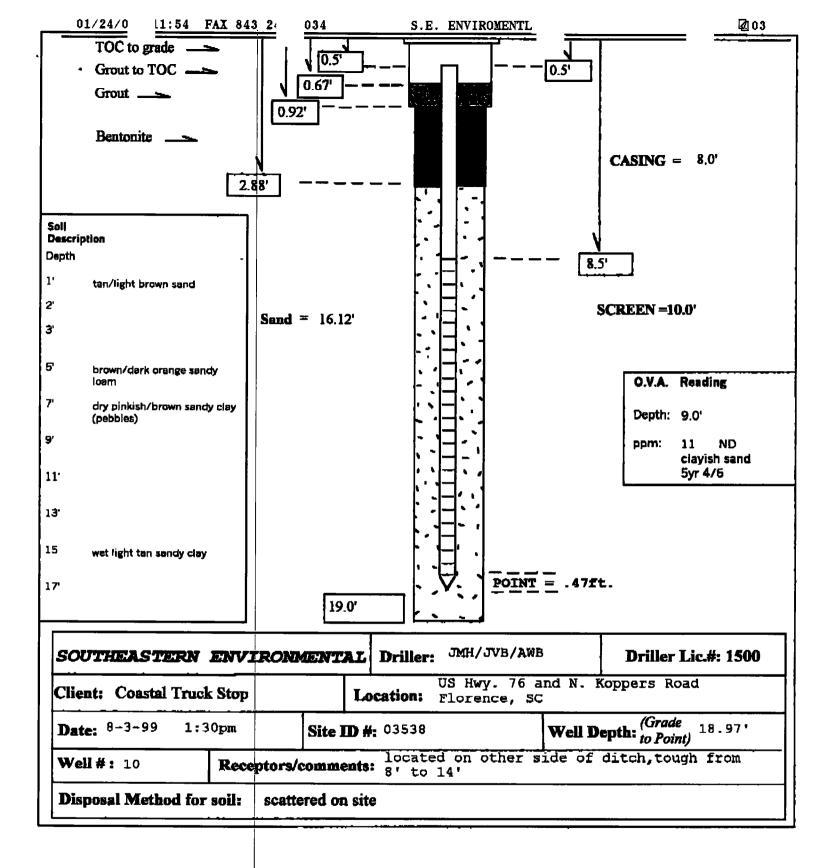
The Ground Water Table for MW # 10 was not available - C.TS: had a shed placed on top of it when we were taking g.w. measurements.

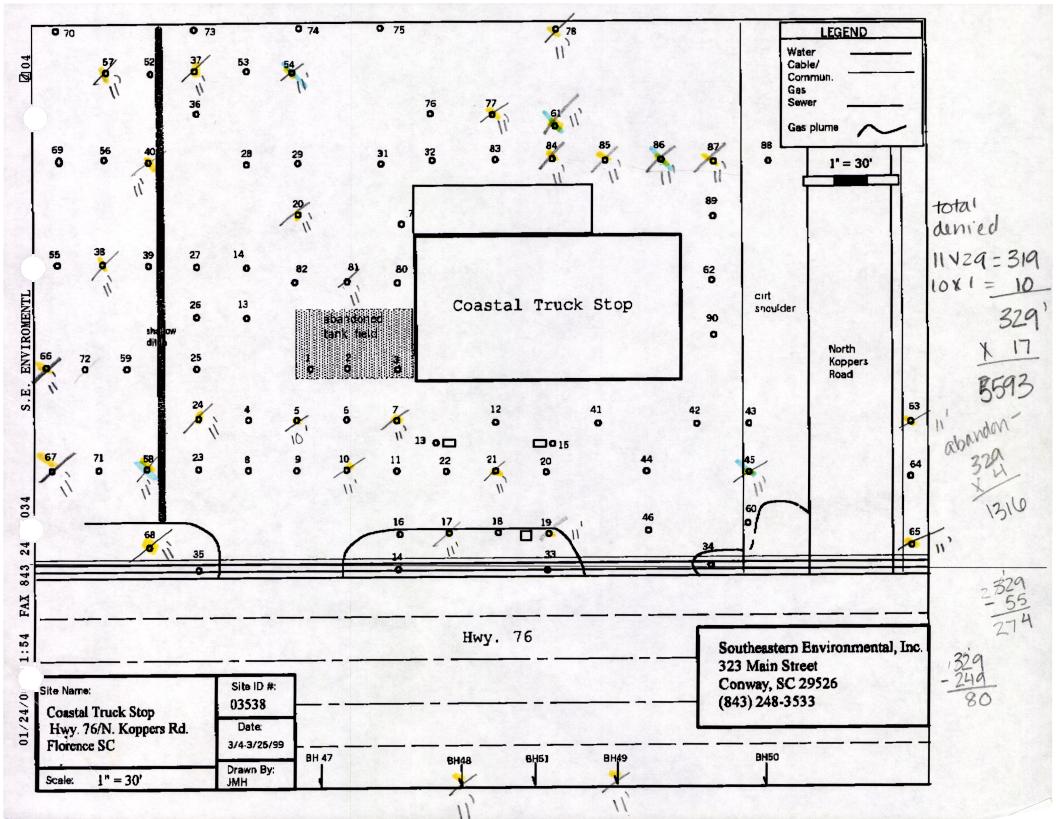


Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

			the sales of the s
1. LOCATION OF WELL: CTS.	P 10		WINDERDEWELL DATE OF THE RESERVED TO THE RESER
The Court of the Party of the stand of the Court of the C	ole a	The state of the same	Address Table 1
County L. System N			Address: #60 1 Westwarts 18
The state of the s	CALS ADDED COMMANDS OF	Delication of the second	
	Action Sale Company	A P Y PROS S CONTRACTOR OF THE PARTY OF THE	Telephone No. CHARLES
			Land to the state of the state
Latitude: 100 100 100 100 100 100 100 100 100 10	1 91 4 2 1 mm		Engineer, Bruce Go Veceth
			Address 355 Mark Street
Distance and Direction from Road Inter-	sections:		
C - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1	_		
see site may			Telephone No. 30 3 - 240 1533 - 440 1533
•			5. WELL DEPTH (completed) Date Started: 4-3-99
Street Address & City of Well Location:			
Sheet Man			18.97 ft. Date Completed: 8-3-49
Sketch Map:			18.91 ft. Date Completed: 8-3-99
•			6. Mud Rotary Letted Letted Dug
See SHE Map			·
See SION MAY			☐ Air Rolary ☐ Driven ☐ Cable tool ☐ Other
f			7. USE:
	ĺ		☐ Domestic ☐ Public Supply-Permit No ☐ Industry
	l		☐ Teat Well ☐ Monitor Well ☐
/			8. CASING: OThreaded U Welded
			Diam.: 2" Height: Above/Below
			Type: PVC Galvanized Surfaceft.
2. CUTTING SAMPLES: 1 Yes 2	No		
			O.5 in. to 3.5 ft. depth Weight Ib./ft.
_			
Geophysical Logs:	se einclose)	□ No	in. to ft. depth
and the same that he was the same and the sa	*Thickness	Depth to	9 SCREEN ALL
• 1	1		
Formation Description	of	Bottom of:	
NOTE TO THE SERVICE OF THE POST OF THE POS	Stratum -	· Statum	Slot/Gauge: 0.010 Length: 10
_		1 -	Set Between: 8-5 ft. and 18-5 ft. NOTE: MULTIPLE SCREENS
To a lbook of a l	罗山人	1-48	
Tan/Brown sand	<u> </u>	<u>'</u>	ft, andft. USE SECOND SHEET
		4	Sieve Analysis 🔲 Yes (please enclose) 🗷 No
Act in fals of anners and for	. 10	5-61	10. STATIC WATER LEVEL
ALCON OF IN DEPUTE SEAS WITH	1 '	0.6	
Den piakida Alimon market	L.	_, ,	MA ft. below land surface after 24 hours
1214 Liver and Company 3-14-1	7'	7-14'	
Clary	<u> </u>		11. PUMPING LEVEL Below Land Surface.
			ft. afterhrs. Pumping G.P.M.
LIEL HOLD TELL TOWN !	٠ أ	15-19	
Wet, light ten sandy clay	4 -	15-19"	Pumping Test: ☐ Yes (please enclose) ☑ No
Dry pinkish/brown sandy clay Let light ten sandy clay	4 -	15-17	Pumping Test: ☐ Yes (please enclose) ☑ No
Wet, light ten sandy clay	4-	15-19'	Pumping Test: Yes (please enclose) No Yield:
Wet, light ten sandy clay	4 -	15-19'	Pumping Test: Yes (please enclose) No Yield:
Wet, light ten sandy clay	4	15-19'	Pumping Test: Yes (please enclose) No Yield:
Wet, light ten sandy clay	4-	15-19'	Pumping Test: Yes (please enclose) No Yield: 12. WATER QUALITY Chemical Analysis Yes No Bacterial Analysis Yes No
Wet light ten sandy clay	4	15-19'	Pumping Test: Yes (please enclose) No Yield: 12. WATER QUALITY Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results.
Wet light ten sandy clay	4	15-17'	Pumping Test: Yes (please enclose) No Yield: 12. WATER QUALITY Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results. 13. ARTIFICIAL FILTER (gravel pack) Yes No
Wet, light ten zandy clay	4	15-19'	Pumping Test: Yes (please enclose) No Yield: 12. WATER QUALITY Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results. 13. ARTIFICIAL FILTER (gravel pack) Yes No
Wet, light ten sandy clay	4	15-19'	Pumping Test: Yes (please enclose) No Yield:
Wet, light ten sandy clay	4	15-19'	Pumping Test: Yes (please enclose) No Yield: 12. WATER QUALITY Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results. 13. ARTIFICIAL FILTER (gravel pack) Yes No
Wet, light ten sandy clay	4	15-19'	Pumping Test: Yes (please enclose) No Yield: 12. WATER QUALITY Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results. 13. ARTIFICIAL FILTER (gravel pack) Yes No Installed from 2.88′
Wet light ten sandy clay	4	15-17'	Pumping Test: Yes (please enclose) No Yield:
Wet, light ten sandy clay	4	15-19'	Pumping Test: Yes (please enclose) No Yield: 12. WATER QUALITY Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results. 13. ARTIFICIAL FILTER (gravel pack) Yes No Installed from 2.88 nt; to 19.0 nt. Effective size Uniformity Coefficient 14. WELL GROUTED? Yes No
Wet light ten sandy clay	4	15-19'	Pumping Test: Yes (please enclose) No Yield: 12. WATER QUALITY Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results. 13. ARTIFICIAL FILTER (gravel pack) Yes No Installed from 2.88 nt; to 19.0 nt. Effective size Uniformity Coefficient 14. WELL GROUTED? Yes No
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SOUTHEASTERN ENVIRONMENTAL INC.

323 Main Street Conway, South Carolina 29526

> Phone: (803) 248-3533 FAX: (803) 248-5034

RECEIVED

JAN 2 8 2000

FAX MESSAGE / COVER SHEET

Bureau of Underground Storage Tank Management

Date:

January 28, 2000

Number of pages including message / cover sheet: 02

To:

Kristen Hein

SC DHEC

From:

LORI GRAINGER

CONFIDENTIALITY NOTICE:

 \sqcup

The Information contained In this transmission is privileged and confidential. It is intended only for the use of the Individual or entity named above. If you are not the intended recipient or an authorized agent or employee of the intended recipient who has been authorized to deliver this facsimile, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone, and arrangements will be made to return the message. Thank you!

No. 4005

Southeastern Soil Recovery MANIFEST - NON-HAZARDOUS SOILS

Date of Shipment	Responsible for Payment	Transporter Truck #:	Project # 317 (3.1.2	Load #:					
Generator's Name & Bill			Generators Phone No.:						
MS. DA. (TER BOCK DAMERN V	, DE DRIVE		Person to Contact:						
	· i.	23373·	Fax No.:						
Consultant's Name & Bi	lling Address:		Consultant's Phone No.:						
	FREN ENVIRONTED	0.	Person to Contact:						
2 26 A:	E-Communication CC	1:02t-	Fax No.: 2447						
Generation Site (Transp	ort from): (Name & Address)		Site Phone No.:						
s BRUMA Congress	ring die State		Person to Contact:						
_			Fax No.:						
	nsport to): (Name & Address)		Facility Phone No.1	, 5 d U					
	Si andlicham Ro Ling J. S.), . D	Person to Contact	. PCR					
202.7			Fax No.: (513))US 1040					
Transporter Name & Ma			Transporter's Phone No.						
	ROTTER DESCRIPTION OF THE STATE		Person to Contact:	.i					
			Fax No.: (2000)	. 02 - 22 25 -					
	consultant's certification: those soils described in the								
certified by me/us f	or the Generation Site sho	vn ahove.							
Print or Type Name:	Generator Consultant	Signature	, /	Day Year					
	mand for Southerlander			27 00					
	ication: TWe acknowledge divered in exactly the same			r mai					
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TROYBAL	knam	1/10	705 Kna1	2700					
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323 Main Street, Conway, S.C. 29526 • (803) 248-3533 • (800) 257-3533 • Fax (803) 248-5034

March 1, 2000

Ms. Kristen Hein SC DHEC 2600 Bull Street Columbia, SC 29201 Bureau of UST Management

Re:

Coast al Truck Stop Facility # 03538 Florence County

Invoice Requests/Adjustments



MAR 0 3 2000

Bureau of Underground Storage Tank Management

Dear Ms. Hein;

We received the letter regarding the invoice adjustments for Coastal Truck Stop (Invoice # 03538). The invoice you approved us for as of Feb 18, 2000 was in the amount of \$32,152.96. The total amount of our invoice was for \$39,575.64. The letter did specify which procedures were adjusted and why.

During the time the work for Coastal Truck Stop was being conducted, you were absent due to an illness. During this period, we consulted with Chris Doll, Charles Williams and John Abernathy on our field screenings and well placements.

Based on our field notes and documents from our file, the following events occurred while conducting the Rapid Assessment at Coastal Truck Stop during your absence.

The initial 600 ft. of soil borings were installed between 3/4/99 and 3/8/99.

We spoke with Chuck Williams on the phone and requested additional bore hole footage in order to completely define the plume. He told us he would approve an additional 300 feet.

On 3/18/99, Chuck Williams sent us a letter (rec'd 3/22/99) approving an additional 300 feet of temporary monitoring wells instead of 300 feet of additional bore holes. Our secretary Kim Garrett phoned Chuck Williams about the mistake, and Mr. Williams acknowledged he meant to state bore holes in the letter.

ST DOCKE: 57 T

As of 3/25/99, we completed the installment of the additional bore holes.

After our field screenings, we consulted with our geologist Dr. Doug Nelson about the monitoring well placements. He gave us the locations for the first 8 wells, which were to be placed inside the contamination plume.

On 7/6/99, Anthony Bell (SEI) faxed a letter to Chris Doll asking him to review our well placements (based on our field screenings) for the first 8 wells which were to be placed inside the plume (with the exception of MW6). He also stated that we intended to start drilling that same day. Anthony did not hear back from Mr. Doll and called him the next day. He informed us he was not involved with that particular site and would pass the information on to the appropriate person. I then spoke with Chuck Williams about the placement of monitoring wells 1-8. The were approved with the exception of MW 2, MW 5, and MW 8, which he directed us to move them closer to the edge of the plume.

During 7/13/99 through 7/15/99, monitoring wells 1 – 8 were installed.

On 8/3/99, a letter was faxed to John Abernathy asking him to review the remaining 7 proposed well placements (proposed by our geologist) for the wells to be located outside the plume. I spoke with John on the phone and we made exact changes for the placements of monitoring wells 9-14.

On 8/4/99, we began the installation of the remaining monitoring wells to be placed outside of the plume. After installing monitoring wells 9, 10 and 11, we began the installation of MW 12. During installation, we noticed a strong gasoline odor (at 15') below the water table. We stopped drilling and called Mr. Abernathy about our findings who told us not to install it and move on to the next one. We then began the drilling for the installation for MW 13. Again at 15', we came across a strong gasoline odor. We stopped the drilling and again called John Abernathy. He did not want to immediately move the locations of these two well placements. Instead, we were instructed to delay the installation of MW 12 and 13. We did install MW 14, which still appeared to be outside of the plume of contamination. Mr. Abernathy instructed us to complete our report without monitoring wells 12 and 13, and those monitoring wells could later be installed based on the results of the Rapid Assessment report.

In regards to the one disallowed slug test; the drilling company we sub-contract for our telescoping wells was not going to be available for some time. We felt it was important to go ahead and perform the slug test on three of the wells we had already installed so we would not delay the completion of our report. Under similar circumstances in the past, we have performed all three slug tests on the shallow water wells and they had been approved. We have noted your correction and will make a point of modifying our procedures.

I have enclosed copies of our letters corresponding with Chuck Williams regarding the additional bore hole footage, and John Abernathy regarding monitoring well placements.

I hope this letter will help alleviate any confusion about this project. Please feel free to contact me if I can be of any further assistance.

Sincerely;

Jared Hendrix Project Supervisor

SEI

cc: J.C. Jones
Senior Accountant
Financial Section
Division of UST Management

Mr. Dan M. McEachin 1007 Wentworth Drive Florence, SC 29501

Catherine B. Templeton, Director

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TREVER Z SLACK PG PRINICIPAL HYDROGEOLOGIST PETRA-TECH ENVIRONMENTAL LLC 2435 E NORTH ST STE 1108-202 GREENVILLE SC 29615-1442

SEP 0 5 2014



Re: Tier II Directive

Coastal 76 Truck Stop, 2513 E. Palmetto Street, Florence, SC UST Permit # 03538; Cost Agreement # 48706; MWA # UMW-25643

Solicitation Number IFB-5400005780/3/20/13-EMW, Purchase Order # 4600361453

Tier II Plan and Site Specific QAPP Contractor Addendum received July 31, 2014

Florence County

Dear Mr. Slack:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the Site-Specific Work Plan (SSWP), and associated Cost Agreement for the referenced site. Assessment activities should begin immediately upon receipt of this letter.

Cost agreement number 48706 has been approved in the amount shown on the enclosed cost agreement spreadsheet and will be kept on file so that compensation can begin. The Agency reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with the referenced Invitation for Bid (IFB). Further, the Agency reserves the right to question and/or reject costs if deemed unreasonable. The Agency reserves the right to audit project records at any time during the project or after completion of the work. The Tier II Assessment Report (1 hardcopies, 1 electronic copy, 1 copy to each property owner who has a well on their property), QAPP checklist, and invoice should be submitted within 90 days from the date of this correspondence.

The approved assessment component cost agreement is enclosed for your information. Petra-Tech Environmental, LLC., can submit an invoice for direct billing from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Future invoices and/or other criteria included therein must comply with current SUPERB criteria per Section 44-2-20(2). Please reference the approved cost agreement number on all pertinent invoices and correspondence. Please note that Sections 44-2-110(4) and 44-2-130(B) of the SUPERB Statute state that no costs will be allowed (considered for payment) unless prior approval from the Agency is obtained. If for any reason there is a change in this cost agreement, any associated changes must be pre-approved in writing by this Agency in order for Petra-Tech Environmental, LLC., to seek future cost compensation. Any temporary well converted to a permanent well will be reimbursed at the permanent well installation rate.

The following revisions have been made to the approved cost agreement:

- Costs for tax map information (item 1B1) were omitted. The information was provided during the previous assessment in 2012.
- Costs have been approved for 34 lead analyses (item 11E1) for all wells and two duplicate samples.

Any item(s) not clearly or completely addressed in the report (SC certified driller's number, disposal manifest for soil cuttings, disposal manifests for generated ground water, etc.) WILL NOT be compensated by the SUPERB Account. In accordance with section 3.14.4. of the referenced IFB, if the time interval between collection of groundwater samples from the permanent monitoring well network and receipt of the report and exceeds 45 days, the contractor will submit an updated comprehensive groundwater sampling report to include blank and duplicate samples for all wells and surface water at no additional cost. The Agency reserves the right to deny payment for laboratory analyses if the detection limit exceeds the reporting limit in Appendix E of the QAPP for the UST Division. As agreed to in the referenced contract, the owner/operator and property owner of the referenced facility will not be responsible for any costs associated with this assessment.

Monitoring well approval for up to seventeen temporary, ten shallow and three deep monitoring wells is enclosed for your records. Please note that all applicable South Carolina certification requirements regarding laboratory analyses, well installation, and report preparation must be met. All shallow wells are to be installed with screen intervals that bracket the water table.

The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. The Division suggests a roll off container be used for disposal. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. IDW should not be stored on-site longer than ninety (90) days. A legible copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included as an appendix to the report. If the CoC concentrations, based on laboratory analysis, are below Risk Based Screening Levels (RBSLs), please contact the project manager for approval to dispose of soil and/or groundwater in a location acceptable to the property owner. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

On all correspondence regarding this site, please reference UST permit number 03538. If you have questions concerning this correspondence, or would like to submit additional information, please contact me at (803) 898-0592, fax me at (803) 898-0673, or e-mail me at milenkmp@dhec.sc.gov.

Sincerely,

Maia Milenkova, Hydrogeologist

Assessment Section

Underground Storage Tank Management Division

Bureau of Land & Waste Management

enc: Approved Cost Agreement

Monitoring Well Approval

cc: Dan M. McEachin, 1007 Wentworth Dr., Florence, SC 29501(w/o enc.)

Technical File (w/ enc.)



Catherine B. Templeton, Director

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Monitoring Well Approval Form

Approval is hereby granted to: Petra-Tech Environmental, LLC

Facility: Coastal 76 Truck Stop, 2513 E. Palmetto St., Florence, SC

UST Permit Number: 03538 County: Florence

This approval is for the installation of seventeen temporary, and thirteen (ten shallow and three deep) permanent monitoring wells. The monitoring wells are to be installed in the approved locations. Monitoring wells are to be installed following the South Carolina Well Standards, R.61-71, and the applicable guidance documents.

Please note that R.61-71 requires the following:

- 1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
- 2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
- 3. A Water Well Record Form or other form provided or approved by the Agency shall be completed and submitted to the Agency within 30 days after well completion or abandonment unless another schedule has been approved by the Agency. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
- 4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Agency within 30 days of receipt of laboratory results unless another schedule has been approved by the Agency as required by R.61-71.H.1.d.
- 5. If any of the information provided to the Agency changes, notification to Maia Milenkova (tel: 803 898-0592 or e-mail: milenkmp@dhec.sc.gov) shall be provided a minimum of twenty-four (24) hours prior to well construction as required by R.61-71.H.1.a.
- 6. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c. All other wells shall be properly developed per R.61-71.H.2.d.
- 7. Approval from the Agency is required prior to abandonment of all monitoring wells as required by R.61-71.H.1.a.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and R.61-71 of the South Carolina Well Standards and Regulations, dated April 26, 2002. A copy of this approval should be on the site during well installation.

Approval #: UMW-25643

Date of Issuance: August 28, 2014

Maia Milenkova, Hydrogeologist

- Alaw Celvina

Assessment Section

UST Management Division

Bureau of Land and Waste Management

Approved Cost Agreement 48706

Facility 03538 COASTAL 76 TRUCK STOP

MILENKMP

PO Number

Task / Description Categories	Item Description	Qty / Pct	Unit Price	<u>Amount</u>
01 PLAN				
	A1 SITE SPECIFIC WORK PLAN	1 0000	470 00	470 00
02 RECEPTOR SURVEY				
	A1 RECEPTOR SURVEY	1 0000	755 00	755 00
03 COMPREHENSIVE SURVEY				
	A1 COMPREHENSIVE SURVEY	1 0000	1,405 00	1,405 00
04 MOB/DEMOB				
	A1 EQUIPMENT	2 0000	985.00	1,970 00
	B1 PERSONNEL	5 0000	955 00	4,775 00
06 SOIL BORINGS (DRILLED)				
	A1 SOIL BORING/FLD SCR STANDARD	320 0000	3 50	1,120 00
09 WELL INSTALLATION				
	B1 WATER TABLE (DRILL RIG)	283 0000	16 25	4,598 75
10 SAMPLE COLLECTION			** * *	
	A1 GROUNDWATER (PURGE)	32 0000	165 00	5,280 00
	D1 GROUNDWATER NO PURGE/DUPLICATE	2 0000	50 00	100 00
p	H1 FIELD BLANK	2 0000	52 00	104 00
11 ANALYSES				
GW GROUNDWATER	A2 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	39 0000	117 00	4,563.00
	E1 LEAD	34 0000	25 00	850 00
	F1 EDB BY 8011	36 0000	75 00	2,700 00
SOIL SOIL	W1 GRAIN SIZE / HYDROMETER	2 0000	55 00	110 00
12 AQUIFER CHARACTERIZATION		 		
	B1 SLUG TEST	3 0000	255 00	765 00
17 DISPOSAL				
	AA WASTEWATER	200 0000	0 25	50 00
	C1 SOIL TREATMENT DISPOSAL	5 0000	35 00	175 00
	D1 DRILLING FLUIDS	25 0000	0 10	2 50
25 WELL REPAIR				
	A1 ADDITIONAL COPIES OF REPORT	3 0000	49 00	147 00
		Total Amo	unt	29,940 25

September 4, 2014 Page 1 of 1 suprcait.rdf Rev: 1.15

McEachin & McEachin, P.A.

Attorneys-At-Law

2117 W. Palmetto Street, Suite C Florence, South Carolina 29501

D. Malloy McEachin, Jr. FitzLee H. McEachin

Phone: 843.665.0135

Facsimile: 843.665.0716

September 9, 2014

Maia Milenkova S.C. Dept. of Health & Environmental Control 2600 Bull St. Columbia, SC 29201

Re: Coastal 76 Truck Stop, 2513 Palmetto Street, Florence, SC

UST Permit #03538

Dear Ms. Milenkova:

Please allow this letter to serve as notice that I am representing my father, Dan McEachin regarding the above referenced matter. Please forward all further correspondence to me at the above address.

If you have any questions, please do not hesitate to contact me.

With kind regards, I am,

Yours very truly,

D. Malloy McEachin, Jr.

DMMJR/tdm





Document Receipt Information

Hard Copy	CD	Email
Date Received	79-14	
Permit Number	0 3538	
Project Manager	Maia	
Name of Contractor	Peta-T.	ech
UST Certification Numb	oer	
Docket Number		18tech
Scanned		
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TIER II ASSESSMENT REPORT

Coastal 76 Truck Stop SCDHEC UST Permit #03538 Cost Agreement #48706 2513 E. Palmetto Street Florence, South Carolina Florence County

PTE Job No. J14-070-A

December 16, 2014



Petra-Tech Environmental 2435 East North Street Suite 1108-202 Greenville, SC 29615

www.petratechenv.com



December 16, 2014

South Carolina Department of Health and Environmental Control Division of Underground Storage Tank Management Bureau of Land and Waste Management 2600 Bull Street Columbia, South Carolina 29201-1708

Attention: Ms. Maia Milenkova

Subject: **Tier II Assessment Report**

> **Coastal 76 Truck Stop** 2513 E. Palmetto Street

Florence, Florence County, South Carolina

SCDHEC UST Permit #03538

Cost Agreement #48706 PTE Job No. J14-070-A

Dear Ms. Milenkova,

In accordance with Solicitation Number IFB-5400005780/3/20/13-EMW (Purchase Order #4600271461), Petra-Tech Environmental, LLC submits herein the completed Tier II Assessment Report for the subject site. This submittal is in response to the South Carolina Department of Health and Environmental Control's (SCDHEC) directive letter dated September 5, 2014 and was performed in accordance with Petra-Tech Environmental, LLC's Site Specific Work Plan dated July 25, 2014.

Please do not hesitate to contact us at 864.436.6322 if you have any questions concerning this submittal.

Sincerely,

Petra-Tech Environmental

Trever Z. Slack, P.G. Principal Hydrogeologist

Registered, South Carolina #2



1.0 FACILITY IDENTIFICATION

Facility Name: Coastal 76 Truck Stop

2513 E. Palmetto Street

Florence, South Carolina 29506

Facility Phone: Not Applicable

UST Owner: Dan Mceachin

UST Owner Address: 1007 Wentworth Drive

Florence, South Carolina 29501

UST Owner Phone: 803.651.8835

Property Owner: Dan Mceachin

Property Owner Address: 1007 Wentworth Drive

Florence, South Carolina 29501

Property Owner Phone: 803.651.8835

2.0 INTRODUCTION

The subject property is located at 2513 E. Palmetto Street in Florence, Florence County, South Carolina (**Figure 1**) and is currently utilized as a storage area for lumber and scrap wood. The approximate 4,000-square foot building located on-site is currently vacant. The site is bordered primarily by commercial properties to the east and west, and wooded land to the north. The site is bordered by Palmetto Street to the south, followed by the Florence Regional Airport.

2.1 Site History

According to documents provided by the SCDHEC in the Notice to Proceed package, a release was reported at the site in September 1995. Twenty groundwater monitoring wells (IGWA, IGWA'R", 03538-MW01 through 03538-MW11, 03538-MW14 through 03538-MW18, 03538-TW01, and 03538-TW02) have been installed at the site in response to the reported release as part of previous environmental assessments.

The SCDHEC issued a directive letter on June 25, 2014 requesting the completion of a Site Specific Work Plan (SSWP) for the site. The SSWP was submitted on July 25, 2014, and the SSWP was accepted by the SCDHEC in a Tier II Directive letter dated September 5, 2014. The results of the Tier II Assessment are contained herein.

2.2 Regional Geology and Hydrogeology

The site is located in the Coastal Plain Physiographic Province, which is generally comprised of Upper Cretaceous to present aged, wedge shaped formations that begin at the "Fall Line" and dip towards the Atlantic Ocean with ground surface elevations typically less than 300 feet. The sedimentary soils of these formations consist of unconsolidated sand, clay, gravel, marl, cemented sands, and limestone that were deposited unconformably over Mesozoic/Paleozoic age basement rock consisting of granite, schist, and



gneiss similar to the rocks of the Piedmont Physiographic Province. The thickness of the Coastal Plain sediments varies from zero at the "Fall Line" to more than 4,000 feet at the southern tip of South Carolina near Hilton Head Island.

The Coastal Plain province was formed during Quaternary, Tertiary, and late Cretaceous geologic periods and can be divided generally into three subunits: Upper Coastal Plain, Middle Coastal Plain, and Lower Coastal Plain. The Lower Coastal Plain comprises approximately one-half of the entire Atlantic Coastal Plain of South Carolina and is separated from the middle coastal plain by the Surry Scarp, a seaward facing scarp with a toe elevation of 90 to 100 feet. The Middle Coastal Plain and the Upper Coastal Plain each compose approximately one fourth of the Coastal Plain area and are separated by the Orangeburg Scarp, a seaward facing scarp with a toe elevation of 250 to 270 feet.

The Lower Coastal Plain is typically identified as the area east of the Surry Scarp below elevation 100 feet, with a vertical stratigraphic sequence overlying the basement rock consisting of unconsolidated Cretaceous, Tertiary, and Quaternary sedimentary deposits. The surface deposits of the Lower Coastal Plain were formed during the Quaternary period which was characterized by the formation of the Carolina Bays and scarps throughout the east coast due to sea level rise and fall, the formation of the barrier islands, and the formation of flood plains from major rivers. Preceding the Quaternary period, limestone was deposited in the Lower Coastal Plain.

The Middle Coastal Plain is typically identified as the area between the Orangeburg Scarp and the Surry Scarp and falls between elevation 100 feet and 270 feet. The vertical stratigraphic sequence overlying the basement rock consists of unconsolidated Cretaceous and Tertiary sedimentary deposits formed as a result of scouring from the regressive cycles of the Ocean as it retreated. During the Eocene epoch of the Tertiary period, limestone was deposited in the Middle Coastal Plain.

The Upper Coastal Plain is typically identified as the area between the "Fall Line" and the Orangeburg Scarp and falls between elevations 270 feet and 300 feet. The Upper Coastal Plain was formed during the Tertiary and late Cretaceous periods and is marked by the formation of the Sandhills dunes as a result of fluvial deposits over the Coastal Plain consisting of marine sediments, limestone, and sand.

According to Newell et al. (In Review)¹, the site is located within the Bear Bluff Formation, a Pliocene aged coastal terrace sequence consisting of gray to cream colored fossiliferous, coarse-grained calcareous sand and sandy limestone. The Bear Bluff Formation unconformably overlies the Peedee Formation and underlies the Canepatch, Conway, or Waccamaw Formation.

2.3 Receptor Survey Results

A receptor survey was conducted within 1,000 feet of the site boundaries (and within 500 feet of the groundwater contaminant plume) and consisted of the following:

 A vehicular reconnaissance of roads and private residences to identify water supply wells and surface water features

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¹ Newell, Wayne L., Prowell, David (retired), Krantz, David, Powars, David, Mixon, Robert (retired), Stone, Byron, and Willard, Debra, in review, Surficial Geology and Geomorphology of the Atlantic Coastal Plain: U.S.G.S. Open File Report,



- Delivery of Water Supply Well Survey Forms through United States Postal Service Mail to property owners within the receptor survey boundaries (returned well survey forms are included in **Appendix J**).
- A review of historical United States Geological Survey topographic maps and historical aerial photographs.
- Utility Protection Service to locate underground structures and underground utilities on-site and proximate to the site.

No private water supply wells or surface water features were identified within the approximate 1,000-foot survey radius of the site. Public water is currently available to the residents located with the receptor survey area.

3.0 ASSESSMENT INFORMATION

The completed scope of services was based on Petra-Tech Environmental's SSWP dated July 25, 2014, and subsequent email and verbal correspondence with SCDHEC project manager Ms. Maia Milenkova. During the Tier II Assessment, the following activities were performed: groundwater screening; installation of groundwater monitoring wells to define the extent of dissolved phase petroleum compounds; slug tests in two shallow and one deep groundwater monitoring well; and completion of a comprehensive groundwater sampling event.

3.1 Site Specific Geology and Hydrogeology

Borings performed during the Tier II Assessment encountered soils consisting primarily of mottled, silty clay from 0 to 6 feet, underlain by silty, fine sand, clayey fine sand, and fine sand to the termination depths of the borings. Soil boring records are provided in **Appendix E**. A soil sample was collected from the screened interval of monitoring wells 03538-MW22 and 03538-MW22D and submitted for laboratory grain size analysis. Grain size analysis results indicated a silty, fine sand for monitoring well 03538-MW22 and a fine sand with minor amounts of silt and clay for monitoring well 03538-MW22D.

Grain size distribution is summarized below:

Sample ID	Sample Depth (feet BGS)	% Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Silt	% Clay
MW22	10.0-11.5	0.0	0.0	0.5	56.3	28.3	14.9
MW22D	40.0-41.5	0.0	0.0	4.0	70.1	10.5	15.5



3.2 Summary of Field Screening Activities

Groundwater field screening was completed at the site on October 1 and 2, 2014. Field screening borings were performed by Mr. Joe Smith (SC Licensed Well Driller #1648-B) under the supervision of Mr. Trever Z. Slack, P.G. and Mr. Jimmy Slagh. Quality Assurance verification for field screening activities was provided by Ms. Kaye Burch. Details of the groundwater field screening activities are included in Section 3.2.1 below.

3.2.1 Groundwater Field Screening Activities

Eleven temporary shallow groundwater screening borings (GW01 through GW08, GW10, GW11, and GW13) and four temporary deep groundwater screening borings (GW02D, GW05D, GW08D, and GW11D) were performed on October 1 and 2, 2014 using a Simco 2500 drill with direct push and Auger capabilities and via hand auger. Shallow groundwater screening borings were drilled to 11.0 feet below ground surface (121 total feet) and deep groundwater screening borings were drilled to 35.0 feet below ground surface (140 total feet).

Each groundwater screening boring location was established in the field from map-scaled distances, by measuring from site landmarks, and estimating right angles (**Figure 2**); and survey coordinates for the groundwater screening borings were obtained using a handheld Geographic Positioning System device. Groundwater samples collected in the field were screened using a portable MiniRAE® Lite Photo-Ionization Detector (PID). After representative samples were collected from each boring, the temporary boreholes were abandoned to the ground surface with a bentonite cement grout pursuant to South Carolina well standards². Groundwater screening boring 1903 Well Records are included in **Appendix D**.

Select groundwater samples from sentinel borings were submitted for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, 1,2-dichloroethane (1,2-DCA), and methyl-tert-butyl-ether (MTBE) by Environmental Protection Agency (EPA) Method 8260B. Of the eight groundwater screening samples submitted for laboratory analysis (GW01, GW03, GW05, GW06, GW07, GW08, GW11, and GW13), petroleum compounds were detected above laboratory method detection limits in GW07. Field screening and laboratory analytical results are summarized in **Table 1**. Groundwater screening laboratory data sheets are provided in **Appendix B**.

3.3 Summary of Well Installation Activities

Following completion of field screening activities, twelve new groundwater monitoring wells (03538-MW10R, 03538-MW19, 03538-MW20, 03538-MW21, 03538-MW22, 03538-MW22D, 03538-MW23, 03538-MW24, 03538-MW25, 03538-MW26, 03538-MW27, and 03538-MW28) were installed from November 9, 2014 through November 24, 2014 to complete the assessment of petroleum hydrocarbons in groundwater. The well locations were based on the groundwater field screening results and communication with SCDHEC project manager Ms. Maia Milenkova. Monitoring well installations were performed by Mr. Lawrence Large (SC Licensed Well Driller #1648-B) and Mr. Joe Smith (SC Licensed Well Driller #1648-B). Field personnel providing oversight of field screening activities included Mr. Trever Slack,

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² South Carolina Well Standards and Regulations, SCDHEC, Promulgated Pursuant to Section 44-55-40 of the 1976 South Carolina Code of Laws, R. 61-71, April 26, 2002.



P.G., Mr. Jimmy Slagh, and Mr. Daniel Burch. Quality Assurance verification for monitoring well installation activities was provided by Ms. Kaye Burch.

3.3.1 Type II Wells

Shallow water table groundwater monitoring wells were installed as Type II monitoring wells using a CME 75 drill utilizing hollow stem auger (4.5-inch inside diameter auger) drilling techniques. Monitoring wells 03538-MW20 and 03538-MW28 were installed via hand auger. The monitoring wells consist of 2-inch ID, schedule 40 PVC casing with flush-threaded joints. The bottom 10-foot section of each shallow water table monitoring well (03538-MW10R and 03538-MW19 through 03538-MW28) is a manufactured well screen with 0.010-inch wide machined slots. Standard sand filter pack, bentonite seal, and grout were installed to the ground surface.

Total well depths for Type II wells are:

Shallow Water Table Groundwater Monitoring Wells

03538-MW10R	11.81 feet BGS
03538-MW19	12.32 feet BGS
03538-MW20	14.70 feet BGS
03538-MW21	12.95 feet BGS
03538-MW22	15.29 feet BGS
03538-MW23	15.77 feet BGS
03538-MW24	13.19 feet BGS
03538-MW25	13.36 feet BGS
03538-MW26	15.06 feet BGS
03538-MW27	15.25 feet BGS
03538-MW28	13.17 feet BGS

Monitoring well construction diagrams and 1903 Water Well Records are included in **Appendix E**. Monitoring well construction data is provided in **Table 2**.

3.3.2 Type III Wells

Monitoring well 03538-MW22D was installed as a Type III, vertical extent (telescoping) monitoring well. The well was installed using a CME Model 75 drill utilizing auger (6.25-inch inside diameter hollow stem auger) and mud rotary (5.5-inch outside diameter hollow stem auger) drilling techniques. The telescoping well was constructed with a 6-inch ID schedule 40 PVC outer casing installed to an approximate depth of 25-feet below ground surface. The casing was pressure grouted to the ground surface with a bentonite-cement grout and allowed to cure for at least 24 hours. After curing, a 5.5-inch outside diameter roller cone bit was utilized to advance the borehole through the outer casing to the termination depth. A 2-inch ID schedule 40 PVC casing with flush-threaded joints was installed in the borehole. The bottom 5-foot section of the well is a manufactured well screen with 0.010-inch machined slots. Standard filter sand pack, bentonite seal and grout were installed to the ground surface.



Total well depth for Type III well is:

Deep Groundwater Monitoring Wells 03538-MW22D 44.43 feet BGS

Monitoring well construction diagrams and 1903 Water Well Records are included in **Appendix E**. Monitoring well construction data is provided in **Table 2**.

3.3.3 General

At assigned intervals, drill cuttings were collected for soil classification. Representative portions of the test samples were visually examined and classified. Soil samples were screened at 5-foot intervals using a PID.

To help prevent cross-contamination, downhole drilling equipment was steam cleaned between borings. Approximately 1.58 tons of petroleum impacted drill cuttings generated during the installation of the monitoring wells were transported off-site for disposal. Waste transportation and disposal records are included in **Appendix G**.

Monitoring well installations were performed by a South Carolina licensed driller from Smith Drilling Services, LLC of Conyers, Georgia while being supervised by Petra-Tech Environmental, LLC field staff. Monitoring wells were developed by personnel from Smith Drilling Services and field personnel from Petra-Tech Environmental through a combination of surging and overpumping. The monitoring well locations were surveyed by a licensed surveyor (George B. Souther RLS, SC #21232) to establish horizontal control and vertical elevations of the top of PVC casing and ground surface. The results of the comprehensive site survey are included as **Appendix A**. The site survey was used to create a site base map (**Figure 3**) for the site.

3.4 Groundwater Sampling

Twenty-nine groundwater monitoring wells were sampled on December 2nd, 3rd, and 12th by Mr. Daniel Burch, Mr. Cameron Warlick, and Mr. James Slagh of Petra-Tech Environmental. Quality Assurance verification was provided by Ms. Kaye Burch. Monitoring well 03538-MW05 could not be located during the groundwater sampling event, and is believed to be located underneath a roll-off container/dumpster.

Groundwater monitoring wells were developed by purging until it was determined that groundwater flow through the well screen was not inhibited by silt or fine sand. Approximately 90 gallons of purge-water generated during the monitoring well development and sampling was transported off-site for disposal. Waste transportation and disposal records are attached in **Appendix G**. Monitoring well purging and sampling logs are included in **Appendix B**.

Sample containers were marked in the field with identifying numbers, properly preserved, placed into sample coolers, secured, and maintained at less than 4 degrees Celsius. The samples and chain-of-custody records were delivered to Shealy Environmental Services, Inc. in Columbia, South Carolina for analysis of BTEX, naphthalene, MTBE, 8-oxygenates, and 1,2-DCA by EPA Method 8260B, 1,2-dibromoethane (EDB) by EPA Method 8011, and total lead by EPA Method 6010B. One duplicate sample per twenty wells sampled and one field blank for each day in the field was analyzed for BTEX, naphthalene, MTBE,



8-oxygenates, and 1,2-DCA by EPA Method 8260B, EDB by EPA Method 8011, and total lead by EPA Method 6010B. Additionally, one trip blank for each sample cooler was analyzed for BTEX, naphthalene, MTBE, 8-oxygenates, and 1,2-DCA by EPA Method 8260B.

3.5 Tier II Assessment Results

3.5.1 Groundwater Occurrence

Site-wide stabilized groundwater elevations recorded on December 13, 2014 ranged from 132.61 (03538-MW28) to 133.27 (03538-MW27) for the shallow groundwater monitoring wells and 131.07 (03538-MW22D) to 133.08 (03538-TW01) for the deep monitoring wells. A tabulation of the groundwater level data is provided in **Table 2**. A water table elevation contour map showing the occurrence and direction of groundwater flow in the shallow and deep monitoring well screened intervals is presented as **Figures 4a** and **4b**, respectively. Groundwater flow from the source area is generally to the northeast.

Figures 5A through **5**C provide hydrogeologic cross-sections through the subsurface soils. The cross-sections depict the surveyed ground surface elevation, subsurface lithologies, monitoring wells and their respective screened intervals, and the static groundwater elevation.

3.5.2 Groundwater Monitoring Well and Surface Water Sampling Results

Of the twenty-nine groundwater monitoring wells sampled for laboratory analysis during the Tier II Assessment, eight wells (03538-IGWA, 03538-IGWA"R", 03538-MW01, 03538-MW02, 03538-MW03, 03538-MW04, 03538-MW07, and 03538-MW17) detected petroleum compounds above South Carolina established Risk-Based Screening Levels.

Petroleum compounds detected above Risk-Based Screening Level concentrations include:

Benzene	03538-IGWA, 03538-IGWA"R", 03538-MW01, 03538-MW02, 03538-MW03, 03538-MW04, 03538-MW07, and 03538-MW17
• Toluene	03538-IGWA, 03538-IGWA"R", 03538-MW01, 03538-MW02, 03538-MW03, and 03538-MW04
• Ethylbenzene	03538-IGWA"R", 03538-MW01, 03538-MW02, 03538-MW03, 03538-MW04, 03538-MW07, and 03538-MW17
• Xylenes	03538-IGWA, 03538-MW01, and 03538-MW03
• MTBE	03538-MW01 and 03538-MW02
• Naphthalene	03538-IGWA, 03538-IGWA"R", 03538-MW01, 03538-MW02, 03538-MW03, 03538-MW04, 03538-MW07, and 03538-MW17



• EDB 03538-IGWA, 03538-IGWA"R", 03538-MW01,

03538-MW02, 03538-MW03, 03538-MW04, and

03538-MW17

• Tert-Amy-Alcohol (TAA) 03538-IGWA, 03538-IGWA"R", 03538-MW01,

03538-MW02, 03538-MW03, and 03538-MW04

Additionally, lead was detected above the established Risk-Based Screening Level (15 ug/l) in monitoring wells 03538-IGWA, 03538-IGWA"R", 03538-MW01, 03538-MW02, 03538-MW03, 03538-MW04, 03538-MW10R, 03538-MW17, and 03538-MW23. However, elevated total lead concentrations may be the result of suspended sediment in the groundwater samples.

Petroleum compounds were also detected above laboratory method detection limits in groundwater monitoring wells 03538-MW14, 03538-MW16, and 03538-MW18; however, concentrations did not exceed South Carolina established Risk-Based Screening Levels. The results of the laboratory analyses are summarized in **Table 3** and are shown on **Figure 6**. Benzene, toluene, ethylbenzene, xylenes, MTBE, naphthalene, and EDB isoconcentration maps are included as **Figures 7a** through **7g**, respectively. Laboratory data sheets are provided in **Appendix B**.

3.5.3 Aquifer Evaluation

Slug tests were performed in monitoring wells 03538-MW21, 03538-MW22, and 03538-MW22D to determine the hydraulic conductivity of the formation material exposed to the well screen. A SCDHEC *Summary of Slug Test Form* is provided in **Appendix F**. The data from the tests are presented on **Table 4**.

Hydraulic Conductivity

Hydraulic conductivity is defined as the ability of the aquifer material to conduct water under a hydraulic gradient. Two slug tests were performed at the site during the current scope of work to measure the in-situ hydraulic conductivity of the aquifer and were evaluated using the Bouwer and Rice Method³ for partially-penetrating wells in an unconfined aquifer (slug testing results are included in **Appendix F**). The hydraulic conductivity values measured at the site were $4.06 \times 10^{-5} \text{ cm/sec}$ (03538-MW21), $1.40 \times 10^{-4} \text{ cm/sec}$ (03538-MW22), and $3.57 \times 10^{-4} \text{ cm/sec}$ (03538-MW22D). The site-wide geometric mean hydraulic conductivity value is $1.79 \times 10^{-4} \text{ cm/sec}$ (**Table 4**).

Horizontal Hydraulic Gradient

The horizontal hydraulic gradient is determined by dividing the difference in groundwater elevations at two locations by the horizontal distance between those locations along the direction of groundwater flow. The horizontal hydraulic gradient across the site is approximately 0.002 feet/feet between groundwater monitoring wells 03538-MW04 and 03538-MW22, and 0.022 feet/feet between groundwater monitoring wells 03538-TW01 and 03538-MW22D.

³ Bouwer, H., and Rice, R., A Slug Test for Determining Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells, *Water Resources Research*, v. 12, o. 423-428.



Effective Porosity

Total porosity is the total volume of void spaces in a rock or sediment divided by the total volume of that rock or sediment. Effective porosity is less than total porosity, and is the ratio of those void spaces which are interconnected allowing water of other fluids to flow to the total volume of the rock or sediment. A number of scientific studies have been undertaken to identify relationships between effective porosity and the physical characteristics of rock or soil (lithology) in order to estimate the effective porosity for different lithological formations.

An effective porosity value of 0.33 was estimated for the shallow and deep wells screened in a predominantly fine sand. The effective porosity was estimated based on published values of effective porosity for a fine sand (McWhorter and Sunada 1977⁴) which ranged from 0.01 to 0.46 with an arithmetic mean of 0.33.

Groundwater Flow Velocity

The velocity of groundwater flow is derived from the equation:

$$V = \frac{Ki}{n_e}$$

Where

V is the flow velocity K is the hydraulic conductivity i is the horizontal hydraulic gradient; and n_e is the effective porosity.

Based on these parameters and the data provided above, the geometric mean horizontal movement of groundwater is approximately 8.59 feet/year in the unconfined aquifer at the site. **Table 4** summarizes the groundwater flow velocity calculations.

4.0 RECOMMENDATIONS

- Eleven shallow and one deep groundwater monitoring wells were installed between the dates of November 9, 2014 and November 24, 2014 to assess the horizontal and vertical extent of groundwater contamination at the subject site.
- Twenty-nine groundwater monitoring wells were sampled for laboratory analysis during the Tier II Assessment. Petroleum compounds were detected above South Carolina established Risk-Based Screening Levels in wells 03538-IGWA, 03538-IGWA"R", 03538-MW01, 03538-MW02, 03538-MW03, 03538-MW04, 03538-MW07, and 03538-MW17. Compounds detected above South Carolina established Risk-Based Screening Level concentrations include benzene, toluene, ethylbenzene, xylenes, MTBE, naphthalene, EDB, and TAA.
- Groundwater flow from the source area is primarily to the northeast.

⁴ Mcwhorter, D. and Sunada, D., 1977, <u>Groundwater Hydrology and Hydraulics</u>, Water Resources Publication, 290 pp.



- Presently, the contaminant plume at the subject site appears to be defined both horizontally and vertically.
- Petra-Tech Environmental recommends continued monitoring of the groundwater monitoring well network associated with the site to establish trends in groundwater contaminant concentrations and ensure that concentrations are attenuating naturally.

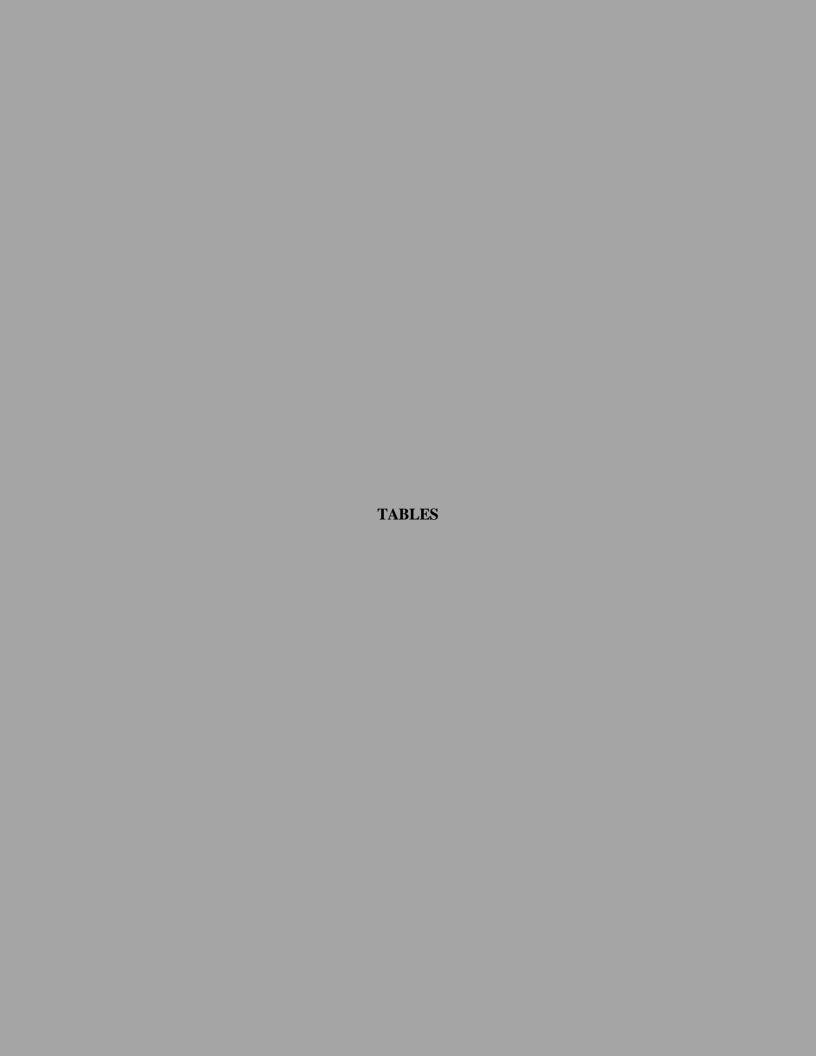


TABLE 1 Summary of Groundwater Screening Results Coastal 76 Truck Stop - UST Permit #03538 Florence, Florence County, South Carolina

		1		Groundwater Screening Sample												
	Method	RBSL (µg/L)	GW01	GW02	GW02D	GW03	GW04	GW05	GW05D	GW06						
Boring Depth (ft bgs)	NA	NA	11	11	35	11	11	11	35	11						
Depth-to-Groundwater (ft bgs)	NA	NA	7.2	7.6	7.4	8.5	7.8	8.2	8.0	8.3						
Sample Depth (ft bgs)	NA	NA	6-11	6-11	31-35	6-11	6-11	6-11	31-35	6-11						
PID Reading (ppm)	NA	NA	0.0	13.4	0.1	0.2	1.9	0.0	0.0	0.0						
Benzene (µg/L)	8260B	5	< 0.13	NT	NT	< 0.13	NT	< 0.13	NT	< 0.13						
Toluene (µg/L)	8260B	1,000	< 0.33	NT	NT	< 0.33	NT	< 0.33	NT	< 0.33						
Ethylbenzene (µg/L)	8260B	700	< 0.33	NT	NT	< 0.33	NT	< 0.33	NT	< 0.33						
Xylenes (µg/L)	8260B	10,000	< 0.33	NT	NT	< 0.33	NT	< 0.33	NT	< 0.33						
Naphthalene (µg/L)	8260B	25	< 0.40	NT	NT	< 0.40	NT	< 0.40	NT	< 0.40						
1,2-DCA (μg/L)	8260B	5	< 0.15	NT	NT	< 0.15	NT	< 0.15	NT	< 0.15						
MTBE (μg/L)	8260B	40	< 0.40	NT	NT	< 0.40	NT	< 0.40	NT	< 0.40						

_				Groundwater Screening Sample											
	Method	RBSL (µg/L)	GW07	GW08	GW08D	GW10	GW11	GW11D	GW13						
Boring Depth (ft bgs)	NA	NA	11	11	35	11	11	35	11						
Depth-to-Groundwater (ft bgs)	NA	NA	8.8	9.25	9.0	9.1	9.5	9.0	8.6						
Sample Depth (ft bgs)	NA	NA	6-11	6-11	31-35	6-11	6-11	31-35	6-11						
PID Reading (ppm)	NA	NA	0.2	0.1	0.1	0.0	0.0	0.0	0.0						
Benzene (µg/L)	8260B	5	< 0.13	< 0.13	NT	NT	< 0.13	NT	< 0.13						
Toluene (μg/L)	8260B	1,000	1.1	< 0.33	NT	NT	< 0.33	NT	< 0.33						
Ethylbenzene (µg/L)	8260B	700	< 0.33	< 0.33	NT	NT	< 0.33	NT	< 0.33						
Xylenes (μg/L)	8260B	10,000	< 0.33	< 0.33	NT	NT	< 0.33	NT	< 0.33						
Naphthalene (µg/L)	8260B	25	< 0.40	< 0.40	NT	NT	< 0.40	NT	< 0.40						
1,2-DCA (μg/L)	8260B	5	< 0.15	< 0.15	NT	NT	< 0.15	NT	< 0.15						
MTBE (µg/L)	8260B	40	< 0.40	< 0.40	NT	NT	< 0.40	NT	< 0.40						

NOTES:

RBSL - Risk Based Screening Level

Shaded values indicate concentrations exceeding RBSLs.

PID - MiniRae Lite Photoionization Detector

ppm - parts per million

ft bgs - feet below ground surface

NA - Not Applicable

NT - Not Tested. Sample not submitted for laboratory analysis

TABLE 2 Monitoring Well and Groundwater Surface Elevation Data Coastal 76 Truck Stop - UST Permit #03538 Florence, Florence County, South Carolina

Monitoring Well	Ground Surface Elevation	Top-of-Casing Elevation	Date	Groundwater Depth Below Top- of-Casing	Groundwater Elevation	Well Depth BGS	Screened Interval Depth	Screened Interval Elevation
			06/26/2012	NA	NA			
IGWA	145.56	145.19	12/03/2014	11.98	133.21	NA	NA - NA	NA - NA
			12/13/2014 06/26/2012	12.15 14.10	133.04 131.04			
IGWA"R"	145.93	145.14	12/03/2014	11.93	133.21	21.00	11.00 - 21.00	134.93 - 124.93
			12/13/2014	12.10	133.04			
			06/26/2012	14.71*	131.16			
03538-MW01	146.22	145.87	12/02/2014	12.54	133.33	17.80	NA - NA	NA - NA
			12/13/2014 06/26/2012	12.75 14.04	133.12 131.15			
03538-MW02	145.71	145.19	12/02/2014	12.34	132.85	18.30	NA - NA	NA - NA
			12/13/2014	12.36	132.83	_		
			06/26/2012	14.19*	131.85			
03538-MW03	146.04	145.51	12/02/2014	12.67	132.84	18.20	NA - NA	NA - NA
			12/13/2014 06/26/2012	12.39 14.35	133.12 131.21			
03538-MW04	146.05	145.56	12/03/2014	12.26	133.30	18.35	NA - NA	NA - NA
			12/13/2014	12.43	133.13			
			06/26/2012	13.90	NA			
03538-MW05	NA	NA	12/03/2014	NOT LC		18.29	8.29 - 18.29	NA - NA
			12/13/2014	NOT LC				
03538-MW06	146.44	146.04	06/26/2012 12/03/2014	14.65 12.67	131.39	18.29	8.29 - 18.29	138.15 - 128.15
03330 1111100	110.11	110.01	12/13/2014	12.91	133.13	10.29	0.2)	130.13
			06/26/2012	13.45	131.16			
03538-MW07	145.02	144.61	12/03/2014	11.20	133.41	18.38	8.38 - 18.38	136.64 - 126.64
			12/13/2014	11.47	133.14			
03538-MW08	144.30	143.78	06/26/2012 12/03/2014	12.62 10.43	131.16 133.35	18.29	8.29 - 18.29	136.01 - 126.01
03338-W W 08	144.30	143.76	12/03/2014	10.43	133.17	18.29	8.29 - 18.29	130.01 - 120.01
			06/26/2012	NOT LC				
03538-MW09	NA	NA	12/03/2014	NOT LC	CATED	18.33	8.33 - 18.33	NA - NA
			12/13/2014	NOT LC				
02520 MW/10	NIA	NIA	06/26/2012	12.41	NA	19.25	NIA NIA	NIA NIA
03538-MW10	NA	NA	12/03/2014	NOT LC		18.25	NA - NA	NA - NA
02529 MW/10D	144.22	142.01	12/13/2014 12/03/2014	10.50	133.31	11.01	1.61 11.61	142.62 122.62
03538-MW10R	144.23	143.81	12/13/2014	10.62	133.19	11.81	1.61 - 11.61	142.62 - 132.62
02529 MW/11	146.20	145.60	06/26/2012	14.39	131.29	19.42	0.42 10.42	127.70 127.70
03538-MW11	146.20	145.68	12/03/2014 12/13/2014	12.64 12.70	133.04 132.98	18.42	8.42 - 18.42	137.78 - 127.78
			06/26/2012	12.70	144.36			
03538-MW14	144.66	144.36	12/03/2014	NOT LC	CATED	18.29	8.29 - 18.29	136.37 - 126.37
			12/13/2014	11.39	132.97			
02520 MW/15	144.04	142.54	06/26/2012	12.78	130.76	20.00	10.00 20.00	124.04 124.04
03538-MW15	144.04	143.54	12/03/2014 12/13/2014	10.46	133.08 132.92	20.00	10.00 - 20.00	134.04 - 124.04
			06/26/2012	13.43	130.90			
03538-MW16	144.56	144.33	12/03/2014	11.18	133.15	21.00	11.00 - 21.00	133.56 - 123.56
			12/13/2014	11.42	132.91			
02520 1 59415	145.45	145.00	06/26/2012	13.96	131.12	21.00		104.45
03538-MW17	145.47	145.08	12/03/2014	11.92 12.10	133.16 132.98	21.00	11.00 - 21.00	134.47 - 124.47
			12/13/2014 06/26/2012	14.44	131.35			
03538-MW18	146.20	145.79	12/03/2014	12.42	133.37	21.00	11.00 - 21.00	135.20 - 125.20
			12/13/2014	12.60	133.19			
03538-MW19	143.97	143.67	12/03/2014	9.79	133.88	12.32	2.12 - 12.12	141.85 - 131.85
			12/13/2014 12/03/2014	10.66 10.97	133.01 132.96			
03538-MW20	144.21	143.93	12/13/2014	11.17	132.76	14.70	4.50 - 14.50	139.71 - 129.71
02520 MW/21	142.00	142.25	12/03/2014	10.38	132.87	12.05	2.75 12.75	141 12 121 12
03538-MW21	143.88	143.25	12/13/2014	10.60	132.65	12.95	2.75 - 12.75	141.13 - 131.13
03538-MW22	145.28	145.03	12/03/2014	9.92	135.11	15.29	5.09 - 15.09	140.19 - 130.19
			12/13/2014	12.16	132.87			
03538-MW22D	145.30	144.89	12/03/2014 12/13/2014	13.83	131.06 131.07	44.43	39.23 - 44.23	106.07 - 101.07
02520 1 51122	142.05	142.62	12/03/2014	11.90	131.73	15.55	5.55 15.55	120.20 120.20
03538-MW23	143.87	143.63	12/13/2014	10.77	132.86	15.77	5.57 - 15.57	138.30 - 128.30
03538-MW24	143.99	143.78	12/03/2014 12/13/2014	10.81 11.03	132.97 132.75	13.19	2.99 - 12.99	141.00 - 131.00
03538-MW25	144.45	144.04	12/03/2014	10.66	133.38	13.36	3.16 - 13.16	141.29 - 131.29
05550-1 V1 VV 25	177.73	177.07	12/13/2014	11.08	132.96	13.30	5.10 - 15.10	111.27 - 131.29
03538-MW26	145.22	144.96	12/03/2014 12/13/2014	11.84 12.09	133.12 132.87	15.06	4.86 - 14.86	140.36 - 130.36
03538-MW27	145.10	144.77	12/03/2014	11.37	133.40	15.25	5.05 - 15.05	140.05 - 130.05
			12/13/2014	11.50 9.97	133.27			
03538-MW28	142.88	142.71	12/03/2014 12/13/2014	10.10	132.74 132.61	13.17	2.97 - 12.97	139.91 - 129.91
	145.00	145 ==	06/26/2012	14.65	131.12	26.00	21.00	114.00
00.500	145.93	145.77	12/03/2014	NOT LC	CATED	36.00	31.00 - 36.00	114.93 - 109.93
03538-TW01	1 13.73			12.69	133 08			
03538-TW01 03538-TW02	144.24	143.98	12/13/2014 06/26/2012	12.69 13.95 10.79	133.08 130.03 133.19	36.00	31.00 - 36.00	113.24 - 108.24

NOTES: Measurements are in feet BGS - below ground surface

Elevations are NAVD 88
* - Groundwater elevation corrected for the presence of 0.02 feet (03538-MW01) and 0.01 feet (03538-MW03) of free-phase petroleum product using a specific gravity factor of 0.70 g/cc

TABLE 3 Summary of Groundwater Analytical Results Coastal 76 Truck Stop - UST Permit #03538 Florence, Florence County, South Carolina

	İ												ı			1	ı		
		Eman Dundanat	Dangana	Tolyona	Ethylhangana	Vilonas	MTBE	Nonhtholono	EDB	1,2 DCA	ETBE	ETBA	TAME	DIPE	Ethonol	TBF	TBA	T A A	Lead
		Free-Product Thickness (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (μg/L)	M1BE (μg/L)	Naphthalene (µg/L)	(µg/L)	1,2 DCA (μg/L)	EIBE (μg/L)	ETBA (μg/L)	(µg/L)	DIFE (μg/L)	Ethanol (µg/L)	μg/L)	μg/L)	TAA (μg/L)	Leau (μg/L)
		Timeliness (Teet)	(48,2)	(48.2)	(48/2)	(48/2)	(48.2)	(FS/2)	(#8/2)	(48,2)	(48.2)	(48,2)	(#8/2)	(MB/2)	(48/2)	(48/2)	(48/2)	(48/2)	(48,2)
			RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL	RBSL
	<u> </u>		5	1,000	700	10,000	40	25	0.05	5	47	NE	128	150	10,000	NE	1,400	240	15
IGWA	06/26/2012									NOT SAM	PLED				ı	ı			
	12/03/2014		1300	6000	630	11000	<40	310	2.0	<15	<20	<100	<20	<40	<3300	<100	<670	790 J	65
IGWA"R"	06/26/2012		130	790	180	980	<25	160	0.71	<25	NT	NT	NT	NT	NT	NT	NT	NT	9.0J
	12/03/2014		2000	9400	1800	7000	<40	530	3.2	<15	<20	<100	<20	<40	<3300	<100	<670	730 J	51
03538-MW01	06/26/2012	0.02						N	OT SAMPLEI	O - FREE-PHA	ASE PETROL	EUM PRODU	CT PRESENT				ı		
	12/02/2014		17000	27000	1500	15000	250 J	820	210	<74	<100	< 500	<100	<200	<17000	< 500	<3400	8800 J	630
03538-MW02	06/26/2012		9800	17000	1300	11000	1100	370	65	240J	NT	NT	NT	NT	NT	NT	NT	NT	390
03330 141 14 02	12/02/2014		4800	8200	940	4500	250	260	28	<15	<20	<100	<20	<40	<3300	<100	<670	4200	150
	06/26/2012	0.01						N	OT SAMPLEI) - FREE-PHA	ASE PETROL	EUM PRODU	CT PRESENT	Γ					
03538-MW03	12/02/2014		2000	10000	1600	11000	<40	780	3.5	<15	<20	<100	<20	<40	<3300	<100	<670	2200	100
	12/02/2014 DUP		2000	11000	1700	10000	<40	750	3.2	<15	<20	<100	<20	<40	<3300	<100	<670	1900 J	100
	06/26/2012		8500	22000	2100	17000	< 500	1100	14	< 500	NT	NT	NT	NT	NT	NT	NT	NT	440
03538-MW04	12/03/2014		3600	9100	810	10000	<80	710	2.2	<29	<40	<200	<40	<80	<6600	<200	<1300	2800 J	110
	12/03/2014 DUP		4000	9600	820	9500	<40	640	2.0	<15	< 20	<100	<20	<40	<3300	<100	<670	2800	130
03538-MW05	06/26/2012		810	7400	1500	10000	<200	770	0.86	< 200	NT	NT	NT	NT	NT	NT	NT	NT	31
03338-141 44 03	12/02/2014							NOT	LOCATED - U	JNDERNEAT	TH ROLLOFF	CONTAINER	₹						
03538-MW06	06/26/2012		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.019	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	9.7 J
03338-IVI W 00	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	< 6.7	< 6.7	2.3 J
03538-MW07	06/26/2012		390	3000	1700	7500	<200	600	0.063	< 200	NT	NT	NT	NT	NT	NT	NT	NT	25
03336-141 44 07	12/03/2014		210	740	1300	3700	<20	270	< 0.020	<7.4	<10	< 50	<10	<20	<1700	< 50	<340	<340	8.1 J
03538-MW08	06/26/2012		< 5.0	< 5.0	6.9	29	< 5.0	20	< 0.021	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	20
03338-IVI W 08	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	< 6.7	<6.7	31
03538-MW09	06/26/2012									NOT LOCA	ATED								
03338-IVI W 09	12/02/2014									NOT LOCA	ATED								
03538-MW10	06/26/2012		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.019	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	11
03330-101 00 10	12/02/2014									NOT LOCA	ATED								
03538-MW10R	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.021	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	28
03538-MW11	06/26/2012		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.020	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	19
03336-W W I I	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.019	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	8.9 J
03538-MW14	06/26/2012		13	16	73	49	< 5.0	46	< 0.019	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	3.0J
03330-1 41 44 14	12/12/2014		2.8	2.0	5.3	4.9	<1.0	1.3	< 0.019	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	7.9	<1.9
03538-MW15	06/26/2012		92	280	140	380	<25	39	0.050	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	8.6J
03330-141 44 13	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
03538-MW16	06/26/2012		180	580	83	380	5.4J	39	0.59	<25	NT	NT	NT	NT	NT	NT	NT	NT	16
03330-141 44 10	12/03/2014		1.3	0.62 J	< 0.33	0.68 J	1.1	< 0.40	0.031	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
03538-MW17	06/26/2012		880	1500	1500	5700	20J	980	2.8	<100	NT	NT	NT	NT	NT	NT	NT	NT	35
03330-141 11 17	12/03/2014		230	600	1000	5000	<20	340	0.70	<7.4	<10	< 50	<10	<20	<1700	< 50	<340	<340	31
03538-MW18	06/26/2012		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.020	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	11
03330-141 44 1 0	12/03/2014		< 0.13	< 0.33	0.40 J	80	< 0.40	21	< 0.019	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	12 J	< 6.7	<1.9
03538-MW19	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
03538-MW20	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.019	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
03538-MW21	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	6.9 J

TABLE 3 **Summary of Groundwater Analytical Results** Coastal 76 Truck Stop - UST Permit #03538 Florence, Florence County, South Carolina

		Free-Product Thickness (feet)	Benzene (µg/L)	Toluene (μg/L)	Ethylbenzene (µg/L)	Xylenes (μg/L)	MTBE (μg/L)	Naphthalene (μg/L)	EDB (μg/L)	1,2 DCA (μg/L)	ETBE (μg/L)	ETBA (μg/L)	TAME (μg/L)	DIPE (μg/L)	Ethanol (μg/L)	TBF (µg/L)	TBA (µg/L)	TAA (μg/L)	Lead (μg/L)
			RBSL 5	RBSL 1.000	RBSL 700	RBSL 10.000	RBSL 40	RBSL 25	RBSL 0.05	RBSL 5	RBSL 47	RBSL NE	RBSL 128	RBSL 150	RBSL 10,000	RBSL NE	RBSL 1.400	RBSL 240	RBSL 15
	12/03/2014		<0.13	<0.33	<0.33	<0.33	< 0.40	<0.40	<0.020	< 0.15	<0.20	<1.0	<0.20	< 0.40	<33	<1.0	<6.7	<6.7	2 J
03538-MW22	12/12/2014		<0.13	<0.33	<0.33	<0.33	<0.40	<0.40	<0.020	<0.15	<0.20	<1.0	<0.20	<0.40	<33	<1.0	<6.7	<6.7	NT
03538-MW22D	12/03/2014		<0.13	<0.33	<0.33	< 0.33	<0.40	<0.40	<0.020	<0.15	<0.20	<1.0	< 0.20	<0.40	<33	<1.0	<6.7	<6.7	3.4 J
02520 357722	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	43
03538-MW23	12/12/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	NT
03538-MW24	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	2 J
03538-MW25	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	3.1 J
03538-MW26	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	3.3 J
03538-MW27	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
03538-MW28	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	3.3 J
03538-TW01	06/26/2012		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.020	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	3.4J
05556-1 WU1	12/12/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
03538-TW02	06/26/2012		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.020	< 5.0	NT	NT	NT	NT	NT	NT	NT	NT	11
03338-1 W 02	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.019	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
TRIP BLANK 1	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	NT	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	NT
TRIP BLANK 2	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	NT	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	NT
TRIP BLANK 3	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	NT	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	< 6.7	NT
TRIP BLANK 4	12/12/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	NT	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	NT
FIELD BLANK 1	12/02/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
FIELD BLANK 2	12/03/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	<1.9
FIELD BLANK 3	12/12/2014		< 0.13	< 0.33	< 0.33	< 0.33	< 0.40	< 0.40	< 0.020	< 0.15	< 0.20	<1.0	< 0.20	< 0.40	<33	<1.0	<6.7	<6.7	NT

NOTES:
RBSL - Risk Based Screening Level
Bold values indicate concentrations detected above the laboratory method detection limit.
Shaded values indicate concentrations exceeding RBSLs.
NE - Not Established
NT - Not Tested

TABLE 4 Groundwater Velocity Coastal 76 Truck Stop - UST Permit #03538 Florence, Florence County, South Carolina

	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Effective	Groundwater	Groundwater	Groundwater
VELOCITY	Conductivity (K)	Conductivity (K)	Conductivity (K)	Gradient (i)	Porosity (n)	Velocity (V)	Velocity (V)	Velocity (V)
CALCULATION	(centimeters/second)	(feet/day)	(feet/year)	(unitless)	(unitless)	(feet/day)	(feet/year)	(meters/second)
03538-MW21	4.06E-05	0.12	4.20E+01	0.002	0.33	6.98E-04	0.25	2.46E-09
03538-MW22	1.40E-04	0.40	1.45E+02	0.002	0.33	2.41E-03	0.88	8.49E-09
03538-MW22D	3.57E-04	1.01	3.69E+02	0.022	0.33	6.75E-02	24.63	2.38E-07
Mathematical Mean	1.79E-04	0.51	1.85E+02	0.009	0.33	2.35E-02	8.59	8.30E-08

Notes:

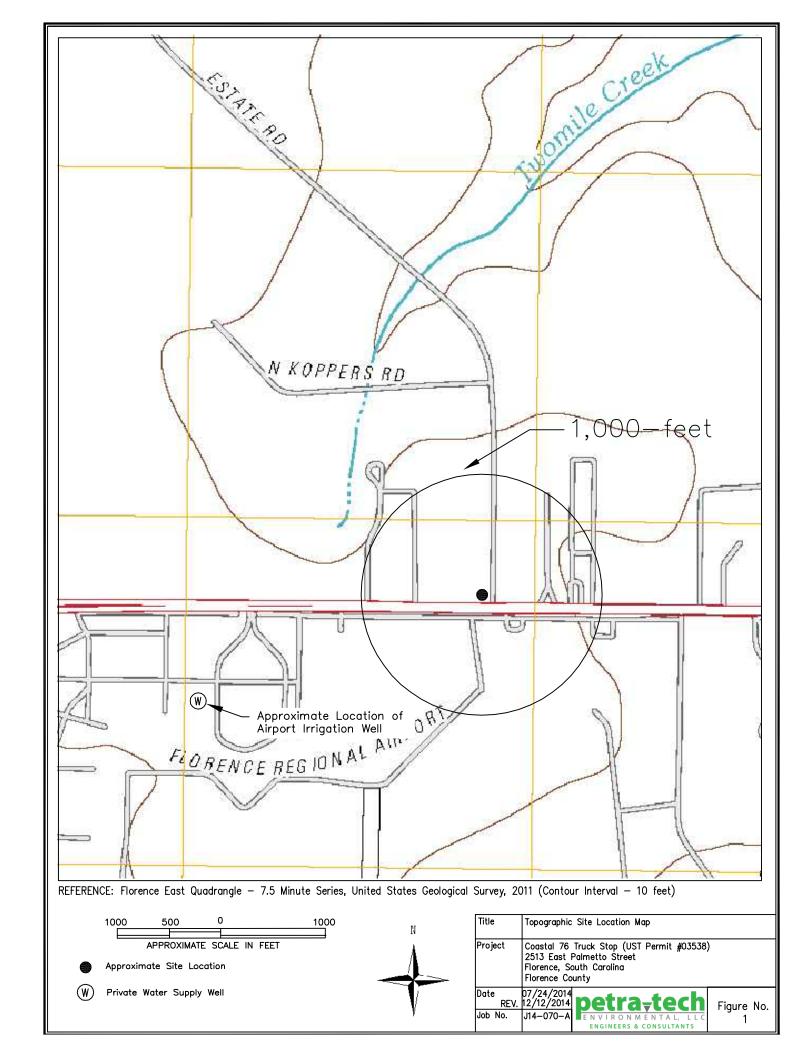
Hydraulic conductivity values were obtained from slug tests performed by Petra-Tech Environmental, LLC.

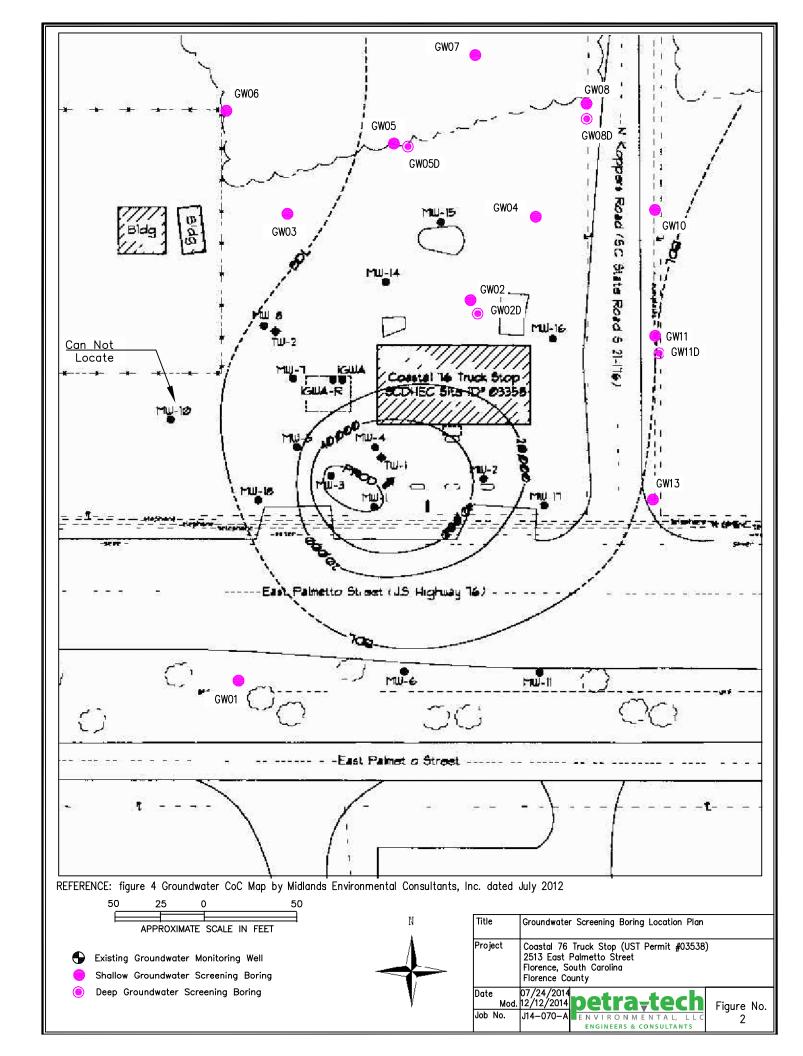
Effective porosity values were estimated from published values of effective porosity for a fine sand (ranging from 0.01 to 0.46; arithmatic mean 0.33) (McWorter and Sunada 1977).

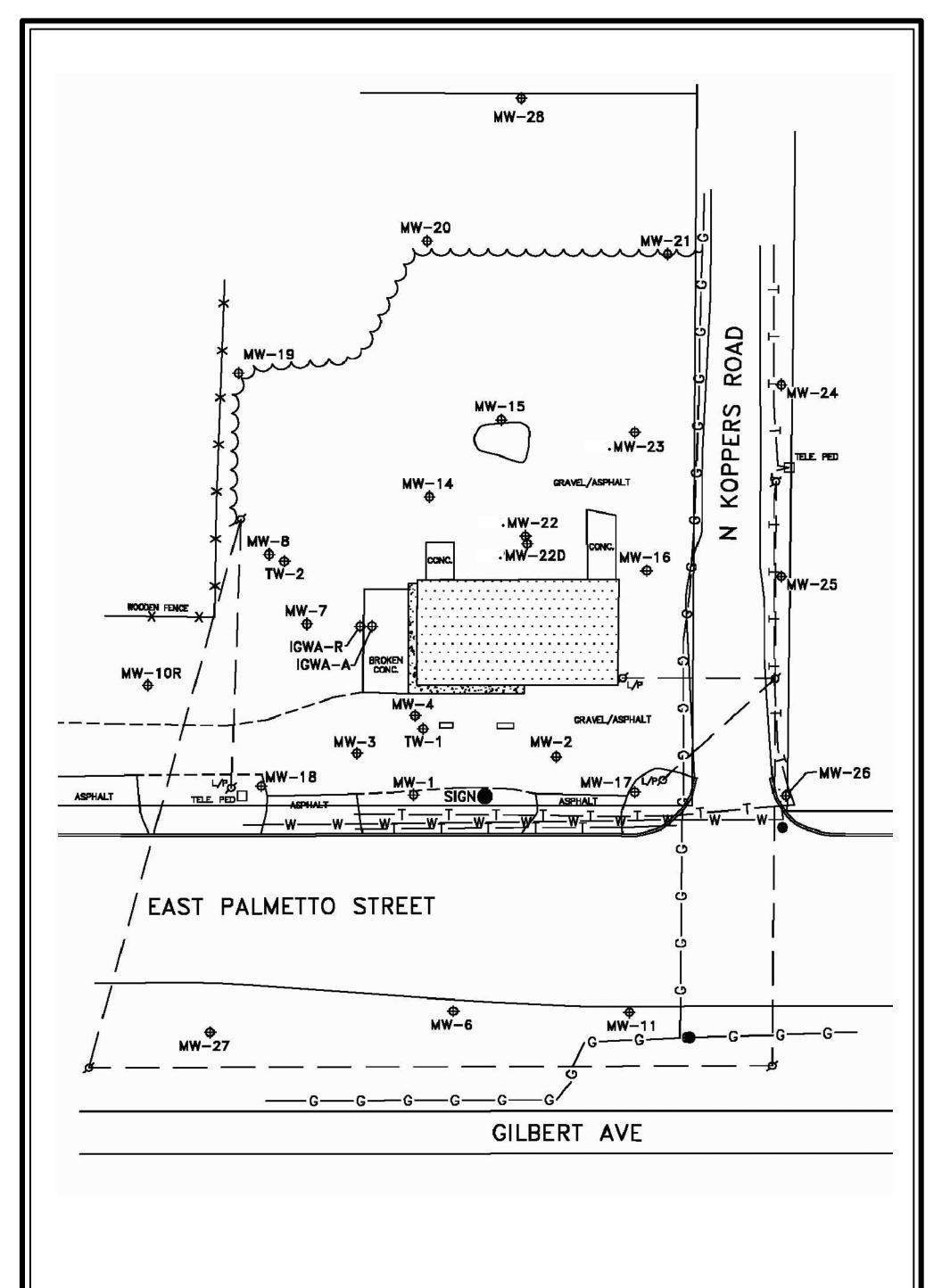
Hydraulic gradient for the shallow aquifer was calculated based on groundwater elevations from and distances between monitoring wells 03538-MW04 and 03538-MW02 (Figure 4a).

Hydraulic gradient for the deep aquifer was calculated based on groundwater elevations from and distances between monitoring wells 03538-TW01 and 03538-MW22D (Figure 4b). Groundwater velocity derived from the equation V = Ki/n.



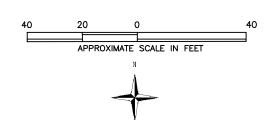




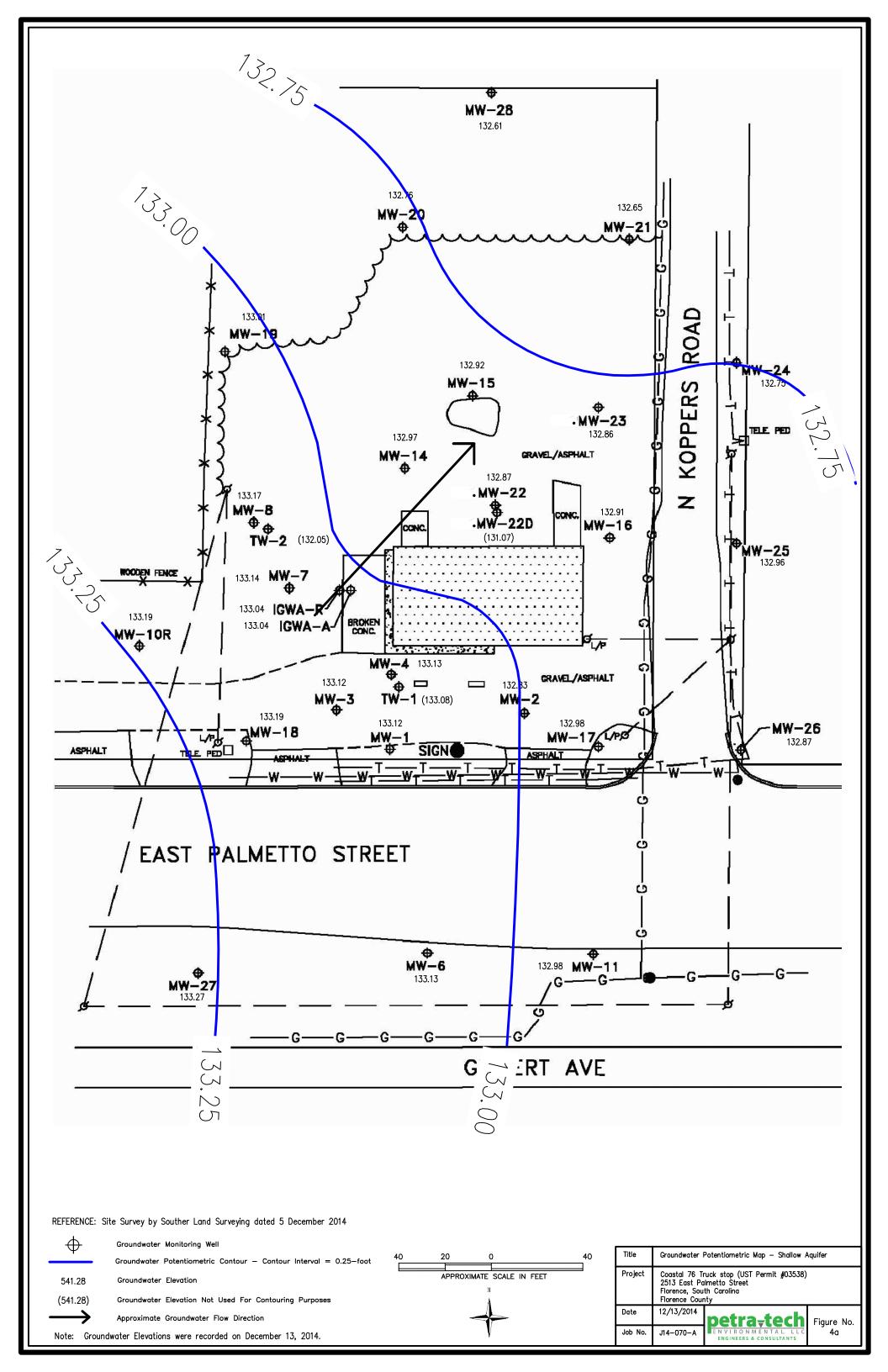


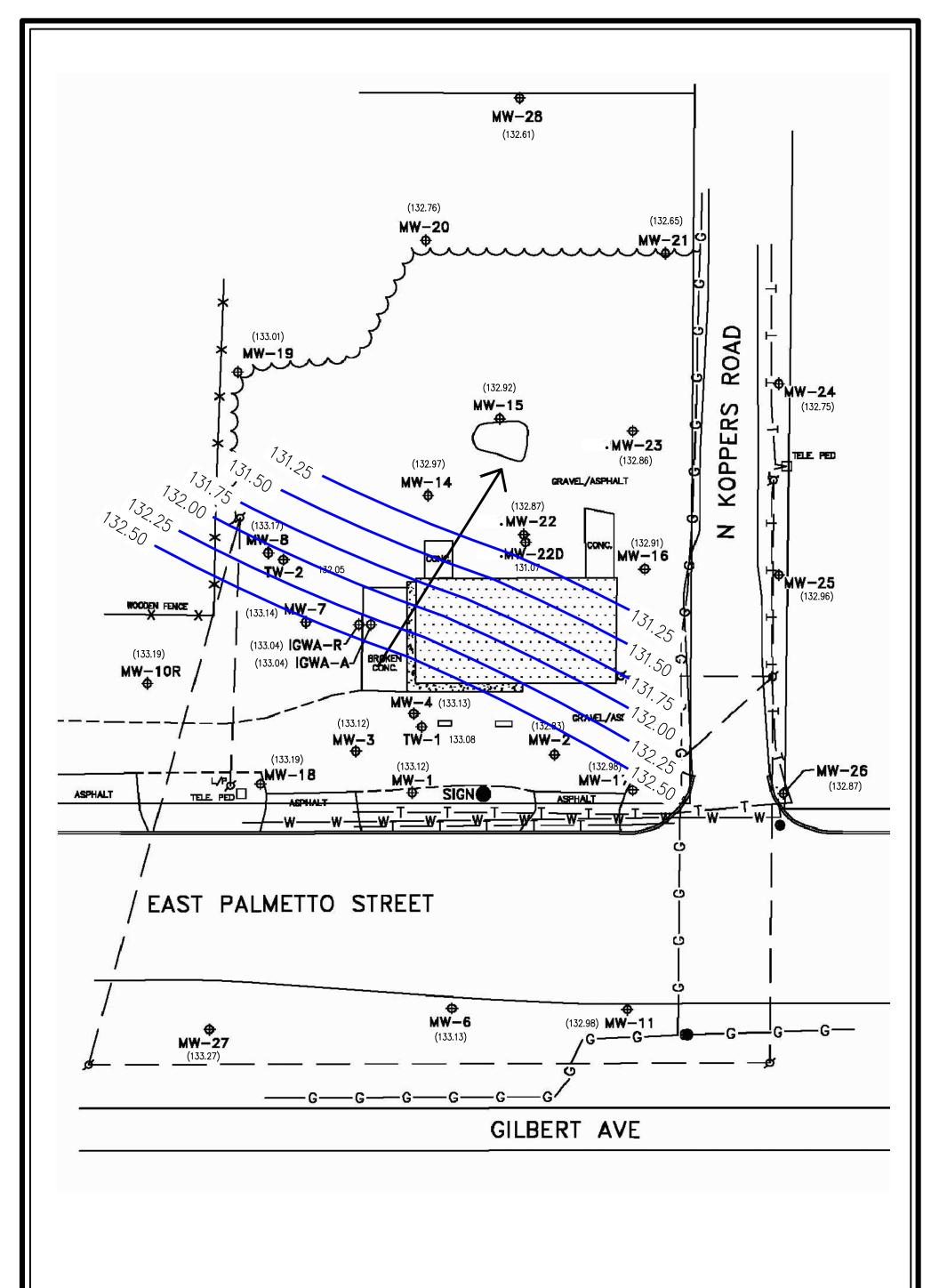


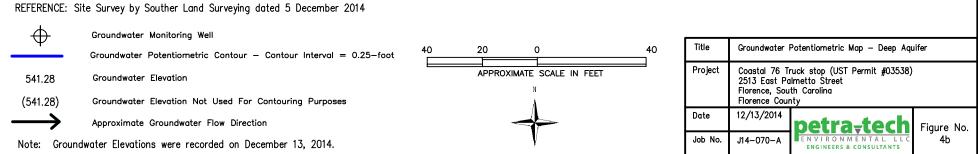
Groundwater Monitoring Well

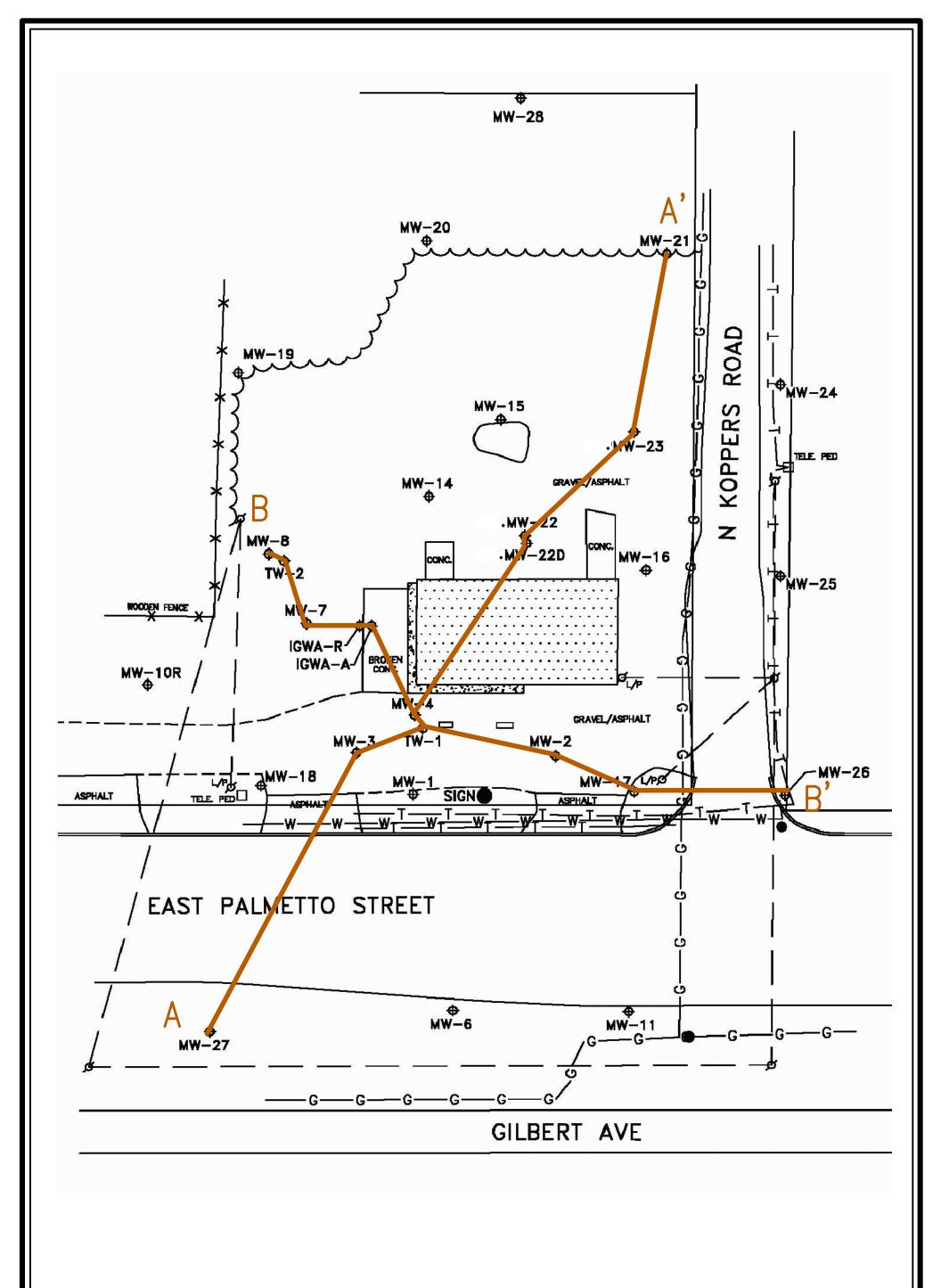


Title	Site Base Map									
Project										
Date	12/12/2014	petra-tech	Figure No.							
Job No.	J14-070-A	ENVIRONMENTAL, LLC ENGINEERS & CONSULTANTS	3							



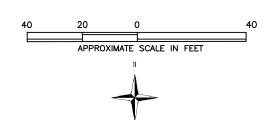




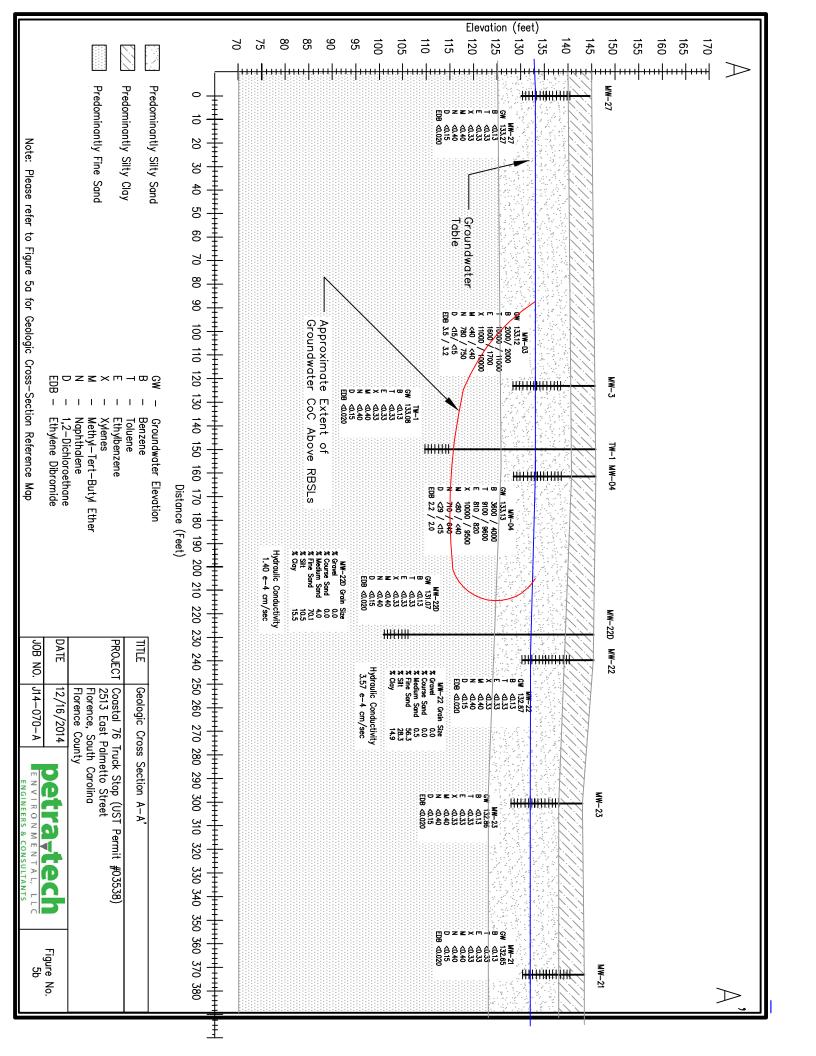


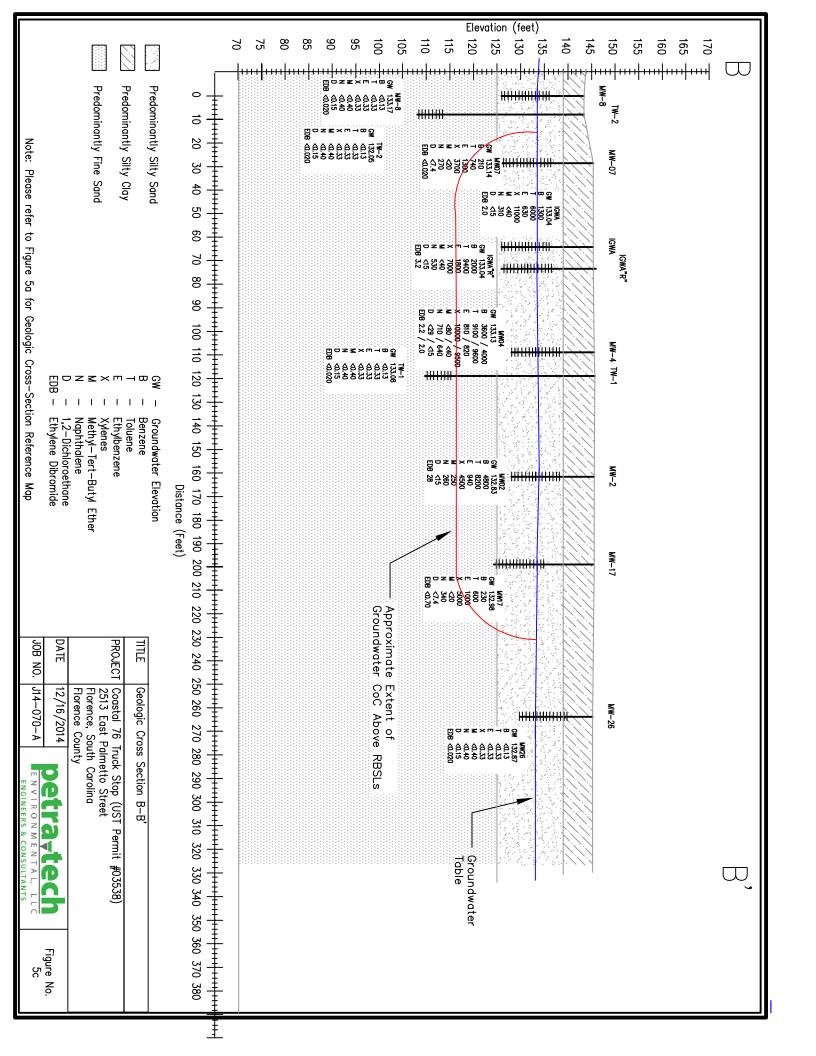


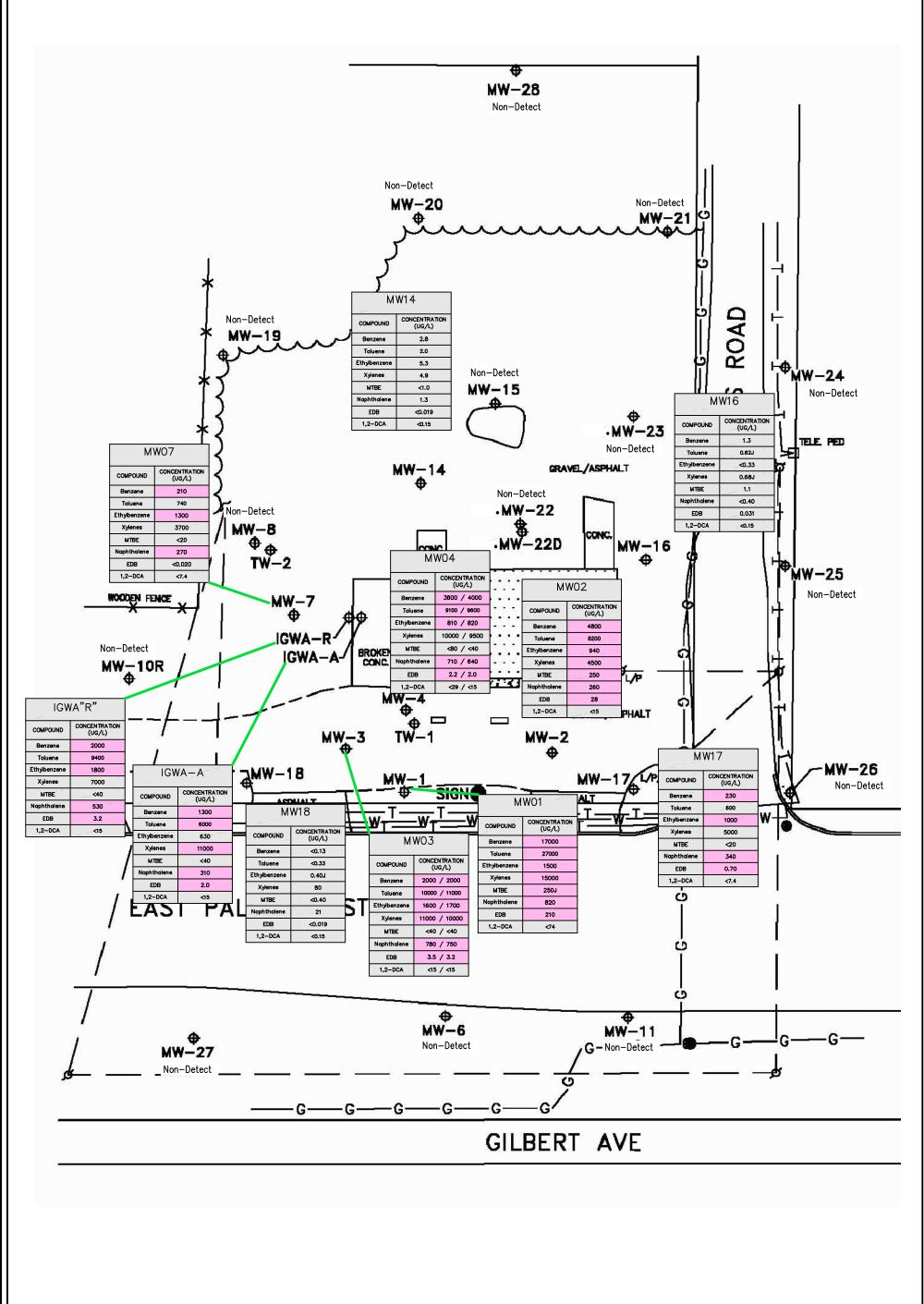
Groundwater Monitoring Well

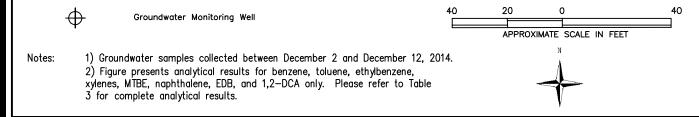


Title	Subsurface Geologic Cross—Section Reference Map									
Project	Coastal 76 Truck stop (UST Permit #03538) 2513 East Palmetto Street Florence, South Carolina Florence County									
Date	12/12/2014	petra-tech	Figure No.							
Job No.	J14-070-A	ENVIRONMENTAL, LLC ENGINEERS & CONSULTANTS	Figure No. 5a							









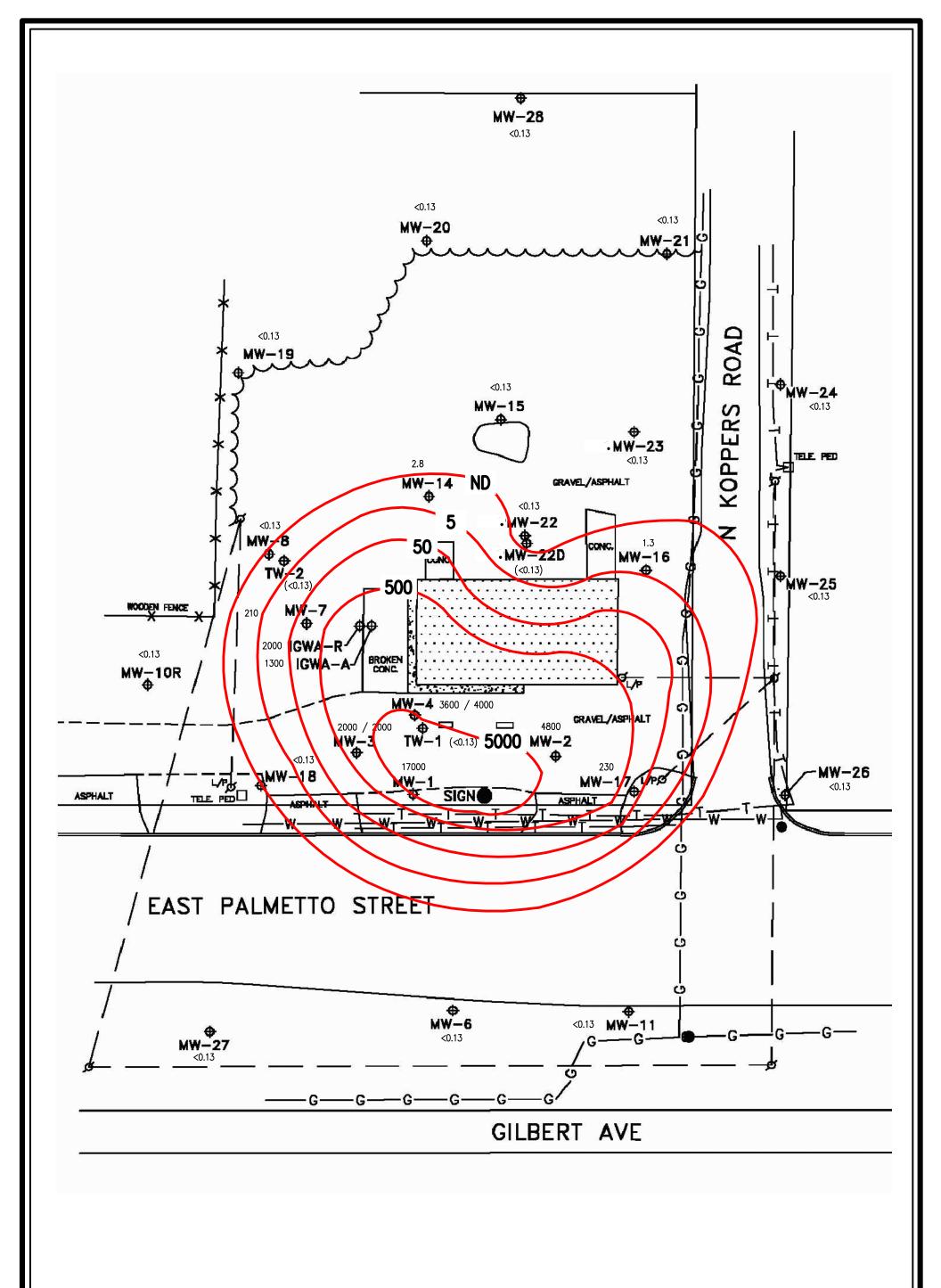
Title Groundwater CoC Map - Shallow Aquifer

Project Coastal 76 Truck stop (UST Permit #03538)
2513 East Palmetto Street
Florence, South Carolina
Florence County

Date 12/16/2014

Job No. J14-070-A

Detraytech
Figure No. 6

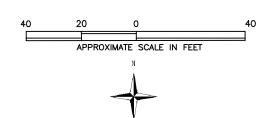


Groundwater Monitoring Well

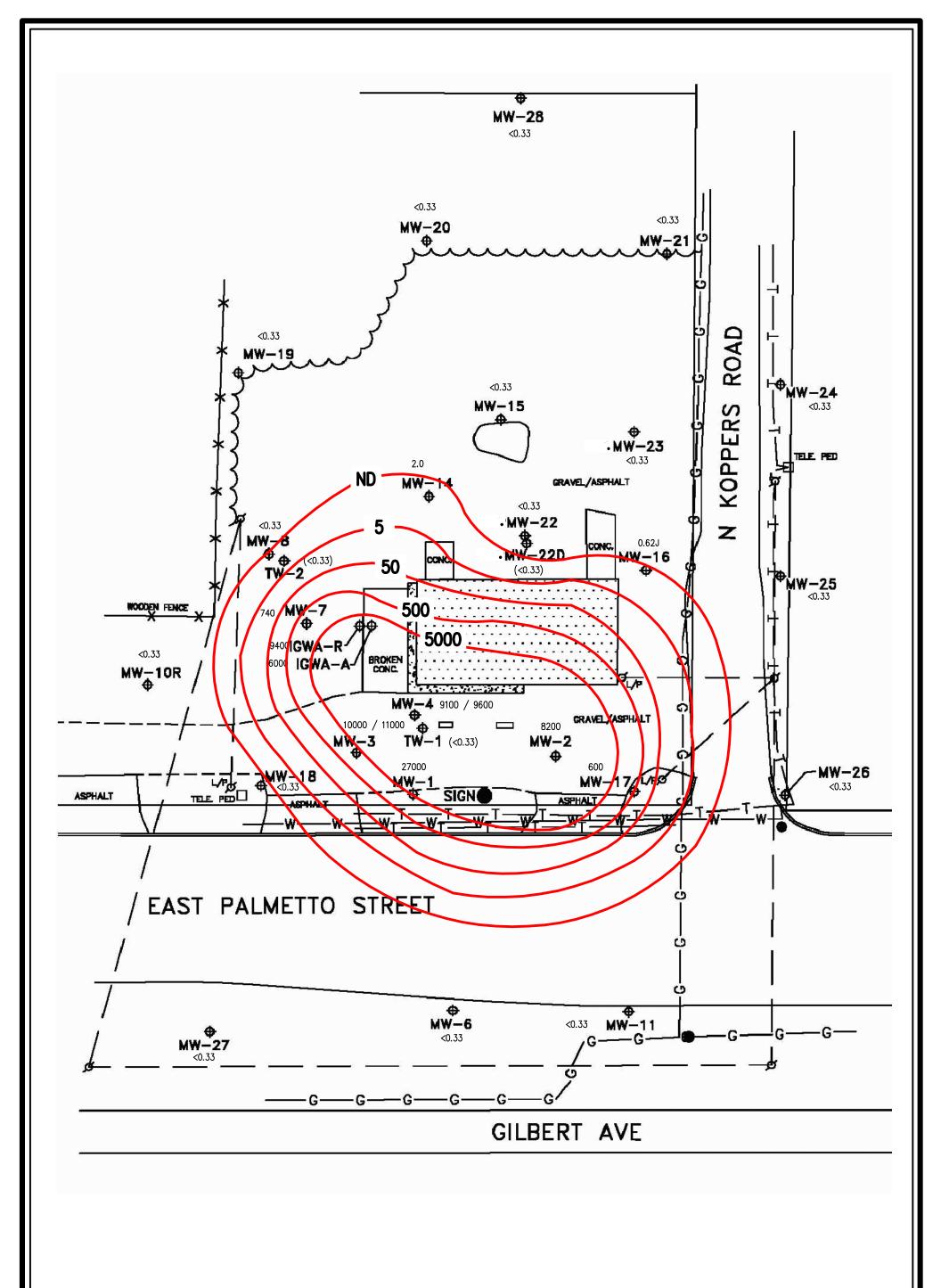
2.5J Benzene Concentration in Micrograms Per Liter

(2.5J) Benzene Concentration In Micrograms Per Liter Not Used For Contouring Purposes Due To The Depth Of The Screened Interval

Benzene Isoconcentration Line



Title	Benzene Isoconcentration Map — December 2014									
Project	2513 East Po Florence, Sou	Coastal 76 Truck stop (UST Permit #03538) 2513 East Palmetto Street Florence, South Carolina Florence County								
Date	12/16/2014	petra-tech	Figure No.							
Job No.	J14-070-A	ENVIRONMENTAL, LLC ENGINEERS & CONSULTANTS	7a							

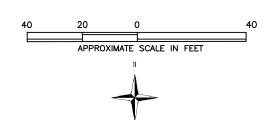


Groundwater Monitoring Well

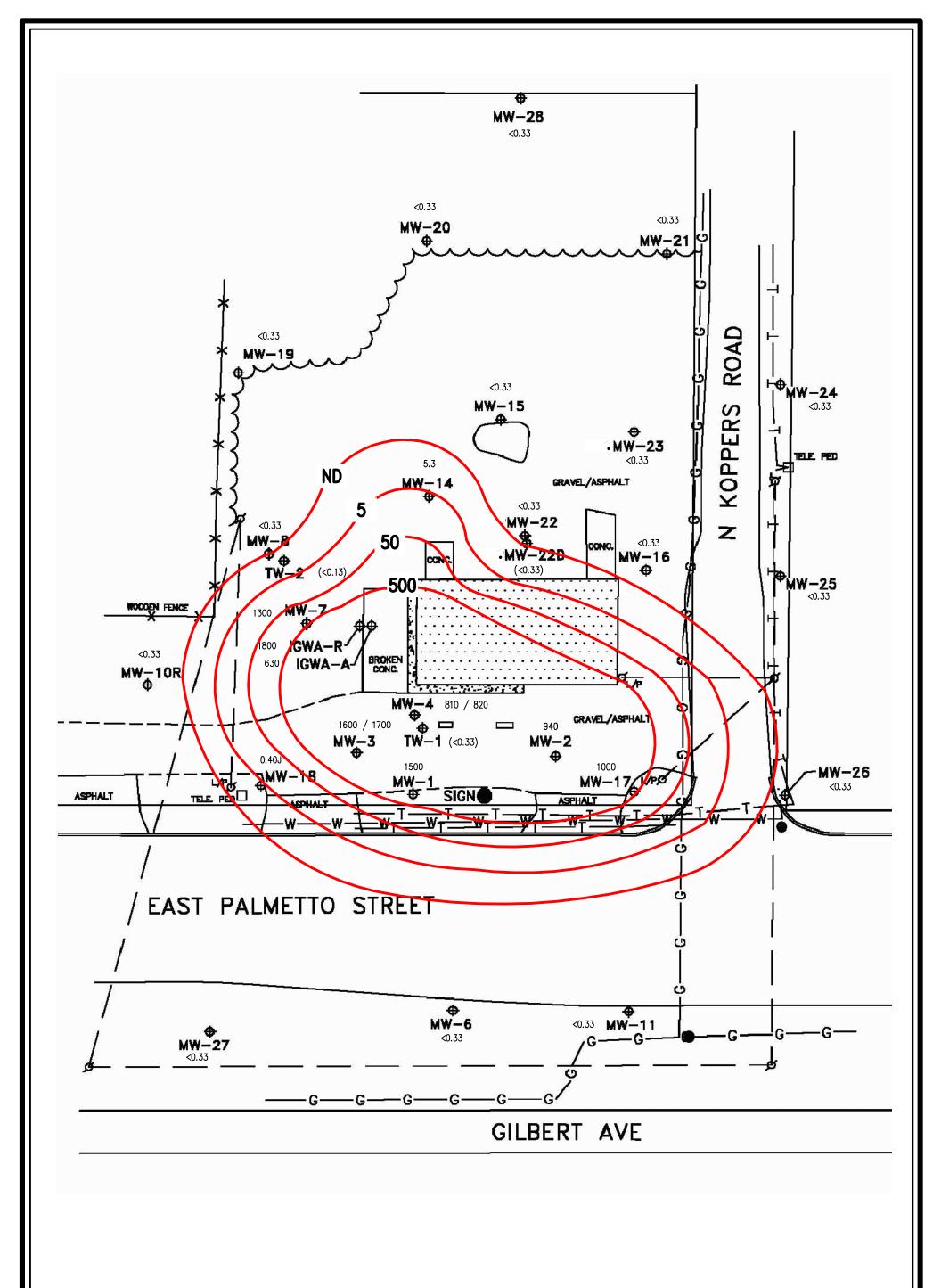
2.5J Toluene Concentration in Micrograms Per Liter

(2.5J) Toluene Concentration In Micrograms Per Liter Not Used For Contouring Purposes Due To The Depth Of The Screened Interval

Toluene Isoconcentration Line



Title	Toluene Isoconcentration Map — December 2014								
Project	Coastal 76 Truck Stop (UST Permit #03538) 2513 East Palmetto Street Florence, South Carolina Florence County								
Date	12/16/2014	petra-tech	Figure No.						
Job No.	J14-070-A	ENVIRONMENTAL, LLC ENGINEERS & CONSULTANTS	7b						



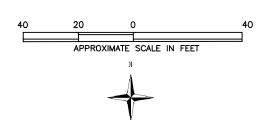
Ground

Groundwater Monitoring Well

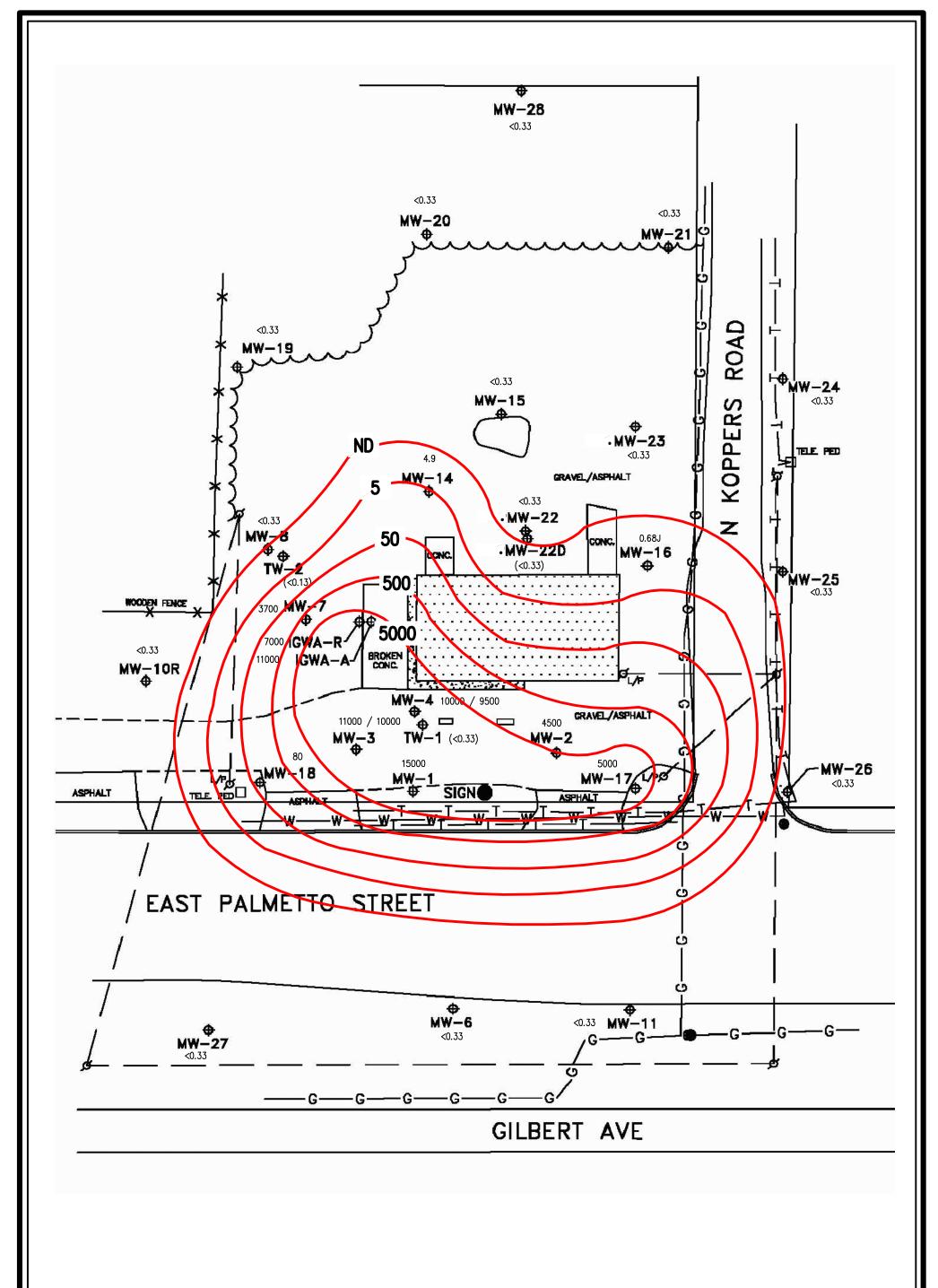
2.5J Ethylbenzene Concentration in Micrograms Per Liter

(2.5J) Ethylbenzene Concentration In Micrograms Per Liter Not Used For Contouring Purposes Due To The Depth Of The Screened Interval

Ethylbenzene Isoconcentration Line



Title	Ethylbenzene Isoconcentration Map — December 2014									
Project	Coastal 76 Truck stop (UST Permit #03538) 2513 East Palmetto Street Florence, South Carolina Florence County									
Date	12/16/2014	petra-tech	Figure No.							
Job No.	J14-070-A	ENVIRONMENTAL, LLC ENGINEERS & CONSULTANTS	7c							





Groundwater Monitoring Well

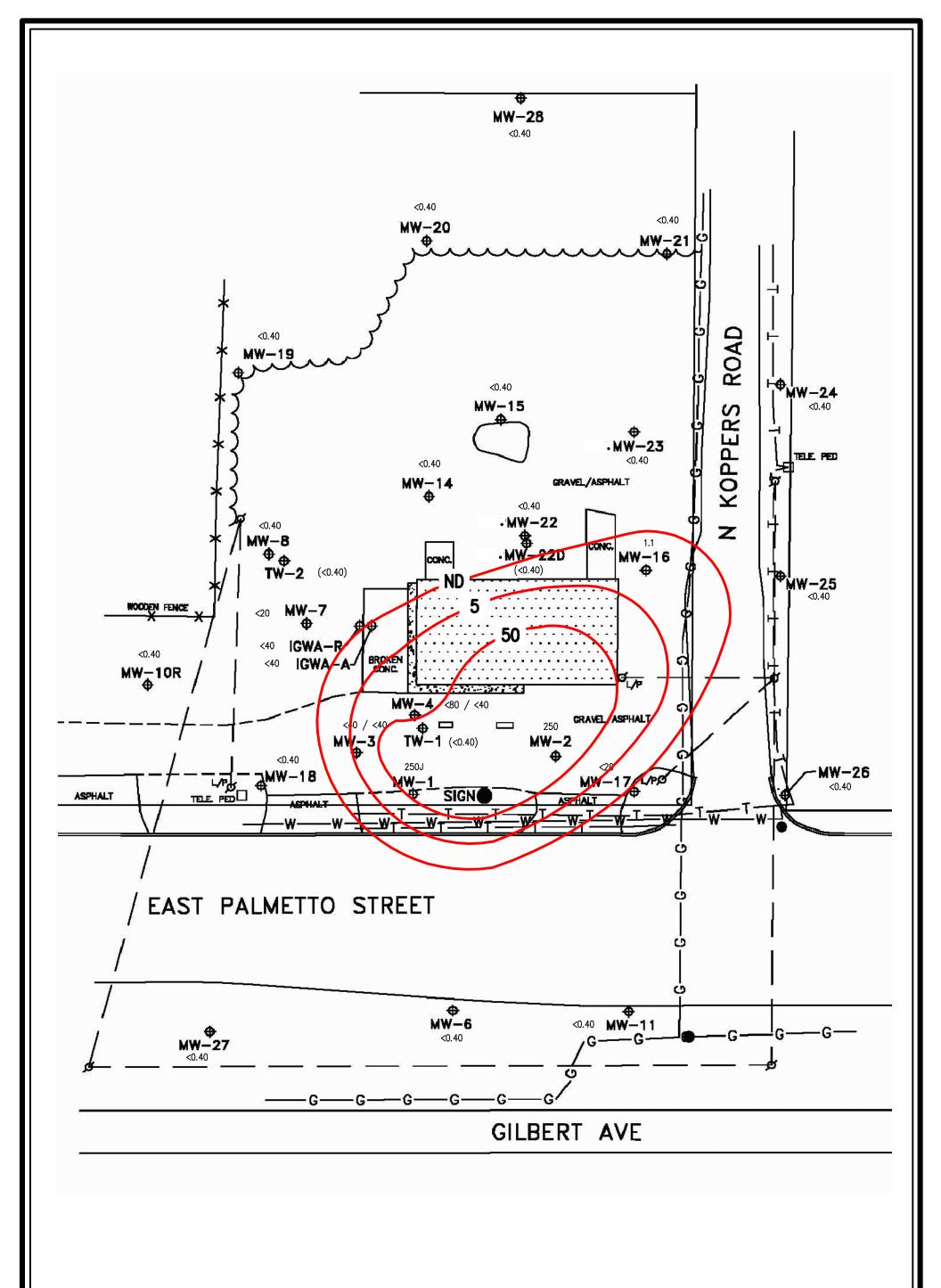
2.5J Xylenes Concentration in Micrograms Per Liter

(2.5J) Xylenes Concentration In Micrograms Per Liter Not Used For Contouring Purposes Due To The Depth Of The Screened Interval

Xylenes Isoconcentration Line

40	20 0	40
	APPROXIMATE SCALE IN FEET	
	N	
	+	

Title)	Xylenes Isoconcentration Map — December 2014									
Projec		Coastal 76 Truck stop (UST Permit #03538) 2513 East Palmetto Street Florence, South Carolina Florence County									
Date	1	2/16/2014	petra-tech	Figure No.							
Job N	o. J	J14-070-A	ENVIRONMENTAL, LLC ENGINEERS & CONSULTANTS	7d							



Groundwater Monitoring Well

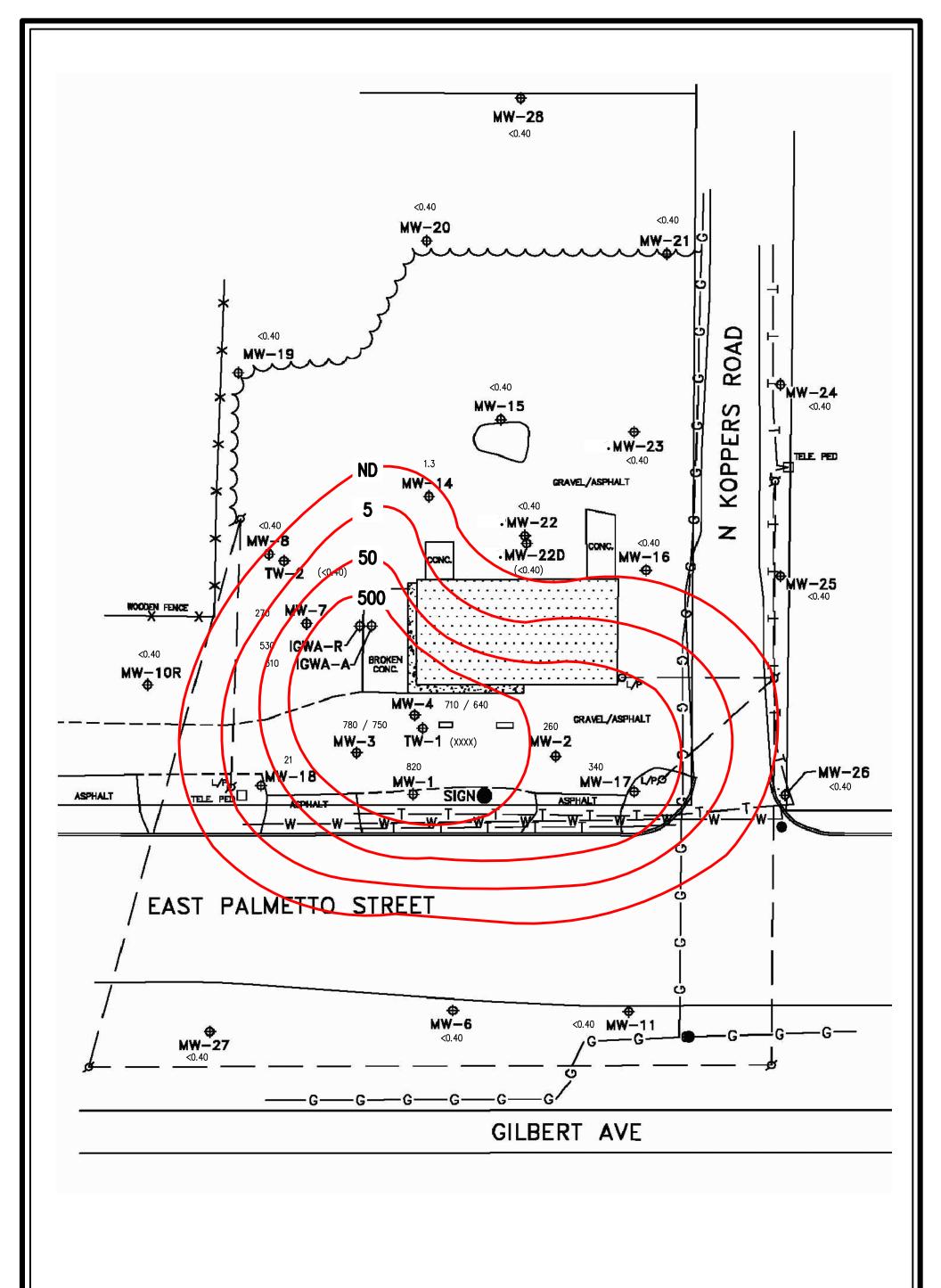
2.5J MTBE Concentration in Micrograms Per Liter

MTBE Isoconcentration Line

(2.5J) MTBE Concentration In Micrograms Per Liter Not Used For Contouring Purposes Due To The Depth Of The Screened Interval

APPROXIMATE SCALE IN FEET

Title	MTBE Isoconcentration Map — December 2014									
Project	2513 East Po Florence, Sou	Coastal 76 Truck stop (UST Permit #03538) 2513 East Palmetto Street Florence, South Carolina Florence County								
Date	12/16/2014	petra-tech	Figure No.							
Job No.	J14-070-A	ENVIRONMENTAL, LLC	7e							



Groundwater Monitoring Well

2.5J Naphthalene Concentration in Micrograms Per Liter

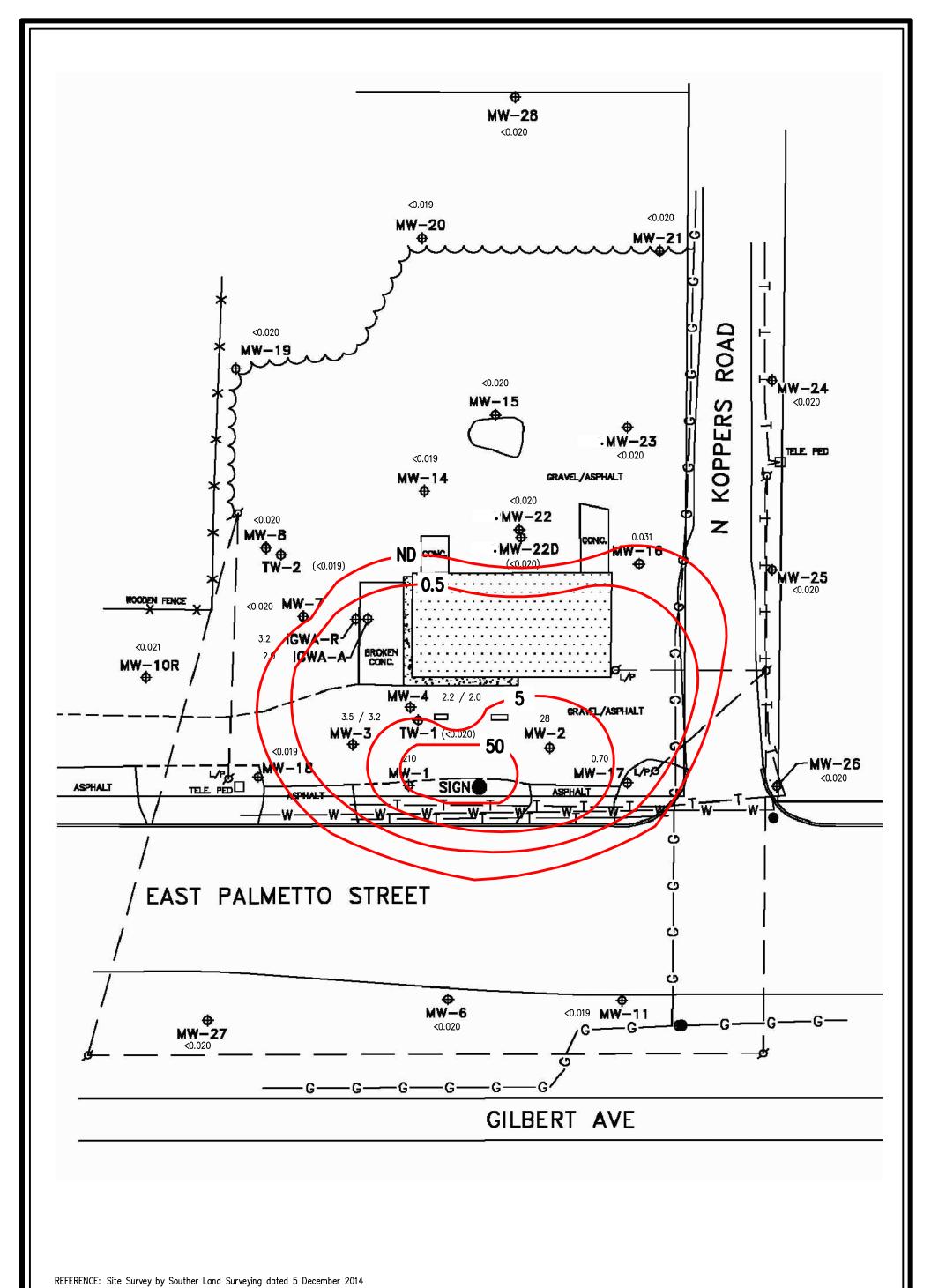
Naphthalene Isoconcentration Line

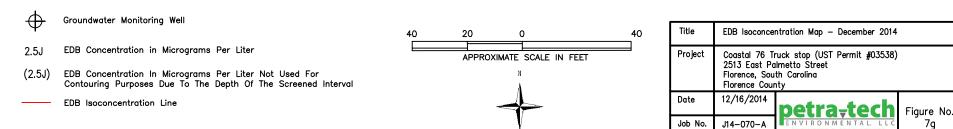
(2.5J) Naphthalene Concentration In Micrograms Per Liter Not Used For Contouring Purposes Due To The Depth Of The Screened Interval

40 20 0 40

APPROXIMATE SCALE IN FEET

Title	Naphthalene Isoconcentration Map — December 2014								
Project	Coastal 76 Truck stop (UST Permit #03538) 2513 East Palmetto Street Florence, South Carolina Florence County								
Date	12/16/2014	petra-tech	Figure No.						
Job No.	J14-070-A	ENVIRONMENTAL, LLC ENGINEERS & CONSULTANTS	7f						

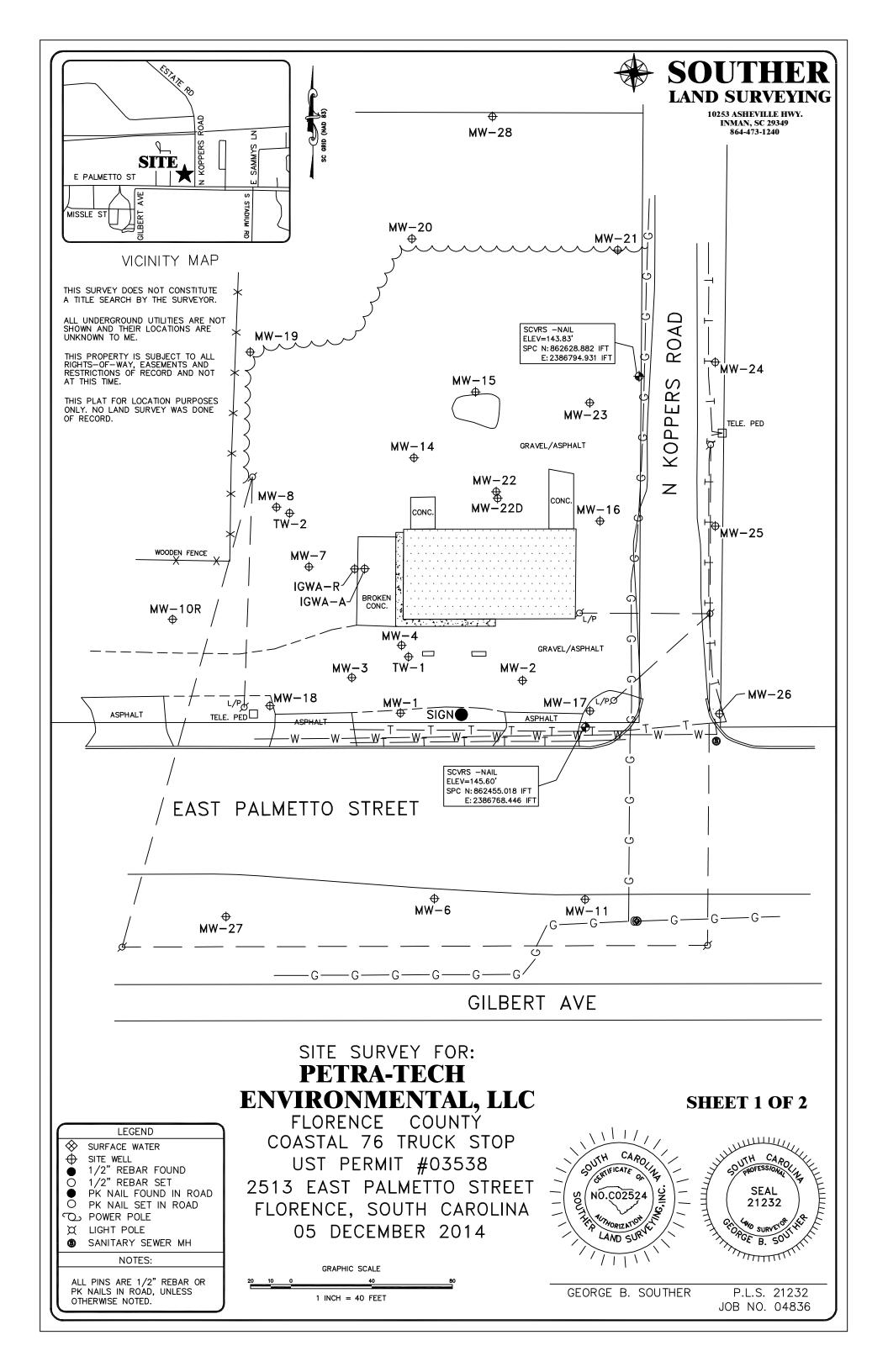




COASTAL 76 TRUCK STOP – UST PERMIT #03538 TIER II ASSESSMENT REPORT

APPENDIX A

SITE SURVEY PLAT





10253 ASHEVILLE HWY. INMAN, SC 29349 864-473-1240

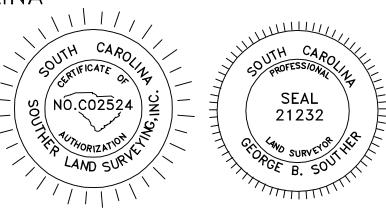
		1	1	
DESCRIPTION	NORTHING	EASTING	TOP OF CASING	GROUND ELEVATION
MW-1	862462.029	2386676.673	145.87	146.22
MW-2	862478.220	2386737.179	145.19	145.71
MW-3	862479.650	2386652.596	145.51	146.04
MW-4	862495.646	2386677.246	145.56	146.05
MW-6	862370.077	2386693.526	146.04	146.44
MW-7	862534.547	2386631.340	144.61	145.02
MW-8	862564.104	2386615.244	143.78	144.30
MW-10r	862508.518	2386563.758	143.81	144.23
MW-11	862369.679	2386768.177	145.68	146.20
MW-14	862588.552	2386683.346	144.36	144.66
MW-15	862621.211	2386713.870	143.54	144.04
MW-16	862557.213	2386775.595	144.33	144.56
MW-17	862463.101	2386770.562	145.08	145.47
MW-18	862465.709	2386612.031	145.79	146.20
IGWA-A	862533.564	2386658.984	145.19	145.60
IGWA-R	862533.483	2386654.027	145.14	145.56
TW-1	862489.953	2386680.706	145.77	145.93
TW-2	862561.117	2386621.737	143.98	144.24
MW-19	862643.974	2386599.774	143.67	143.97
MW-20	862700.102	2386682.369	143.93	144.21
MW-21	862691.531	2386784.365	143.25	143.88
MW-22	862571.793	2386724.121	145.03	145.28
MW-22D	862568.499	2386724.833	144.89	145.30
MW-23	862615.867	2386770.481	143.63	143.87
MW-24	862635.982	2386832.681	143.78	143.99
MW-25	862554.716	2386832.691	144.04	144.45
MW-26	862461.702	2386834.720	144.96	145.22
MW-27	862361.177	2386590.226	144.77	145.10
MW-28	862757.710	2386710.326	142.71	142.88

SITE SURVEY FOR: PETRA-TECH ENVIRONMENTAL, LLC

FLORENCE COUNTY
COASTAL 76 TRUCK STOP
UST PERMIT #03538
2513 EAST PALMETTO STREET
FLORENCE, SOUTH CAROLINA

05 DECEMBER 2014

SHEET 2 OF 2



GEORGE B. SOUTHER

P.L.S. 21232 JOB NO. 04836

COASTAL 76 TRUCK STOP – UST PERMIT #03538 TIER II ASSESSMENT REPORT

APPENDIX B

WELL PURGING AND SAMPLING LOGS, CHAIN-OF-CUSTODY FORMS, LABORATORY ANALYTICAL DATA

ITE AME:	Coa	stal	76				OCATION:	tlor	ence,	50	I DATE			/
ELL NO	16h	JA			SAMP	LE ID:	I	.6W/	7		DATE	17	-3-1	7
					PU	RGING	DATA							
ELL	B (nehon) 1	T otal V	Vell Depth (fe	et): \ \ / /	^	WELL S	CREEN INTE	RVAL fee	STATIC TO WAT	DEPTH	11.9	PL	RGE PUM	P TYPE
	R (inches): d- LUME PURGE	: 1 WELL V				- STAT	C DEPTH TO	WATER)	V AAFFF	AFACI	1.1			
		CUMUL.	= (NΑ	100	et - N	A	feet)	× NA		gallons	:/100t	= <i>N</i> A,	gallon
ГІМЕ	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)	TEMP. (°C)	۸	pH (su)	Λ	COND. (μS)	Λ.	DO (mg/L)	۸	TURB IDITY (NTU)	Λ	COLOR	ODO
21	_		21.9	-	6-9	-	126	_	0.6	_	892	1101	ay	Star
32	1.5	1.5	121.7	0.2	626 624	0.3	103	12		-	411	48 21 D	aij	1
51	0.5	25	21.6		6.3	00	109	6		+	104	SIT	ch	1
06	15	4.5	21.6		5.3	0	106	.3			29	75	CAS	
13	0.5	5.0	21.6	0	6.3	0	712	6			12	17	cw	
20	0.5	5,5	21.5	0-11	5.4	0.1	110	12			8.4	3,6	W	A
										1				
				\vdash		_				_		_		_
				\vdash		-		_		-		_		-
		1	1	+ +		-		+		-	-	-		-
				+ +		-		+		1				+
			1	+ +		1		+-		t		\vdash		\vdash
ELL CA	PACITY (Gallo	no Bor Foot):	0.752 - 0.0	2: 4"-0	04: 4.3	57 - 0 08:	377 - 0.16:	3" - 0 3	7; 4° = 0.65	E27 -	1.02	E22 - 1	17; 12 "=	5 88
ELL CA	PACITI (Gallo	ins Fer (00t).	0.13 - 0.0.	2, 1 - 0	.04, 1.2	3 - 0.00,	2 - 0.10,	3 - 0.51	, 4 - 0.03		1.02,	1	11, 12	3.00
					SA	MDI IN	G DATA							
AMPLE	BY(PRINT)			SAMPLE		NATURE (S			SAMPLING	DATE:			LING TIME	:
Dan		rch			DB					12/3/14 1620				
	TUBING VVELL (feet):	13		TUBING MATERI	AL CODE:	PE	-		FIELD-FILTI Filtration Eq				FILTER	SIZE:
JPLICA	TE COLLECTE	D: Y	0											
SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		G IT	AMPLE PUMP FLOW RATE ml/min)			
AMPLE CODE	# CONTAINER S	MATERIA L CODE	VOLUME		RV ATIVE ED	TOTAL ADDED II (ml	N FIELD	FINAL pH						
	3	CG	40 ml	НС	L				8260	В	RF	PP		
	3	CG	40 ml	HC		/			8011		-			/
	1	PE	250 ml	HN	O3	/			6010		-			
				-							+-		- '	
											+			
				1		1			1		1		- 1	

SAMPLING EQUIPMENT CODES:

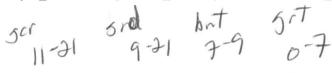
B = Bailer; BP = Bladder Pump; ESP = Electr ump; SM = StrawMethod (Tubing Gravity Drain);

APP = After Peristaltic Pump; B = Ba RFPP = Reverse FlowPeristaltic Pump;

ME: ELL NO	(0407	2 2	70		SAMP		OCATION:	Flore	ence, E	00	DATE		2-3-	14
ELL NO	16	WA-	K		SAMP	LE ID.	1353	W /V	IGWA	0		10	7	17
					PU	RGING	DATA	_	LOWI	1				
ELL AMETE	R (inches): 2	T otal V	/ell Depth (fe	et): 21		WELL S	CREEN INTE	RYAL 16	STATIC et TOWAT	DEPTH ER (fee	1/4	3 PL	JRGE PUI	WE IYPE
ELL VO	LUME PURGE	: 1 WELL V	OLUME = (T = (OTAL WE	LL DEPTH fee			WATER)	X WELL	CAP ACI	TY gallons		=1,40	gallons
	VOLUME	CUMUL.				T //	10	Т			TURB			T
IME	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Λ	DO (mg/L)	Δ	(NTU)	Λ	COLOR	ODO
10	_		226		7.1	_	132	-	0.74	_	4000	-	class	Stra
27	2.0	2.0	21.9	0.7	68	0.3	111	2		1	+1000	-		1
42	2.0	4.0	21.8	0,1	6.4	0.4	109	2		-	+1000	-	1	+
7 [1.5	Sis	21.9	0.(6.5	0.1	109	0	-	-	319	01.01	1	++
3	1.0	6.5	21.9	0	6.5	0	112	13	-	-	50	269	Slay	4
13	1.0	7.5	21.	0,2	6-5	0	11.5	13		+-	15	35	ar	+
30	0-5	8-0	21.7	0	6.5	0	114				9.0	6	CV	1
								-				-		-
						i –								1
			İ	İΪ		İ		Ť	İ	1	İ	İ	ĺ	1
MP OR	BY (PRINT) TUBING WELL (feet):	rch 15		TUBIN	ER(S) SIGI	NATURE(S	G DATA		SAMPLING 12/3 FIELD-FILT Filtration Eq	H RED:	Y NO.	16	LING TIM	E: R SIZE:
	TE COLLECTE	D: Y				- 1			1	,	or please			
SAM	PLE CONTAIN	ER SPECIFIC	CATION	SAMPLE PRESERVATION					INTEND ANALY AND/C METHO	SAMPLING EQUIPMENT CODE		G	SAMPLE PUMP FLOW RATE (ml/min)	
IMPLE CODE	# CONTAINER S	MATERIA L CODE	VOLUME		ERVATIVE USED	TOTAL ADDED II	N FIELD	FINAL pH						
	3	CG	40 ml	H	CL		1	/	8260	В	RF	PP		/
	3	CG	40 ml	Н	CL	/		/	8011					
	1	PE	250 ml	H	NO3				6010			1		
														/
MARK	S:													
MARK:	S:			Clear Gla		= Polyethyl		: Polyprop		Silicone;	T = Te			er (Specif

STABILIZATION CRITERIA

 $\textbf{pH:} \pm 0.2 \text{ units } \textbf{Temperature:} \pm 0.2 \text{ °C} \textbf{ Specific Conductance:} \pm 5\% \textbf{ Dissolved Oxygen:} \pm 0.2 \text{ mg/L or} \pm 10\% \textbf{ Turbidity:} \leq 10 \text{ NTU or} \pm 10\% \textbf{ NTU or} \pm 10\% \textbf{ Specific Conductance:} \pm 10\% \textbf{ Dissolved Oxygen:} \pm 10\% \textbf{ NTU or} \pm 10$



ITE		1 .			140477		SAIVIP							
IAME:		tul 71	b				LOCATION:		ence,	SC	DATE		10 11:	,
VELL NO): MW	-			SAMP	LE ID:	0353	8-/	MWO 1			121	2/1,	1
					PU	RGIN	G DATA							
/ELL IAMETE	R (inches):	2 Total V	Well Depth (fe	et): 17	180	WELL S DEPTH	SCREEN INTE	RVAL fe	STATIC et TO WA	DEPTH	12.5	4 PU	RGE PUN BAILER:	P TYPE
ELL VO	LUME PURGI	: 1 WELL V	OLUME = (T = (- STAT	пс bертн то 2 , 5 Ч	WATER) feet)	X WELL	CAPAC			=0.8 ^L	
TIME	VOLUME	CUMUL. VOLUME	TEMP.	1/	рн	Ι ,	COND.		DO.	10	TURB			İ
TIME	PURGED (gallons)	PURGED (gallons)	(°C)	, A	(su)	Α.	(μS)	^	(mg/L)	A	(NTU)	Α.	COLOR	ODOF
01	1.5	10	21.9	-	7.2	-	114	11	0.6	-	846	-	Cly	Stron
14	1.5	1.5	21.4	0.5	6-8	0.4	163	12		+	115	206		++
38	1.0	4.0	215	0.1	6.7	0	96	53			62	53	Slaw	
50	1.0	5.0	21.5	0	6.6	0.1	99	3			14	48	Clr	
100	1.0	6.0	21.4	0.	6.6	0	104	5		+-	9.1	4.9	cir	1
										+				
				-		-	-	-		-				-
		-	-	-		_	-	+		+	-	+		+
										+				
ELL CA	PACITY (Galle	ons Per Foot)	0.75 " = 0.0	2; 1" =	0.04; 1.2	5" = 0.06;	2" = 0.16;	3" = 0.3	7; 4" = 0.69	5; 5 "	= 1.02;	6" = 1.4	17; 12 " =	5.88
AMDLE	D BY (PRINT)			LSAME	SAI PLER(S) SIG		G DATA		SAMPLING	DATE		SAMD	LING TIME	
Dan		rch		JANI	1	3	٥).		1212				00	
	R TUBING N WELL (feet):	14		TUBIN	NG RIAL CODE	Pe	5		FIELD-FILT Filtration Ed	ERED: quipmen	t Type		FILTER	R SIZE:
UPLICA	TE COLLECTE	D: Y	0											
SAM	PLE CONTAIN	ER SPECIFI	CATION		SAMP	LE PRESI	ERVATION		INTENI ANALY AND/ METH	'SIS DR	EQ	MPLIN UIPMEN CODE	G NT	AMPLE PUMP FLOW RATE m/min)
AMPLE CODE	# CONTAINER	MATERIA L CODE	VOLUME		SERVATIVE USED	ADDED	L VOL IN FIELD nL)	FINAL pH						
	3	C6	40ml		CL		/	/	8260		RS	PP		/
	3	C6	40ml		26	/		/	801		-	1		/
	1 /	PE	250ml	HJ	V03	1 /			601)	-	$V_{\underline{}}$		
	 								1		1			1
											+-		-	

SAMPLING EQUIPMENT CODES:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass;

 APP = After Peristaltic Pump;
 B = Bailer;
 BP = Bladder Pump;
 ESP = Elect

 RFPP = Reverse Flow Peristaltic Pump;
 SM = Straw Method (Tubing Gravity Drain);

PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

ESP = Electric Submersible Pump, ravity Drain); 0 = Other (Specify)

SITE NAME: (Coasta	176	Truck	: 54	Op		OCATION:	Flor	ence, S	50					
WELLNO	MWO	2			SAMP	LE ID: O	3538	My	v02		DATE	12	12114	1	
					PU	RGING	DATA							,	
	R (inches):	4	/ell Depth (fe	et): 18.	30	DEPTH:	•	, fe		ER (fee	t):12.8	4 PI	JRGE PUMI R BAILER: ∳	P TYP	P
WELL VO	LUME PURGE	: 1 WELL V	DLUME = (T = (18.	30 fee		L.3 4	WATER feet) X WELL C	BPACI	TY gallons		=0.95	gallo	ins
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	A	∫pH (su)	۸	COND. (µS)	۸	DO (mg/L)	Λ	TURB IDITY (NTU)	Λ	COLOR	OD	OR
1114	_	_	20,6	_	6.8	_	118	_	0.59	_	4000	_	Cup	Stre	m
1126	1.0	1.0	26.4	0.2	6.6	0.2	114	4			281	-	90	1	\supset
1139	1.5	25	20.4	0	6.5	0.1	114	0			10.3	178	Ohr	1	
1151	1.0	3.5	20,4	0	6.5	0	113	1			64		Siday		
1203	1.0	4.5	20.3	0.1	6.5	0	112	1			34	25	dr	П	
12/4	1.0	5.5	20.3	0	6.6	0.1	114	2			20	19		П	
1226	1.0	6.5	20.4	0.1	6.6	0.	114	0			14	6			
1230	0.5	7.0	20.4	0	6.5	0.	110	4			8,9	51	V	V	_
								<u> </u>						_	

SAMPLING DATA

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLED BY (PRINT			SAMPLER(S) SIG	NATURE(S):	.,,	SAMPLING DATE:	SAMPLING	TIME:
Daniel B	urch		THE STATE OF THE S	3		12/2/14	123	
PUMP OR TUBING DEPTH IN WELL (feet	15		TUBING MATERIAL CODE:	MP	ϵ	FIELD-FILTERED: Filtration Equipment		LTER SIZE:
DUPLICATE COLLECT	ED: Y	0						
SAMPLE CONTA	NER SPECIF	ICATION	SAMPI	LE PRESERVATIO	N	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE CONTAINER	MATERIA L CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
3	C6	Hom	HCL	_	1	826013	RSEP	_
3	C6	4001	HCL	_	_	8011		_
	PE	250ml	HN03	-	_	6010		_
REMARKS:			Clear Glass: PE :	= Polyethylene;	PP = Polypro	ovlene: S = Silicone;	T = Teflon; O =	Other (Specif

DATE	NAME CONSTAL 76 TOUCK STOP	SITE LOCATION: Florence, SC	
11000		SAMPLE ID: 03538-MW03	DATE: 12/2/14

		1	- //		PU		DATA					1	1005 01	D TV /D =
WELL DIAMETE	R (inches):	入 Total V	/ell Depth (fe	et): \8	.20	DEPTH:	1	feet		ER (fee	t)12.6	7 0	JRGE PUM R BAILER:	259
WELL VO	LUME PURGE	: 1 WELL V	OLUME = (T = (OTALW	DEPTH D fee		1.67	WATER) feet)	× WELL C	APAC 6	gallon:		=0.88	gallons
TIME	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)	TEMP. (°C)	Λ.	pH (su)	Λ	COND. (µS)	Λ	DO (mg/L)	Λ	TURB IDITY (NTU)	٨	COLOR	ODOF
209	_	_	21.6	_	6.9	_	132	_	0.83	_	1/000	-	Clay	Stron
120	1.5	1.5	21.3	0.3	6.7	0.2	94	31		-	404	254	1/	1
2 <u>33</u> 24/	0.5	3.0	21,2	0.1	6.6	0-1	78	16			120	21X	Slyw	+
246	05	3.5	21.4	0.1	6.6	0.1	76	2			18	54	CIV	
252	0.5	4.0	21.4	0	6.6	0	77				12	6		
300	0,5	4.5	21.4	0	6.6	0	77	0			9,9	2.1	V	1
									1					
WELL CA	PACITY (Gallo	Dor Footh	A 75" - 0.00	. 47	0.04: 4.01	F" - 0.00:	an 0.10:	DT 0.07	411 0.05		100		17. 100	5.00

	BY (PRINT)	ch		SAMPLER(S) SIGN	NATURE(S):		SAMPLING DATE:	SAMPLING	
PUMP OR DEPTH IN		+9		TUBING MATERIAL CODE:	PE		FIELD-FILTERED: Filtration Equipment		LTER SIZE:
	PLE CONTAINI		CATION	SAMPI	LE PRESERVATIO	N	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (m/min)
SAMPLE ID CODE	# CONTAINER S	MATERIA L CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	C6	40ml	HCL	_	_	826013	RFPP	-
	1	T	1	HCL	_	_	8011		_
	1	PE	250ml	HNO3	_	_	6010	₩	_
REMARK		O = 8mbcr/	Class: CC -	Clear Class: RE-	- Dolvethylene	DD - Dolvero	nvlene: C = Silicene:	T = Teflon; O = 1	Other (Speci
	G EQUIPMENT		APP = After	Clear Glass; PE = Peristaltic Pum p; erse Flow Peristaltic	B = Bailer, B	PP = Polypro P = Bladder F		Submersible Pump;	

			GF	KOUNDW	AIER	SAIVI	PLING	LOG					
SITE NAME:	Coast	2/ 7	46		S	SITE OCATION:	FI	orence.	SC				
WELL NO	MU	-4		SAI	MPLE ID:	035	38-M	orence. wo4		DATE	12-	3-14	1
					PURGING						,	,	
WELL	9	T otal V	Vell Depth (fe	at):	Lwelle	CREENIN	TERYAL	STATIC	DEPTH	17 2	PU	IRGE PUM	P TYPE
	R (inches): 2	1	OLUME = (T	18.39 OT AL WELL DEP		-	to 18 te				(OF	R BAILER:	KHPP
			= (18.35	feet -	2.26	feet	× 0.1	6	gallons	s/foot	0,97	gallons
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	A pH (su)	Δ	COND (µS)	. Α	DO (mg/L)	Λ	TURB IDITY (NTU)	Δ	COLOR	ODOR
221	~	_	21.0	- 7.2		84	_	0.24	_	881	_	clay	Strin
236	1.5	1.5	20.7	0.3 6.5		73		,		326	525	die	
150	1.5	3.0	20.5	0.2 6.6	0.2	62				104	217	J.	1
30D	1.0	4.0	20.6	0.1 6.6	0	60		<u> </u>	_	51	58	Stuly	11
307	0.5	4.5	20.6	0 6.7	0.1	58			_	22	29	all	\perp
315	0.5	5.0	20.6	0 6.7	0	59	-			10	112	1	1
				QNG)/			-						
					_	-	_		-	-			-
			-		-	-	-		-	-	+		+
	İ				-		-	l I	1		\vdash	i i	+
WELL CA	PACITY (Gallo	ons Per Foot):	0.75 " = 0.02		1.25" = 0.06;	2** = 0.16		7; 4" = 0.65;	5" :	= 1.02;	6" = 1.4	47; 12" =	5.88
SAMPLED	BY(PRINT)			SAMPLER(S)S	AMPLIN IGNATURE (S		Α	SAMPLING	DATE:		SAMP	LING TIME	
Dante	~	`		13				12/3/	14			115	
PUMP OR	TUBING WELL (feet):	15	-	TUBING MATERIAL CO	DE: P	E		FIELD-FILTE		Y &	0	FILTER	SIZE:
	TE COLLECTE	-	N (21320				T III SII OT E S	a pin on	· / /pc.			
SAM	PLE CONTAIN	ER SPECIFIC	CATION	SAI	MPLE PRESE	RVATION		INTEND ANALYS AND/O METHO	SIS R	EQ	MPLIN UIPMEN CODE	G NT	AMPLE PUMP FLOW RATE ml/min)
SAMPLE ID CODE	# CONTAINER S	MATERIA L OODE	VOLUME	P RESERVATIVE USED	TOTAL ADDED II	N FIELD	FINAL pH						
	3	CG	40 ml	HCL		/	/	82608	3	RF	PP		1
	3	CG	40 ml	HCL				8011			1		
	1	PE	250 ml	HNO3				6010		,	V		
					/		,			-			
						-				-		_	
REMARKS	2.			L									

MATERIAL CODES: AG = Amber Glass;

SAMPLING EQUIPMENT CODES:

PP = Polypropylene;

O = Other (Specify)

S = Silicone;

T = Teflon;

ESP = Electric Submersible Pump; avity Drain); 0 = Other (Specify)

PE = Polyethylene;

 APP = After Peristaltic Pump;
 B = Baller;
 BP = Bladder Pump;
 ESP = Elect

 RFPP = Reverse FlowPeristaltic Pump;
 SM = StrawMethod (Tubing Gravity Drain);

CG = Clear Glass;

TE AME: (Coastal	76	Truck	5-1	100		OCATION:	Hlo	rence	15	0			
ELL N C	MWO	5			SAMP	LE ID:					DAT	121	3114	1
					PU	IRGINO	DATA							
ELL AMETE	R (inches):	L Total	Well Depth (fe	et): 18	.29			RVAL 18.24	STATIC et TO WAT	DEPTH ER (fee	et):		JRGE PUM R BAILER:	P TYPE
ELL VO	LUME PURGE	: 1 WELL	VOLUME = (T = (OTAL WE		- STAT et-	IC DEPTH T	WATER) X WELL	CAPACI	ITY	s/foot	=	gallon:
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)		Λ	pH (su)	А	COND. (µS)	۸	DO (mg/L)	۸	TURB IDITY (NTU)	Λ	COLOR	ODO
ELL CA	APACITY (Gallo	ns Per Foot)): 0.75 " = 0.02	2; 1" =	0.04; 1.2 :	5" = 0.06;	2" = 0.16;	3" = 0.3	7; 4" = 0.65	5" =	- 1.02;	6 " = 1.	47; 12" =	5.88
							G DATA							
	D BY (PRINT)		8)	TUBING	_ER(S) SIG	NATURE(S	5):		SAMPLING		Y		FILTER	
	WELL (feet): TE COLLECTE	D: Y	N	MATER	RIAL CODE				Filtration Eq	ulpmen	туре:			
SAM	SAMPLE CONTAINER SPECIFICATION				SAMP	LE PRESE	RVATION		INTEND ANALY AND/O METHO	SIS	EQ	MPLIN UIPME CODE	G NT	AMPLE PUMP FLOW RATE ml/min)
MPLE	CONTAINER S	MATERIA L CODE	VOLUME		ERVATIVE JSED	ADDED IN	FIELD	FINAL pH						
	<u> </u>													
				!							1		1	

SAMPLING EQUIPMENT CODES:

B = Bailer, BP = Bladder Pump; ESP = Electric Submersible Pump; ump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

APP = After Peristaltic Pump; B = 88
RFPP = Reverse Flow Peristaltic Pump;

SITE NAME: (Coastul	76	Truck	Sto	PI	S	OCATION: F	love	nce, SC	_				
WELLNO	MWO	6			SAMPL	EID: O	3538 ~	Mw	06		DATE	121	3/14	
					PU	RGING	DATA							
WELL	R (inches):	Total W	ell Depth (fee	18	,29	WELL SI	CREEN INTER	VAL 900	STATIC D	EPTH R (fee	et)12.67	PU OF	RGE PUM R BAILER:	e P
	LUME PURGE	1 WELL VO)LUME = (TC = (OTAL WE	Q 9 fee	- STATI	C DEPTH TOV	VATER) feet)	X WELL C	APACI 6	TY gallons	/foot	= 0.89	gallons
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP.	Λ	pH (su)	۸	COND. (μS)	Λ	DO (mg/L)	۸	TURB IDITY (NTU)	۸	COLOR	ODOR
1501	(gamerie)	(ganono)	21.8	-	6.9	_	126	_	2.7	_	H000	_	Quy	2000
1509	0.5	6,5	21.6	0,2	6.7	0.2	114	12			804	-	1/	1
1518	1.0	1.5	21.6	0	6.8	0.1	169	5			600	204		
1526	1.0	2.5	21.5	6.1	6.7	0.1	111	2			319	28		\perp
1933	0.5	3.0	21.5	0	6.6	0.1	110	1			100	25	V	
543	1.0	4.5	21.5	0	6.6	0	1//	1			92	12	Sldy	1
1551	05	50	21.6	0,1	6.6	0	112				25	67	dr	
1600	0.5	5.5	21.6	0	6.6	0	109	3			10	15	dew	V
								-		-	-	-		-
										_		-		

SAMPLING DATA SAMPLING DATE: SAMPLING TIME: SAMPLER(S) SIGNATURE(S): SAMPLED BY (PRINT) Daniel Burch 12/3/14 FIELD-FILTERED FILTER SIZE: TUBING PUMP OR TUBING PE 15 MATERIAL CODE: Filtration Equipment Type DEPTH IN WELL (feet): DUPLICATE COLLECTED: 0 SAMPLE INTENDED SAMPLING PUMP ANALYSIS EQUIPMENT FLOW SAMPLE PRESERVATION SAMPLE CONTAINER SPECIFICATION AND/OR CODE RATE METHOD (ml/min) TOTAL VOL PRESERVATIVE FINAL MATERIA SAMPLE ADDED IN FIELD VOLUME CONTAINER рН USED LCODE ID CODE (mL) 826013 RSAP 3 Hom HCL CG 8011 3 40ml HCL C6 6010 PE HNO3 250ml REMARKS: o = Other (Specify) T = Teflon; PP = Polypropylene; S = Silicone; PE = Polyethylene; MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; ESP = Electric Submersible Pump; BP = Bladder Pump; APP = After Peristaltic Pump; B = Bailer, SAMPLING EQUIPMENT CODES: SM = Straw Method (Tubing Gravity Drain); o = Other (Specify)

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

RFPP = Reverse Flow Peristaltic Pump;

AME:	(oast	1 76	7			OCATION:		rence, SC	DATI	E: 10 2	111
ELL NO:	MW	-7		SAN	IPLE ID:	035	38-1	hwo7		12-3	-17
				Р	URGIN	G DATA					
ELL	1	T otal V	/ell Depth (fee	18.38	WELL S	CREEN INTE	RVA fee	STATIC DEPTI	111.2	PURGE OR BAI	PUMP TYPE
	R (inches): LUME PURGE:	: 1 WELL V	OLUME = (T	OT AL WELL DEPT	H - STAT	IC DEPTH TO	WATER)	X WELL CAPAC	HY		1 .
		CUMUI	= (18.38	leet –	11.20	feet)	× 0.16	_	s/foot = /.	15 gallon
ГІМЕ	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	A pH (su)	۸	COND. (µS)	Δ	DO (mg/L)	TURB IDITY (NTU)		LOR ODO
21		_	21.9	- 6.9	_	109	-	2,1 =	4/000	7- 9	4 313
30	1.0	1.0	21.6	0.3 6.4	0.5	72	37		319	265 51	411
06	1.5	3.0	21.4	0.2 6.3	0.1	68	3		54	25 5	My
15	0.5	3.5	21.1	0.3 6.4	0.1	69	Ĭ		26	53 C	6
23	0.5	4.0	21.4	03 64	0	69	0		14	12	OD
30	05	4.5	21.3	0. 6.3	0.1	70	11		12	12	
640	1.0	55	21.3	0 63	10	70	10		19.0	131	VV
					+	-	-		+	+	-
			-		-	-	+		+	+	
			1		+		+		+		
					1						
					ĺ						
ELL CA	PACITY (Gallo	ns Per Foot):	0.75 " = 0.02	2; 1"= 0.04; 1	.25" = 0.06;	2" = 0.16;	3" = 0.3	7; 4 " = 0.65; 5 "	= 1.02;	6" = 1.47;	12" = 5.88
						IG DATA					
	BY(PRINT)	.1-		SAMPLER(S) S	IGNATURE(S):		SAMPLING DATE	ĺ	SAMPLING	()
	TUBING		-	TUBING	DE: P	=		FIELD-FILTERED			ILTER SIZE:
IMP OR TUBING EPTH IN WELL (feet): JPLICATE COLLECTED: Y				MATERIAL COL	DE: / T			Filtration Equipme	nt Type:		
				1				INTENDED	T .	AMPLIN G	SAMPLE
SAM	PLE CONTAIN	ER SPECIFI	CATION	SAM	MPLE PRES	ER VATION		ANALYSIS AND/OR METHOD		QUIPMENT	FLOW RATE (ml/min
SAMPLE O GODE	# GONTAINER S	MATERIA L CODE	VOLUME	P RESERVATIVE USED	ADDED	IL VOL IN FIELD nL)	FINAL pH				
	3	CG	40 ml	HCL		/	_	8260B	R	FPP	+-/
	3	CG	40 ml	HCL	-		/	8011	+-	1	+/
	1	PE	250 ml	HNO3	+ /		/	6010	+	V	+ /
								1	+		+
					- 1			l .			1

SAMPLING EQUIPMENT CODES:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass;

APP = After Peristaltic Pump; B = B RFPP = Reverse FlowPeristaltic Pump;

PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon;

B = Bailer; BP = Bladder Pump; ESP = Electr lump; SM = StrawMethod (Tubing Gravity Drain); 0 = Other (Specify)

ESP = Electric Submersible Pump; avity Drain); 0 = Other (Specify)

TE AME:	Coug	tal :	76			L	SITE OCATION:	F	orence	,50	<u>ک</u>			
ELL NO:	ML	1-8			SAMPI	LE ID:	OCATION:	3 -M	w08		DATE	12	-3-,	14
					PU	RGING	DATA							
ELL	2	T otal V	Vell Depth (fe	et): 18			CREEN INTER	VAL 12 fee	STATIC TO WAT			, ,	RGE PUM	
	R (inches): C LUME PURGE	: 1 WELL V		OT AL WI	ELL DEDTH	STAT	IC DEPTH TO	WATER)	X WELL	CAPACI	TY	-!-	. ,	-311
			= (8,29 fee	ι –	10.43	feet)	^ 0.	16	ganons	5/100L	=1,26	gallon
IME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	۸	pH (su)	Λ	COND. (µS)	۸	DO (mg/L)	Λ	TURB IDITY (NTU)	Λ	COLOR	ODO
15	_	_	21/8	_	6.9	_	104	10	214	_	4000		Cly	00
26	1,5	15	21,4	04	6.4	05	93	12			390		any	1
35	1.0	25	21,2	02	6.6	0.3	6.3	29		+	140	250	X	\vdash
13	15	4,0	21.2	0	6.6	0	88	25		+	32	108	ar	1
51	05	4.5	21.3	0.1	0.1	0.1	24	17		+	8.9	3.1	. /	1
00	0.5	.5.0	21.1	02	0.7	0	80	1			011	0.1	W	V
										-				_
								-		-				
				-				+		+	-	\vdash		\vdash
				\vdash	i İ	_		+	İ	1	 	+		t
=	PACITY (Gallo	D FA	0.7511 - 0.01	0. 433	0.04: 4.34	E22 - 0.06:	20 - 0.16	3" - 0 3	7; 4 " = 0.65	. gn.	- 1.02:	622 - 1	47; 12" =	5.88
ELL CA	PACITY (Gain	ons Per Foot).	0.13 ** = 0.0.	2, 1 -	0.04, 1.23	y = 0.00,	2 - 0.10,	3 - 0.0	7, 4 - 0.00	, ,	- 1.02,	• - 1.	71, 12	0.00
					SA	MPI IN	G DATA							
AMPLEC	BY (PRINT)			SAMP	LER(S) SIGI				SAMPLING	DATE:			LING TIME	:
anic		h			15				12/3/	14		-	00	0.175
	TUBING WELL (feet):	14	/	T UBIN M ATE	IG RIAL CODE:	PE	=		FIELD-FILT Filtration Ed	EKED: Juipmen	t Type:	,	FILTER	(SIZE:
JPLICA	TE COLLECTE	D: Y	0										1 6	AMDLI
SAM	PLE CONTAIN	ER SPECIFIC	CATION		SAMP		RVATION		ANALY AND/O METH	SIS DR	EQ	MPLIN UIPME CODE	G NT	AMPLI PUMP FLOW RATE ml/min
AMPLE CODE	# GONTAINER S	MATERIA L CODE	VOLUME		SERVATIVE USED	ADDED I	N FIELD	FINAL pH						
	3	CG	40 ml	Н	CL			/	8260	В	R	FPF		/
	3	CG	40 ml		lCL .				8011			1		/
	1	PE	250 ml	H	INO3		/		6010			V		/
						,	1		ļ					
				+		i 					-			

STABILIZATION CRITERIA

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: \pm 0.2 mg/L or \pm 10% Turbidity: \leq 10 NTU or \pm 10%

PP = Polypropylene;

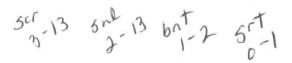
PE = Polyethylene;

0 = Other (Specify)

S = Silicone;

T = Teflon;

ESP = Electric Submersible Pump; avity Drain); 0 = Other (Specify)



CG = Clear Glass;

MATERIAL CODES: AG = Amber Glass;

SAMPLING EQUIPMENT CODES:

TE AME: (Coastul 7	6 Trud	K Stor	2			ITE OCATION:	Flore	encess					
	· Mwo				SAMP			1-1			DATE			
					PII	IRGING	DATA							
ELL AMETE	R (inches):	Total V	Vell Depth (fe	et):		_	CREEN INT	TERVAL		DEPTH			JRGE PUM R BAILER:	P TYPE
	LUME PURGE	: 1 WELL V	OLUME = (T = (OTALWE				TO WATER			TY	s/foot		gallon
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP.	Λ	pH (su)	Λ	COND (μS)	Α.	DO (mg/L)	۸	TURB IDITY (NTU)	۸	COLOR	ODO
	(3 /	(gamerie)								-				
												-		
ELL CA	PACITY (Gallo	ns Per Foot):	0.75 " = 0.00	2: 1" =	0.04: 1.2	5 " = 0.06;	2" = 0.16	3" = 0.3	7: 4" = 0.6	35: 5" =	= 1.02:	6 " = 1.	47: 12" =	5.88
MPLE	D BY (PRINT)			SAMPL	SAI LER(S) SIG	MPLING NATURE(S		A	SAMPLIN	G DATE:		SAME	LING TIME	:
	R TUBING			TUBIN	G RIAL CODE				FIELD-FIL Filtration E			ı	FILTER	SIZE:
	TE COLLECTE	D: Y	N	IMAILI	(IAL CODE	*			T III GLOTTE	quipiricii	туро.			ABSDL P
SAM	SAMPLE CONTAINER SPECIFICATION				SAMP	LE PRESE	RVATION		ANAL AND METI	YSIS OR		MPLIN UIPME CODE	NT	AMPLE PUMP FLOW RATE m/min)
MPLE CODE	# CONTAINER S	MATERIA L CODE	VOLUME		ERVATIVE JSED	ADDED IN	FIELD	FINAL pH						
				1			- 1				1			

SAMPLING EQUIPMENT CODES:

SITE Coastal	76 Truck	Stop		OCATION:	Flore	nce, S	C			
WELLNO: MW-			MPLE ID:				DATE	12	13/14	-
			PURGING	DATA						
WELL DIAMETER (inches):	Total Well Depth (CREEN INTER	RVAL feet	STATIC DE			JRGE PUMI	P TYPE
WELL VOLUME PURGE:	1 WELL VOLUME =					X WELL CA	PACITY	s/foot		gallons
TIME VOLUME PURGED (gallons)	CUMUL. VOLUME TEMP. PURGED (°C) (gallons)	A pH (su)	۸	COND. (µS)	٨	DO (mg/L)	A TURB IDITY (NTU)	٨	COLOR	ODOR
, , , , , , , , , , , , , , , , , , ,										
							_	+		
					\vdash			_		
			-	-				-		
					-	-	_	-		
								1		
WELL CAPACITY (Gallon	s Per Foot): 0.75" = 0	02; 1" = 0.04;	1.25" = 0.06;	2" = 0.16;	3" = 0.37;	4" = 0.65;	5" = 1.02;	6" = 1,	47; 12" =	5.88
		S	AMPLIN	G DATA						
SAMPLED BY (PRINT)		SAMPLER(S)			\$	SAMPLING DA	ATE:	SAMF	LING TIME	
PUMP OR TUBING DEPTH IN WELL (feet):	. V N	TUBING MATERIAL CO	DE:			FIELD-FILTER Filtration Equip	RED: Y Noment Type:	I	FILTER	SIZE:

SAMPLE	BY (PRINT)			SAMPLER(S) SIGN	NATURE(S):		SAMPLING DATE:	SAMPLING	TIME:
	WELL (feet):			TUBING MATERIAL CODE:			FIELD-FILTERED: Filtration Equipment		LTER SIZE:
DUPLICA	TE COLLECTE	D: Y	N						
SAM	PLE CONTAIN	ER SPECIFI	CATION	SAMPI	LE PRESERVATIO	DN	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (m/min)
SAMPLE ID CODE	# CONTAINER S	MATERIA L CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
REMARK		vot 1	_ocnte	d. In a	rea of L	nigh co	instruction	trassic.	
MATERIA	L CODES: A	G = Amber (Glass; CG =	Clear Glass; PE =	= Polyethylene;	PP = Polyprop	ylene; S = Silicone;	T = Teflon; O = (Other (Specify)
SAMPLIN	IG EQUIPMEN	T CODES:		Peristaltic Pump; verse Flow Peristaltic		RP = Bladder Puraw Method (T	ump; ESP = Electricubing Gravity Drain);	P = Electric Submersible Pump;	

AME:	Coast	al 76	0				ITE OCATION:	FI	ovence	,50				
VELL NO:		-IDR			SAMPL				nwlop		DATE	12	-3-1	14
	176		0-1	U .	^				, , , , ,					,
			WO BTV		, bn		DATA					1-		(D. T.)
ELL IAMETER	R (inches):)	T otal W	/ell Depth (fee	et): / .	2		CREEN IN		et TOWA	DEPTH TER (fee	100		RGE PUN R BAILER:	
	LUME PURGE	: 1 WELL V				- STAT	C DEPTH	TO WATER		CAPACI	TY gallons		-0.14	gallon:
		CUMU	= (11.3	9 100	10	.50	1001	<u> </u>	16	_	1	0.17	T
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Λ	pH (su)	Α	COND (mS)		DO (mg/L)	Δ	TURB IDITY (NTU)	Λ	COLOR	ODO
106	_	-	20.6	_	6.8	_	83		3,2	-	4000	-	day	ner
20	1.0	1.0	20.3	03	6.6	6.2	62	بهر	-	1	843	-	dily	11
30	0.5	1.5	20.2	al	65	0.1	78	116	-	+-	196	647	duy	+
43	1.0	2.5	20.2	0	6,5	0	74	14	-	+-	2/	175	ar	++
<i>93</i>	1.0	3.5	20.2	0	6.6	0.1	73	1	-	+	13	8	CW	+
109	1.0	4.5	20.3	01	65	0.1	75	a	-	+	12	2/	ar	
115	0.5	5.0	20.3	0	6.5	0	13	12		+	10.7	3.6	CW	IV
						-		-	-	+	-	-		+-
			-	-		_	-	+	+	+	+-	\vdash	-	+-
	-					-		+	 	+	 	\vdash	_	+
		1		-		-		+	+	+	-		-	+
						1	1	_	1	+	1	+		+
				1	l		1						1	
									İ		İ			I
ELL CA	PACITY (Gallo	ons Per Foot):	0.75 " = 0.02	2, 1"=			2" = 0.1		37; 4" = 0.6	5; 5 "	= 1.02;	6" = 1.	47; 12 "	= 5.88
AMPLEC	BY(PRINT)		0.75 ** = 0.02			MPLIN	G DAT		37; 4" = 0.6 SAMPLING		= 1.02;		47; 12"	
AMPLEC Duni	BY (PRINT) A BUM TUBING		0.75" = 0.02	SAMP	SAI LER(S) SIGI	MPLIN NATURE (S	G DAT		SAMPLING	DATE:	Y 0	SAMP	LING TIM	
AMPLEC Dun! UMP OR EPTH IN	D BY (PRINT) BY (PRINT) TUBING TUBING WELL (feet):	en II		SAMP	SAI LER(S) SIGI	MPLIN NATURE (S	G DAT		SAMPLING	DATE:	Y 0	SAMP	LING TIM	=
Duns UMP OR DEPTH IN	BY (PRINT) A BUM TUBING	en II	0.75 " = 0.00	SAMP	SAI LER(S) SIGI	MPLIN NATURE (S	G DAT		SAMPLING 1913 FIELD-FILT Filtration E	DATE:	Y t Type:	SAMP	FILTE	E: R SIZE:
Duns	D BY (PRINT) BY (PRINT) TUBING TUBING WELL (feet):	D: Hy	0	SAMP	SAI LER(S) SIGI B G RIAL CODE:	MPLIN NATURE (S	G DAT	'A	SAMPLING	DED YSIS	t Type:	SAMP	FILTE	E: R SIZE:
Duns	D BY (PRINT) A BUM TUBING WELL (feet): TE COLLECTE	D: Hy	0	SAMPI TUBIN MATE	SAI LER(S) SIGI B G RIAL CODE:	MPLIN NATURE (S	G DAT	'A	SAMPLING 12.13 FIELD-FIL' Filtration E	DED YSIS	Y of Type:	SAMP 12 D WIPLIN UIPME CODE	FILTE	E: R SIZE: SAMPLE PUMP FLOW RATE
AMPLEC Dun! UMP OR EPTH IN UPLICA SAM	D BY (PRINT) A BUM TUBING TUBING WELL (feet): TE COLLECTE PLE CONTAIN	D: Y ER SPECIFIC	O CATION	SAMPI TUBIN MATE	SAI LER(S) SIGI PS G RIAL CODE: SAMPI	MPLIN NATURE(S	G DAT	'A FINAL	SAMPLING 12.13 FIELD-FIL' Filtration E	DED YSIS OR	Y of Type:	SAMP 12 D WIPLIN UIPME CODE	FILTE	E: R SIZE: SAMPLE PUMP FLOW RATE
AMPLEC Dun! UMP OR EPTH IN UPLICA SAM	D BY (PRINT) A BUM TUBING TUBING WELL (feet): TE COLLECTE PLE CONTAIN CONTAINER S	D: Y ER SPECIFIC MATERIA L ODE	CATION	SAMPI TUBIN MATE	SAI LER(S) SIGI G RIAL CODE: SAMPI	MPLIN NATURE(S	G DAT	'A FINAL	SAMPLING 19.13 FIELD-FIL' Filtration E INTEN ANAL AND METH	DED YSIS OR IOD	Y of Type:	SAMP 12	FILTE	E: R SIZE: SAMPLE PUMP FLOW RATE
AMPLEC Dun! UMP OR EPTH IN UPLICA SAM	D BY (PRINT) A BUM TUBING I WELL (feet): TE COLLECTE PLE CONTAIN CONTAINER S 3	D: Y ER SPECIFIC MATERIA L ODE CG	CATION VOLUME 40 ml	SAMPI TUBIN MATE	SAI LER(S) SIGH G RIAL CODE: SAMPI SERVATIVE USED	MPLIN NATURE(S	G DAT	'A FINAL	SAMPLING 19.13 FIELD-FILT Filtration E INTEN ANAL AND METH	DED YSIS FOR IOD	Y of Type:	SAMP 12 D WIPLIN UIPME CODE	FILTE	E: R SIZE: SAMPLE PUMP FLOW RATE
AMPLEC DUMP OR EPTH IN UPLICA SAM	D BY (PRINT) A BUTC TUBING I WELL (feet): TE COLLECTE PLE CONTAINER S 3 3	D: Y ER SPECIFIC MATERIA L OODE CG CG	CATION VOLUME 40 ml 40 ml	SAMPI TUBIN MATE	SAMPI CL CAN DE SAMPI CL CL	MPLIN NATURE(S	G DAT	'A FINAL	SAMPLING 12/3 FIELD-FILT Filtration E INTEN ANAL AND METH 828	DED YSIS FOR IOD	Y of Type:	SAMP 12 D WIPLIN UIPME CODE	FILTE	E: R SIZE: SAMPLE PUMP FLOW RATE
AMPLEC Dun! UMP OR EPTH IN UPLICA SAM	D BY (PRINT) A BUTO TUBING TOUBLE (feet): TE COLLECTE PLE CONTAINER S 3 1	D: Y ER SPECIFIC MATERIA L OODE CG CG	CATION VOLUME 40 ml 40 ml	SAMPI TUBIN MATE	SAMPI CL CAN DE SAMPI CL CL	MPLIN NATURE(S	G DAT	'A FINAL	SAMPLING 12/3 FIELD-FILT Filtration E INTEN ANAL AND METH 828	DED YSIS FOR IOD	Y of Type:	SAMP 12 D WIPLIN UIPME CODE	FILTE	E: R SIZE: SAMPLE PUMP FLOW RATE
AMPLEC DUMP OR EPTH IN UPLICA SAM GAMPLE CODE	D BY (PRINT) A BUTO TUBING TOUBLE (feet): TE COLLECTE PLE CONTAINER S 3 1	D: Y ER SPECIFIC MATERIA L ODE CG CG PE	VOLUME 40 ml 250 ml	SAMPI TUBIN MATE	SAMPI ERRYATIVE USED CL ICL	MPLIN NATURE(S	G DAT	'A FINAL	SAMPLING 19.13 FIELD-FILT Filtration E INTEN ANAL AND METH 826 801	DED YSIS FOR IOD	Y of Type:	SAMP 12 MPLIN UIPME CODE	FILTE	E: R SIZE: SAMPLE PUMP FLOW RATE (ml/min)

STABILIZATION CRITERIA

pH: ±0.2 units Temperature: ±0.2 °C Specific Conductance: ±5% Dissolved Oxygen: ±0.2 mg/L or ±10% Turbidity: ≤10 NTU or ±10%



NAME: Constal 76 Truck Stop	SITE LOCATION: Florence, SC	
WELL NO: MW	SAMPLE ID: 03538 -MW	DATE: 12/3/14
	DURGING DATA	

WELL DIAMETER		Total W	all Denth (fee	43.								-		
	(inches): -	4	en Depui (ice	18	.42	DEPTH:	REEN INTER	8.42 fee		ER (fe	et):14.6°	1 OF	RGE PUMI R BAILER:	RAPP
WELL VOL	UME PURGE:	1 WELL VO	= (TO		HQ fee		6 H	WATER) feet)	X WELL	APAL	ITY gallons		=0.92	gallons
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP.	Λ	pH (su)	Λ	COND. (μS)	Λ	DO (mg/L)	A	TURB IDITY (NTU)	٨	COLOR	ODOF
441	_		21.6	-	7.0	_	98	-	2.9	-	808	-	and	0000
456	2.0	2.0	21.4	0.2	6.9	0.1	86	2		_			274	\vdash
502	0.5	2.5	21.3	0.1	6.7	6.2	84			-		343		\vdash
514	1.0	3.5	21.3	0	6.6	0.1	87	3		-	21	165	ar	1
521	0.5	4.0	21.4	01	6.7	0.	86	1		-	12	14	1	1
530	0,5	4.5	21.4	0	6.7	0	88	2		-	8.0	17	1	1
								-		-	-	-		-
								-		-	-	-	-	-
											1			

				SAI	VIPLING DA	TΑ					
	BY (PRINT)			SAMPLER(S) SIGN	NATURE(S):		SAMPLING DATE:	SAMPLING			
Dunie	1 Bun	ch		1	3		12/3/14	1530			
PUMP OR DEPTH IN	TUBING WELL (feet):	15	0	TUBING MATERIAL CODE:	PE		FIELD-FILTERED: Filtration Equipment	. 1.7	LTER SIZE:		
	LE CONTAIN			SAMP	LE PRESERVATIO	N	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (m//min)		
SAMPLE ID CODE	# CONTAINER S	MATERIA L CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
	3	CG	Homl	HCL	/	/	826013	RFPP	/		
	3	C6	.1/	1			8011				
	Ī	PE	250ml	HN03		/	6010	1			
REMARK:	S:										
	L CODES: A	.G = Amber	APP = After	Clear Glass; PE r Peristaltic Pum p; verse Flow Peristaltic		PP = Polypro		T = Teflon;			

ITE ,		-/ -					SITE (LING						
AME:	Coastal		rude	540			LOCATION:				DATE	:	777 Sec. 1404	
ELL NO	· Mwl	4			SAME	PLE ID: (73538	-MW	4		DATE	121	112/1-	1
					PL	JRGIN	G DATA							
/ELL		Total V	Well Depth (fe	et): 18		WELL	SCREEN INTE	RVAL	STATIC	DEPTI	H. 11 4.	PL	JRGE PUM	
IELL VO	R (inches):	: 1 WELL V		OTAL W	ELL DEPTH	- STA		WATER)	X WELL	CAPAC			R BAILER:	
		0.1141.11	= (18,29 feet - 11.46 feet						=1,09	gallons				
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (μS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOF
21	1.0	-	20.4	dom	6-8	_	92	-	1,2	-	4000	-	dy	none
35	1.5	1.5	20.4	0	6-6	0.2	63	10		+-	304	-	1/	+
51	6.5	30	20,4	0.1	6.6	0.1	61	2		+	101	223	1	+
403	1.0	4.0	20,2	0,2	6,6	0.1	59	2			29	12	ar	
2/4	1.0	5.0	20.2	0	6.7	0.1	61	2			16	13		
26	1.0	6.0	20.2	0	6./	0	60	10		+-	12	7	6/	1
135	1.0	7.0	20.2	U	6.7	10	60	10		+	10	0	A	V
						-	-	-		-		_		
						1	 	+		+-		\vdash		+
						1				T				1
AMPLEI J n UMP OF EPTH IN	D BY (PRINT) R TUBING WELL (feet):	09h		SAMP	SA LER(S) SIG	MPLIN GNATURE(IG DATA		SAMPLING	DATE	: Y / N	SAMP	LING TIME	::
UPLICA	TE COLLECTE	D: Y	(y											AMPLE
SAM	PLE CONTAIN	ER SPECIFIC	CATION		SAMF		ERVATION		ANALY ANALY METH	'SIS OR	EQ	MPLIN UIPMEI CODE	G NT	PUMP FLOW RATE ml/min)
AMPLE CODE	# CONTAINER S	MATERIA L CODE	VOLUME		SERVATIVE USED	ADDED	IL VOL IN FIELD nL)	FINAL pH						
_	3	CG	4001	H	CL	-		man,	8960	13	R	FRE		_
_	3	66	Hom	1	CL	_	`		801	0		1,		_
	/	UE.	250ml	HA	102	_			001	U		W_		
	1			1										

SAMPLING EQUIPMENT CODES:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass;

 APP = After Peristaltic Pump;
 B = Bailer;
 BP = Bladder Pump;
 ESP = Elect

 RFPP = Reverse Flow Peristaltic Pump;
 SM = Straw Method (Tubing Gravity Drain);

PE = Polyethylene; PP = Polypropylene; S = Silicone;

T = Teflon;

ESP = Electric Submersible Pump; avity Drain); O = Other (Specify)

O = Other (Specify)

): Mw	14	Truck		SAMP		CATION:		nce, &		DATE	12/	3/14	
						DOING	DATA				-			
/ELL IAMETE /ELL V O	R (inches):	İ	/ell Depth (fee			DEPTH:	REEN INTER	fe WATER)	STATIC I TO WAT	ER (fee	t): TY	1	RGE PUM R BAILER:	P TYPE
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP.	۸	pH (su)	Α	COND. (µS)	Λ	DO (mg/L)	Λ	TURB IDITY (NTU)	Λ	COLOR	ODO
											-			
	APACITY (Gallo	ons Per Foot):	0.75" = 0.00		SA	5" = 0.06; MPLING NATURE(S):		3" = 0.3	7; 4" = 0.65,		= 1.02;		17; 12" =	
AMPLE UMP OF	D BY (PRINT) R TUBING N WELL (feet):			SAMF	SA PLER(S) SIG	MPLING NATURE(S):		3" = 0.3		DATE:	YN	SAMP		:
AMPLEI UMP OF DEPTH II DUPLICA	D BY (PRINT)	ĒD: Y	N	SAMF	SA PLER(S) SIG IIG RIAL CODE	MPLING NATURE(S):	DATA	3" = 0.3	SAMPLING	DATE: ERED: ulpmen	Y N t Type:	SAMP	FILTER G NT	:
AMPLEI UMP OF EPTH II UPLICA SAW	D BY (PRINT) R TUBING N WELL (feet): TE COLLECTE	ĒD: Y	N	SAMF TUBIN MATE	SA PLER(S) SIG IIG RIAL CODE	MPLING NATURE(S):	DATA VATION	3" = 0.3	SAMPLING FIELD-FILTE Filtration Eq. INTEND ANALY: AND/O	DATE: ERED: ulpmen	Y N t Type:	SAMP	FILTER G NT	SIZE:
AMPLEI UMP OF EPTH II UPLICA	D BY (PRINT) R TUBING N WELL (feet): TE COLLECTE IPLE CONTAIN # CONTAINER	ED: Y	N CATION	SAMF TUBIN MATE	SA PLER(S) SIG IG RIAL CODE SAMP	MPLING NATURE(S): LE PRESER TOTAL V ADDED IN F	DATA VATION	FINAL	SAMPLING FIELD-FILTE Filtration Eq. INTEND ANALY: AND/O	DATE: ERED: ulpmen	Y N t Type:	SAMP	FILTER G NT	SIZE:
AMPLEI JMP OF EPTH II UPLICA SAM	D BY (PRINT) R TUBING N WELL (feet): TE COLLECTE IPLE CONTAIN CONTAINER S	ED: Y	N CATION	SAMF TUBIN MATE	SA PLER(S) SIG IG RIAL CODE SAMP	MPLING NATURE(S): LE PRESER TOTAL V ADDED IN F	DATA VATION	FINAL	SAMPLING FIELD-FILTE Filtration Eq. INTEND ANALY: AND/O	DATE: ERED: ulpmen	Y N t Type:	SAMP	FILTER G NT	SIZE:

SITE NAME:	Const	W/ 71	6				OCATION:	03	538-	Moo	45	Ho	rence,	SC
VELL NO		-15			SAMPL	E ID:	0353	38-M			DATE		!-3-	14
					PU	RGING	DATA							
VELL	R (inches): 2	T otal V	/ell Depth (fee	et): 20			CREEN INT	ERVAL	STATIC TO WAT				IRGE PUM	
VELL VO	LUME PURGE	: 1 WELL V	OLUME = (T (ELL DEPTH	- STAT		O WATER)	X WELL	AP ACT			<u>-1.52</u>	gallons
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP.	^	pH (su)	Δ	COND. (µS)		DO (mg/L)	Λ	TURB IDITY (NTU)	۸	COLOR	ODOR
130	(gunons)	(gallons)	20,9		8.4		192		1.2		506	-	Cly	none
142	1.5	1.5	20.1	0.8	6.1	0.3	111	81			312	794	1	
153	1.0	2.5	20.1	0	6.1	0	106	5			111	20	V	\perp
204	0.5	3.0	20.2	0.1	6.0	0.1	110	4		-	29	39	Ur	\vdash
216	1.0	4.0	20,2	0	611	0.1	100	1			14	13		+
121	0.5	4.5	20.3	0.1	6.0	011	10-1				9.5	12	1	
150	1.0	5,5	20.3	0	6.0	V	100	+		-	9.5	15	A	W
			-	_						-	_	-	-	-
			-	-	<u> </u>	<u> </u>	-	+		+	-	\vdash		+-
			-	-		-		_			-	\vdash		-
			-	-	-	-		-		1	-	-	1	-
			-		-	-		+-		+	-	\vdash	<u> </u>	1
			+	 	 	 	1	+	<u> </u>	+		\vdash		
										1				1
VELL CA	PACITY (Gallo	ns Per Foot):	0.75 " = 0.02	1"=	0.04; 1.25	5" = 0.06;	2" = 0.16	3 " = 0.3	7; 4" = 0.65	5" =	= 1.02;	6" = 1.	47; 12 " :	= 5.88
							G DAT	A	Loosaninio	DATE		00140	LINIO TIME	
	BY (PRINT)	ماء		SAMP	LER(S) SIGN	NATURE(S).		SAMPLING	IL			LING TIME	
		W I		l	7-1						V /		FILTER	R SIZE:
Duni	TUBING	1/		TUBIN	IG	200	`		FIELD-FILT		Y			
Dun's	TUBING WELL (feet):	16	ND.		IG RIAL CODE:	PE			FIELD-FILT Filtration Eq					
DUMP OR	TUBING	16				PE			Filtration Eq	uipm ent	Type:C		1 9	AMPLE
UMP OR EPTH IN UPLICA	TUBING WELL (feet):	16 D: Y			RIAL CODE:		R VATION			ED SIS	SA EQ	MPLIN UIPME CODE	G NT	AMPLE PUMP FLOW RATE (ml/min)
UMP OR SEPTH IN UPLICA	TUBING WELL (feet): TE COLLECTE	16 D: Y		M ATE	RIAL CODE:		R VATION VOL N FIELD	FINAL pH	Filtration Eq	ED SIS	S.A.	MPLIN UIPME CODE	G NT	PUMP FLOW RATE
DAMP OR DEPTH IN DUPLICA	TUBING WELL (feet): TE COLLECTE PLE CONTAIN # CONTAINER	D: Y ER SPECIFIC	CATION	M ATE	SAMPI SERVATIVE	LE PRESE	R VATION VOL N FIELD		Filtration Eq	ED SIS OR OD	S.A.	WPLIN UIPME	G NT	PUMP FLOW RATE
DUMP OR DEPTH IN	TUBING WELL (feet): TE COLLECTE PLE CONTAIN # CONTAINER S	D: Y ER SPECIFIC MATERIA L OODE	VOLUME	PRES	SAMPI SERVATIVE USED	LE PRESE	R VATION VOL N FIELD		INTEND ANALY AND/ METH	ED SIS OR OD	S.A.	MPLIN UIPME CODE	G NT	PUMP FLOW RATE

STABILIZATION CRITERIA

REMARKS:

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: \pm 0.2 mg/L or \pm 10% Turbidity: \leq 10 NTU or \pm 10%

PE = Polyethylene;

CG = Clear Glass;

APP = After Peristaltic Pump; B = E RFPP = Reverse FlowPeristaltic Pump; PP = Polypropylene;

B = Bailer; BP = Bladder Pump; ESP = Electrump; SM = StrawMethod (Tubing Gravity Drain);

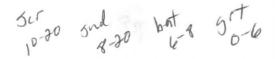
S = Silicone;

T = Teflon;

0 = Other (Specify)

ESP = Electric Submersible Pump;

0 = Other (Specify)



MATERIAL CODES: AG = Amber Glass;

SAMPLING EQUIPMENT CODES:

DIAMETER (inches): DEPTH: // feet to 2/ feet TO WATER (feet): OR BAILE	nce, SC	4 Floren	ROLINA	H CA	ouro SOUT	partant	OCATION:	l S	76	stel 1	- Con	ompany	lorriss Oil C	IAME:
VELL SAMPLING DATA SAMPLER (Inches) Total Well Depth (feet) Depth Feet to 2 feet To WARR (feet) N PURGE OR BAILE PURGE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION SAMPLE SAMPLING DETAIL SAMPL	-14	12-3-1	DATE:		nw16	8-1	0353	LE ID:	SAMP			W 16	14	/ELL NO
							DATA	RGING	PU					
	PUMP TYPE	PURGE PI	11.18						1	et):	/ell Depth (fee	Total W	2	
Feet	ER: KFPK	OR BAILE							FIL DEPTH	OTAL W	DI IIME = (T	1 WELL V	67	
TIME VOLUME (SECOND.) PURGED PURGED (C) PURGED PURGED (C) (gallons) (gall	7 gallons	foot =1.5	gallons/foo							2000 100 100			IOME I OROL	ILLE VO
SAMPLED BY (PRINT) SAMPLE CONTAINER SPECIFICATION SAMPLE CON	OR ODO	Δ COLO	IDITY \	Δ		Δ		Δ		Δ		VOLUME PURGED	PURGED	TIME
SAMPLING DATA SAMPLING DATA SAMPLING DATE SAMPLING DATE SAMPLING DATE SAMPLING DATE SAMPLING TIBED BY (PRINT) SAMPLER(S) SIGNATURE(S): SAMPLING DATE SAMPLING DATE SAMPLING TIBED BY (PRINT) SAMPLER COLLECTED: SAMPLE	Sim	- dry	H000=	_	1.8 -	6	142	-	7.2	_	21.0-			339
SAMPLING DATA SAMPLING DATA SAMPLING DATE SAMPLING DATE SAMPLING DATE SAMPLING TIBED YELLO CODE SAMPLE CONTAINER SPECIFICATION SAMPLE PRESERVATION SAMPLE PRESERVATION SAMPLING EQUIPMENT SAMPLING DATE SAMPLING EQUIPMENT SAMPLING DATE SAMPLIN	1	- de	304 -			4/	101	0.4	6-8	6.4	20.6	1.5	1.5	396
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	_		1	0	6011	-		_	103	HV	250ml	PE	1	
EMARKS:													s:	MARK

STABILIZATION CRITERIA

pH: \pm 0.2 units Temperature: \pm 0.2 °C Specific Conductance: \pm 5% Dissolved Oxygen: \pm 0.2 mg/L or \pm 10% Turbidity: \leq 10 NTU or \pm 10%

SCT 21 500 21 60 7 9 57