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RECEIVED
Main
MAR 28 2008

UNDERGROUND STORAGE
TANK PROGRAM

TIER II Assessment Plan

O.H. Meggs Exxon

UST Permit #: 03423

4925 Pamplico Hwy., Florence, SC

(843) 669-6818

PREPARED FOR:

**SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL**

MARCH 26, 2008

William Van Ward, P.E.

UST PROGRAM
DOCKETING # 1



Tier II Assessment Plan Underground Storage Tank Program

UST Permit #: 03423 County: Florence Facility Name: O.H.Meggs
Facility Address: 4925 Pamplico Hwy. City: Florence State: South Carolina Zipcode: 29505
Responsible Party: B.W Stokes Oil Company Address: P.O. Box 274
City: Florence State: South Carolina Zipcode: 29501
No. USTs: 4 Removed? _____ Replaced? _____
Current use of facility/property: _____ (date: MM/DD/YYYY) _____ (date: MM/DD/YYYY)

Gas station and convenience store located in rural area.

Current property owner name: B.W Stokes Oil Company Address: P.O. Box 274
City: Florence State: South Carolina Zipcode: 29501

Field Screening Methodology

Specify the field screening methodology to be used. The use of field screening methods to optimize the number and location of permanent wells is required.

We will need to clear some of the wooded property adjacent to and down gradient of site. A Geoprobe will be used to collect samples. A Foxboro OVA will be used for field screening. As we step out from the site, and OVA reading reach less than 2 ppm some samples will be sent off for rush BTEX analysis. This will help to expedite location of the monitoring wells.

Permanent Monitoring Wells (estimate number and total completed depth)

of shallow wells: 6 Total depth: 90'
of deep wells: 1 Total depth: 40'

Comments, if warranted:

This estimated time frame assumes we are allowed access to the adjacent sites.

Analyses

List the analytical parameters (e.g., BTEX, MTBE) and estimated number.

10 Soil samples [BTEX, Naphthalene, and PAH's]
11 Water samples [BTEX, Naphthalene, MTBE, EDB, LEAD, 1,2 DCA, Oxygenates and PAH's]
1 Water Supply sample [BTEX, Naphthalene, MTBE, EDB, LEAD, PAH's]

Implementation Schedule (Use MM/DD/YYYY format - Example 01/23/2004)

Start up date: 05/01/2008 Completion date: 07/01/2008
(MM/DD/YYYY) (MM/DD/YYYY)
Report submittal date: 08/01/2008 (MM/DD/YYYY)

UST Permit #: 03423

Facility Name: O.H.Meggs

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, UST Permit number, date, and a bar scale
Location of property lines	Streets or highways (indicate names and numbers)
Location of buildings	Identification of located buildings
Paved areas on or adjacent to site	Location of all present and former ASTs and USTs
Previous soil sampling locations	Underground and above ground utilities on or adjacent to site
Previous monitoring well locations	Location of any other potential receptor

Aquifer Characterization

Pump test: ☐ Slug tests: ☒ (check one and provide explanation for choice)

1 slug test - most economical

Small Volume Disposal Type and Method

Soil:

Containerized on site in 55 gallon drums. If disposal is required, it will be sent to G&K tank in Sumter.

Purge water:

Containerized on site in 55 gallon drums. If disposal is required, either it will be sent to G&K tank in Sumter or disposed of at Florence POTW per our approval letter..

Additional comments:

This estimated time frame assumes we are allowed access to the adjacent sites.



**ASSESSMENT COMPONENT COST AGREEMENT
SOUTH CAROLINA**

Department of Health and Environmental Control
Underground Storage Tank Program
State Underground Petroleum Environmental Response Bank Account

Facility Name O.H. Meggs

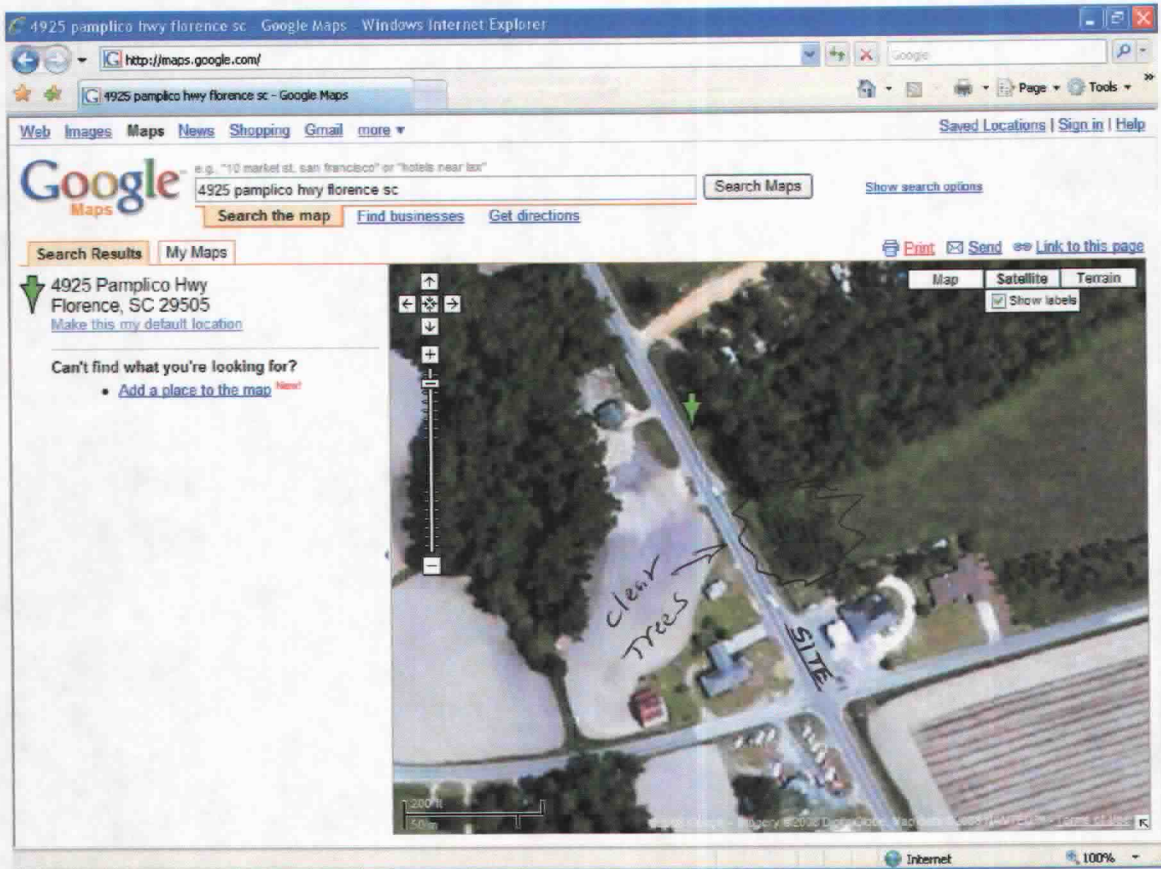
UST Permit # 3423

Cost Agreement # _____

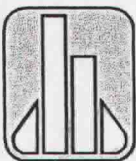
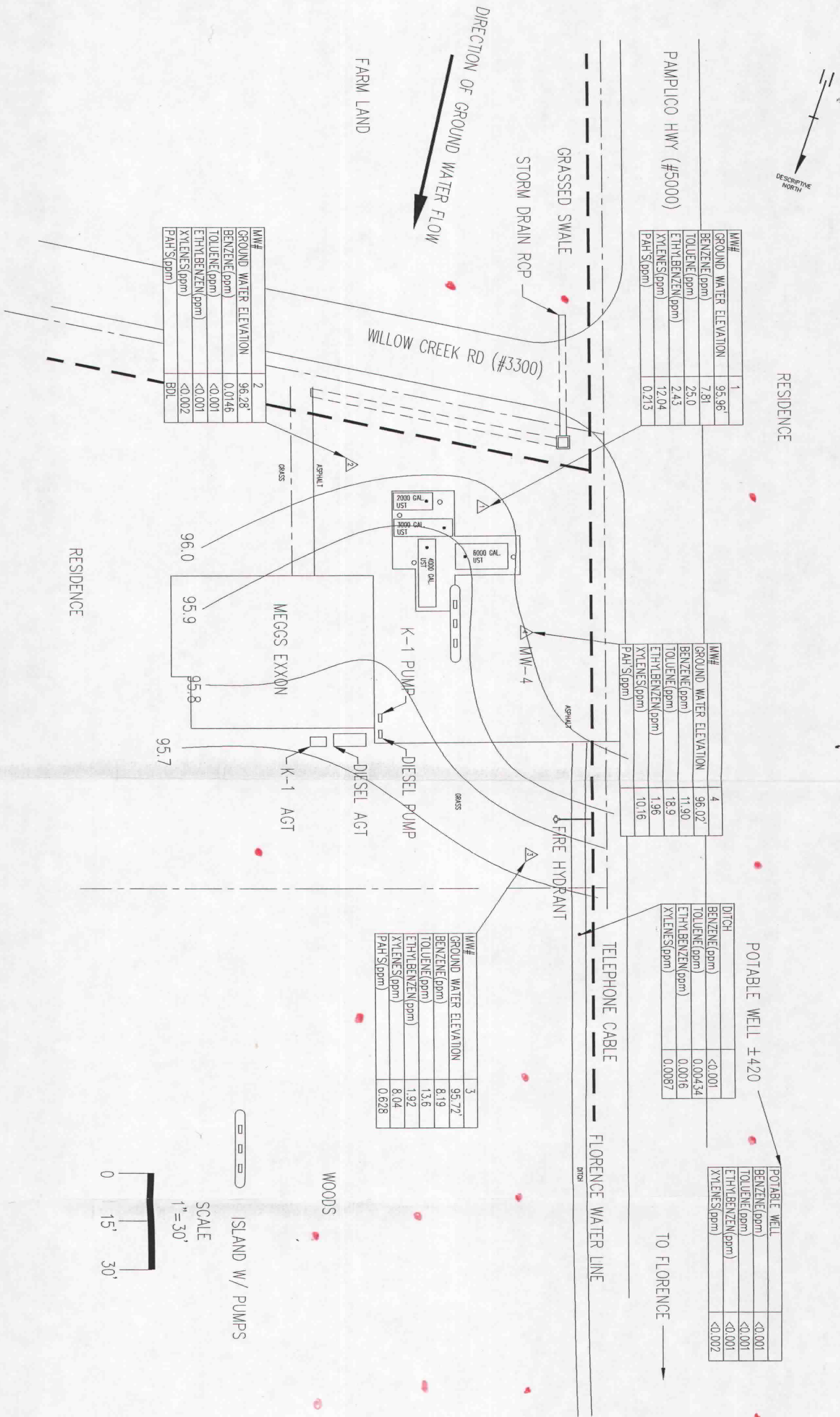
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. Plan*				
A. Plan Preparation	1	x	\$100.00	\$100.00
B. Tax Map		x	\$50.00	\$0.00
2. Receptor Survey *		x	\$500.00	\$0.00
3. Comprehensive Survey		x	\$1,000.00	\$0.00
4. Mob/Demob				
A. Equipment	3	x	\$550.00	\$1,650.00
B. Personnel	5	each x	\$275.00	\$1,375.00
C. Adverse Train Vehicle		x	\$550.00	\$0.00
5. Soil Borings (hand auger)*		feet x	\$14.00	\$0.00
6. Soil Borings (drilled) & Field Screening				
A. Standard	300	feet x	\$17.00	\$5,100.00
B. Alternative, on-site		feet x	\$12.50	\$0.00
C. Fractured Rock		feet x	\$27.50	\$0.00
7. Soil Leachability Model		each x	\$200.00	\$0.00
8. Abandonment*	300	feet x	\$5.00	\$1,500.00
9. Well Installation*				
A. Water Table (hand auger)		feet x	\$20.00	\$0.00
B. Water Table (drilled)	90	feet x	\$38.00	\$3,420.00
C. Telescoping	40	feet x	\$58.00	\$2,320.00
D. Rock Drilling		feet x	\$58.00	\$0.00
E. 2" Rock Coring		feet x	\$44.10	\$0.00
F. 4" Rock Coring		feet x	\$50.40	\$0.00
G. multi sampling port/screen		feet x	\$47.20	\$0.00
10. Groundwater Sample Collection				
A. Groundwater	11	samples x	\$55.00	\$605.00
B. Air Vapor		samples x	\$90.00	\$0.00
C. Water Supply	1	samples x	\$25.00	\$25.00
D. Groundwater No Purge		samples x	\$35.00	\$0.00
E. Gauge Well only		per well x	\$20.00	\$0.00
F. Sample Below Product		samples x	\$50.00	\$0.00
G. Passive Diffusion Bag		each x	\$40.00	\$0.00
11. Analyses-Groundwater	(see Analytical Methodology for site-specific analyses)			
A. BTEX+Naphth.+MTBE	12	samples x	\$100.00	\$1,200.00
B. Rush BTEX analysis	10	samples x	\$120.00	\$1,200.00
D. PAH's	12	samples x	\$120.00	\$1,440.00
E. Lead	0	samples x	\$20.00	\$0.00
F. EDB	12	samples x	\$55.00	\$660.00
G. 8 RCRA Metals		samples x	\$140.00	\$0.00
H.TPH (9070)		samples x	\$55.00	\$0.00
J. BOD		samples x	\$40.00	\$0.00
K. Nitrate	11	samples x	\$20.00	\$220.00
L. Sulfate	11	samples x	\$20.00	\$220.00
M. Ferrous Iron	11	samples x	\$20.00	\$220.00
N. Methane	11	samples x	\$110.00	\$1,210.00
O. Organic Lead		samples x	\$100.00	\$0.00
P. 8 Oxygenates	11	samples x	\$85.00	\$935.00
AA. Filtered Lead	12	samples x	\$46.00	\$552.00
BB. 1,2-DCA	11	samples x	\$10.75	\$118.25

11. Analyses-Soil					
Q. BTEX + Naphth.	10	samples x	\$100.00		\$1,000.00
R. PAH's	10	samples x	\$120.00		\$1,200.00
S. 8 RCRA Metals		samples x	\$150.00		\$0.00
T. TPH (9071)		samples x	\$60.00		\$0.00
U. TPH (3550B/8015B)		samples x	\$65.00		\$0.00
V. TPH (5030B/8015B)		samples x	\$65.00		\$0.00
W. Grain size/hydrometer		samples x	\$75.00		\$0.00
X. Total Organic Carbon		samples x	\$35.00		\$0.00
11. Analyses-Air					
Y. BTEX + Naphthalene		samples x	\$247.50		\$0.00
Z. Hydrocarbon Fuel Identification		samples x	\$620.00		\$0.00
12. Aquifer Characterization*					
A. Pumping Test		hours x	\$120.00		\$0.00
B. Slug Test*	1	tests x	\$150.00		\$150.00
C. Fractured Rock		tests x	\$500.00		\$0.00
13. Free Product Recovery Rate Test*		tests x	\$120.00		\$0.00
14. Fate/Transport Modeling					
A. Mathematical Model		each x	\$300.00		\$0.00
B. Computer Model		each x	\$500.00		\$0.00
15. Risk Evaluation					
A. Tier I Risk Evaluation		x	\$301.00		\$0.00
B. Tier II Risk Evaluation		x	\$500.00		\$0.00
16. Subsequent Survey*		1	x	\$260.00	\$260.00
17. Disposal*					
A. Wastewater					
1. Purging/Sampling	5	drums x	\$90.00		\$450.00
2. Pumping Test/EFR		gallons x	\$0.60		\$0.00
B. Free Product		drums x	\$110.00		\$0.00
C. Soil (Treatment/Disposal)	3	drum/ton x	\$50.00		\$150.00
18. Miscellaneous (attach receipts)					
Tree removal/site clearing	1	x	\$1,000.00		\$1,000.00
		x			\$0.00
		x			\$0.00
20. Tier I Assessment (Use DHEC 3665 form)					
21. IGWA (Use DHEC 3666 form)					
22. Corrective Action (Use DHEC 3667 form)					
23. EFR					
A. 8-hour Event*		each x	\$3,000.00		\$0.00
B. Additional Hour		per hour x	\$204.00		\$0.00
C. Off-gas treatment		per hour x	\$35.00		\$0.00
24. Granulated Activated Carbon (GAC) filter system installation & service:					
A. New GAC System Installation*		each x	\$2,500.00		\$0.00
B. Refurbished GAC Sys. Install*		each x	\$850.00		\$0.00
C. Filter replacement/removal*		each x	\$450.00		\$0.00
D. System removal, cleaning, & refurbishment*		each x	\$450.00		\$0.00
E. GAC System housing		each x	\$450.00		\$0.00
F. In-line particulate filter		each x	\$140.00		\$0.00
G. Additional piping & fittings		feet x	\$4.00		\$0.00
25. Well Repair					
A. Additional Copies of Report		each x	\$25.00		\$0.00
B. Repair 2x2 MW pad		each x	\$100.00		\$0.00
C. Repair 4x4 MW pad		each x	\$150.00		\$0.00
D. Repair well vault		each x	\$225.00		\$0.00
E. Replace well cover & gasket		each x	\$30.00		\$0.00
F. Replace well cover bolts		each x	\$10.00		\$0.00
G. Replace locking well cap & lock		each x	\$15.00		\$0.00
19. Report/Project Management and Coordination		15%	x	\$28,280.25	\$4,242.04
TOTAL					\$32,522.29

*The appropriate mobilization cost can be added to complete these tasks, as necessary



Geoprobe Locations



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WATER AND WASTEWATER OPERATIONS

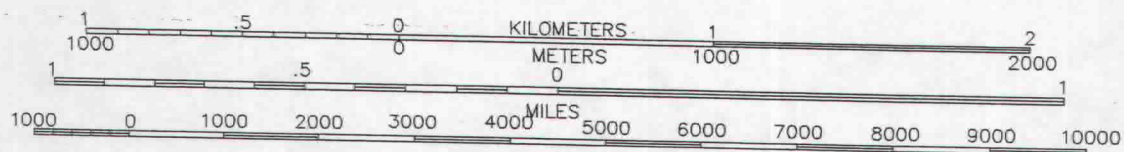
MEGG'S EXXON

GROUND WATER
FIGURE 5

2/14/03	0	FOR CONSTRUCTION	
DATE	REV #	REVISION	APPROVED
DESIGNED BY		CHECKED BY	
DRAWN BY		CHECKED BY	



SCALE : GRAPHIC



CONTOUR INTERVAL 2 METERS

EVERGREEN QUADRANGLE
SOUTH CAROLINA-FLORENCE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



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WATER AND WASTEWATER OPERATIONS



C. Earl Hunter, Commissioner

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

MAY 28 2008

B W STOKES OIL CO INC
PO BOX 274
FLORENCE SC 29503-0274

Re: Monitoring Well Installation and Groundwater Sampling Directive
O. H. Meggs Exxon, 4925 Pamplico Hwy, Florence, SC
UST Permit # 03423, CA# 32499; MWA# UMW-21750
Release #1 Reported February 26, 2002
Florence County

To Whom It May Concern:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) recognizes your commitment to continue work at this site utilizing Davis & Brown, Inc. on your behalf. The Program has reviewed the technical file and determined the next necessary scope of work to be a monitoring well installation (see enclosed map for location) and groundwater sampling event of all existing wells to obtain current data.

According to Program records, the release at the facility was reported to SCDHEC on February 26, 2002. In accordance with Section 44-2-40(D) of the SUPERB Act, B W Stokes Oil, Inc. is responsible for the first \$25,000 of site rehabilitation costs. To insure that expenditures made toward rehabilitation apply to the \$25,000 deductible, the Program has pre-approved costs for implementing the sampling event and assigned Cost Agreement number 32449 for the tracking. By law, the SUPERB Account cannot compensate any costs that are not pre-approved.

Cost Agreement # 32499 has been approved in the amount shown on the enclosed cost agreement for the sampling. Sample should be collected from all wells associated with the release (including the newly installed one) and the water supply well 420 feet from site and analyzed for BTEX+Naph.+MtBE, 1,2 DCA, EDB and lead in accordance with *Analytical Methodology* dated August 24, 2005. A copy of this publication is available on line at <http://www.scdhec.gov/eqc/admin/html/..%5C..%5Cust%5Cpubs%5CCanalmet.pdf>. Note that purging will not be required for existing monitoring wells where the water table is bracketed by the screen. Please have your contractor request low detection limits/reporting levels for all analyses. The use of "J" values is encouraged. Note that the Program cannot make a decision based upon a non-detect analysis where the detection limit/reporting level exceeds the risk-based screening level (RBSL). In this case, payment for the analysis may be denied. The Assessment report submitted at the completion of these activities should include the following:

- A narrative portion documenting current site conditions and noting the names of field personnel, date, time, ambient air temperature, and general weather conditions during the sampling event. The report shall also contain well purging data, pH, specific conductivity, water temperature, PID readings (where applicable) and turbidity comments.
- Well measurements (groundwater elevations, depth to groundwater, measurable free product thickness (where applicable), total well depth, screened interval) and groundwater laboratory analytical data for all monitoring wells associated with the site, unless otherwise directed by the Program, shall be presented in tabular format.
- A groundwater elevation contour map of the site based on current groundwater potentiometric data.
- A CoC map based on current groundwater laboratory analytical data. The groundwater data should be adjacent to the relevant monitoring well.

UST DOCKET

3/26/08

- Boring Log and Well Log (SCDHEC form 1903) signed by a SC Certified well driller for the new well.
- The report must be signed and sealed by a professional geologist or engineer registered in the State of South Carolina.

The Assessment report and SUPERB invoice are due within 60 days of the date of this correspondence. Upon receipt of the report and invoice with all necessary supporting documentation, up to the amount indicated on the enclosed cost agreement will be applied towards the \$25,000 deductible. Suitable supporting documentation can be a copy of a cancelled check (front and back) or notarized statement verifying payments to the contractor. Please note that if an invoice is not received within 120 days of this correspondence, the referenced cost agreement will be closed and any eligible costs will not be applied to your deductible.

Please be advised if the time frame exceeds 45 days between the date when the groundwater samples are collected and the date the report of findings is received, the analytical data will not be considered current and your contractor will not be reimbursed for a personnel mobilization to collect the groundwater samples, sample collection costs, laboratory analyses, or associated disposal costs.

Please note that in accordance with R.61-92, Subpart H, Section 280.114, you are required to notify the Program by certified mail within ten (10) days of commencing a voluntary or involuntary proceeding in bankruptcy. State law also requires that an owner/operator or guarantor that files for bankruptcy protection must immediately submit appropriate forms documenting that entity's ability to demonstrate financial responsibility.

Sections 44-2-110(4) and 44-2-130 of the SUPERB Statute state that no costs will be allowed unless prior approval from the Program is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Program for the cost to be paid. The SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with established criteria. Further, SCDHEC reserves the right to question and/or reject costs if deemed unreasonable, and the right to audit project records at any time during the project or after completion of work.

The Program grants pre-approval for transportation of virgin petroleum contaminated soil and groundwater from the referenced site to a permitted treatment facility. The contaminated soil or groundwater must be properly stored in labeled containers or covered with plastic as appropriate. The contaminated soil and/or groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A 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 final report. If the levels of petroleum contamination based on laboratory analysis are below risk-based screening levels, please contact the project manager for approval to dispose of soil and/or groundwater on site. The SUPERB Account will not compensate for transportation or treatment of clean soil and/or groundwater.

On all correspondence concerning this site, please reference **UST Permit # 03423**. If there are any questions concerning this project, please contact me at (803) 896-6664. I can also be reached by email at milenkmp@dhec.sc.gov or by fax at (803) 896-6245.

Sincerely,



Maia Milenkova, Hydrogeologist
Assessment Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

enc: Approved Cost Agreement
Monitoring Well Approval
Site map

cc: Technical File (w/enc)
Mr. Van Ward, Davis & Brown, PO Box 15038, Quinby, SC 29506 (w/enc)

SCDHEC/UST/05/21/08/MPM



C. Earl Hunter, Commissioner

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

Monitoring Well Approval

Approval is hereby granted to: Davis & Brown, Inc.
(On behalf of): B W Stokes Oil Co., Inc.
Facility: O H Meggs Exxon, 4925 Pamplico Hwy., Florence, SC
UST Permit Number: 03423
County: Florence

This approval is for the installation of one groundwater monitoring well. The monitoring well is to be installed in the approved location. Monitoring well is 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:

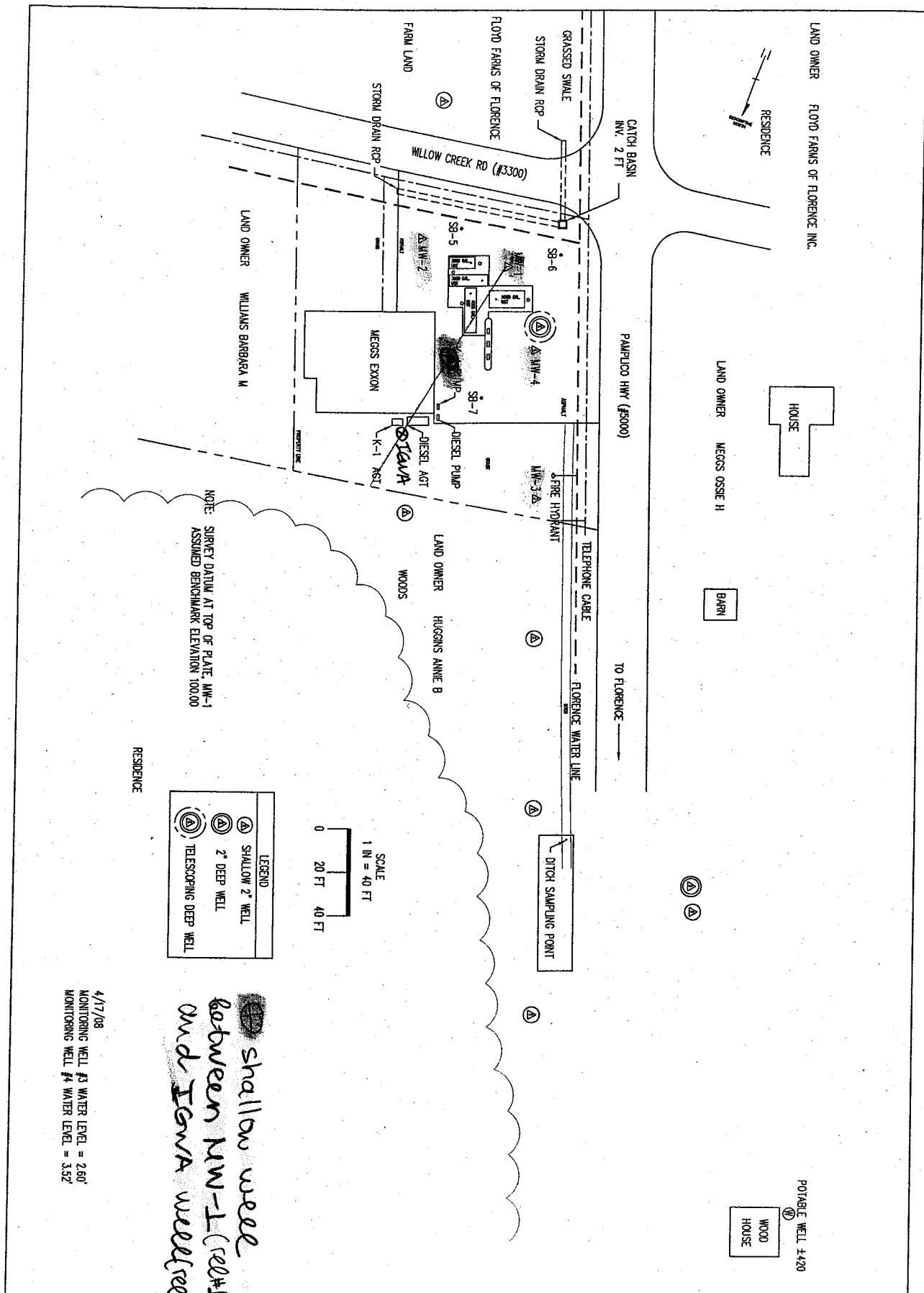
1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. 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 Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department 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. Departmental approval 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 21, 2008

Approval #: UMW-21749

Maia Milenkova, Hydrogeologist
Assessment Section
Division of Assessment and Corrective Action
Bureau of Land and Waste Management



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WATER AND WASTEWATER OPERATIONS

MEGG'S EXXON
PROPOSED WELL LOCATIONS
PERMIT # 03423

DATE	REV #	REVISION	APPROVED
DESIGNED BY		CHECKED BY	
DRAWN BY		CHECKED BY	

Approved Cost Agreement 32499

Facility: 03423 O H MEGGS

MILENKMP

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
04 MOB/DEMOB					
		A EQUIPMENT	1.0000	550.00	550.00
		B PERSONNEL	3.0000	275.00	825.00
09 WELL INSTALLATION					
		B WATER TABLE (DRILLED)	15.0000	38.00	570.00
10 SAMPLE COLLECTION					
		A GROUND WATER	1.0000	55.00	55.00
		C WATER SUPPLY	1.0000	25.00	25.00
		D GROUNDWATER NO-PURGE	4.0000	35.00	140.00
11 ANALYSES					
	GW GROUNDWATER	A BTEX+NAPTH+MTBE	6.0000	100.00	600.00
		BB 1,2-DCA	6.0000	10.75	64.50
		E LEAD	6.0000	20.00	120.00
		F EDB	6.0000	55.00	330.00
16 SUBSEQUENT SURVEY					
		SUBSEQUENT SURVEY	1.0000	260.00	260.00
17 DISPOSAL					
		A1 WASTEWATER - PURGING/SAMPLING	1.0000	90.00	90.00
		C SOIL (TREATMENT/DISPOSAL)	1.0000	50.00	50.00
19 RPT/PROJECT MNGT & COORDINATIO					
		PCT PERCENT	0.1500	3,679.50	551.93
Total Amount					4,231.43



C. Earl Hunter, Commissioner

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

MAY 28 2006

B W STOKES OIL CO INC
PO BOX 274
FLORENCE SC 29503-0274

Re: Initial Groundwater Assessment (IGWA) Directive
O. H. Meggs Exxon, 4925 Pamplico Hwy, Florence, SC
UST Permit # 03423, CA# 32500; MWA# UMW- 21750
Release # 2 Reported September 17, 2002
Closure report May 20, 2002
Florence County

To Whom It May Concern:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced report. The report indicates that chemicals of concern are present in the soil in concentrations that exceed Risk-based Screening Levels (RBSL). To determine what risk the chemicals 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 Initial Groundwater Assessment (IGWA) document is necessary. The IGWA document may be obtained from our website at: <http://www.scdhec.gov/EQC/admin/html/eqforms.html#UST>. IGWA well should be placed in the vicinity of the former kerosene tank (see enclosed map).

According to Program records, the release at the facility was reported to SCDHEC on September 17, 2002. In accordance with Section 44-2-40(D) of the SUPERB Act, B W Stokes Oil, Inc. is responsible for the first \$25,000 of site rehabilitation costs. To insure that expenditures made toward rehabilitation apply to the \$25,000 deductible, the Program has pre-approved costs for implementing the IGWA and assigned Cost agreement # 32500 for tracking. By law, the SUPERB Account cannot compensate any costs that are not pre-approved.

The Program has pre-approved a total of \$1,545.00 for implementation of the IGWA. The total includes costs for completion of up to 25 feet of permanent monitoring well footage. Additional monitoring well footage can be billed at the appropriate SUPERB allowable component rate, provided that the cost is pre-approved by the Program. **Please note that samples for EDB (by EPA method 8011) and lead are now required as part of all initial assessment activities as directed in the revised SUPERB Account Allowable Costs document issued on February 1, 2006.** Additional costs for the analyses are reflected in the revised IGWA rate. Also, if any drinking water wells are located within 250 feet of the UST area, a water sample shall be obtained from the well(s) and analyzed for the appropriate parameters. Upon receipt of a report of findings, and a completed IGWA invoice with all necessary supporting documentation, up to \$1,545.00 will be applied towards the \$25,000 deductible provided that the release is qualified for SUPERB. The report and invoice should be submitted to the Program within

90 days of the date of this correspondence. Please be certain that the IGWA report is submitted in the format that corresponds to the SCDHEC Guidance document.

Please note that in accordance with R.61-92, Subpart H, Section 280.114, you are required to notify the Program by certified mail within ten (10) days of commencing a voluntary or involuntary proceeding in bankruptcy. State law also requires that an owner/operator or guarantor that files for bankruptcy protection must immediately submit appropriate forms documenting that entity's ability to demonstrate financial responsibility.

Implementation of the IGWA may proceed immediately upon receipt of this correspondence. Approval to install one permanent monitoring well is enclosed. Please note that applicable South Carolina certification requirements regarding laboratory services, well installation, and report preparation must be satisfied. Also note that only EPA Method 8260B will be accepted for analysis of volatile organic hydrocarbons. Any site rehabilitation activity associated with the UST release must be performed by an SCDHEC-certified site rehabilitation contractor as required by R.61-98.

The Department 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. IDW should not be stored on-site longer than ninety (90) days. A 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 on site. 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 # 03423. Should you have any questions regarding this correspondence, please feel free to contact me at (803) 896-6664.

Sincerely,



Maia Milenkova, Hydrogeologist
Assessment Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

enc: Approved cost agreement (ACA)
Monitoring well approval (MWA)
Site map

cc: Technical File (w/enc)
Mr. Van Ward, Davis & Brown, PO Box 15038, Quinby, SC 29506 (w/enc)



C. Earl Hunter, Commissioner

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

Monitoring Well Approval

Approval is hereby granted to: Davis & Brown, Inc.
(On behalf of): B W Stokes Oil Co., Inc.
Facility: O H Meggs Exxon, 4925 Pamplico Hwy., Florence, SC
UST Permit Number: 03423
County: Florence

This approval is for the installation of one groundwater monitoring well. The monitoring well is to be installed in the approved location. Monitoring well is 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 Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. 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 Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department 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. Departmental approval 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 21, 2008

Approval #: UMW-21750

Maia Milenkova, Hydrogeologist
Assessment Section
Division of Assessment and Corrective Action
Bureau of Land and Waste Management

Approved Cost Agreement 32500

Facility: 03423 O H MEGGS

MILENKMP

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
21 INITIAL GROUNDWATER ASSESSMENT		IGWA	1.0000	1,545.00	1,545.00
Total Amount					1,545.00



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SE

**UNDERGROUND
TANK**

Monitoring Well Installation and Groundwater Sampling

O.H. Meggs Exxon

UST Permit #: 03423

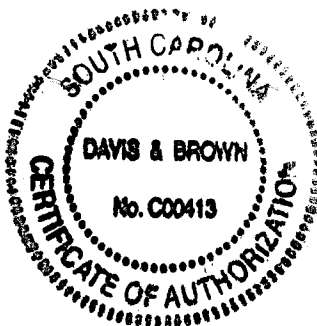
4925 Pamplico Hwy., Florence, SC

(843) 669-6818

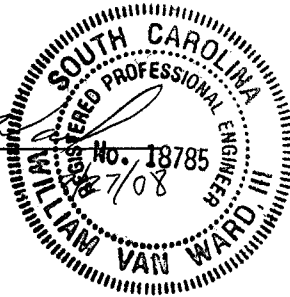
PREPARED FOR:

**SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL**

AUGUST 27, 2008



William Van Ward
William Van Ward, P.E.



UST DOCKET

Steel

1 Introduction and Site History

O.H. Meggs Exxon (ID# 03423) is located at 4925 Pamplico Hwy. in Florence, SC. A Tier I assessment report was submitted in February of 2003. Since 2 releases have been documented in SCDHEC's file, this effort will help determine if the contamination from release #1 is the primary source of contamination at this site. Release #1 was from a gasoline source and release #2 was from a suspected diesel fuel source.

2 Scope of Work

This is a monitoring well installation and groundwater sampling directive per SCDHEC letter dated May 28, 2008. Cost agreement # 32499 has been approved for installing 1 groundwater monitoring well and sample collection of wells associated with release #1. The analysis of each well should include BTEX+Naphth.+MtBE, 1,2 DCA, EDB, and lead.

3 Ground Water Monitoring Well Installation

On June 26, 2008 ARM Environmental installed a 2-inch diameter, schedule 40, flush threaded PVC well casing with 0.01-inch opening, slotted schedule 40 PVC well screen attached. The Type II monitor well was constructed with the top of the well screen above the water table to allow for detection of potential free-phase liquid hydrocarbon. A uniformly graded silica filter pack was installed in the annular space from total depth to approximately 2 feet above the top of the screen. The filter pack was followed by 0.5 feet of bentonite pellets, which were hydrated. The remainder of the boring was grouted to land surface. The well was completed with water tight, locking PVC cap, protected by a flush finished concrete pad and traffic-rated manhole with a bolt down cover. This well was designated as MW-6, and was located between MW-1 and MW-5. The purpose of this monitor well was to have a data point between the area of release #1 and release #2. We also, installed a new IGWA well (MW-5) in the area of release #2. Since MW-1 has the highest level of contaminants in the ground water and MW-5 and MW-6 are located in a straight line down gradient of MW-1, the evaluation of this data will help to determine if release #2 actually caused ground water contamination. Monitoring well development and boring logs and construction details are presented in Appendix A. In addition, historical water level data has been tabulated and included in Appendix A.

On July 16, 2008 we developed MW-5 and MW-6 using a peristaltic pump. The development water was containerized and disposed of at a permitted facility. See disposal manifest located in Appendix E.

4 Ground Water Sampling and Analysis

Jody Ricks with Davis & Brown obtained ground water samples from monitoring wells MW-1 through MW-6 on July 24, 2008. The weather was sunny and 90 F. The depth to ground water measurements were used to construct the potentiometric map included as Figure 1. As indicated in Figure 1, the ground water flow is from south to north at this site.

A new, disposable, polyethylene bailer was used for the collection of each ground water sample. Groundwater samples were collected from MW-1 through MW-6 using "no-purge" methodology. Field measurements obtained during the sampling process for the monitoring wells are presented in Appendix B.

5 Ground Water Analytical Results

The laboratory analytical reports from the July 24, 2008 sampling event are presented in Appendix C. The data is also presented in historical tabular form in Appendix D. Benzene was detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1, MW-4, MW-5, and MW-6. MW-1 had 14.1 mg/L of benzene, the next down gradient well, MW-6, had 2.87 mg/L of benzene and MW-5 had a benzene concentration of 0.686 mg/L.

Naphthalene was detected at concentrations above its RBSL in samples collected from wells MW-1, MW-4, MW-5, and MW-6. MW-1 was diluted so that the naphthalene level reported was < 10 mg/L. MW-6 had 0.65 mg/L naphthalene and MW-5 had 0.255 mg/L naphthalene.

MTBE was detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1, MW-4, MW-5, and MW-6. MW-1 had 37.8 mg/L of MTBE. MW-4 had 11.6 mg/L of MTBE. MW-6 had 0.69 mg/L MTBE and MW-5 had 0.83 mg/L MTBE.

Toluene and Xylene were detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1, MW-3, MW-4, MW-5, and MW-6.

Ethylbenzene was detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1, MW-3, MW-4, and MW-6. MW-1, MW-3, and MW-4 were diluted and had reporting limits higher than RBSLs.

EDB was detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1 and MW-4.

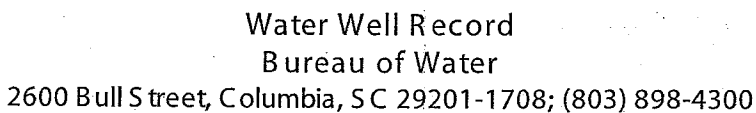
1,2 DCA was not detected in any of the ground water samples. A chemical of concern map is included as Figure 2.

6 Conclusions

- Groundwater flow is in the north direction at this site.
- The water supply well located 420 feet from site has been abandoned. The house has been removed from the property and there is no indication of the well.
- Benzene and MTBE were detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1, MW-4, MW-5, and MW-6. Naphthalene was detected at concentrations above its RBSL in samples collected from wells MW-1, MW-4, MW-5, and MW-6. Toluene and Xylene were detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1, MW-3, MW-4, MW-5, and MW-6. EDB was detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1 and MW-4.
- The data from the IGWA well MW-5 indicates that gasoline is the contaminant in this well and that its relative petroleum levels are lower than the two up gradient wells (MW-1 and MW-6) for all contaminants. Naphthalene is a good indicator for diesel fuel contamination. The naphthalene concentration in MW-5 is 0.255 mg/L and the next up gradient well (MW-6) has a naphthalene concentration of 0.65 mg/L. Therefore, we feel that only one release has occurred at this site.

The vertical and horizontal extent of contamination has not been defined at this site. Additional assessment is required to completely delineate the petroleum plume.

APPENDIX A

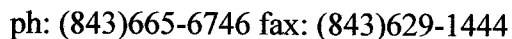


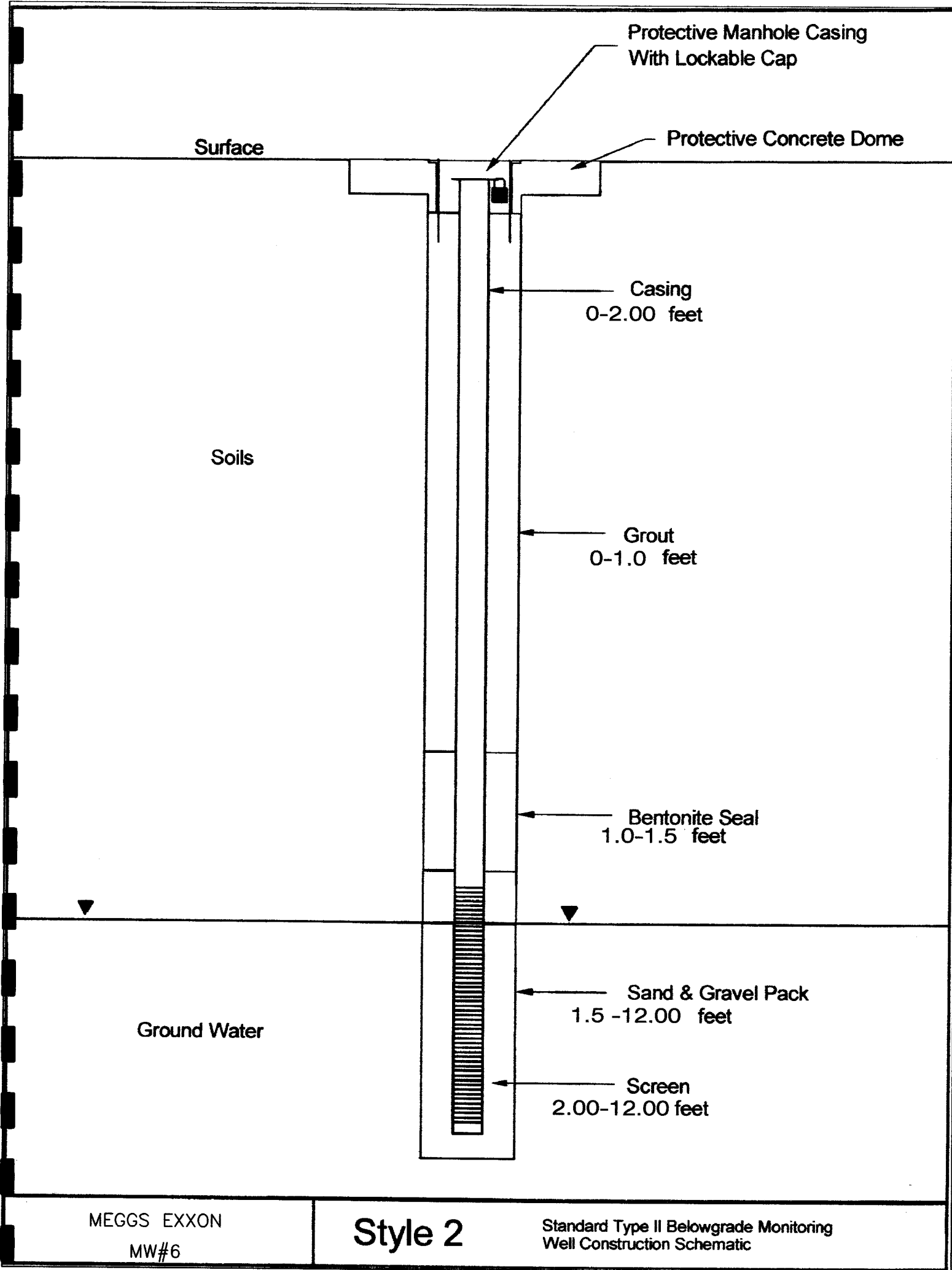
Name: BW STOKES OTC
Address: Po Box 274
City: FLORENCE State: SC Zip: 29503
Telephone: Work: _____ Home: _____

Name: Meggy Eiken
 Street Address: 4925 Pauplico Hwy
 City: Pauplico Zip: _____
 Latitude: _____ Longitude: _____

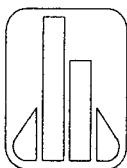
Depth to
Bottom of
Stratum

Date: 7-6-2008
(MM/DD/YYYY)

[illegible]



WELL DEVELOPMENT FIELD DATA INFORMATION FOR GROUND WATER SAMPLING



DAVIS & BROWN

P. O. Box 15038
Quincy, SC 29506
843 665-6746
843 629-1444 Fax

FACILITY NAME OH MEGGS EXXON
LOCATION FLORENCE SC
SITE ID # 03423

DATE: 7/16/08

FIELD PERSONNEL JOEY RICKS

WEATHER CONDITIONS Sunny / Hot

AMBIENT AIR TEMPERATURE 85°F

WELL # 5

WELL DIAMETER(INCH) 2

DEPTH TO GROUND WATER(FT) 6.34

TOTAL DEPTH OF WELL(FT) 12.00

GALLONS TO BE PURGED _____

PURGED GALLONS	PH	TEMP C	COND. U/CM	TURB.	TIME
5	5.92	18.9	196	3	1201
7	5.85	19.2	193	2	1205

TURBIDITY (1-NONE) (2-FAINT) (3-MODERATE) (4-STRONG)

WELL # _____

WELL DIAMETER(INCH) _____

DEPTH TO GROUND WATER(FT) _____

TOTAL DEPTH OF WELL(FT) _____

GALLONS TO BE PURGED _____

PURGED GALLONS	PH	TEMP C	COND. U/CM	TURB.	TIME

TURBIDITY (1-NONE) (2-FAINT) (3-MODERATE) (4-STRONG)

WELL # 6

WELL DIAMETER(INCH) 2

DEPTH TO GROUND WATER(FT) 6.97

TOTAL DEPTH OF WELL(FT) 12.00

GALLONS TO BE PURGED _____

PURGED GALLONS	PH	TEMP C	COND. U/CM	TURB.	TIME
5	5.40	19.0	198	3	1138
7	5.33	19.4	193	2	1145

TURBIDITY (1-NONE) (2-FAINT) (3-MODERATE) (4-STRONG)

WELL # _____

WELL DIAMETER(INCH) _____

DEPTH TO GROUND WATER(FT) _____

TOTAL DEPTH OF WELL(FT) _____

GALLONS TO BE PURGED _____

PURGED GALLONS	PH	TEMP C	COND. U/CM	TURB.	TIME

TURBIDITY (1-NONE) (2-FAINT) (3-MODERATE) (4-STRONG)

**OH MEGGS EXXON
POTENTIOMETRIC DATA
SITE # 03423**

WELL #	CAS. ELEV.	GW DEPTH	GW ELEV.	GW DEPTH	GW ELEV.	WELL DEPTH	SCREENED INT.
DATE		1103	1103	7108	7108		
1	99.56	3.60	95.96	6.10	93.46	15.00	5.00-15.00'
2	100.18	3.90	96.28	6.80	93.38	15.00	5.00-15.00'
3	97.74	2.02	95.72	4.21	93.53	12.00	2.00-12.00'
4	98.85	2.93	95.92	5.52	93.33	13.00	3.00-13.00'
5	99.58			6.36	93.22	12.00	2.00-12.00'
6	100.37			7.00	93.37	12.00	2.00-12.00'

APPENDIX B

OH MEGGS EXXON
HISTORICAL FIELD DATA
UST # 03423

MW #	1	1	1	2	2	3	3	4	4	5	6
DATE	7\02	1\03	7\08	1\03	7\08	1\03	7\08	1\03	7\08	7\08	7\08
PH	4.51	4.92	4.25	3.73	4.43	5.62	5.33	4.67	4.66	6.22	5.33
TEMP	28.1	18.2	27.6	19.5	26.7	17.6	25.8	18.1	27.6	24.6	25.2
COND	78.90	60.00	68.60	75.90	56.60	139.40	128.70	74.00	92.10	398.20	128.90
DO	1.50	1.05	0.84	1.70	2.23	1.60	1	2.40	1.17	0.98	1.28
FE		2.54		<0.03		>3.30		1.43			

SITE CONDITIONS: CONVIENCE STORE IN RURAL AREA

FIELD PERSON: JODY RICKS

DATE: 7/24/08 AFTERNOON

WEATHER: SUNNY/HOT 90 F

NOTE: WELLS DID NOT NEED TO BE PURGED

APPENDIX C

Davis & Brown

PO Box 15038
Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 25-Jul-08

Contact:

Report Date: 14-Aug-08

Sample Date: 24-Jul-08

Approved By:

Van Ward

SDG #: SDG-061833

Van Ward

Lab Sample ID: LSID-136745

Lab Director

Sample ID: MW 1

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
1,2-Dichloroethane	<10.0	10	ppm	8260B	S11	8/3/2008	6:40	ADI
Benzene	14.1	10	mg/L	EPA 8260	S11	8/3/2008	6:40	ADI
BTEX, Total	81.1	50	mg/L	EPA 8260		8/3/2008		WWS
Ethylbenzene	<10.0	10	mg/L	EPA 8260	S11	8/3/2008	9:40	ADI
Methyl tert-Butyl Ether	37.8	10	mg/L	EPA 8260	S11	8/3/2008	6:40	ADI
Napthalene	<10.0	10	mg/L	EPA 8260	S11	8/3/2008	6:40	ADI
Toluene	46.5	10	mg/L	EPA 8260	S11	8/3/2008	9:40	ADI
Xylenes, Total	20.5	20	mg/L	EPA 8260	S11	8/3/2008	9:40	ADI
EDB	0.183	0.01	ug/L	SW 846 8011	S11	8/2/2008	16:12	TLS
Lead, Dissolved	0.005	0.001	mg/L	SW846 6010B		7/29/2008	9:26	JR

Davis & Brown

PO Box 15038
Quincy, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 25-Jul-08

Contact:

Report Date: 14-Aug-08

Sample Date: 24-Jul-08

Approved By: Van Ward

SDG #: SDG-061833

Van Ward

Lab Sample ID: LSID-136746

Lab Director

Sample ID: MW 2

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	8/3/2008	7:02	ADI
Benzene	<0.005	0.005	mg/L	EPA 8260	S11	8/3/2008	7:02	ADI
BTEX, Total	<0.025	0.025	mg/L	EPA 8260		8/3/2008		WSF
Ethylbenzene	<0.005	0.005	mg/L	EPA 8260	S11	8/3/2008	7:02	ADI
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	8/3/2008	7:02	ADI
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	8/3/2008	7:02	ADI
Toluene	<0.005	0.005	mg/L	EPA 8260	S11	8/3/2008	7:02	ADI
Xylenes, Total	<0.010	0.01	mg/L	EPA 8260	S11	8/3/2008	7:02	ADI
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	8/2/2008	16:33	TLS
Lead, Dissolved	<0.001	0.001	mg/L	SW846 6010B		7/29/2008	9:26	JR

Davis & Brown

PO Box 15038
Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 25-Jul-08

Contact:

Report Date: 14-Aug-08

Sample Date: 24-Jul-08

SDG #: SDG-061833

Approved By:

Van Ward

Lab Sample ID: LSID-136747

Van Ward

Sample ID: MW 3

Lab Director

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
1,2-Dichloroethane	<2.50	2.5	ppm	8260B	S11	8/3/2008	7:24	ADI
Benzene	<2.50	2.5	mg/L	EPA 8260	S11	8/3/2008	7:24	ADI
BTEX, Total	34.4	12.5	mg/L	EPA 8260		8/3/2008		WSF
Ethylbenzene	<2.5	2.5	mg/L	EPA 8260	S11	8/3/2008	7:24	ADI
Methyl tert-Butyl Ether	<2.50	2.5	mg/L	EPA 8260	S11	8/3/2008	7:24	ADI
Napthalene	<2.50	2.5	mg/L	EPA 8260	S11	8/3/2008	7:24	ADI
Toluene	18.2	2.5	mg/L	EPA 8260	S11	8/3/2008	7:24	ADI
Xylenes, Total	16.2	5	mg/L	EPA 8260	S11	8/3/2008	7:24	ADI
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	8/2/2008	16:54	TLS
Lead, Dissolved	0.001	0.001	mg/L	SW846 6010B		7/29/2008	9:26	JR

Davis & Brown

PO Box 15038
Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 25-Jul-08

Contact:

Report Date: 14-Aug-08

Sample Date: 24-Jul-08

SDG #: SDG-061833

Approved By:

Van Ward

Lab Sample ID: LSID-136748

Van Ward

Sample ID: MW 4

Lab Director

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
1,2-Dichloroethane	<5.00	5	ppm	8260B	S11	8/3/2008	7:46	ADI
Benzene	13.9	5	mg/L	EPA 8260	S11	8/3/2008	7:46	ADI
BTEX, Total	69.6	25	mg/L	EPA 8260		8/3/2008		WSF
Ethylbenzene	<5.00	5	mg/L	EPA 8260	S11	8/3/2008	7:46	ADI
Methyl tert-Butyl Ether	11.6	5	mg/L	EPA 8260	S11	8/3/2008	7:46	ADI
Napthalene	<5.00	5	mg/L	EPA 8260	S11	8/3/2008	7:46	ADI
Toluene	40.4	5	mg/L	EPA 8260	S11	8/3/2008	7:46	ADI
Xylenes, Total	15.3	10	mg/L	EPA 8260	S11	8/3/2008	7:46	ADI
EDB	0.105	0.01	ug/L	SW 846 8011	S11	8/2/2008	17:16	TLS
Lead, Dissolved	<0.001	0.001	mg/L	SW846 6010B		7/29/2008	9:26	JR

Davis & Brown

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Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 25-Jul-08

Contact:

Report Date: 14-Aug-08

Sample Date: 24-Jul-08

SDG #: SDG-061833

Approved By:

Van Ward

Lab Sample ID: LSID-136749

Van Ward

Sample ID: MW 5(IGWA)

Lab Director

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
1,2-Dichloroethane	<0.025	0.25	ppm	8260B	S11	8/3/2008	8:11	ADI
Benzene	0.686	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
BTEX, Total	0.9539	0.125	mg/L	EPA 8260		8/3/2008		WSF
Ethylbenzene	0.118	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Methyl tert-Butyl Ether	0.828	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Napthalene	0.255	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Toluene	0.0309	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Xylenes, Total	0.119	0.05	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Polynuclear Aromatic Hydc.	0.226		ppm	EPA 8270C	S11	8/1/2008	13:02	KNB
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	8/2/2008	17:37	TLS
Lead, Dissolved	<0.001	0.001	mg/L	SW846 6010B		7/29/2008	9:26	JR

Davis & Brown

PO Box 15038
Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 25-Jul-08

Contact:

Report Date: 14-Aug-08

Sample Date: 24-Jul-08

SDG #: SDG-061833

Approved By:

Van Ward

Lab Sample ID: LSID-136750

Van Ward

Sample ID: MW 6

Lab Director

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
1,2-Dichloroethane	<0.250	0.25	ppm	8260B	S11	8/3/2008	8:33	ADI
Benzene	2.87	0.25	mg/L	EPA 8260	S11	8/3/2008	8:33	ADI
BTEX, Total	16.39	1.25	mg/L	EPA 8260		8/3/2008		WSF
Ethylbenzene	2.05	0.25	mg/L	EPA 8260	S11	8/3/2008	8:33	ADI
Methyl tert-Butyl Ether	0.690	0.25	mg/L	EPA 8260	S11	8/3/2008	8:33	ADI
Napthalene	0.650	0.25	mg/L	EPA 8260	S11	8/3/2008	8:33	ADI
Toluene	3.76	0.25	mg/L	EPA 8260	S11	8/3/2008	8:33	ADI
Xylenes, Total	7.71	0.5	mg/L	EPA 8260	S11	8/3/2008	8:33	ADI
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	8/2/2008	17:58	TLS
Lead, Dissolved	<0.001	0.001	mg/L	SW846 6010B		7/29/2008	9:26	JR

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293102	136745	Water	07/24/2008 14:45	07/29/2008 08:49

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2000	08/03/2008 06:40	ADI	394317

CAS#	Parameter	Result	RDL	REG LIMIT	Units
107-06-2	1,2-Dichloroethane	ND	10000		ug/L
71-43-2	Benzene	14100	10000		ug/L
100-41-4	Ethylbenzene	ND	10000		ug/L
91-20-3	Naphthalene	ND	10000		ug/L
108-88-3	Toluene	46500	10000		ug/L
1330-20-7	Xylene (total)	20500	20000		ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	37800	10000		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100000	113000	ug/L	113	78 - 130
1868-53-7	Dibromofluoromethane	100000	103000	ug/L	103	77 - 127
2037-26-5	Toluene d8	100000	102000	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	100000	109000	ug/L	109	71 - 127

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
08/01/2008 15:00	394170	SW-846 8011	1	08/02/2008 16:12	TLS	394366

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-93-4	1,2-Dibromoethane	0.183	0.010		ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293103	136746	Water	07/24/2008 15:00	07/29/2008 08:49

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	08/03/2008 07:02	ADI	394317

CAS#	Parameter	Result	RDL	REG LIMIT	Units
107-06-2	1,2-Dichloroethane	ND	5.00		ug/L
71-43-2	Benzene	ND	5.00		ug/L
100-41-4	Ethylbenzene	ND	5.00		ug/L
91-20-3	Naphthalene	ND	5.00		ug/L
108-88-3	Toluene	ND	5.00		ug/L
1330-20-7	Xylene (total)	ND	10.0		ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.00		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	54.4	ug/L	109	78 - 130
1868-53-7	Dibromofluoromethane	50	53.4	ug/L	107	77 - 127
2037-26-5	Toluene d8	50	50.8	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	54.7	ug/L	109	71 - 127

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
08/01/2008 15:00	394170	SW-846 8011	1	08/02/2008 16:33	TLS	394366

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-93-4	1,2-Dibromoethane	ND	0.010		ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293104	136747	Water	07/24/2008 13:55	07/29/2008 08:49

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	08/03/2008 07:24	ADI	394317

CAS#	Parameter	Result	RDL	REG LIMIT	Units
107-06-2	1,2-Dichloroethane	ND	2500		ug/L
71-43-2	Benzene	ND	2500		ug/L
100-41-4	Ethylbenzene	ND	2500		ug/L
91-20-3	Naphthalene	ND	2500		ug/L
108-88-3	Toluene	18200	2500		ug/L
1330-20-7	Xylene (total)	16200	5000		ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	2500		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	25000	30100	ug/L	120	78 - 130
1868-53-7	Dibromofluoromethane	25000	27000	ug/L	108	77 - 127
2037-26-5	Toluene d8	25000	25700	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	25000	27900	ug/L	112	71 - 127

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
08/01/2008 15:00	394170	SW-846 8011	1	08/02/2008 16:54	TLS	394366

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-93-4	1,2-Dibromoethane	ND	0.010		ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293105	136748	Water	07/24/2008 14:30	07/29/2008 08:49

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	08/03/2008 07:46	ADI	394317

CAS#	Parameter	Result	RDL	REG LIMIT	Units
107-06-2	1,2-Dichloroethane	ND	5000		ug/L
71-43-2	Benzene	13900	5000		ug/L
100-41-4	Ethylbenzene	ND	5000		ug/L
91-20-3	Naphthalene	ND	5000		ug/L
108-88-3	Toluene	40400	5000		ug/L
1330-20-7	Xylene (total)	15300	10000		ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	11600	5000		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50000	57200	ug/L	114	78 - 130
1868-53-7	Dibromofluoromethane	50000	54500	ug/L	109	77 - 127
2037-26-5	Toluene d8	50000	51600	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50000	54500	ug/L	109	71 - 127

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
08/01/2008 15:00	394170	SW-846 8011	1	08/02/2008 17:16	TLS	394366

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-93-4	1,2-Dibromoethane	0.105	0.010		ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293106	136749	Water	07/24/2008 13:45	07/29/2008 08:49

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5	08/03/2008 08:11	ADI	394317

CAS#	Parameter	Result	RDL	REG LIMIT	Units
107-06-2	1,2-Dichloroethane	ND	25.0		ug/L
71-43-2	Benzene	686	25.0		ug/L
100-41-4	Ethylbenzene	118	25.0		ug/L
91-20-3	Naphthalene	255	25.0		ug/L
108-88-3	Toluene	30.9	25.0		ug/L
1330-20-7	Xylene (total)	119	50.0		ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	828	25.0		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	250	286	ug/L	114	78 - 130
1868-53-7	Dibromofluoromethane	250	242	ug/L	97	77 - 127
2037-26-5	Toluene d8	250	263	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	250	273	ug/L	109	71 - 127

SW-846 8270C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
07/30/2008 18:00	393842	3510C	10	08/01/2008 13:02	KNB	394202

CAS#	Parameter	Result	RDL	REG LIMIT	Units
83-32-9	Acenaphthene	ND	100		ug/L
208-96-8	Acenaphthylene	ND	100		ug/L
120-12-7	Anthracene	ND	100		ug/L
56-55-3	Benzo(a)anthracene	ND	100		ug/L
50-32-8	Benzo(a)pyrene	ND	100		ug/L
205-99-2	Benzo(b)fluoranthene	ND	100		ug/L
191-24-2	Benzo(g,h,i)perylene	ND	100		ug/L
207-08-9	Benzo(k)fluoranthene	ND	100		ug/L
218-01-9	Chrysene	ND	100		ug/L
53-70-3	Dibenz(a,h)anthracene	ND	100		ug/L
206-44-0	Fluoranthene	ND	100		ug/L
86-73-7	Fluorene	ND	100		ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	ND	100		ug/L
91-20-3	Naphthalene	226	100		ug/L
85-01-8	Phenanthrene	ND	100		ug/L
129-00-0	Pyrene	ND	100		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	50	Diluted Out	ug/L	0*	52 - 110
321-60-8	2-Fluorobiphenyl	50	Diluted Out	ug/L	0*	16 - 128
1718-51-0	Terphenyl-d14	50	Diluted Out	ug/L	0*	43 - 138

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293106	136749	Water	07/24/2008 13:45	07/29/2008 08:49

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
08/01/2008 15:00	394170	SW-846 8011	1	08/02/2008 17:37	TLS	394366

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-93-4	1,2-Dibromoethane	ND	0.010		ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293107	136750	Water	07/24/2008 14:10	07/29/2008 08:49

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	08/03/2008 08:33	ADI	394317

CAS#	Parameter	Result	RDL	REG LIMIT	Units
107-06-2	1,2-Dichloroethane	ND	250		ug/L
71-43-2	Benzene	2870	250		ug/L
100-41-4	Ethylbenzene	2050	250		ug/L
91-20-3	Naphthalene	650	250		ug/L
108-88-3	Toluene	3760	250		ug/L
1330-20-7	Xylene (total)	7710	500		ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	690	250		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2500	3010	ug/L	120	78 - 130
1868-53-7	Dibromofluoromethane	2500	2460	ug/L	98	77 - 127
2037-26-5	Toluene d8	2500	2550	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	2500	2620	ug/L	105	71 - 127

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
08/01/2008 15:00	394170	SW-846 8011	1	08/02/2008 17:58	TLS	394366

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-93-4	1,2-Dibromoethane	ND	0.010		ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

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Data Qualifiers

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" or "flag" next to the result. **The data qualifier "S" indicates that the analysis was performed by another SC certified Lab. This table summarizes the South Carolina Lab Certification Numbers for those laboratories.**

S	South Carolina Lab Certification Number: 23101
S1	South Carolina Lab Certification Number: 93013
S2	South Carolina Lab Certification Number: 23105
S3	South Carolina Lab Certification Number: 10120
S4	South Carolina Lab Certification Number: 84002
S5	South Carolina Lab Certification Number: 32117
S6	Agricultural Service Laboratory Clemson University
S7	South Carolina Lab Certification Number: 36001
S8	*****
S9	South Carolina Lab Certification Number: 94014001; 94014002
S10	South Carolina Lab Certification Number: 84009
S11	South Carolina Lab Certification Number: 96023; 96026; 96031; 98001; 73006
S12	AASHTO R18 Certified
S13	South Carolina Lab Certification Number: 96012
S14	South Carolina Lab Certification Number: 89002
S15	*****
S16	South Carolina Lab Certification Number: 84004
S17	South Carolina Lab Certification Number: 96037001
S18	South Carolina Lab Certification Number: 95005
S19	South Carolina Lab Certification Number: 23104
S20	South Carolina Lab Certification Number: 96027001
S21	South Carolina Lab Certification Number: 21005
S22	South Carolina Lab Certification Number: 24110
S23	South Carolina Lab Certification Number: 84001001
S24	South Carolina Lab Certification Number: 82014001
S25	Sample was analyzed by Microseeps, Inc Laboratory
S26	North Carolina Lab Certification Number: 21 (Wilson Division NC00120)
S27	South Carolina Lab Certification Number: 40569

DAVIS & BROWN

Post Office Box 15038
Quirby, South Carolina 29506
Telephone (843) 665-6746

Page ___ of ___

61833

[illegible]

* Program Area: D -- Drinking Water / G -- Groundwater / S -- Solid / W -- Waste Water / N -- NPDES / O -- Other

APPENDIX D

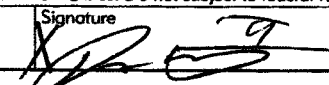
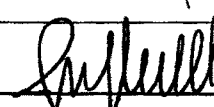
OH MEGGS EXXON
SITE ID# 03423
HISTORICAL DATA

COC	RBSL	MW1	MW1	MW1	MW2	MW2	MW3	MW3	MW4	MW4	MW5	MW6
DATE	ug/l	7\02	1\03	7\08	1\03	7\08	1\03	7\08	1\03	7\08	7\8	7\8
1,2 DCA			19.1	<10,000	281	<5	157	<2,500	272	<5,000	<25	<250
BENZENE	5	3,650	7,210	14,100	14.6	<5	6,190	<2,500	11,900	13,900	686	2,870
BTEX	N/A	21,170	47,280	81,100	14.6	<25	31,750	34,400	42,920	69,600	954	16,390
ETHYLBENZENE	700	804	2,430	<10,000	<1	<5	1,928	<2,500	1,940	<5,000	118	2,080
MTBE	40	2,770	60.7	37,200	9	<5	1,670	<2,500	9,790	11,300	628	690
NAPHTHALENE	25	218	418	<10,000	<1	<5	710	<2,500	695	<5,000	266	530
TOLUENE	1,000	10,500	25,000	<10,000	<1	<5	13,400	18,200	18,900	40,400	31	1,760
XYLENES	10,000	6,180	12,040	30,500	<2	<10	8,040	16,200	10,100	18,300	119	7,710
EDB		1.2	4.6	0.183	<0.02	<0.01	<0.02	<0.01	0.1	0.1	<0.01	<0.01
Pb	15	6	17	5	14	<1	5	<1	9	<1	<1	<1
PAH		285	213		BDL		628		480			
METHANE			<10		<10		10		<10			
NITRATE			<500		4,500		<500		<500			
SULFATE			<2,000		<2,000		3,100		<2,000			

APPENDIX E

Grandall

C 138003

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No. 27163	2. Page 1 of 1
3. Generator's Name and Mailing Address 4925 Pamlico Hwy Florence, SC 29505		Oh Means Exxon		
4. Generator's Phone (843) 665-6746				
5. Transporter 1 Company Name Crandall Corporation	6. US EPA ID Number 3CD981854499	A. Transporter's Phone (803) 791-4800		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone		
9. Designated Facility Name and Site Address Crandall Corporation 100 Rich-Lex Drive Lexington, SC 29072	10. US EPA ID Number 3CD981854499	C. Facility's Phone (803) 791-4800		
11. Waste Shipping Name and Description		12. Containers No. Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non - Hazardous Waste, Petroleum-Contaminated Soil		0. DM	0.	P
b. Non - Hazardous Waste, Waste Water		0.02 DM	0.100.	P
c.				
d.				
D. Additional Descriptions for Materials Listed Above		E. Handling Codes for Wastes Listed Above		
FIELD SERVICE				
15. Special Handling Instructions and Additional Information Service Call ID: GLE0127163 Emergency Response: Infotrac - 800-535-5053 Caller must ID Crandall as registrant 1) Abiotic; Davol-002-6				
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.				
Printed/Typed Name Jerry Andrews		Signature 		Month Day Year 08/13/08
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Brian Leggied		Signature Brian Leggied		Month Day Year 08/13/08
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.				
Printed/Typed Name Sal Cernell		Signature 		Month Day Year 08/13/08

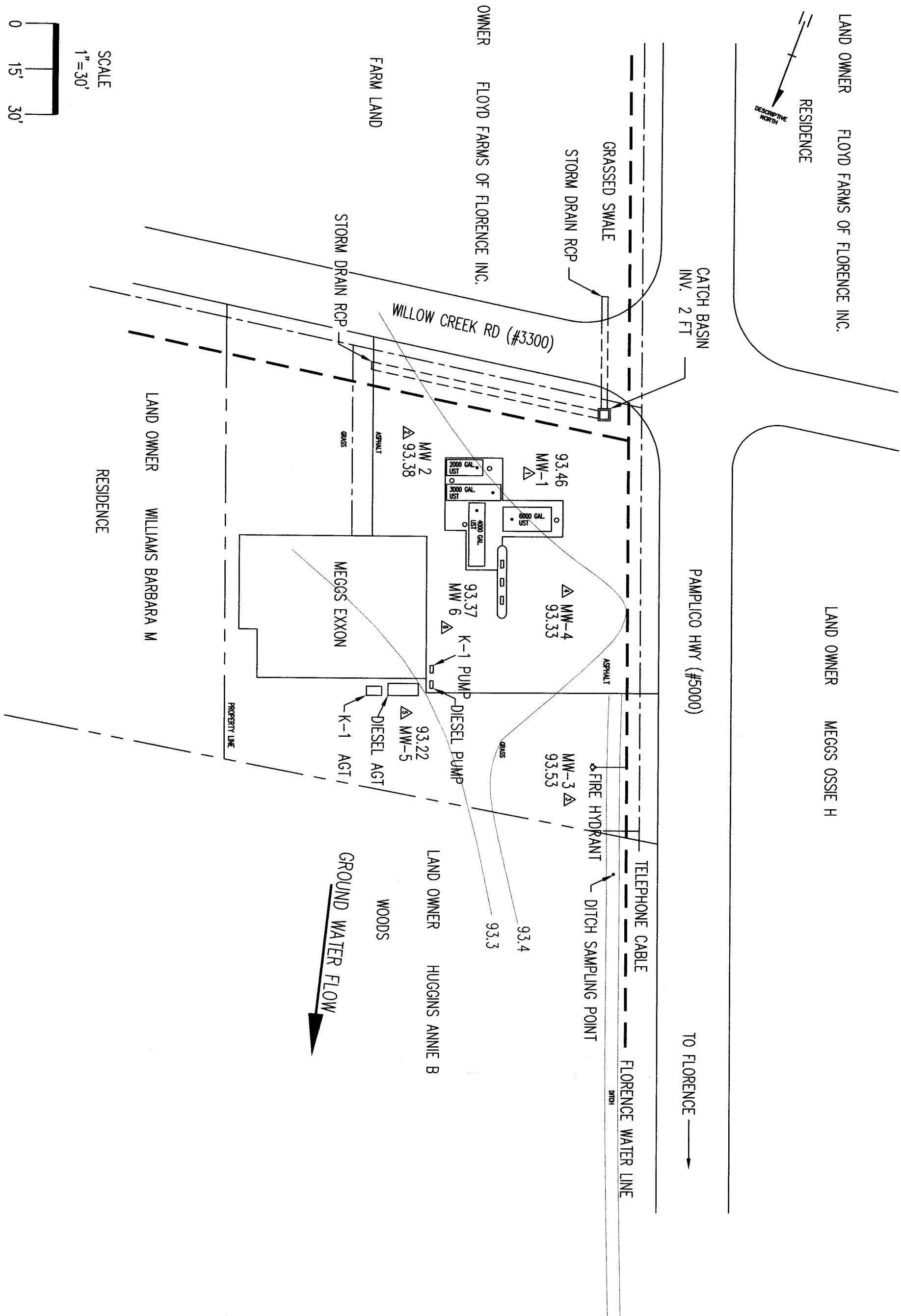
GENERATOR

TRANSPORTER

FACILITY

ORIGINAL TO OFFICE

Maps and Figures



SCALE
1"=30'
0 15' 30'

LAND OWNER FLOYD FARMS OF FLORENCE INC.
RESIDENCE
DESCRPTIVE NORTH

LAND OWNER MEGGS OSSIE H

CATCH BASIN
INV. 2 FT

PAMPLICO HWY (#5000)

TO FLORENCE

GRASSSED SWALE

STORM DRAIN RCP

LAND OWNER FLOYD FARMS OF FLORENCE INC.

FARM LAND

WILLOW CREEK RD (#3300)

MW 2
93.38

MW-1
93.46

MW-4
93.33

2000 GAL
1ST
2000 GAL
1ST
4000 GAL
1ST

MW 6
93.37

MW-3
93.53

93.4

93.3

LAND OWNER HUGGINS ANNIE B

WOODS

GROUND WATER FLOW

STORM DRAIN RCP

MEGGS EXXON

MW-5
93.22

DIESEL AGT

K-1 AGT

K-1 PUMP
DIESEL PUMP

TELEPHONE CABLE

DITCH SAMPLING POINT

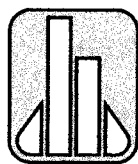
DITCH

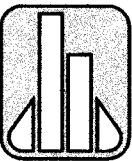
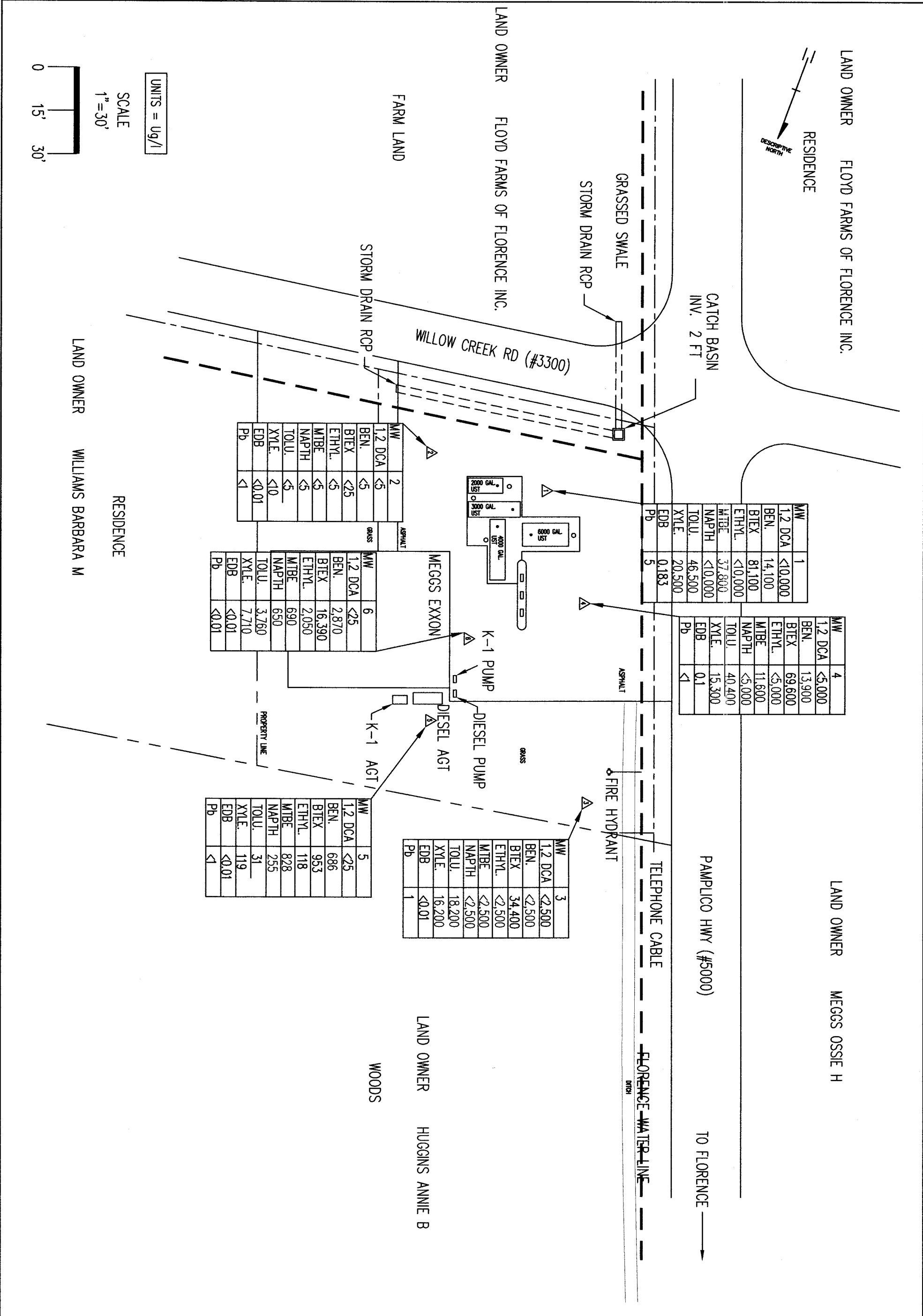
FLORENCE WATER LINE

LAND OWNER WILLIAMS BARBARA M

RESIDENCE

PROPERTY LINE

 DAVIS & BROWN ENGINEERING • CONSTRUCTION • ENVIRONMENTAL ANALYSIS WATER AND WASTEWATER OPERATIONS	MEGG'S EXXON	8/29/06 0 WATER CONTOUR JR/VW	
		DESIGNED BY	CHECKED BY
		DRAWN BY	CHECKED BY
WATER CONTOUR MAP			
FIGURE 1			



DAVIS & BROWN

ENGINEERING • CONSTRUCTION • ENVIRONMENTAL ANALYSIS
WATER AND WASTEWATER OPERATIONS

MEGG'S EXXON

COC MAP
FIGURE 2

8/29/08	0	GROUND WATER DATA	JR/VW
DESIGNED BY	CHECKED BY		
DRAWN BY	CHECKED BY		

INITIAL GROUNDWATER ASSESSMENT REPORT

RECEIVED

mlua
SEP 02 2008

Facility Name MEGGS EXXON
Facility Address 4925 PAMPLICO HWY FLORENCE, SC 29502
Facility Telephone Number 843-669-6818
UST Permit Number 03423

**UNDERGROUND STORAGE
TANK PROGRAM**

UST Owner and Operator's Name BW. STOKES OIL COMPANY
Address PO BOX 274, FLORENCE, SC 29503-0274
Phone Number 843-662-3954

Property Owner's Name BARBRA WILLIAMS
Address 3309 WILLOW CREEK ROAD, FLORENCE, SC 29505
Phone Number _____

Contractor DAVIS & BROWN Cert. # 79
Address 124 W. MCIVER ROAD, FLORENCE, SC 29501
Phone Number 843-665-6746

Well Driller ARM Cert. # 1920
Address 1210 1ST ST. EXT. COLUMBIA, SC 29209
Phone Number 803-783-3314

Receptor and Site Data

Please place a check in the appropriate answer block for each question:

Receptor Survey Questions	No	Yes *
Are any drinking water supply wells (public or private) or surface water supply intakes within 1000 feet of the UST?	X	
Are irrigation or other non-drinking water wells located within 1000 feet of the UST?	X	
Are other potential receptors (i.e., utilities, surface waters, wetlands) less than 500 feet from the UST?		X

* If "yes" provide additional information below:

UTILITIES, SHOWN ON SITE MAP

Were any water supply wells or surface waters within 250 ft. sampled?

UST DOCKET

4/02/08

Yes _____ No X (Show on site base map)

Is a public water supply line in the area? Yes _____ No X (Show on site base map)

Is the current use of the facility and surrounding properties commercial, residential, agricultural or industrial?

Site: COMMERCIAL

Adjacent Properties:

North: AGRICULTURAL

East: RESIDENTIAL

South: AGRICULTURAL

West: RESIDENTIAL

Soil and Boring/Monitoring Well Data

Primary Soil Type: SANDY/CLAY

Well Installation Method and Date: PUSHED

Development Method and Date: HAND BAILER/ 7/16/08

Soil Sample obtained from 5 feet.

SOIL ANALYTICAL DATA

Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Xylenes (µg/kg)	Naphthalene (µg/kg)	MTBE (µg/kg)
<237	<237	<237	<473	374	<237

Benzo(a)- anthracene (µg/kg)	Benzo(b)- fluoranthene (µg/kg)	Benzo(k)- fluoranthene (µg/kg)	Chrysene (µg/kg)	Dibenz(a,h) anthracene (µg/kg)	Total PAH (µg/kg)	Lead (µg/kg)
<4.26	<4.26	<4.26	<4.26	<4.26	<4.26	<2840

*For waste oil UST releases only:

Chromium* (µg/kg)	Mercury* (µg/kg)	Selenium* (µg/kg)	Silver* (µg/kg)	Arsenic* (µg/kg)	Barium* (µg/kg)	Cadmium* (µg/kg)

Include Laboratory Data and Chain of Custody Form in Appendix B.

Groundwater Data

Depth to Groundwater: 6.36 Depth to FP, if present: 0

Free Product Thickness: 0

Well Purging/Sampling Method: HAND BAILER

Date Sampled: 7/24/08

Equilibrated values: Temperature: 24.6 pH: 6.22

Dissolved Oxygen: 0.98 Specific Conductance: 398

Soil/Water Disposal Method: DRUMMED DISPOSED BY CRANDALL

Include in Appendix D. Costs for work cannot be compensated without manifest.

GROUNDWATER ANALYTICAL DATA

Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	EDB (µg/l)	Naphthalene (µg/l)
686	31	118	119	828	< 0.01	255

Benzo(a)- anthracene (µg/l)	Benzo(b)- fluoranthene (µg/l)	Benzo(k)- fluoranthene (µg/l)	Chrysene (µg/l)	Dibenz(a,h) anthracene (µg/l)	Total PAH (µg/l)	Lead (µg/l)
< 100	< 100	< 100	< 100	< 100	< 100	1

*For waste oil UST releases only:

Chromium* (µg/l)	Mercury* (µg/l)	Selenium* (µg/l)	Silver* (µg/l)	Arsenic* (µg/l)	Barium* (µg/l)	Cadmium* (µg/l)

Include Laboratory Data and Chain of Custody Form in Appendix B.

Report Completed By (Print Name): Van Ward

Signature : *Van Ward*

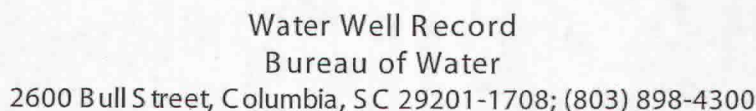
DHEC Contractor Certification # 79 Date: 8/29/08

Appendices

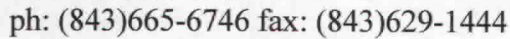
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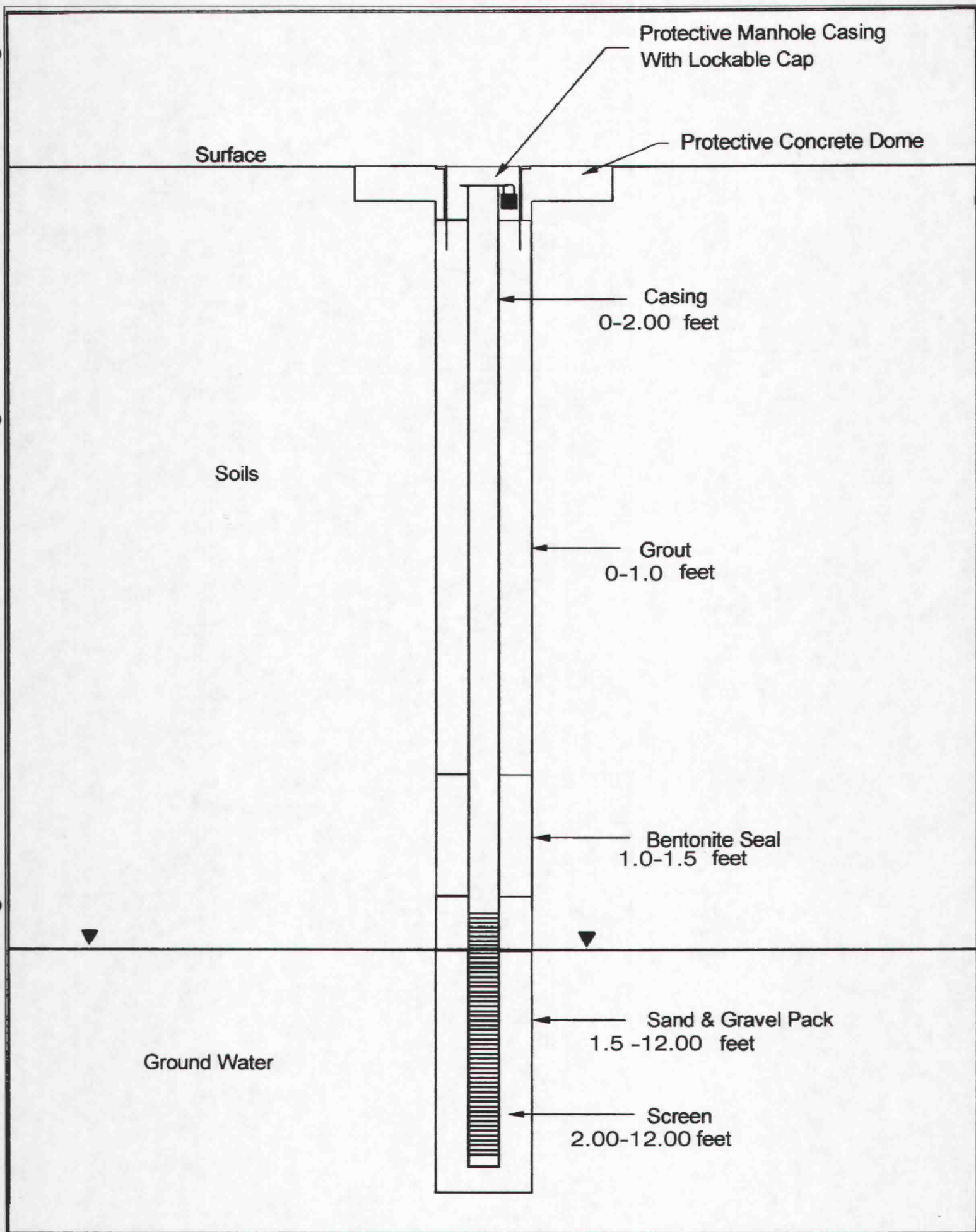
- Appendix A. Well Construction Log
- Appendix B. Laboratory Data
- Appendix C. Maps (Topographic and Site Base)
- Appendix D. Disposal Manifest(s). (Must be included for payment from SUPERB)
- Appendix E. Additional Data (Property owner name, address, phone number for any water supply wells or surface water bodies sampled.)

APPENDIX A



COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

DATA/PERSONAL/WWV/BORING LOG



MEGGS EXXON
MW#5

Style 2

Standard Type II Belowgrade Monitoring
Well Construction Schematic

APPENDIX B

Davis & Brown

PO Box 15038
Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 26-Jun-08

Contact:

Report Date: 28-Aug-08

Sample Date: 26-Jun-08

SDG #: SDG-061387

Lab Sample ID: LSID-135851

Sample ID: MW 5 IGWA

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Acid Digestion (Solids)	YES			EPA 200.2		7/7/2008	16:00	DH
Methyl tert-Butyl Ether	<0.237	0.237	mg/kg	EPA 8260	S11	7/2/2008	17:34	JCK
Benzene	<0.237	0.237	mg/kg	EPA 8260/827	S11	7/2/2008	17:34	JCK
BTEX, Total (Soil)	<1.184	1.184	mg/kg	EPA 8260/827		7/2/2008		WSF
Ethylbenzene	<0.237	0.237	mg/kg	EPA 8260/827	S11	7/2/2008	17:34	JCK
Napthalene	0.374	0.237	mg/kg	EPA 8260/827	S11	7/2/2008	17:34	JCK
Polynuclear Aromatic Hydc.	enclosed		mg/kg	EPA 8260/827	S11	7/1/2008	12:09	KNB
Toluene	<0.237	0.237	mg/kg	EPA 8260/827	S11	7/2/2008	17:34	JCK
Xylenes, Total	<0.473	0.473	mg/kg	EPA 8260/827	S11	7/2/2008	17:34	JCK
Lead, Total	<2.84	2.84	mg/kg	SW846 6010B		7/8/2008	10:00	DH

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20806281301	135851	Solid	06/26/2008 11:30	06/28/2008 09:00

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	07/02/2008 17:34	JCK	391996

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	237		ug/Kg
108-88-3	Toluene	ND	237		ug/Kg
100-41-4	Ethylbenzene	ND	237		ug/Kg
1330-20-7	Xylene (total)	ND	473		ug/Kg
91-20-3	Naphthalene	374	237		ug/Kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	237		ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1830	1930	ug/Kg	106	62 - 127
1868-53-7	Dibromofluoromethane	1830	2020	ug/Kg	111	65 - 130
2037-26-5	Toluene d8	1830	2010	ug/Kg	110	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1830	1990	ug/Kg	109	62 - 125

SW-846 8270C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
06/30/2008 11:00	391860	3550B	10	07/01/2008 12:09	KNB	391953

CAS#	Parameter	Result	RDL	REG LIMIT	Units
83-32-9	Acenaphthene	ND	4260		ug/Kg
208-96-8	Acenaphthylene	ND	4260		ug/Kg
120-12-7	Anthracene	ND	4260		ug/Kg
56-55-3	Benzo(a)anthracene	ND	4260		ug/Kg
50-32-8	Benzo(a)pyrene	ND	4260		ug/Kg
205-99-2	Benzo(b)fluoranthene	ND	4260		ug/Kg
191-24-2	Benzo(g,h,i)perylene	ND	4260		ug/Kg
207-08-9	Benzo(k)fluoranthene	ND	4260		ug/Kg
218-01-9	Chrysene	ND	4260		ug/Kg
53-70-3	Dibenz(a,h)anthracene	ND	4260		ug/Kg
206-44-0	Fluoranthene	ND	4260		ug/Kg
86-73-7	Fluorene	ND	4260		ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4260		ug/Kg
91-20-3	Naphthalene	7910	4260		ug/Kg
85-01-8	Phenanthrene	5280	4260		ug/Kg
129-00-0	Pyrene	ND	4260		ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	1660	0	ug/Kg	0*	46 - 123
321-60-8	2-Fluorobiphenyl	1660	0	ug/Kg	0*	47 - 127
1718-51-0	Terphenyl-d14	1660	0	ug/Kg	0*	38 - 167

RESULTS REPORTED ON A DRY WEIGHT BASIS

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is **SCDHEC certified lab # 73006**, NELAP certification # 01955

DAVIS & BROWN

Data Qualifiers

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" or "flag" next to the result. **The data qualifier "S" indicates that the analysis was performed by another SC certified Lab. This table summarizes the South Carolina Lab Certification Numbers for those laboratories.**

S	South Carolina Lab Certification Number: 23101
S1	South Carolina Lab Certification Number: 93013
S2	South Carolina Lab Certification Number: 23105
S3	South Carolina Lab Certification Number: 10120
S4	South Carolina Lab Certification Number: 84002
S5	South Carolina Lab Certification Number: 32117
S6	Agricultural Service Laboratory Clemson University
S7	South Carolina Lab Certification Number: 36001
S8	*****
S9	South Carolina Lab Certification Number: 94014001; 94014002
S10	South Carolina Lab Certification Number: 84009
S11	South Carolina Lab Certification Number: 96023; 96026; 96031; 98001; 73006
S12	AASHTO R18 Certified
S13	South Carolina Lab Certification Number: 96012
S14	South Carolina Lab Certification Number: 89002
S15	*****
S16	South Carolina Lab Certification Number: 84004
S17	South Carolina Lab Certification Number: 96037001
S18	South Carolina Lab Certification Number: 95005
S19	South Carolina Lab Certification Number: 23104
S20	South Carolina Lab Certification Number: 96027001
S21	South Carolina Lab Certification Number: 21005
S22	South Carolina Lab Certification Number: 24110
S23	South Carolina Lab Certification Number: 84001001
S24	South Carolina Lab Certification Number: 82014001
S25	Sample was analyzed by Microseeps, Inc Laboratory
S26	North Carolina Lab Certification Number: 21 (Wilson Division NC00120)
S27	South Carolina Lab Certification Number: 40569

Davis & Brown

PO Box 15038
Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 25-Jul-08

Contact:

Report Date: 14-Aug-08

Sample Date: 24-Jul-08

SDG #: SDG-061833

Lab Sample ID: LSID-136749

Sample ID: MW 5(IGWA)

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Result	Reporting		Method	Flag	Date	Time	Analyst
		Limit	Unit					
1,2-Dichloroethane	<0.025	0.25	ppm	8260B	S11	8/3/2008	8:11	ADI
Benzene	0.686	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
BTEX, Total	0.9539	0.125	mg/L	EPA 8260		8/3/2008		WSF
Ethylbenzene	0.118	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Methyl tert-Butyl Ether	0.828	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Napthalene	0.255	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Toluene	0.0309	0.025	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Xylenes, Total	0.119	0.05	mg/L	EPA 8260	S11	8/3/2008	8:11	ADI
Polynuclear Aromatic Hydc.	0.226		ppm	EPA 8270C	S11	8/1/2008	13:02	KNB
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	8/2/2008	17:37	TLS
Lead, Dissolved	<0.001	0.001	mg/L	SW846 6010B		7/29/2008	9:26	JR

DAVIS & BROWN

Data Qualifiers

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" or "flag" next to the result. **The data qualifier "S" indicates that the analysis was performed by another SC certified Lab. This table summarizes the South Carolina Lab Certification Numbers for those laboratories.**

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S8	*****
S9	South Carolina Lab Certification Number: 94014001; 94014002
S10	South Carolina Lab Certification Number: 84009
S11	South Carolina Lab Certification Number: 96023; 96026; 96031; 98001; 73006
S12	AASHTO R18 Certified
S13	South Carolina Lab Certification Number: 96012
S14	South Carolina Lab Certification Number: 89002
S15	*****
S16	South Carolina Lab Certification Number: 84004
S17	South Carolina Lab Certification Number: 96037001
S18	South Carolina Lab Certification Number: 95005
S19	South Carolina Lab Certification Number: 23104
S20	South Carolina Lab Certification Number: 96027001
S21	South Carolina Lab Certification Number: 21005
S22	South Carolina Lab Certification Number: 24110
S23	South Carolina Lab Certification Number: 84001001
S24	South Carolina Lab Certification Number: 82014001
S25	Sample was analyzed by Microseeps, Inc Laboratory
S26	North Carolina Lab Certification Number: 21 (Wilson Division NC00120)
S27	South Carolina Lab Certification Number: 40569

DAVIS & BROWN

Post Office Box 15038
Quincy, South Carolina 29506
Telephone (843) 665-6746

Telephone (843) 665-6746

(01833)

[illegible]

* Program Area: D -- Drinking Water / G -- Groundwater / S -- Solid / W -- Waste Water / N -- NPDES / O -- Other

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293106	136749	Water	07/24/2008 13:45	07/29/2008 08:49

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			5	08/03/2008 08:11	ADI	394317

CAS#	Parameter	Result	RDL	REG LIMIT	Units
107-06-2	1,2-Dichloroethane	ND	25.0		ug/L
71-43-2	Benzene	686	25.0		ug/L
100-41-4	Ethylbenzene	118	25.0		ug/L
91-20-3	Naphthalene	255	25.0		ug/L
108-88-3	Toluene	30.9	25.0		ug/L
1330-20-7	Xylene (total)	119	50.0		ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	828	25.0		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	250	286	ug/L	114	78 - 130
1868-53-7	Dibromofluoromethane	250	242	ug/L	97	77 - 127
2037-26-5	Toluene d8	250	263	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	250	273	ug/L	109	71 - 127

SW-846 8270C

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
07/30/2008 18:00	393842	3510C	10	08/01/2008 13:02	KNB	394202

CAS#	Parameter	Result	RDL	REG LIMIT	Units
83-32-9	Acenaphthene	ND	100		ug/L
208-96-8	Acenaphthylene	ND	100		ug/L
120-12-7	Anthracene	ND	100		ug/L
56-55-3	Benzo(a)anthracene	ND	100		ug/L
50-32-8	Benzo(a)pyrene	ND	100		ug/L
205-99-2	Benzo(b)fluoranthene	ND	100		ug/L
191-24-2	Benzo(g,h,i)perylene	ND	100		ug/L
207-08-9	Benzo(k)fluoranthene	ND	100		ug/L
218-01-9	Chrysene	ND	100		ug/L
53-70-3	Dibenz(a,h)anthracene	ND	100		ug/L
206-44-0	Fluoranthene	ND	100		ug/L
86-73-7	Fluorene	ND	100		ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	ND	100		ug/L
91-20-3	Naphthalene	226	100		ug/L
85-01-8	Phenanthrene	ND	100		ug/L
129-00-0	Pyrene	ND	100		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	50	Diluted Out	ug/L	0*	52 - 110
321-60-8	2-Fluorobiphenyl	50	Diluted Out	ug/L	0*	16 - 128
1718-51-0	Terphenyl-d14	50	Diluted Out	ug/L	0*	43 - 138

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20807293106	136749	Water	07/24/2008 13:45	07/29/2008 08:49

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
08/01/2008 15:00	394170	SW-846 8011	1	08/02/2008 17:37	TLS	394366

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-93-4	1,2-Dibromoethane	ND	0.010		ug/L

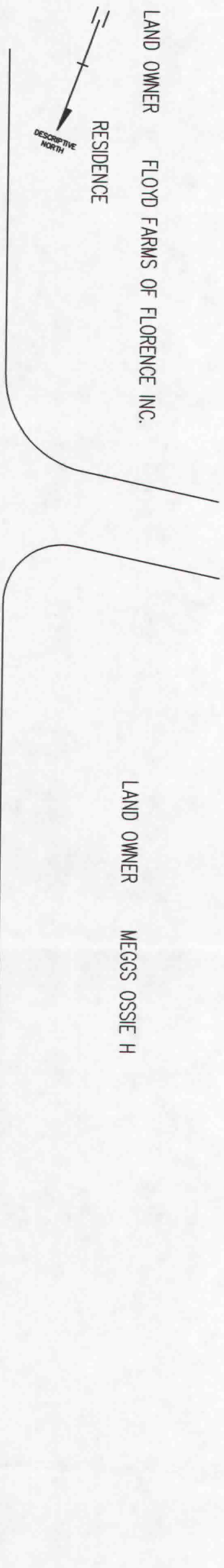
Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

APPENDIX C



CATCH BASIN
INV. 2 FT

PAMPLICO HWY (#5000)

TO FLORENCE —→

GRASSED SWALE
STORM DRAIN RCP

WILLOW CREEK RD (#3300)

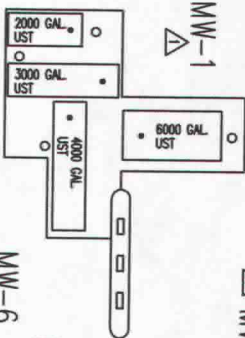
FARM LAND

LAND OWNER FLOYD FARMS OF FLORENCE INC.

STORM DRAIN RCP

MW-2

MW-1



K-1 PUMP
DIESEL PUMP

MW-3

FIRE HYDRANT

TELEPHONE CABLE

FLORENCE WATER LINE

DITCH

LAND OWNER HUGGINS ANNIE B

IGWA WELL

WOODS

DIESEL AGT
K-1 AGT

MEGGS EXXON

LAND OWNER WILLIAMS BARBARA M

PROPERTY LINE

SCALE
1" = 30'

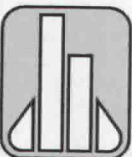
0 15' 30'

RESIDENCE

DATE	REV #	REVISION	APPROVED		
DESIGNED BY			CHECKED BY		
DRAWN BY			CHECKED BY		

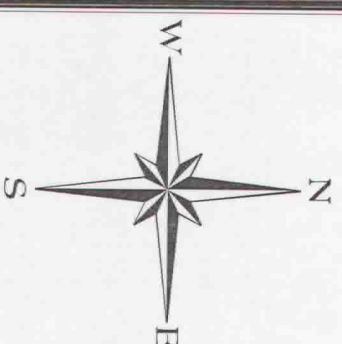
MEGG'S EXXON

IGWA SITE PLAN
UST # 03423

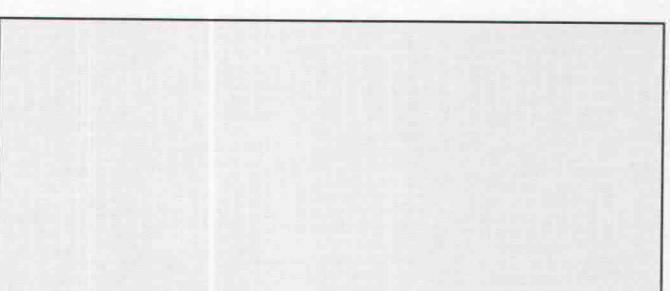


DAVIS & BROWN

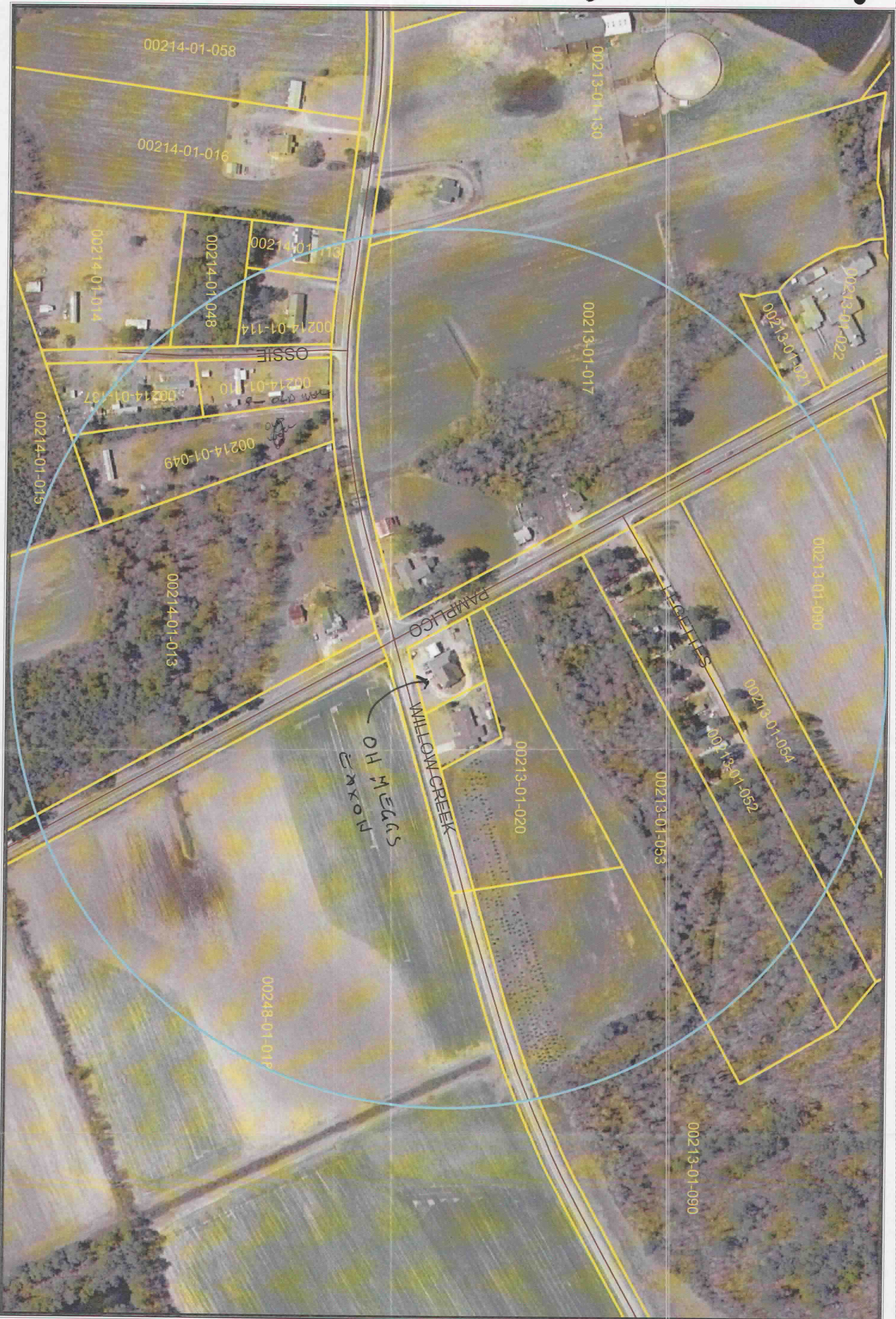
ENGINEERING • CONSTRUCTION • ENVIRONMENTAL ANALYSIS
WATER AND WASTEWATER OPERATIONS



Notes:



Reginald Odell Sanders II
Cadastral Mapper I
Rsanders@florenceco.org
843-665-3056 ex.54262



This map is for reference use only

Scale = 1 inch equals 200 feet

APPENDIX D

Grandall

C 138003

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest
Document No.
27163

2. Page 1
of 1

3. Generator's Name and Mailing Address

Oh Mega Exxon

4925 Pamlico Hwy
Florence, SC 29595

4. Generator's Phone (843) 665-6746

5. Transporter 1 Company Name
Crandall Corporation

6. US EPA ID Number
3CD981864499

A. Transporter's Phone
(803) 791-4800

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Crandall Corporation
100 Rich-Lex Drive
Lexington, SC 29072

10. US EPA ID Number

3CD981864499

C. Facility's Phone

(803) 791-4800

11. Waste Shipping Name and Description

12. Containers

No.

Type

13. Total
Quantity

14. Unit
Wt./Vol.

a. Non - Hazardous Waste, Petroleum-Contaminated Soil

.0

DM

.0

P

b. Non - Hazardous Waste, Waste Water

0.02

DM

0.100

P

D. Additional Descriptions for Materials Listed Above

FIELD
SERVICE

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Service Call ID: GLB0127163

Emergency Response: Infotrac - 800-535-5053

Caller must ID Crandall as registrant

1) Abiotic; Davol-002-C

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Signature

Month Day Year

X Jerry Andrews

[Signature]

08/13/08

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

Brian Leggje

[Signature]

08/13/08

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

SaPernell

[Signature]

08/13/08

ORIGINAL TO OFFICE



DAVIS & BROWN

ENGINEERING • ENVIRONMENTAL • O&M SERVICES
www.NACCDB.com

RECEIVED

OCT 20 2008

UNDERGROUND STORAGE
TANK PROGRAM

Tier II Assessment Plan

O.H. Meggs Exxon

UST Permit #: 03423

4925 Pamplico Hwy., Florence, SC

(843) 669-6818

PREPARED FOR:

**SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL**

OCTOBER 17, 2008

William Van Ward, P.E.

UST DOCKET

6 tech



Tier II Assessment Plan Underground Storage Tank Program

UST Permit #: 03423 County: Florence Facility Name: O.H. Meegs
Facility Address: 4925 Pamplico Hwy. City: Florence State: South Carolina Zipcode: 29505
Responsible Party: B.W. Stokes Oil Co. Address: P.O.Box 274
City: Florence State: South Carolina Zipcode: 29501
No. USTs: 4 Removed? _____ Replaced? _____
Current use of facility/property: _____ (date: MM/DD/YYYY) (date: MM/DD/YYYY)

Gas station and convenience store located in rural area of Florence County.

Current property owner name: B.W. Stokes Oil Address: P.O. Box 274
City: Florence State: South Carolina Zipcode: 29505

Field Screening Methodology

Specify the field screening methodology to be used. The use of field screening methods to optimize the number and location of permanent wells is required.

A geoprobe will be used to collect ground water samples. A Foxboro OVA shall be used for field screening. As we step out from the site, and OVA readings drop less than 2 ppm, samples will be collected for ground water analysis to verify BTEX and mtbe levels.

Permanent Monitoring Wells (estimate number and total completed depth)

of shallow wells: 6 Total depth: 90'

of deep wells: 1 Total depth: 40'

Comments, if warranted:

Analyses

List the analytical parameters (e.g., BTEX, MTBE) and estimated number.

10 Soil samples [BTEX, Naphthalene, and PAH's]
11 Water Samples [BTEX, Naphthalene, MTBE, EDB, Lead, 1,2-DCA, Oxygenates and PAH's]
11 Water field screening Samples [BTEX, Naphthalene and Mtbe]

Implementation Schedule (Use MM/DD/YYYY format - Example 01/23/2004)

Start up date: 11/03/2008 Completion date: 12/31/2008
(MM/DD/YYYY) (MM/DD/YYYY)

Report submittal date: 01/15/2009 (MM/DD/YYYY)

UST Permit #: 03423

Facility Name: O.H. Meegs

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

Location of property lines

Location of buildings

Paved areas on or adjacent to site

Previous soil sampling locations

Previous monitoring well locations

Legend with facility name and address, UST Permit number, date, and a bar scale

Streets or highways (indicate names and numbers)

Identification of located buildings

Location of all present and former ASTs and USTs

Underground and above ground utilities on or adjacent to site

Location of any other potential receptor

Aquifer Characterization

Pump test: ☐ Slug tests: ☒ (check one and provide explanation for choice)

slud test - most economical

Small Volume Disposal Type and Method

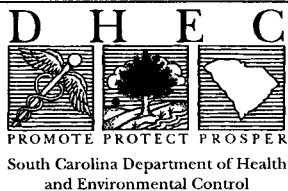
Soil:

Containerize on site in 55 gallon drums. If disposal is required, it will be sent to Crandall in Lexington, SC.

Purge water:

Containerize on site in 55 gallon drums. If disposal is required, it will either be sent to Crandall in Lexington, SC. or disposed of at Florence POTW per our approval letter.

Additional comments:



ASSESSMENT COMPONENT COST AGREEMENT SOUTH CAROLINA

Department of Health and Environmental Control
Underground Storage Tank Program
State Underground Petroleum Environmental Response Bank Account

Facility Name O.H. Meggs

UST Permit # 3423

Cost Agreement # _____

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. Plan*				
A. Plan Preparation	1	x	\$100.00	\$100.00
B. Tax Map		x	\$50.00	\$0.00
2. Receptor Survey *		x	\$500.00	\$0.00
3. Comprehensive Survey		x	\$1,000.00	\$0.00
4. Mob/Demob				
A. Equipment	3	x	\$575.00	\$1,725.00
B. Personnel	5	each x	\$290.00	\$1,450.00
C. Adverse Train Vehicle		x	\$575.00	\$0.00
5. Soil Borings (hand auger)*		feet x	\$14.00	\$0.00
6. Soil Borings (drilled) & Field Screening				
A. Standard	300	feet x	\$17.00	\$5,100.00
B. Alternative, on-site		feet x	\$12.50	\$0.00
C. Fractured Rock		feet x	\$27.50	\$0.00
7. Soil Leachability Model		each x	\$200.00	\$0.00
8. Abandonment*	300	feet x	\$5.00	\$1,500.00
9. Well Installation*				
A. Water Table (hand auger)		feet x	\$20.00	\$0.00
B. Water Table (drilled)	90	feet x	\$38.00	\$3,420.00
C. Telescoping	40	feet x	\$58.00	\$2,320.00
D. Rock Drilling		feet x	\$58.00	\$0.00
E. 2" Rock Coring		feet x	\$44.10	\$0.00
F. 4" Rock Coring		feet x	\$50.40	\$0.00
G. multi sampling port/screen		feet x	\$47.20	\$0.00
10. Groundwater Sample Collection				
A. Groundwater	7	samples x	\$55.00	\$385.00
B. Air Vapor		samples x	\$90.00	\$0.00
C. Water Supply		samples x	\$25.00	\$0.00
D. Groundwater No Purge	4	samples x	\$35.00	\$140.00
E. Gauge Well only		per well x	\$20.00	\$0.00
F. Sample Below Product		samples x	\$50.00	\$0.00
G. Passive Diffusion Bag		each x	\$40.00	\$0.00
11. Analyses-Groundwater	(see Analytical Methodology for site-specific analyses)			
A. BTEX+Naphth.+MTBE	22	samples x	\$100.00	\$2,200.00
B. Rush BTEX analysis		samples x	\$120.00	\$0.00
D. PAH's	11	samples x	\$120.00	\$1,320.00
E. Lead		samples x	\$20.00	\$0.00
F. EDB	11	samples x	\$55.00	\$605.00
G. 8 RCRA Metals		samples x	\$140.00	\$0.00
H.TPH (9070)		samples x	\$55.00	\$0.00
J. BOD		samples x	\$40.00	\$0.00
K. Nitrate	11	samples x	\$20.00	\$220.00
L. Sulfate	11	samples x	\$20.00	\$220.00
M. Ferrous Iron	11	samples x	\$20.00	\$220.00
N. Methane	11	samples x	\$110.00	\$1,210.00
O. Organic Lead		samples x	\$100.00	\$0.00
P. 8 Oxygenates	11	samples x	\$85.00	\$935.00
AA. Filtered Lead	11	samples x	\$46.00	\$506.00
BB. 1,2-DCA	11	samples x	\$10.75	\$118.25

11. Analyses-Soil				
Q. BTEX + Naphth.	10	samples x	\$100.00	\$1,000.00
R. PAH's	10	samples x	\$120.00	\$1,200.00
S. 8 RCRA Metals		samples x	\$150.00	\$0.00
T. TPH (9071)		samples x	\$60.00	\$0.00
U. TPH (3550B/8015B)		samples x	\$65.00	\$0.00
V. TPH (5030B/8015B)		samples x	\$65.00	\$0.00
W. Grain size/hydrometer		samples x	\$75.00	\$0.00
X. Total Organic Carbon		samples x	\$35.00	\$0.00
11. Analyses-Air				
Y. BTEX + Naphthalene		samples x	\$247.50	\$0.00
Z. Hydrocarbon Fuel Identification		samples x	\$620.00	\$0.00
12. Aquifer Characterization*				
A. Pumping Test		hours x	\$120.00	\$0.00
B. Slug Test*	1	tests x	\$150.00	\$150.00
C. Fractured Rock		tests x	\$500.00	\$0.00
13. Free Product Recovery Rate Test*				
		tests x	\$120.00	\$0.00
14. Fate/Transport Modeling				
A. Mathematical Model		each x	\$300.00	\$0.00
B. Computer Model		each x	\$500.00	\$0.00
15. Risk Evaluation				
A. Tier I Risk Evaluation		x	\$301.00	\$0.00
B. Tier II Risk Evaluation		x	\$500.00	\$0.00
16. Subsequent Survey*				
	1	x	\$260.00	\$260.00
17. Disposal*				
A. Wastewater				
1. Purging/Sampling	5	drums x	\$90.00	\$450.00
2. Pumping Test/EFR		gallons x	\$0.60	\$0.00
B. Free Product		drums x	\$110.00	\$0.00
C. Soil (Treatment/Disposal)	4	drum/ton x	\$50.00	\$200.00
18. Miscellaneous (attach receipts)				
		x		\$0.00
		x		\$0.00
		x		\$0.00
20. Tier I Assessment (Use DHEC 3665 form)				
21. IGWA (Use DHEC 3666 form)				
22. Corrective Action (Use DHEC 3667 form)				
23. EFR				
A. 8-hour Event*		each x	\$3,000.00	\$0.00
B. Additional Hour		per hour x	\$204.00	\$0.00
C. Off-gas treatment		per hour x	\$35.00	\$0.00
24. Granulated Activated Carbon (GAC) filter system installation & service:				
A. New GAC System Installation*		each x	\$2,500.00	\$0.00
B. Refurbished GAC Sys. Install*		each x	\$850.00	\$0.00
C. Filter replacement/removal*		each x	\$450.00	\$0.00
D. System removal, cleaning, & refurbishment*		each x	\$450.00	\$0.00
E. GAC System housing		each x	\$450.00	\$0.00
F. In-line particulate filter		each x	\$140.00	\$0.00
G. Additional piping & fittings		feet x	\$4.00	\$0.00
25. Well Repair				
A. Additional Copies of Report		each x	\$25.00	\$0.00
B. Repair 2x2 MW pad		each x	\$100.00	\$0.00
C. Repair 4x4 MW pad		each x	\$150.00	\$0.00
D. Repair well vault		each x	\$225.00	\$0.00
E. Replace well cover & gasket		each x	\$30.00	\$0.00
F. Replace well cover bolts		each x	\$10.00	\$0.00
G. Replace locking well cap & lock		each x	\$15.00	\$0.00
19. Report/Project Management and Coordination				
	15%	x	\$26,954.25	\$4,043.14
TOTAL				\$30,997.39

*The appropriate mobilization cost can be added to complete these tasks, as necessary



C. Earl Hunter, Commissioner

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

B W STOKES OIL CO INC
PO BOX 274
FLORENCE SC 29503-0274

NOV 04 2008

Re: Tier II Assessment Directive
O. H. Meggs Exxon, 4925 Pamplico Hwy, Florence, SC
UST Permit # 03423, CA# 34233; MWA# UMW-22186
Release #1 Reported February 26, 2002
Tier II Assessment Plan and Assessment Cost Agreement received October 20, 2008
Florence County

To Whom It May Concern:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) recognizes your commitment to continue work at this site utilizing your own contractor. The UST Program has reviewed the referenced Tier II Assessment Plan and cost agreement submitted by Davis & Brown.

Assessment activities at the site should begin immediately upon receipt of this letter. According to Program records, the release at the facility was reported to SCDHEC on February 26, 2002. In accordance with Section 44-2-40(D) of the SUPERB Act, B W Stokes Oil, Inc. is responsible for the first \$25,000 of site rehabilitation costs. To insure that expenditures made toward rehabilitation apply to the \$25,000 deductible, the Program has assigned Cost agreement number 34233 for the amount shown on the enclosed cost agreement form. Please be aware that the February 1, 2006 SUPERB Allowable Costs sheet states that "If vertical and horizontal extent of chemicals of concern are not fully defined by this tier report, additional mobilizations may not be approved by the Department." **Please contact the department prior to well installation for concurrence regarding the final well locations.** No-purge sampling is required for previously installed monitoring wells (except deep wells) where the screens bracket the water table. Guidance documents and Appendices may be obtained from our website at http://www.scdhec.gov/environment/lwm/html/ust_guidance_docs.htm. Please note the following adjustments to the submitted cost agreement:

- Equipment mobilizations were reduced from three to two.
Monitoring well installation has been approved for up to ten shallow wells and for two deep telescoping wells. Please consider installation of the deep two-inch well(s). It may not be necessary to pit case the well(s) unless a confining unit is reached; 150 feet was approved for shallow wells and 300 feet for temporary wells (if necessary) and must delineate the extent of the plume, to include offsite extent. See the enclosed site map for proposed locations. Please note that the screens of the permanent monitoring wells must bracket the water table, and all monitoring well locations must be technically justified or installation costs will not be approved. Field screening points converted to wells will be compensated at the permanent well installation rate.
- Number of groundwater samples is approved for the two new deep wells, ten new shallow wells, six existing wells, eleven field screening points and the ditch onsite; PAH analyses were omitted; nitrate, sulfate and ferrous iron analyses are necessary for the new wells only; methane analyses were omitted.
- Soil analyses for BTEX,+Naphth. were approved for six borings to complete the soil delineation onsite.
- Costs have been approved to conduct two slug tests (in one shallow and one deep well).

UST DOCKET
[Handwritten signature]

Beginning in 2009, the UST Program will begin requiring that laboratories be certified through the SCDHEC Office of Environmental Laboratory Certification for the oxygenate compounds. The UST Program will require that laboratories submit the application for certification no later than December 31, 2008. Beginning April 1, 2009, the UST Program will no longer reimburse costs for oxygenate analysis for any laboratory that is not certified. Detailed information regarding the oxygenate certification can be found on the UST Guidance Documents webpage. ([http://www.scdhec.net/environment/lwm/forms/Oxygenate Certification.pdf](http://www.scdhec.net/environment/lwm/forms/Oxygenate%20Certification.pdf)).

A Report of Findings and the invoice are due within 90 days from the date of this letter. Costs that exceed the \$25,000 deductible can be compensated to Davis & Brown. An interim well drilling invoice for installation of the new wells may not be submitted, as the \$25,000 deductible has not been met. If the invoice and completed report are not submitted within 120 days from the date of this letter, monies allocated to pay this invoice will be uncommitted. This means that the invoice will not be processed for payment until all other committed funds are paid or monies become available. Please be advised if the time frame exceeds 45 days between the date when the groundwater samples are collected and the date the report of findings is received, the analytical data will not be considered current and your contractor will not be reimbursed for a personnel mobilization to collect the groundwater samples, sample collection costs, laboratory analyses, or associated disposal costs.

Please note that you and/or your contractor are responsible for obtaining all off-site access agreements and/or encroachment permits necessary for this scope of work.

Please note that Sections 44-2-110(4) and 44-2-130 of the SUPERB Statute state that no costs will be allowed unless prior approval from the Program is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Department for the cost to be paid. The SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with established criteria. Further, SCDHEC reserves the right to question and/or reject costs if deemed unreasonable. The SCDHEC reserves the right to audit project records at any time during the project or after completion of work.

The Department 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. IDW should not be stored on-site longer than ninety(90)days. A 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 on site. 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 and scope of work, please reference UST Permit # 03423. If you have any questions concerning this correspondence, please contact me at (803) 896-6664.

Sincerely,



Maia Milenkova, Hydrogeologist
Assessment Section
Assessment and Corrective Action Division
Underground Storage Tank program
Bureau of Land and Waste Management

enc.: Approved Cost Agreement
Monitoring Well Approval (MWA)
Site map

cc: Technical File (w/enc)
Mr. Van Ward, Davis & Brown, PO Box 15038, Quinby, SC 29506 (w/enc.)

SCDHEC/UST/10/24/08/MPM



C. Earl Hunter, Commissioner

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

Monitoring Well Approval

Approval is hereby granted to: Davis & Brown, Inc.
(On behalf of): B W Stokes Oil Co., Inc.
Facility: O H Meggs Exxon, 4925 Pamlico Hwy., Florence, SC
UST Permit Number: 03423
County: Florence

This approval is for the installation of thirty-two groundwater monitoring wells (twenty temporary, ten shallow and two deep). 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:

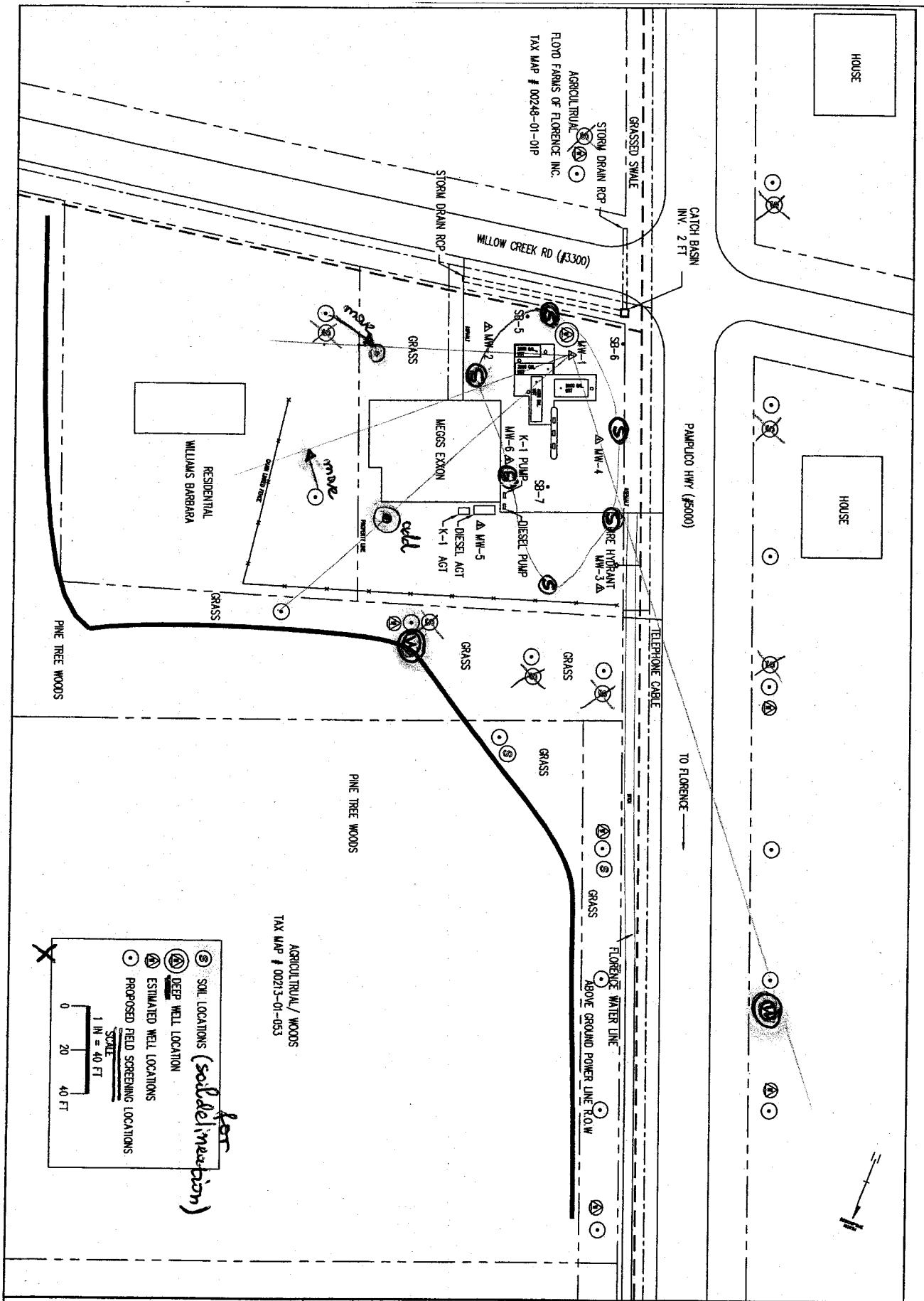
1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. 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 Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department 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. Departmental approval 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: October 23, 2008

Approval #: UMW-22186

Maia Milenkova, Hydrogeologist
Assessment Section
Division of Assessment and Corrective Action
Bureau of Land and Waste Management



LEGEND

- ⑤ SOIL LOCATIONS (solid line)
- ④ DEEP WELL LOCATION
- ③ ESTIMATED WELL LOCATIONS
- ② PROPOSED FIELD SCREENING LOCATIONS

SCALE

1 IN = 40 FT

0 20 40 FT

AGRICULTURAL/ WOODS
TAX MAP # 00213-01-053



DAVIS & BROWN
ENGINEERING • CONSTRUCTION • ENVIRONMENTAL ANALYSIS
WATER AND WASTEWATER OPERATIONS

MEGGS EXXON

**PROPOSED TIER 2
PERMIT # 03423**

10/17/06	0	PROPOSED TIER 2 PLAN		
DATE	REV #	REVISION	APPROVED	
DESIGNED BY	CHECKED BY			
DRAWN BY	CHECKED BY			

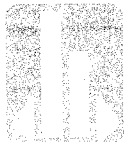
Approved Cost Agreement 34233

Facility: 03423 O H MEGGS

MILENKMP

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
01 PLAN		A PLAN PREPARATION	1.0000	100.00	100.00
04 MOB/DEMOB		A EQUIPMENT	2.0000	575.00	1,150.00
		B PERSONNEL	5.0000	290.00	1,450.00
06 SOIL BORINGS (DRILLED)		A SOIL BORINGS & FLD SCREENING	300.0000	17.00	5,100.00
08 ABANDONMENT		ABANDONMENT	300.0000	5.00	1,500.00
09 WELL INSTALLATION		B WATER TABLE (DRILLED)	150.0000	38.00	5,700.00
		C TELESCOPING	80.0000	58.00	4,640.00
10 SAMPLE COLLECTION		A GROUNDWATER	10.0000	55.00	550.00
		C WATER SUPPLY	1.0000	25.00	25.00
		D GW NO PURGE	6.0000	35.00	210.00
11 ANALYSES					
	GW GROUNDWATER	A BTEX+NAPTH+MTBE	30.0000	100.00	3,000.00
		BB 1,2-DCA	12.0000	10.75	129.00
		E LEAD	6.0000	20.00	120.00
		F EDB	12.0000	55.00	660.00
		K NITRATE	12.0000	20.00	240.00
		L SULFATE	12.0000	20.00	240.00
		M FERROUS IRON	12.0000	20.00	240.00
		P 8 OXYGENATES	12.0000	85.00	1,020.00
	SOIL SOIL	Q BTEX+NAPTH	6.0000	100.00	600.00
12 AQUIFER CHARACTERIZATION		B SLUG TEST	2.0000	150.00	300.00
16 SUBSEQUENT SURVEY		SUBSEQUENT SURVEY	1.0000	260.00	260.00
17 DISPOSAL		A1 WASTEWATER - PURGING/SAMPLING	5.0000	90.00	450.00
		C SOIL (TREATMENT/DISPOSAL)	4.0000	50.00	200.00
19 RPT/PROJECT MNGT & COORDINATIO		PCT PERCENT	0.1500	27,884.00	4,182.60
Total Amount					32,066.60



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www.NACCDB.com



Monitoring Well Installation and Groundwater Sampling

O.H. Meggs Exxon

UST Permit #: 03423

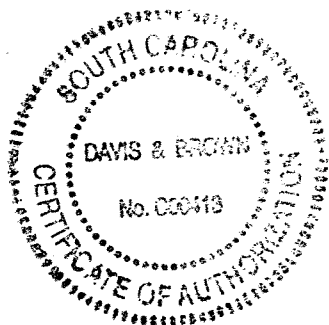
4925 Pamplico Hwy., Florence, SC

(843) 669-6818

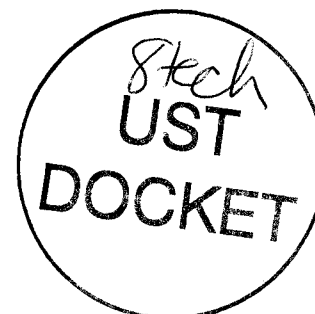
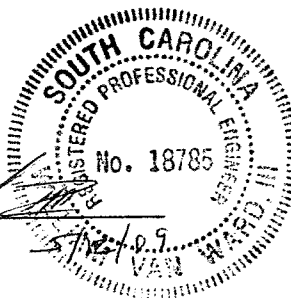
PREPARED FOR:

**SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL**

MAY 12, 2009



William Van Ward
William Van Ward, P.E.





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Monitoring Well Installation and Groundwater Sampling

O.H. Meggs Exxon

UST Permit #: 03423

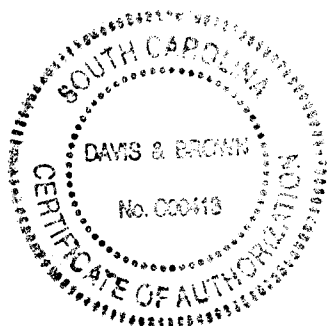
4925 Pamplico Hwy., Florence, SC

(843) 669-6818

PREPARED FOR:

**SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL**

MAY 12, 2009



William Van Ward

William Van Ward, P.E.

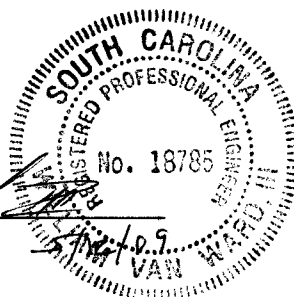


TABLE OF CONTENTS

1	Introduction	1
2	Field Screening Points.....	1
3	Soil Sampling.....	1
4	Monitoring Well Installation.....	1
5	Ground Water Sampling and Analysis.....	2
6	Ground Water Analytical Results.....	3
7	Conclusions.....	3

TABLES

- Table 1 Soil Data
Table 2 Groundwater Elevation Data
Table 3 Historical data for Ground Water Samples

APPENDICES

- Appendix A Boring Logs for temporary screening wells
Appendix B Analytical Reports for Screening, Soil, and Groundwater Samples
Appendix C Well Construction Information
Appendix D Field Measurements for Groundwater Sampling
Appendix E Disposal Manifests/Letter of Approval
Appendix F Slug Test

FIGURES

- Figure 1 Analytical Results for Screening Samples
Figure 2 Soil Sample Map
Figure 3 Groundwater Elevation Contour Map
Figure 4 Chemicals of Concern Map

1 Introduction and Site History

O.H. Meggs Exxon (ID# 03423) is located at 4925 Pamplico Hwy. in Florence, SC. The release for this site was reported in February 2002. Davis & Brown was contracted to provide assessment services to delineate impacted soil and groundwater at the site. This work was performed per SCDHEC directive letter dated November 4, 2008, under cost agreement number 34233.

2 Field Screening Points

On January 12-13 and February 19 and 27, 2009, Davis & Brown contracted ARM Environmental to install forty (40), temporary groundwater monitoring wells (TMW-1 through TMW-40). The temporary well points were installed using a Geoprobe® and hand auger. Groundwater samples were collected from each location and screened in the field using a Foxboro OVA. Groundwater samples were collected in 40ml vials and sent to a contract lab for analysis for BTEX, Naphthalene, and MTBE using EPA Method 8260B. Field and analytical data generated during this investigation was used to select locations for monitoring well installations.

Boring logs for the temporary wells are contained in Appendix A. Temporary monitoring well locations and analytical data are illustrated on Figure 1. Analytical results and chain of custody documentation are contained in Appendix B.

3 Soil Sampling

On March 29, 2009, six (6) soil samples were collected using a hand auger. These soil samples were labeled SB-8 through SB-13. Soil samples were collected at 3 to 5 foot intervals and screened in the field using a Foxboro OVA. Soil samples were collected from each boring location at the depth with the highest OVA reading above the water table. Samples were placed in laboratory supplied jars and sent to a contract lab for analysis for BTEX and Naphthalene. Analytical data for soil samples are illustrated on Figure 2 and are contained in Table 1. Analytical reports and chain of custody documentation are contained in Appendix B.

4 Monitoring Well Installation

Field and analytical data generated during field screenings was used to select locations for additional permanent monitoring wells. In addition, we had to consider the recently acquired right-of-way for the Pamplico highway. Per field meeting with the SC Department of Transportation representative, the road is due

to be widened in 2009. The new highway right-of-way is shown on our site map. Therefore, no monitoring wells were installed in this area.

During the period of March 25 to April 13, 2009, ARM Environmental installed a total of sixteen (16) groundwater monitoring wells. The wells were 2-inch diameter, schedule 40, flush threaded PVC well casing with 0.01-inch opening, slotted schedule 40 PVC well screen attached. The Type II monitor wells were constructed with the top of the well screen above the water table to allow for detection of potential free-phase liquid hydrocarbon. A uniformly graded silica filter pack was installed in the annular space from total depth to approximately 2 feet above the top of the screen. The filter pack was followed by 0.5 feet of bentonite pellets, which were hydrated. The remainder of the boring was grouted to land surface. The wells were completed with water tight, locking PVC cap, protected by a flush finished concrete pad and traffic-rated manhole with a bolt down cover.

On April 6-7, 2009, ARM Environmental installed two telescoping monitoring wells labeled MW-1-D and MW-2-D. These wells were set at 40 feet with a 5 foot screen.

Monitoring well development, boring logs and construction details are presented in Appendix C. In addition, ground water elevation data has been tabulated and included in Table 2.

The development water was containerized and disposed of at the Florence POTW. See disposal approval letter for Florence POTW located in Appendix E. Disposal manifest for soil cuttings (2 drums) and contaminated well water (3 drums) will follow under separate cover. These drums are scheduled for pick up the week of May 18, 2009 by Crandall Corporation USA.

5 Ground Water Sampling and Analysis

Jody Ricks and Ryan Davis with Davis & Brown obtained ground water samples from monitoring wells MW-1 through MW-22, MW-1-D and MW-2-D on April 20, 2009. The weather was cloudy and 80° F. A new, disposable, polyethylene bailer was used for the collection of each ground water sample. Groundwater samples were collected from MW-3 through MW-6, and a surface water sample using "no-purge" methodology. Groundwater samples were collected from MW-1, MW-2, MW-7 through MW-22, MW-1-D, and MW-2-D. After three well casing volumes of water had been purged from the well. Field measurements obtained during the sampling process for the monitoring wells are presented in Appendix D. New, disposable, Latex gloves were used to maintain sample integrity during the sampling process. Groundwater samples were placed in laboratory supplied containers, placed on ice, and shipped for analysis for BTEX, Naphthalene, MTBE, 1,2 DCA and 8 oxygenates using method 8260B. In addition, samples from monitoring wells MW-7 through MW-22, MW-1D and MW-2-D were analyzed for EDB, ferrous iron, Nitrate and Sulfate using SCDHEC approved analytical methods. Proper preservation methods and chain-of-custody procedures were followed throughout the sampling process.

The depth to ground water measurements were used to construct the potentiometric map included as Figure 3. Groundwater measurements and water table elevations are summarized in Table 2.

A slug test was conducted on monitoring well MW-2-D and MW-15. Analysis of data collected during the slug test indicates approximate hydraulic conductivities of 0.35 feet per day for monitoring well MW-2-D and 0.032 feet per day for monitoring well MW-15. The slug test can be found in Appendix F. As indicated in Figure 3, the ground water flow is from south to north at this site.

6 Ground Water Analytical Results

The laboratory analytical reports from the April 20, 2009 sampling event are presented in Appendix B. The data is also presented in historical tabular form in Table 3.

Benzene and Naphthalene was detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1, MW-3 through MW-6, MW-13, and MW-14.

Toluene was detected at concentrations above its RBSL in samples collected from wells MW-1, MW-3 and MW-4.

MTBE was detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1, MW-3, MW-4, MW-13, and MW-14 through MW-16. Also, the surface water sample collected from the ditch on the west side of the site had an MTBE concentration of 155 ppb.

Xylene was detected at concentrations greater than its RBSL in the sample collected from monitoring well MW-3.

Ethylbenzene was detected at concentrations greater than its RBSL in samples collected from monitoring wells MW-1 and MW-3.

EDB was detected at concentrations greater than its RBSL in the sample collected from monitoring well MW-1.

A chemical of concern map is included as Figure 4.

7 Conclusions

- Groundwater flow is in the north direction at this site.
- Soil contamination was not fully delineated using the approved six sample points. Additional soil sampling on the north and east sides of the property are required to finish delineation.
- Benzene, Naphthalene and MTBE in groundwater has migrated off site to the north side.
- The surface water sample collected from the ditch on the west side of the site had an MTBE concentration of 155 ppb.
- The vertical and horizontal extent of groundwater contamination has been defined at this site.

TABLES

OH MEGGS EXXON

HISTORICAL SOIL DATA

HISTORICAL SOIL DATA						TABLE 1	
	RBSL	SB2=MW2	SB3=MW3	SB4=MW4	SB-5	SB-6	SB-7
DATE	Mg/Kg	11\25\02	11\25\02	11\25\02	11\25\02	11\25\02	11\25\02
PARAMETER		PPM					
BENZENE	0.007	<0.005	0.506	9.45	<0.050	0.592	0.985
BTEX		<0.025	166.41	386	0.014	10.28	133.5
ETHYLBENZENE	1.5	<0.005	14.7	97.5	0.009	0.782	13
NAPTHALENE	0.2	<0.005	19.2	16.2	0.418	0.83	8.61
PAH		BDL	3.63	26.3	BDL	BDL	39.2
TOLUENE	1.7	<0.005	36	122	<0.050	4.11	29.8
XYLENES	44	<0.010	115.2	217	<0.006	4.8	89.7

	RBSL	SB-8	SB-9	SB-10	SB-11	SB-12	SB-13
DATE	Mg/Kg	3\27\09	3\27\09	3\27\09	3\27\09	3\27\09	3\27\09
PARAMETER		PPM					
BENZENE	0.007	<0.005	43.4	20.9	51.1	<0.004	<0.287
BTEX		0.027	1586	716	1425	<0.021	0.605
ETHYLBENZENE	1.5	<0.005	156	68	129	<0.004	0.605
NAPHTHALENE	0.2	<0.005	82	43	77	<0.004	2.44
PAH							
TOLUENE	1.7	<0.005	602	256	563	0.004	<0.287
XYLENES	44	<0.011	785	771	680	<0.009	<0.574

RBSL LIMITS ARE BASED ON SANDY SOIL

OH MEGGS EXXON
POTENTIOMETRIC DATA
SITE # 03423

TABLE 2

WELL #	CAS. ELEV.	GW DEPTH	GW ELEV.	GW DEPTH	GW ELEV.	GW DEPTH	GW ELEV.	WELL DEPTH	SCREENED INT.
DATE		92000	92000	1103	1103	7108	7108		
1	99.56	4.10	95.46	3.60	95.96	6.10	93.46	15.00	5.00-15.00'
2	100.18	4.38	95.80	3.90	96.28	6.80	93.38	15.00	5.00-15.00'
3	97.74	2.14	95.60	2.02	95.72	4.21	93.53	12.00	2.00-12.00'
4	98.85	3.12	95.73	2.93	95.92	5.52	93.33	13.00	3.00-13.00'
5	99.58	3.82	95.76			6.36	93.22	12.00	2.00-12.00'
6	100.37	4.22	96.15			7.00	93.37	12.00	2.00-12.00'
7	100.96	4.87	96.09					12.00	2.00-12.00'
8	98.12	2.47	95.65					12.00	2.00-12.00'
9	96.61	2.80	94.81					12.00	2.00-12.00'
10	93.88	1.39	92.49					12.00	2.00-12.00'
11	92.73	1.88	91.85					12.00	2.00-12.00'
12	93.84	2.89	90.95					12.00	2.00-12.00'
13	94.89	2.48	92.41					12.00	2.00-12.00'
14	96.24	2.48	93.76					12.00	2.00-12.00'
15	97.36	2.89	94.47					12.00	2.00-12.00'
16	94.27	0.70	93.57					12.00	2.00-12.00'
17	93.55	1.30	92.25					12.00	2.00-12.00'
18	96.44	2.10	94.34					12.00	2.00-12.00'
19	93.8	1.06	92.74					12.00	2.00-12.00'
20	100.7	2.90	97.80					12.00	2.00-12.00'
21	91.73	1.84	90.89					12.00	2.00-12.00'
22	92.81	1.10	91.71					12.00	2.00-12.00'
DW-1	98.82	3.12	95.76					40.00	35.00-40.00'
DW-2	96.63	1.18	95.45					40.00	35.00-40.00'

COC	RBSL	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW3	MW3	MW3
DATE	ug/l	7\25\02	1\06\03	7\24\08	4\20\09	1\06\03	7\24\08	4\20\09	1\06\03	7\24\08	4\20\09
1,2 DCA			19.1	<180	<2.50	281	<0.090	<5	157	<45	<1,000
BENZENE	5	3,690	7,810	14,100	7,010	14.6	<0.065	<5	8,190	1,730	822
BTEX	N/A	21,170	47,280	84,090	42,420	14.6	0.793	<25	31,750	38,220	23,620
DIPE					<2,500			<5			<1,000
EDB	<0.03	1.2	4.6	0.183	0.487	<0.02	<0.003	<10	<0.02	<0.003	<0.01
ETHANOL					<50,000			<100			<20,000
ETBA					<5,000			<10			<2,000
ETBE					<2,500			<5			<1,000
ETHYLBENZENE	700	804	2,430	2,990	1670 J	<1	<0.065	<5	1,920	2,090	1,580
FERROUS											
MTBE	40	2,770	68.7	37,800	12,300	9	<5	<5	1,670	<2,500	<1,000
NAPHTHALENE	25	218	615	<236	1070 J	<1	<0.118	<5	715	2,130	685 J
NITRATE			<500			4,500			<500		
SULFATE			<2,000			<2,000			3,100		
TAA					27,400			<20			<4,000
TAME					<2,500			<5			<1,000
TBA					<5,000			<10			<2,000
TBF					<2,500			<5			<1,000
TOLUENE	1,000	10,500	25,000	46,500	26,500	<1	0.793	<5	13,600	18,200	9,640
XYLENE	10,000	6,180	12,040	20,500	8,910	<2	<0.183	<10	8,040	16,200	12,400
Pb	15	6	17	5		14	<1		5	1	
PAH		285	213			BDL			628		
METHANE			<10			<10			10		

[illegible][illegible]

APPENDIX A



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BORING LOG			BORING NO: BORING - SB - 8	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 3-27-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):4		GROUND WATER DEPTH (ft):	SCREEN DEPTH (ft):	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL):	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION	OVA	COMMENTS	PID (PPM)
0-4	BROWNISH MOIST SAND W/ LITTLE CLAY	<1	SAMPLED @ 4 FT	

BORING LOG			BORING NO: BORING - SB - 9	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 3-27-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):4		GROUND WATER DEPTH (ft):	SCREEN DEPTH (ft):	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL):	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION	OVA	COMMENTS	PID (PPM)
0-4	BROWN MOIST SAND WITH LITTLE CLAY	>1000	SAMPLED @ 4 FT	

BORING LOG			BORING NO: BORING - SB - 10	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 3-27-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):4		GROUND WATER DEPTH (ft):	SCREEN DEPTH (ft):	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL):	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION	OVA	COMMENTS	PID (PPM)
0-4	BROWNISH MOIST SANDY CLAY	>1000	SAMPLED @ 4 FT	



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BORING LOG				BORING NO: BORING - SB - 11	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 3-27-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):4		GROUND WATER DEPTH (ft):		SCREEN DEPTH (ft):	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL):	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-4	BROWNISH MOIST SANDY CLAY		>1000	SAMPLED @ 4 FT	

BORING LOG				BORING NO: BORING - SB - 12	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 3-27-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):4		GROUND WATER DEPTH (ft):		SCREEN DEPTH (ft):	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL):	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-4	BROWN MOIST SANDY CLAY		<1	SAMPLED @ 4 FT	

BORING LOG				BORING NO: BORING - SB - 13	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 3-27-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):4		GROUND WATER DEPTH (ft):		SCREEN DEPTH (ft):	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL):	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-4	BROWNISH MOIST SANDY CLAY		3	SAMPLED @ 4 FT	

OH MEGGS
TMW'S SUMMARY

TMW	WATER LEVEL	TOTAL DEPTH	LAB DATA	PURGED	OVA	SCREENED INT.
1	7.00	9.00			<1	4.00 - 9.00
2	7.30	9.00			<1	4.00 - 9.00
3	8.00	9.00			<1	4.00 - 9.00
4	7.00	9.00	Y		<1	4.00 - 9.00
5	6.35	9.00			<1	4.00 - 9.00
6	4.91	9.00			<1	4.00 - 9.00
7	4.20	9.00			<1	4.00 - 9.00
8	4.10	9.00	Y		<1	4.00 - 9.00
9	4.20	9.00			>10	4.00 - 9.00
10	1.15	9.00		Y	5.00	4.00 - 9.00
11	1.95	9.00	Y	Y	1.00	4.00 - 9.00
12	5.00	9.00	Y		<1	4.00 - 9.00
13	3.65	9.00	Y	Y	1.00	4.00 - 9.00
14	2.60	9.00		Y	60.00	4.00 - 9.00
15	3.00	9.00		Y	>100	4.00 - 9.00
16	2.50	9.00		Y	20.00	4.00 - 9.00
17	3.00	9.00		Y	>100	4.00 - 9.00
18	2.50	9.00		Y	30.00	4.00 - 9.00
19	6.30	9.00	Y		3.00	4.00 - 9.00
20	5.50	9.00	Y		<1	4.00 - 9.00
21	1.50	4.00	Y		<1	0.00 - 4.00
22	1.30	4.00	Y		<1	0.00 - 4.00
23	2.65	9.00	Y	Y	<1	4.00 - 9.00
24	2.50	5.00	Y		150.00	0.00 - 5.00
25	1.30	5.00			7.00	0.00 - 5.00
26	2.70	5.00			4.00	0.00 - 5.00
27	2.74	5.00			70.00	0.00 - 5.00
28	0.80	5.00			110.00	0.00 - 5.00
29	0.95	5.00			10.00	0.00 - 5.00
30	0.60	5.00	Y		<1.0	0.00 - 5.00
31	1.00	5.00			1.00	0.00 - 5.00
32	0.95	5.00	Y		3.00	0.00 - 5.00
33	0.77	5.00			13.00	0.00 - 5.00
34	1.00	5.00	Y		1.00	0.00 - 5.00
35	1.60	5.00			<1	0.00 - 5.00
36	1.10	5.00	Y		<1	0.00 - 5.00
37	1.22	5.00			1.00	0.00 - 5.00
38	1.26	5.00	Y		7.00	0.00 - 5.00
39	2.10	5.00			6.00	0.00 - 5.00
40	2.00	5.00	Y		<1	0.00 - 5.00

ALL TMW'S ABOVE SCREEN WERE PURGED BEFORE SAMPLING

ALL 5 FT. TMW'S WERE HAND AUGERED

FALSE OVA READINGS WERE DUE TO ORGANIC MATERIAL



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BORING LOG				BORING NO: BORING - TMW-1	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 7		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	FIELD	
2-9	GRAYISH ORANGE MOIST CLAY		<1		

BORING LOG				BORING NO: BORING - TMW-2	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 7.3		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		<1		

BORING LOG				BORING NO: BORING - TMW-3	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 8		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	DIRT DRIVE WAY	
2-9	GRAYISH ORANGE MOIST CLAY		<1		



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BORING LOG			BORING NO: BORING - TMW-4		PAGE 0F	
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 7		SCREEN DEPTH (ft):4		
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5		
DEPTH (FT)		UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
	0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
	2-9	GRAYISH ORANGE MOIST CLAY		<1		
		LAB DATA W/ SAMPLE				

BORING LOG			BORING NO: BORING - TMW-5		PAGE 0F	
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09	PROJECT NAME: MEGGS EXXON			
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 6.35	SCREEN DEPTH (ft):4			
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5			
DEPTH (FT)		UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
	0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
	2-9	GRAYISH ORANGE MOIST CLAY		<1		

BORING LOG			BORING NO: BORING - TMW-6		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09	PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 4.91	SCREEN DEPTH (ft):4		
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5		
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		<1		



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BORING LOG			BORING NO: BORING - TMW-7		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 4.20		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		<1		

BORING LOG			BORING NO: BORING - TMW-8		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 4.10		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		<1		
	WATER LAB DATA				

BORING LOG			BORING NO: BORING - TMW-9		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 4.20		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-4	GRAYISH ORANGE MOIST CLAY				
4-9	GRAYISH ORANGE WET SAND CLAY		>10		



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BORING LOG				BORING NO: BORING - TMW-10	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 1.15		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	FIELD	
2-8	GRAYISH ORANGE MOIST CLAY		5		
8-9	WHITE SAND WITH LITTLE CLAY		5		
	PURGED BEFORE SAMPLING				

BORING LOG				BORING NO: BORING - TMW-11	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 1.95		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	FIELD	
2-8	GRAYISH ORANGE MOIST CLAY		<1		
8-9	WHITE SAND WITH LITTLE CLAY		<1		
	PURGED BEFORE SAMPLING - LAB DATA				

BORING LOG				BORING NO: BORING - TMW-12	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 5.0		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		<1		
	LAB DATA W/ WATER SAMPLE				



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BORING LOG			BORING NO: BORING - TMW-13		PAGE 0F	
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 3.65		SCREEN DEPTH (ft):4		
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5		
DEPTH (FT)		UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
	0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
	2-9	GRAYISH ORANGE MOIST CLAY		<1		
		PURGED BEFORE SAMPLING/ LAB DATA				

BORING LOG			BORING NO: BORING - TMW-14		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09	PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 2.60	SCREEN DEPTH (ft):4		
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5		
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		30		
	PURGED BEFORE SAMPLING				

BORING LOG			BORING NO: BORING - TMW-15		PAGE 0F	
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09	PROJECT NAME: MEGGS EXXON			
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 3.0	SCREEN DEPTH (ft):4			
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5			
DEPTH (FT)		UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
	0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
	2-9	GRAYISH ORANGE MOIST CLAY		>100		
		PURGED BEFORE SAMPLING				



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BORING LOG				BORING NO: BORING - TMW-16	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 2.50		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		8	SOIL @ 5 FT	
	PURGED BEFORE SAMPLING				

BORING LOG				BORING NO: BORING - TMW-17	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 3.00		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		20	SOIL @ 5 FT.	
	PURGED BEFORE SAMPLING				

BORING LOG				BORING NO: BORING - TMW-18	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 2.50		SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY		<1	GRASS	
2-9	GRAYISH ORANGE MOIST CLAY		12	SOIL @ 5 FT	
	PURGED BEFORE SAMPLING				



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BORING LOG			BORING NO: BORING - TMW-19	PAGE 0F	
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-13-09	PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 6.30	SCREEN DEPTH (ft):4		
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5		
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
	0-2	BROWN MOIST SAND WITH LITTLE CLAY	<1	GRASS	
	2-9	GRAYISH ORANGE MOIST CLAY	1	SOIL @ 5 FT	
		LAB DATA W/ WATER			

BORING LOG			BORING NO: BORING - TMW-20	PAGE 0F	
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-13-09	PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 5.50	SCREEN DEPTH (ft):4		
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5		
DEPTH (FT)		UNIFIED CLASSIFICATION DESCRIPTION	OVA	COMMENTS	PID (PPM)
	0-2	BROWN MOIST SAND WITH LITTLE CLAY	<1	HEAVY BRUSH	
	2-9	GRAYISH ORANGE MOIST CLAY	<1		
		LAB DATA W/ WATER			

BORING LOG			BORING NO: BORING - TMW-21		PAGE 0F	
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-12-09		PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):4		GROUND WATER DEPTH (ft): 1.5		SCREEN DEPTH (ft):4		
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5		
DEPTH (FT)		UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
	0-4	BROWN WET ORGANIC SANDY CLAY		<1	MUDDY FIELD	
		LAB DATA W/ WATER				



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BORING LOG			BORING NO: BORING - TMW-22	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-13-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):4		GROUND WATER DEPTH (ft): 1.3	SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION	OVA	COMMENTS	PID (PPM)
0-4	BROWN WET ORGANIC SANDY CLAY	<1	MUDDY FIELD	
	LAB DATA W/ WATER			

BORING LOG			BORING NO: BORING - TMW-23	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 1-13-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):9		GROUND WATER DEPTH (ft): 2.65	SCREEN DEPTH (ft):4	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION	OVA	COMMENTS	PID (PPM)
0-2	BROWN MOIST SAND WITH LITTLE CLAY	<1	GRASS	
2-8	GRAYISH ORANGE MOIST CLAY	<1		
8-9	WHITE WET SAND WITH LITTLE CLAY	<1		
	PURGED BEFORE SAMPLING/ LAB DATA			



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BORING LOG			BORING NO: BORING - TMW-24	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-19-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 2.5	SCREEN DEPTH (ft): 5	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS PID (PPM)
0-1	BLACK ORGANIC SOIL			WOODS
1-5	GRAYISH WET SANDY CLAY		5	

BORING LOG			BORING NO: BORING - TMW-25	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-19-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 1.3	SCREEN DEPTH (ft):5	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS PID (PPM)
0-1	BLACK ORGANIC SOIL			WOODS
1-5	GRAYISH WET SANDY CLAY		<1	

BORING LOG			BORING NO: BORING - TMW-26	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-19-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 2.70	SCREEN DEPTH (ft):5	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS PID (PPM)
0-1	BLACK ORGANIC SOIL			WOODS
1-5	GRAYISH WET SANDY CLAY		<1	



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BORING LOG			BORING NO: BORING - TMW-27	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-19-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 2.74	SCREEN DEPTH (ft): 5	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS PID (PPM)
0-1	BLACK ORGANIC SOIL			WOODS
1-5	GRAYISH WET SANDY CLAY		<1	

BORING LOG			BORING NO: BORING - TMW-28	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-19-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 0.8	SCREEN DEPTH (ft):5	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS PID (PPM)
0-1	BLACK ORGANIC SOIL			WOODS
1-5	GRAYISH WET SANDY CLAY		3	

BORING LOG			BORING NO: BORING - TMW-29	PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-19-09	PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 0.95	SCREEN DEPTH (ft):5	
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS PID (PPM)
0-1	BLACK ORGANIC SOIL			WOODS
1-5	GRAYISH WET SANDY CLAY		<1	



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BORING LOG			BORING NO: BORING - TMW-30		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-19-09	PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 0.60	SCREEN DEPTH (ft): 5		
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5		
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-1	BLACK ORGANIC SOIL			WOODS	
1-5	GRAYISH WET SANDY CLAY		<1		

BORING LOG			BORING NO: BORING - TMW-31		PAGE 0F		
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09		PROJECT NAME: MEGGS EXXON			
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 1.0		SCREEN DEPTH (ft):5			
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5			
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION			OVA	COMMENTS	PID (PPM)	
	0-5	BROWNISH ORANGE WET SANDY CLAY			<1	GRASS	

BORING LOG			BORING NO: BORING - TMW-32		PAGE 0F		
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-19-09		PROJECT NAME: MEGGS EXXON			
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 0.95		SCREEN DEPTH (ft):5			
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5			
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION			OVA	COMMENTS	PID (PPM)	
	0-5	BROWNISH ORANGE SANDY CLAY			<1	GRASS	



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BORING LOG			BORING NO: BORING - TMW-33		PAGE 0F		
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09		PROJECT NAME: MEGGS EXXON			
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 0.77		SCREEN DEPTH (ft): 5			
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5			
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION			OVA	COMMENTS	PID (PPM)	
	0-5	BROWNISH ORANGE WET SANDY CLAY			<1	GRASS	

BORING LOG			BORING NO: BORING - TMW-34	PAGE 0F	
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09	PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 1.00	SCREEN DEPTH (ft):5		
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5		
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PH (PPM)
	0-5	BROWNISH ORANGE WET SANDY CLAY	<1	GRASS	

BORING LOG			BORING NO: BORING - TMW-35		PAGE 0F		
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09		PROJECT NAME: MEGGS EXXON			
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 1.60		SCREEN DEPTH (ft):5			
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5			
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION			OVA	COMMENTS	PID (PPM)	
	0-5	BROWNISH ORANGE SANDY CLAY			<1	GRASS	



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BORING LOG			BORING NO: BORING - TMW-36		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09	PROJECT NAME: MEGGS EXXON		
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 1.10	SCREEN DEPTH (ft): 5		
		G/W ELEV (MSL): NA	SCREEN INTERVAL (MSL): 5		
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-5	BROWNISH ORANGE WET SANDY CLAY		<1	GRASS	

BORING LOG			BORING NO: BORING - TMW-37		PAGE 0F		
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09		PROJECT NAME: MEGGS EXXON			
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 1.22		SCREEN DEPTH (ft):5			
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5			
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION			OVA	COMMENTS	PID (PPM)	
	0-5	BROWNISH ORANGE WET SANDY CLAY			<1	GRASS	

BORING LOG			BORING NO: BORING - TMW-38		PAGE 0F		
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09		PROJECT NAME: MEGGS EXXON			
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 1.26		SCREEN DEPTH (ft):5			
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5			
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION			OVA	COMMENTS	PID (PPM)	
	0-5	BROWNISH ORANGE SANDY CLAY			<1	GRASS	



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BORING LOG			BORING NO: BORING - TMW-39		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 2.10		SCREEN DEPTH (ft): 5	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-5	BROWNISH ORANGE WET SANDY CLAY		<1	FIELD	

BORING LOG			BORING NO: BORING - TMW-40		PAGE 0F
LOCATION: MEGGS EXXON FLORENCE SC		DATE COMPLETED: 2-27-09		PROJECT NAME: MEGGS EXXON	
TOTAL DEPTH (ft):5		GROUND WATER DEPTH (ft): 2.00		SCREEN DEPTH (ft):5	
		G/W ELEV (MSL): NA		SCREEN INTERVAL (MSL): 5	
DEPTH (FT)	UNIFIED CLASSIFICATION DESCRIPTION		OVA	COMMENTS	PID (PPM)
0-5	BROWNISH ORANGE WET SANDY CLAY		<1	FIELD	

APPENDIX B

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 12-Jan-09

Approved By:

Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142890

Lab Director

Sample ID: TMW 4

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	15:05	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	15:05	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	15:05	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	1/20/2009	15:05	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	15:05	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	15:05	CLH

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Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 12-Jan-09

Approved By:

Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142891

Lab Director

Sample ID: TMW 8

Parameter	Result	Reporting		Unit	Method	Flag	Date	Time	Analyst
		Limit							
Benzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	15:27	CLH
BTEX, Total (Liquids)	<0.025	0.025		ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	15:27	CLH
Toluene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	15:27	CLH
Xylene, Total	<0.010	0.01		ppm	5035/8260B	S11	1/20/2009	15:27	CLH
Methyl tert-Butyl Ether	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	15:27	CLH
Napthalene	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	15:27	CLH

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 12-Jan-09

Approved By:

Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142892

Lab Director

Sample ID: TMW 11

Parameter	Result	Reporting		Unit	Method	Flag	Date	Time	Analyst
		Limit							
Benzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	15:50	CLH
BTEX, Total (Liquids)	<0.025	0.025		ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	15:50	CLH
Toluene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	15:50	CLH
Xylene, Total	<0.010	0.01		ppm	5035/8260B	S11	1/20/2009	15:50	CLH
Methyl tert-Butyl Ether	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	15:50	CLH
Napthalene	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	15:50	CLH

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Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 12-Jan-09

Approved By:

Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142893

Lab Director

Sample ID: TMW 12

Parameter	Result	Reporting		Unit	Method	Flag	Date	Time	Analyst
		Limit							
Benzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	16:12	CLH
BTEX, Total (Liquids)	<0.025	0.025		ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	16:12	CLH
Toluene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	16:12	CLH
Xylene, Total	<0.010	0.01		ppm	5035/8260B	S11	1/20/2009	16:12	CLH
Methyl tert-Butyl Ether	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	16:12	CLH
Napthalene	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	16:12	CLH

Davis & Brown

PO Box 15038
Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

Client #: 1688

Contact:

Sample Date: 12-Jan-09

SDG #: SDG-064758

Lab Sample ID: LSID-142894

Sample ID: TMW 13

South Carolina Certification Number: 21117

Receipt Date: 19-Jan-09

Report Date: 03-Feb-09

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	16:34	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	16:34	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	16:34	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	1/20/2009	16:34	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	16:34	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	16:34	CLH

Davis & Brown

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 13-Jan-09

Approved By:

Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142895

Lab Director

Sample ID: TMW 19

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	0.0572	0.005	ppm	5035/8260B	S11	1/20/2009	16:57	CLH
BTEX, Total (Liquids)	0.0572	0.025	ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	16:57	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	16:57	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	1/20/2009	16:57	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	16:57	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	16:57	CLH

Davis & Brown

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 13-Jan-09

Approved By: Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142896

Lab Director

Sample ID: TMW 20

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	18:49	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	18:49	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	18:49	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	1/20/2009	18:49	CLH
Methyl tert-Butyl Ether	0.0195	0.005	mg/L	EPA 8260	S11	1/20/2009	16:57	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	18:49	CLH

Davis & Brown

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 13-Jan-09

Approved By:

Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142897

Lab Director

Sample ID: TMW 21

Parameter	Result	Reporting		Unit	Method	Flag	Date	Time	Analyst
		Limit							
Benzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	19:11	CLH
BTEX, Total (Liquids)	<0.025	0.025		ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	19:11	CLH
Toluene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	19:11	CLH
Xylene, Total	<0.010	0.01		ppm	5035/8260B	S11	1/20/2009	19:11	CLH
Methyl tert-Butyl Ether	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	19:11	CLH
Napthalene	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	19:11	CLH

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Certificate of Analysis

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P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 13-Jan-09

Approved By: Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142898

Lab Director

Sample ID: TMW 22

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	20:42	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	20:42	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	1/20/2009	20:42	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	1/20/2009	20:42	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	20:42	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	1/20/2009	20:42	CLH

Davis & Brown

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 19-Jan-09

Contact:

Report Date: 03-Feb-09

Sample Date: 13-Jan-09

Approved By:

Van Ward

SDG #: SDG-064758

Van Ward

Lab Sample ID: LSID-142899

Lab Director

Sample ID: TMW 23

Parameter	Result	Reporting		Unit	Method	Flag	Date	Time	Analyst
		Limit							
Benzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	21:04	CLH
BTEX, Total (Liquids)	<0.025	0.025		ppm	5035/8260B		1/20/2009		WSF
Ethylbenzene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	21:04	CLH
Toluene	<0.005	0.005		ppm	5035/8260B	S11	1/20/2009	21:04	CLH
Xylene, Total	<0.010	0.01		ppm	5035/8260B	S11	1/20/2009	21:04	CLH
Methyl tert-Butyl Ether	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	21:04	CLH
Napthalene	<0.005	0.005		mg/L	EPA 8260	S11	1/20/2009	21:04	CLH

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201701	142890	Water	01/12/2009 16:15	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 15:05	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	1.62J	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	48.5	ug/L	97	78 - 130
1868-53-7	Dibromofluoromethane	50	59.5	ug/L	119	77 - 127
2037-26-5	Toluene d8	50	50.2	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.4	ug/L	99	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201702	142891	Water	01/12/2009 17:00	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 15:27	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.172J	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	4.09J	10.0	0.183	ug/L
91-20-3	Naphthalene	1.58J	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.228J	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.4	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	59.9	ug/L	120	77 - 127
2037-26-5	Toluene d8	50	51.4	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.1	ug/L	96	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201703	142892	Water	01/12/2009 10:10	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 15:50	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	48.6	ug/L	97	78 - 130
1868-53-7	Dibromofluoromethane	50	59.5	ug/L	119	77 - 127
2037-26-5	Toluene d8	50	50	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.5	ug/L	99	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201704	142893	Water	01/12/2009 10:20	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 16:12	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	48.4	ug/L	97	78 - 130
1868-53-7	Dibromofluoromethane	50	60.6	ug/L	121	77 - 127
2037-26-5	Toluene d8	50	49.6	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	51	ug/L	102	71 - 127

Second Tier Data Review By:



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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201705	142894	Water	01/12/2009 10:25	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 16:34	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	2.33J	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	1.76J	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.2	ug/L	98	78 - 130
1868-53-7	Dibromofluoromethane	50	59.5	ug/L	119	77 - 127
2037-26-5	Toluene d8	50	50.6	ug/L	101	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.7	ug/L	99	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
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GCAL Report 209012017

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201706	142895	Water	01/13/2009 11:30	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 16:57	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	57.2	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	1.67J	10.0	0.183	ug/L
91-20-3	Naphthalene	2.35J	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	3.30J	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.5	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	58.6	ug/L	117	77 - 127
2037-26-5	Toluene d8	50	50	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50	ug/L	100	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

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GCAL Report 209012017

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201707	142896	Water	01/13/2009 11:45	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 18:49	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	1.77J	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	19.5	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	50.5	ug/L	101	78 - 130
1868-53-7	Dibromofluoromethane	50	59.6	ug/L	119	77 - 127
2037-26-5	Toluene d8	50	50.8	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.4	ug/L	99	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
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GCAL Report 209012017

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201708	142897	Water	01/13/2009 12:00	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 19:11	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	1.63J	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.5	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	53.2	ug/L	106	77 - 127
2037-26-5	Toluene d8	50	51.1	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.3	ug/L	97	71 - 127

Second Tier Data Review By:



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GCAL Report 209012017

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201709	142898	Water	01/13/2009 12:15	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 20:42	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.7	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	59.9	ug/L	120	77 - 127
2037-26-5	Toluene d8	50	50.7	ug/L	101	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.8	ug/L	100	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20901201710	142899	Water	01/13/2009 13:40	01/20/2009 09:10

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	01/20/2009 21:04	CLH	404748

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.8	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	50	59.6	ug/L	119	77 - 127
2037-26-5	Toluene d8	50	50	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	52.8	ug/L	106	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL Report 209012017

DAVIS & BROWN

Data Qualifiers

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" or "flag" next to the result. **The data qualifier "S" indicates that the analysis was performed by another SC certified Lab. This table summarizes the South Carolina Lab Certification Numbers for those laboratories.**

S	South Carolina Lab Certification Number: 23101
S1	South Carolina Lab Certification Number: 93013
S2	South Carolina Lab Certification Number: 23105
S3	South Carolina Lab Certification Number: 10120
S4	South Carolina Lab Certification Number: 84002
S5	South Carolina Lab Certification Number: 32117
S6	Agricultural Service Laboratory Clemson University
S7	South Carolina Lab Certification Number: 36001
S8	*****
S9	South Carolina Lab Certification Number: 94014001; 94014002
S10	South Carolina Lab Certification Number: 84009
S11	South Carolina Lab Certification Number: 96023; 96026; 96031; 98001; 73006
S12	AASHTO R18 Certified
S13	South Carolina Lab Certification Number: 96012
S14	South Carolina Lab Certification Number: 89002
S15	*****
S16	South Carolina Lab Certification Number: 84004
S17	South Carolina Lab Certification Number: 96037001
S18	South Carolina Lab Certification Number: 95005
S19	South Carolina Lab Certification Number: 23104
S20	South Carolina Lab Certification Number: 96027001
S21	South Carolina Lab Certification Number: 21005
S22	South Carolina Lab Certification Number: 24110
S23	South Carolina Lab Certification Number: 84001001
S24	South Carolina Lab Certification Number: 82014001
S25	Sample was analyzed by Microseeps, Inc Laboratory
S26	North Carolina Lab Certification Number: 21 (Wilson Division NC00120)
S27	South Carolina Lab Certification Number: 40569

09-15-08

DAVIS & BROWN

Post Office Box 15038
 124 West McIver Road
 Florence, South Carolina 29506
 Telephone (843) 665-6746

CHAIN OF CUSTODY RECORD

Page 1 of 1 BWS Stokes

Client Name / Facility Name O. H. McEggs		SAMPLE ANALYSIS REQUIRED (X) - use remarks area to specify specific compounds or methods.										Use Codes in the boxes to indicate whether sample was filtered or preserved.						
SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# of containers	TSS BOD COD Nitrate VOC METALS - Spec. Cyanide TKN Phenol - Specify Coliform - Total Coliform - Fecal Ammonia - Dist.										LAB ID
								REMARKS	LAB ID									
T1114 4	1/12/09	1615	✓				3										142890	
T1114 8	1/12/09	1700	✓				3										142891	
T1114 11	1/12/09	1010	✓				3										142892	
T1114 12	1/12/09	1020	✓				3										142893	
T1114 13	1/12/09	1025	✓				3										142894	
T1114 19	1/13/09	1130	✓				3										142895	
T1114 20	1/13/09	1145	✓				3										142896	
T1114 21	1/13/09	1200	✓				3										142897	
T1114 22	1/13/09	1215	✓				3										142898	
T1114 23	1/13/09	1340	✓				3										142899	
Relinquished by (SIGNATURE)* BWS Stokes Received by (SIGNATURE)* Date 1/14/09 11:05 Date 1/14/09 11:05 Relinquished by (SIGNATURE)* Received by (SIGNATURE)* Date Date																		
ICED ☐ YES ☐ NO Comments ☐ Regulatory ☐ Non Regulatory																		

* Program Area: D - Drinking Water / G - Groundwater / S - Solid / W - Waste Water / N - NPDES / O - Other

Davis & Brown

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Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 26-Feb-09

Contact:

Report Date: 11-Mar-09

Sample Date: 19-Feb-09

Approved By:

Van Ward

SDG #: SDG-065458

Van Ward

Lab Sample ID: LSID-144408

Lab Director

Sample ID: O.H. MEGGS-MW 24

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Acid Digestion (Liquids)	YES			EPA 200.2		3/4/2009	1:00	DH
Benzene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	14:33	CLH
BTEX, Total	<0.025	0.025	mg/L	EPA 8260		3/3/2009		WSF
Ethylbenzene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	14:33	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	14:33	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	14:33	CLH
Toluene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	14:33	CLH
Xylenes, Total	<0.010	0.01	mg/L	EPA 8260	S11	3/3/2009	14:33	CLH
Lead, Total	<0.002	0.002	mg/L	SM 3113B		3/4/2009	19:52	JR

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Quinby, SC 29506
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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 26-Feb-09

Contact:

Report Date: 11-Mar-09

Sample Date: 19-Feb-09

Approved By:

Van Ward

SDG #: SDG-065458

Van Ward

Lab Sample ID: LSID-144409

Lab Director

Sample ID: O.H. MEGGS-MW 30

Parameter	Result	Reporting		Method	Flag	Date	Time	Analyst
		Limit	Unit					
Benzene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:02	CLH
BTEX, Total	<0.025	0.025	mg/L	EPA 8260		3/3/2009		WSF
Ethylbenzene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:02	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:02	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:02	CLH
Toluene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:02	CLH
Xylenes, Total	<0.010	0.01	mg/L	EPA 8260	S11	3/3/2009	15:02	CLH

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 26-Feb-09

Contact:

Report Date: 11-Mar-09

Sample Date: 19-Feb-09

Approved By:

Van Ward

SDG #: SDG-065458

Van Ward

Lab Sample ID: LSID-144410

Lab Director

Sample ID: O.H. MEGGS-NORTH DITCH

Parameter	Result	Reporting		Method	Flag	Date	Time	Analyst
		Limit	Unit					
Benzene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:27	CLH
BTEX, Total	<0.025	0.025	mg/L	EPA 8260		3/3/2009		WSF
Ethylbenzene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:27	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:27	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:27	CLH
Toluene	<0.005	0.005	mg/L	EPA 8260	S11	3/3/2009	15:27	CLH
Xylenes, Total	<0.010	0.01	mg/L	EPA 8260	S11	3/3/2009	15:27	CLH

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20902272003	144408	Water	02/19/2009 13:30	02/27/2009 09:43

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	03/03/2009 14:33	CLH	407159

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	1.66J	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.7	ug/L	91	78 - 130
1868-53-7	Dibromofluoromethane	50	47.1	ug/L	94	77 - 127
2037-26-5	Toluene d8	50	50.5	ug/L	101	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.8	ug/L	98	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20902272004	144409	Water	02/19/2009 13:45	02/27/2009 09:43

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	03/03/2009 15:02	CLH	407159

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.1	ug/L	90	78 - 130
1868-53-7	Dibromofluoromethane	50	47.6	ug/L	95	77 - 127
2037-26-5	Toluene d8	50	51.1	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.6	ug/L	97	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20902272005	144410	Water	02/19/2009 14:05	02/27/2009 09:43

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	03/03/2009 15:27	CLH	407159

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.6	ug/L	91	78 - 130
1868-53-7	Dibromofluoromethane	50	47.8	ug/L	96	77 - 127
2037-26-5	Toluene d8	50	51.5	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.2	ug/L	98	71 - 127

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Data Qualifiers

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" or "flag" next to the result. **The data qualifier "S" indicates that the analysis was performed by another SC certified Lab. This table summarizes the South Carolina Lab Certification Numbers for those laboratories.**

S	South Carolina Lab Certification Number:	23101
S1	South Carolina Lab Certification Number:	93013
S2	South Carolina Lab Certification Number:	23105
S3	South Carolina Lab Certification Number:	10120
S4	South Carolina Lab Certification Number:	84002
S5	South Carolina Lab Certification Number:	32117
S6	Agricultural Service Laboratory Clemson University	
S7	South Carolina Lab Certification Number:	36001
S8	*****	
S9	South Carolina Lab Certification Number:	94014001; 94014002
S10	South Carolina Lab Certification Number:	84009
S11	South Carolina Lab Certification Number:	96023; 96026; 96031; 98001; 73006
S12	AASHTO R18 Certified	
S13	South Carolina Lab Certification Number:	96012
S14	South Carolina Lab Certification Number:	89002
S15	*****	
S16	South Carolina Lab Certification Number:	84004
S17	South Carolina Lab Certification Number:	96037001
S18	South Carolina Lab Certification Number:	95005
S19	South Carolina Lab Certification Number:	23104
S20	South Carolina Lab Certification Number:	96027001
S21	South Carolina Lab Certification Number:	21005
S22	South Carolina Lab Certification Number:	24110
S23	South Carolina Lab Certification Number:	84001001
S24	South Carolina Lab Certification Number:	82014001
S25	Sample was analyzed by Microseeps, Inc Laboratory	
S26	North Carolina Lab Certification Number:	21 (Wilson Division NC00120)
S27	South Carolina Lab Certification Number:	40569

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124 West McIver Road
Florence, South Carolina 29501
Telephone (843) 685-6746

Page of

Client Name / Facility Name

B.I. STOKES / OHMERS

Collected by JOBY RICKS

[illegible]

* Program Area: D - Drinking Water / G - Groundwater / S - Solid / W - Waste Water / N - NPDES / O - Other

Davis & Brown

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Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 02-Mar-09

Contact:

Report Date: 11-Mar-09

Sample Date: 27-Feb-09

Approved By:

Van Ward

SDG #: SDG-065476

Van Ward

Lab Sample ID: LSID-144438

Lab Director

Sample ID: TMW 32

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:31	ADI
BTEX, Total	<0.025	0.025	mg/L	EPA 8260		3/4/2009		WSF
Ethylbenzene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:31	ADI
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:31	ADI
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:31	ADI
Toluene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:31	ADI
Xylenes, Total	<0.010	0.01	mg/L	EPA 8260	S11	3/4/2009	20:31	ADI

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 02-Mar-09

Contact:

Report Date: 11-Mar-09

Sample Date: 27-Feb-09

Approved By:

Van Ward

SDG #: SDG-065476

Van Ward

Lab Sample ID: LSID-144439

Lab Director

Sample ID: TMW 34

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:56	ADI
BTEX, Total	<0.025	0.025	mg/L	EPA 8260		3/4/2009		WSF
Ethylbenzene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:56	ADI
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:56	ADI
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:56	ADI
Toluene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	20:56	ADI
Xylenes, Total	<0.010	0.01	mg/L	EPA 8260	S11	3/4/2009	20:56	ADI

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Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 02-Mar-09

Contact:

Report Date: 11-Mar-09

Sample Date: 27-Feb-09

Approved By:

Van Ward

SDG #: SDG-065476

Van Ward

Lab Sample ID: LSID-144440

Lab Director

Sample ID: TMW 36

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:21	ADI
BTEX, Total	<0.025	0.025	mg/L	EPA 8260		3/4/2009		WSF
Ethylbenzene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:21	ADI
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:21	ADI
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:21	ADI
Toluene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:21	ADI
Xylenes, Total	<0.010	0.01	mg/L	EPA 8260	S11	3/4/2009	21:21	ADI

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 02-Mar-09

Contact:

Report Date: 11-Mar-09

Sample Date: 27-Feb-09

SDG #: SDG-065476

Approved By: Van Ward

Lab Sample ID: LSID-144441

Van Ward

Sample ID: TMW 38

Lab Director

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:45	ADI
BTEX, Total	<0.025	0.025	mg/L	EPA 8260		3/4/2009		WSF
Ethylbenzene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:45	ADI
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:45	ADI
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:45	ADI
Toluene	<0.005	0.005	mg/L	EPA 8260	S11	3/4/2009	21:45	ADI
Xylenes, Total	<0.010	0.01	mg/L	EPA 8260	S11	3/4/2009	21:45	ADI

Davis & Brown

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Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 02-Mar-09

Contact:

Report Date: 11-Mar-09

Sample Date: 27-Feb-09

Approved By:

Van Ward

SDG #: SDG-065476

Van Ward

Lab Sample ID: LSID-144442

Lab Director

Sample ID: TMW 40

Parameter	Result	Reporting		Unit	Method	Flag	Date	Time	Analyst
		Limit							
Benzene	<0.005	0.005		mg/L	EPA 8260	S11	3/4/2009	22:10	ADI
BTEX, Total	<0.025	0.025		mg/L	EPA 8260		3/4/2009		WSF
Ethylbenzene	<0.005	0.005		mg/L	EPA 8260	S11	3/4/2009	22:10	ADI
Methyl tert-Butyl Ether	<0.005	0.005		mg/L	EPA 8260	S11	3/4/2009	22:10	ADI
Napthalene	<0.005	0.005		mg/L	EPA 8260	S11	3/4/2009	22:10	ADI
Toluene	<0.005	0.005		mg/L	EPA 8260	S11	3/4/2009	22:10	ADI
Xylenes, Total	<0.010	0.01		mg/L	EPA 8260	S11	3/4/2009	22:10	ADI

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20903043101	144438	Water	02/27/2009 14:00	03/04/2009 09:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	03/04/2009 20:31	ADI	407227

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.5	ug/L	87	78 - 130
1868-53-7	Dibromofluoromethane	50	46.1	ug/L	92	77 - 127
2037-26-5	Toluene d8	50	46.2	ug/L	92	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	46	ug/L	92	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL Report 209030431

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20903043102	144439	Water	02/27/2009 14:40	03/04/2009 09:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	03/04/2009 20:56	ADI	407227

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	46.1	ug/L	92	78 - 130
1868-53-7	Dibromofluoromethane	50	46.1	ug/L	92	77 - 127
2037-26-5	Toluene d8	50	46	ug/L	92	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	46.3	ug/L	93	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL Report 209030431

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20903043103	144440	Water	02/27/2009 15:10	03/04/2009 09:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	03/04/2009 21:21	ADI	407227

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	46.9	ug/L	94	78 - 130
1868-53-7	Dibromofluoromethane	50	45.6	ug/L	91	77 - 127
2037-26-5	Toluene d8	50	49.9	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	45.6	ug/L	91	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

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GCAL Report 209030431

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20903043104	144441	Water	02/27/2009 15:40	03/04/2009 09:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	03/04/2009 21:45	ADI	407227

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.9	ug/L	86	78 - 130
1868-53-7	Dibromofluoromethane	50	46.3	ug/L	93	77 - 127
2037-26-5	Toluene d8	50	45.5	ug/L	91	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	45.9	ug/L	92	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL Report 209030431

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20903043105	144442	Water	02/27/2009 16:10	03/04/2009 09:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	03/04/2009 22:10	ADI	407227

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.4	ug/L	87	78 - 130
1868-53-7	Dibromofluoromethane	50	45.9	ug/L	92	77 - 127
2037-26-5	Toluene d8	50	45.7	ug/L	91	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	45.4	ug/L	91	71 - 127

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL Report 209030431

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Data Qualifiers

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" or "flag" next to the result. **The data qualifier "S" indicates that the analysis was performed by another SC certified Lab. This table summarizes the South Carolina Lab Certification Numbers for those laboratories.**

S	South Carolina Lab Certification Number: 23101
S1	South Carolina Lab Certification Number: 93013
S2	South Carolina Lab Certification Number: 23105
S3	South Carolina Lab Certification Number: 10120
S4	South Carolina Lab Certification Number: 84002
S5	South Carolina Lab Certification Number: 32117
S6	Agricultural Service Laboratory Clemson University
S7	South Carolina Lab Certification Number: 36001
S8	*****
S9	South Carolina Lab Certification Number: 94014001; 94014002
S10	South Carolina Lab Certification Number: 84009
S11	South Carolina Lab Certification Number: 96023; 96026; 96031; 98001; 73006
S12	AASHTO R18 Certified
S13	South Carolina Lab Certification Number: 96012
S14	South Carolina Lab Certification Number: 89002
S15	*****
S16	South Carolina Lab Certification Number: 84004
S17	South Carolina Lab Certification Number: 96037001
S18	South Carolina Lab Certification Number: 95005
S19	South Carolina Lab Certification Number: 23104
S20	South Carolina Lab Certification Number: 96027001
S21	South Carolina Lab Certification Number: 21005
S22	South Carolina Lab Certification Number: 24110
S23	South Carolina Lab Certification Number: 84001001
S24	South Carolina Lab Certification Number: 82014001
S25	Sample was analyzed by Microseeps, Inc Laboratory
S26	North Carolina Lab Certification Number: 21 (Wilson Division NC00120)
S27	South Carolina Lab Certification Number: 40569

DAVIS & BROWN

Post Office Box 15038
Quirby, South Carolina 29506
Telephone (843) 685-6746

Page ____ of B.W. Stokes

[illegible]
$$\text{OH} \equiv \text{M} \equiv \text{S}$$

Collected by

Joey Ricks

[illegible]

♦ Program Area: D – Drinking Water / G – Groundwater / S – Solid / W – Waste Water / N – NPDES / O – Other

Davis & Brown

PO Box 15038
Quinby, SC 29506
(843) 665-6746 FAX: (843) 629-1444

Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 30-Mar-09

Contact:

Report Date: 14-Apr-09

Sample Date: 27-Mar-09

Approved By:

Van Ward

SDG #: SDG-065972

Van Ward

Lab Sample ID: LSID-145407

Lab Director

Sample ID: SB-8

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.00547	0.0055	ppm	5030\8021B	S11	4/1/2009	17:42	RJU
BTEX, Total (Soils)	<0.0273	0.0273	ppm	5030\8021B		4/1/2009		WSF
Ethylbenzene	<0.00547	0.0055	ppm	5030\8021B	S11	4/1/2009	17:42	RJU
Toluene	<0.00547	0.0055	ppm	5030\8021B	S11	4/1/2009	17:42	RJU
Xylene, Total	<0.0109	0.0109	ppm	5030\8021B	S11	4/1/2009	17:42	RJU
Napthalene	<0.00547	0.0055	mg/kg	EPA 8260	S11	4/1/2009	17:42	RJU

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Certificate of Analysis

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FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

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Receipt Date: 30-Mar-09

Contact:

Report Date: 14-Apr-09

Sample Date: 27-Mar-09

Approved By:

Van Ward

SDG #: SDG-065972

Van Ward

Lab Sample ID: LSID-145408

Lab Director

Sample ID: SB-9

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	43.4	37.5	ppm	5030\8021B	S11	4/1/2009	14:51	ADI
BTEX, Total (Soils)	1586.4	187.5	ppm	5030\8021B		4/1/2009		WSF
Ethylbenzene	156	37.5	ppm	5030\8021B	S11	4/1/2009	17:42	ADI
Toluene	602	37.5	ppm	5030\8021B	S11	4/1/2009	17:42	ADI
Xylene, Total	785	75	ppm	5030\8021B	S11	4/1/2009	17:42	ADI
Napthalene	82.5	37.5	mg/kg	EPA 8260	S11	4/1/2009	14:51	ADI

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Certificate of Analysis

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 30-Mar-09

Contact:

Report Date: 14-Apr-09

Sample Date: 27-Mar-09

Approved By:

Van Ward

SDG #: SDG-065972

Van Ward

Lab Sample ID: LSID-145409

Lab Director

Sample ID: SB-10

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	20.9	10	ppm	5030\8021B	S11	4/1/2009	15:15	ADI
BTEX, Total (Soils)	716.2	50	ppm	5030\8021B		4/1/2009		WSF
Ethylbenzene	68.3	10	ppm	5030\8021B	S11	4/1/2009	15:15	ADI
Toluene	256	10	ppm	5030\8021B	S11	4/1/2009	15:15	ADI
Xylene, Total	371	20	ppm	5030\8021B	S11	4/1/2009	15:15	ADI
Napthalene	43.4	10	mg/kg	EPA 8260	S11	4/1/2009	15:15	ADI

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FLORENCE, S.C. 29503

Client #: 1688

Contact:

Sample Date: 27-Mar-09

SDG #: SDG-065972

Lab Sample ID: LSID-145410

Sample ID: SB-11

South Carolina Certification Number: 21117

Receipt Date: 30-Mar-09

Report Date: 14-Apr-09

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	51.1	24.4	ppm	5030\8021B	S11	4/1/2009	15:39	ADI
BTEX, Total (Soils)	1423.1	121.9	ppm	5030\8021B		4/1/2009		WSF
Ethylbenzene	129	24.4	ppm	5030\8021B	S11	4/1/2009	15:39	ADI
Toluene	563	24.4	ppm	5030\8021B	S11	4/1/2009	15:39	ADI
Xylene, Total	680	48.7	ppm	5030\8021B	S11	4/1/2009	15:39	ADI
Napthalene	77.1	24.4	mg/kg	EPA 8260	S11	4/1/2009	15:39	ADI

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Certificate of Analysis

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FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 30-Mar-09

Contact:

Report Date: 14-Apr-09

Sample Date: 27-Mar-09

Approved By:

Van Ward

SDG #: SDG-065972

Van Ward

Lab Sample ID: LSID-145411

Lab Director

Sample ID: SB-12

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.0043	0.0043	ppm	5030\8021B	S11	4/3/2009	15:22	JCK
BTEX, Total (Soils)	<0.0215	0.0215	ppm	5030\8021B		4/3/2009		WSF
Ethylbenzene	<0.0043	0.0043	ppm	5030\8021B	S11	4/3/2009	15:22	JCK
Toluene	<0.0043	0.0043	ppm	5030\8021B	S11	4/3/2009	15:22	JCK
Xylene, Total	<0.00859	0.0086	ppm	5030\8021B	S11	4/3/2009	15:22	JCK
Napthalene	<0.0043	0.0043	mg/kg	EPA 8260	S11	4/3/2009	15:22	JCK

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Certificate of Analysis

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 30-Mar-09

Contact:

Report Date: 14-Apr-09

Sample Date: 27-Mar-09

Approved By:

Van Ward

SDG #: SDG-065972

Van Ward

Lab Sample ID: LSID-145412

Lab Director

Sample ID: SB-13

Parameter	Result	Reporting Limit	Unit	Method	Flag	Date	Time	Analyst
Benzene	<0.287	0.287	ppm	5030\8021B	S11	4/1/2009	11:51	AGC
BTEX, Total (Soils)	0.605	1.435	ppm	5030\8021B		4/1/2009		WSF
Ethylbenzene	0.605	0.287	ppm	5030\8021B	S11	4/1/2009	11:51	AGC
Toluene	<0.287	0.287	ppm	5030\8021B	S11	4/1/2009	11:51	AGC
Xylene, Total	<0.574	0.574	ppm	5030\8021B	S11	4/1/2009	11:51	AGC
Napthalene	2.44	0.287	mg/kg	EPA 8260	S11	4/1/2009	11:51	AGC

DAVIS & BROWN 63A
Post Office Box 15038
Quincy, South Carolina 29506
124 West McIver Road
Florence, South Carolina 29501
Telephone (843) 685-6746

Client Name / Facility Name
B. L. STOKES (MELISSA EXTON)

dicted by
2064 Rfcs

[illegible]

* Program Area: D – Drinking Water / G – Groundwater / S – Solid / W – Waste Water / N – NPDES / O – Other

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
LSID-146116	MW 1							
Benzene	7.01	2.5	ppm	5035/8260B	S11	4/23/2009	13:25	CLH
BTEX, Total (Liquids)	42.42	12.5	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<2.50	2.5	ppm	5035/8260B	S11	4/23/2009	13:25	CLH
Toluene	26.5	2.5	ppm	5035/8260B	S11	4/23/2009	13:25	CLH
Xylene, Total	8.91	5	ppm	5035/8260B	S11	4/23/2009	13:25	CLH
1,2-Dichloroethane	<2.50	2.5	ppm	8260B	S11	4/23/2009	13:25	CLH
Diisopropyl Ether (DIPE)	<2.50	2.5	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Ethanol	<50.0	50	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Ethyl tert-butanol (ETBA)	<5.00	5	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Ethyl tert-butyl ether (ETBE)	<2.50	2.5	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Methyl tert-Butyl Ether	12.3	2.5	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Napthalene	<2.50	2.5	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Tert-amyl alcohol (TAA)	27.4	10	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Tert-amyl methyl ether (TAME)	<2.50	2.5	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Tert-butyl alcohol (TBA)	<5.00	5	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
Tert-butyl formate (TBF)	<2.50	2.5	mg/L	EPA 8260	S11	4/23/2009	13:25	CLH
EDB	0.487	0.01	ug/L	SW 846 8011	S11	4/25/2009	5:51	SMH
LSID-146117	MW 2							
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	13:50	CLH

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Certificate of Analysis

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	13:50	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	13:50	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/23/2009	13:50	CLH
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/23/2009	13:50	CLH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	13:50	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	6:12	SMH

LSID-146118	MW 3							
Benzene	<1.00	1	ppm	5035/8260B	S11	4/23/2009	14:14	CLH
BTEX, Total (Liquids)	23.62	5	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	1.58	1	ppm	5035/8260B	S11	4/23/2009	14:14	CLH

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Toluene	9.64	1	ppm	5035/8260B	S11	4/23/2009	14:14	CLH
Xylene, Total	12.4	2	ppm	5035/8260B	S11	4/23/2009	14:14	CLH
1,2-Dichloroethane	<1.00	1	ppm	8260B	S11	4/23/2009	14:14	CLH
Diisopropyl Ether (DIPE)	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Ethanol	<20.0	20	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Ethyl tert-butanol (ETBA)	<2.00	2	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Ethyl tert-butyl ether (ETBE)	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Methyl tert-Butyl Ether	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Napthalene	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Tert-amyl alcohol (TAA)	<4.00	4	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Tert-amyl methyl ether (TAME)	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Tert-butyl alcohol (TBA)	<2.00	2	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
Tert-butyl formate (TBF)	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:14	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	6:34	SMH

LSID-146119

MW 4

Benzene	3.93	1	ppm	5035/8260B	S11	4/23/2009	14:39	CLH
BTEX, Total (Liquids)	19.32	5	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<1.00	1	ppm	5035/8260B	S11	4/23/2009	14:39	CLH
Toluene	11.3	1	ppm	5035/8260B	S11	4/23/2009	14:39	CLH
Xylene, Total	4.09	2	ppm	5035/8260B	S11	4/23/2009	14:39	CLH

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
1,2-Dichloroethane	<1.00	1	ppm	8260B	S11	4/23/2009	14:39	CLH
Diisopropyl Ether (DIPE)	1.10	1	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Ethanol	<20.0	20	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Ethyl tert-butanol (ETBA)	<2.00	2	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Ethyl tert-butyl ether (ETBE)	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Methyl tert-Butyl Ether	1.92	1	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Napthalene	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Tert-amyl alcohol (TAA)	10.2	4	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Tert-amyl methyl ether (TAME)	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Tert-butyl alcohol (TBA)	<2.00	2	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
Tert-butyl formate (TBF)	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	14:39	CLH
EDB	0.019	0.01	ug/L	SW 846 8011	S11	4/25/2009	6:55	SMH

LSID-146120

MW 5

Benzene	0.0872	0.005	ppm	5035/8260B	S11	4/23/2009	15:04	CLH
BTEX, Total (Liquids)	0.0943	0.025	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	0.00708	0.005	ppm	5035/8260B	S11	4/23/2009	15:04	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	15:04	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/23/2009	15:04	CLH
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/23/2009	15:04	CLH
Diisopropyl Ether (DIPE)	0.0262	0.005	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Methyl tert-Butyl Ether	0.0392	0.005	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Napthalene	0.136	0.005	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Tert-amyl alcohol (TAA)	0.323	0.02	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Tert-amyl methyl ether (TAME)	0.010	0.005	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	7:17	SMH

LSID-146121

MW 6

Benzene	0.0695	0.02	ppm	5035/8260B	S11	4/23/2009	15:28	CLH
BTEX, Total (Liquids)	1.545	0.1	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	0.502	0.02	ppm	5035/8260B	S11	4/23/2009	15:28	CLH
Toluene	0.0377	0.02	ppm	5035/8260B	S11	4/23/2009	15:28	CLH
Xylene, Total	0.936	0.04	ppm	5035/8260B	S11	4/23/2009	15:28	CLH
1,2-Dichloroethane	<0.020	0.02	ppm	8260B	S11	4/23/2009	15:28	CLH
Diisopropyl Ether (DIPE)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	15:28	CLH
Ethanol	<0.400	0.4	mg/L	EPA 8260	S11	4/23/2009	15:28	CLH
Ethyl tert-butanol (ETBA)	<0.040	0.04	mg/L	EPA 8260	S11	4/23/2009	15:28	CLH

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Client #: 1688

Contact:

Sample Date: 20-Apr-09

SDG #: SDG-066357

South Carolina Certification Number: 21117

Receipt Date: 21-Apr-09

Report Date: 07-May-09

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Ethyl tert-butyl ether (ETBE)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	15:28	CLH
Methyl tert-Butyl Ether	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	15:28	CLH
Napthalene	0.594	0.02	mg/L	EPA 8260	S11	4/23/2009	15:28	CLH
Tert-amyl alcohol (TAA)	0.124	0.08	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Tert-amyl methyl ether (TAME)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Tert-butyl alcohol (TBA)	<0.040	0.04	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
Tert-butyl formate (TBF)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	15:04	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	7:38	SMH

LSID-146122	MW 7							
Iron, Ferrous	1.04	0	ppm			4/20/2009	15:15	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	15:53	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	15:53	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	15:53	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/23/2009	15:53	CLH
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/23/2009	15:53	CLH
Nitrogen, Nitrate- IC	8.0	1	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH

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Certificate of Analysis

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	15:53	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	8:00	SMH

LSID-146123

MW 8

Iron, Ferrous	1.65	0	ppm			4/20/2009	12:00	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	16:18	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	16:18	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	16:18	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/23/2009	16:18	CLH
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/23/2009	16:18	CLH
Nitrogen, Nitrate- IC	<0.50	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	6.9	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH

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Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:18	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	8:22	SMH

LSID-146124

MW 9

Iron, Ferrous	0.09	0	ppm			4/20/2009	11:45	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	16:43	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	16:43	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	16:43	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/23/2009	16:43	CLH
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/23/2009	16:43	CLH
Nitrogen, Nitrate- IC	<0.50	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH

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Receipt Date: 21-Apr-09

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Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	16:43	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	9:05	SMH

LSID-146125

MW 10

Iron, Ferrous	1.74	0	ppm			4/20/2009	11:15	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:07	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:07	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:07	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/23/2009	17:07	CLH
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/23/2009	17:07	CLH
Nitrogen, Nitrate- IC	4.6	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH

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Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:07	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	10:32	SMH

LSID-146126

MW 11

Iron, Ferrous	2.26	0	ppm			4/20/2009	11:30	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:32	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:32	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:32	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/23/2009	17:32	CLH
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/23/2009	17:32	CLH

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Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Nitrogen, Nitrate- IC	0.86	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:32	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	10:54	SMH

LSID-146127

MW 12

Iron, Ferrous	0.21	0	ppm			4/20/2009	12:52	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:57	CLH
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:57	CLH
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/23/2009	17:57	CLH
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/23/2009	17:57	CLH

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/23/2009	17:57	CLH
Nitrogen, Nitrate- IC	4.6	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/23/2009	17:57	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	11:16	SMH

LSID-146128

MW 13

Iron, Ferrous	2.50	0	ppm			4/20/2009	13:45	JR
Benzene	0.288	0.05	ppm	5035/8260B	S11	4/23/2009	13:00	CLH
BTEX, Total (Liquids)	0.288	0.25	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.050	0.05	ppm	5035/8260B	S11	4/23/2009	13:00	CLH
Toluene	<0.050	0.05	ppm	5035/8260B	S11	4/23/2009	13:00	CLH

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Xylene, Total	<0.100	0.1	ppm	5035/8260B	S11	4/23/2009	13:00	CLH
1,2-Dichloroethane	<0.050	0.05	ppm	8260B	S11	4/23/2009	13:00	CLH
Nitrogen, Nitrate- IC	2.2	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	29.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	0.138	0.05	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Ethanol	<1.00	1	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Ethyl tert-butanol (ETBA)	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Ethyl tert-butyl ether (ETBE)	<0.050	0.05	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Methyl tert-Butyl Ether	1.15	0.05	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Napthalene	<0.050	0.05	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Tert-amyl alcohol (TAA)	0.609	0.2	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Tert-amyl methyl ether (TAME)	0.0631	0.05	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Tert-butyl alcohol (TBA)	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
Tert-butyl formate (TBF)	<0.050	0.05	mg/L	EPA 8260	S11	4/23/2009	13:00	CLH
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	11:38	SMH

LSID-146129

MW 14

Iron, Ferrous	1.08	0	ppm			4/20/2009	14:20	JR
Benzene	0.281	0.1	ppm	5035/8260B	S11	4/23/2009	21:38	CLH
BTEX, Total (Liquids)	0.281	0.5	ppm	5035/8260B		4/23/2009		WSF
Ethylbenzene	<0.100	0.1	ppm	5035/8260B	S11	4/23/2009	21:38	CLH

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Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Toluene	<0.100	0.1	ppm	5035/8260B	S11	4/23/2009	21:38	CLH
Xylene, Total	<0.200	0.2	ppm	5035/8260B	S11	4/23/2009	21:38	CLH
1,2-Dichloroethane	<0.100	0.1	ppm	8260B	S11	4/23/2009	21:38	CLH
Nitrogen, Nitrate- IC	1.1	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	5.6	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	0.234	0.1	mg/L	EPA 8260	S11	4/28/2009	12:34	AGC
Ethanol	<2.00	2	mg/L	EPA 8260	S11	4/28/2009	12:34	AGC
Ethyl tert-butanol (ETBA)	<0.200	0.2	mg/L	EPA 8260	S11	4/28/2009	12:34	AGC
Ethyl tert-butyl ether (ETBE)	<0.100	0.1	mg/L	EPA 8260	S11	4/28/2009	12:34	AGC
Methyl tert-Butyl Ether	2.42	0.1	mg/L	EPA 8260	S11	4/23/2009	21:38	CLH
Napthalene	<0.100	0.1	mg/L	EPA 8260	S11	4/23/2009	21:38	CLH
Tert-amyl alcohol (TAA)	1.08	0.4	mg/L	EPA 8260	S11	4/28/2009	12:34	AGC
Tert-amyl methyl ether (TAME)	0.125	0.1	mg/L	EPA 8260	S11	4/28/2009	12:34	AGC
Tert-butyl alcohol (TBA)	<0.200	0.2	mg/L	EPA 8260	S11	4/28/2009	12:34	AGC
Tert-butyl formate (TBF)	<0.100	0.1	mg/L	EPA 8260	S11	4/28/2009	12:34	AGC
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	11:59	SMH
LSID-146130	MW 15							
Iron, Ferrous	2.26	0	ppm			4/20/2009	14:35	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	1:57	JCK
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/28/2009		WSF

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Certificate of Analysis

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	1:57	JCK
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	1:57	JCK
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	1:57	JCK
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/28/2009	1:57	JCK
Nitrogen, Nitrate- IC	<0.50	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	6.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	0.0153	0.005	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Methyl tert-Butyl Ether	0.0738	0.005	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Tert-amyl alcohol (TAA)	0.208	0.02	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Tert-amyl methyl ether (TAME)	0.0051	0.005	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Tert-butyl alcohol (TBA)	0.0132	0.01	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	1:57	JCK
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	12:21	SMH

LSID-146131

MW 16

Iron, Ferrous	0.62	0	ppm			4/20/2009	13:34	JR
Benzene	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	2:24	JCK

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South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
BTEX, Total (Liquids)	<0.050	0.05	ppm	5035/8260B		4/28/2009		WSF
Ethylbenzene	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	2:24	JCK
Toluene	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	2:24	JCK
Xylene, Total	<0.020	0.02	ppm	5035/8260B	S11	4/28/2009	2:24	JCK
1,2-Dichloroethane	<0.010	0.01	ppm	8260B	S11	4/28/2009	2:24	JCK
Nitrogen, Nitrate- IC	4.1	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	0.0254	0.01	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Ethanol	<0.200	0.2	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Ethyl tert-butanol (ETBA)	<0.020	0.02	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Ethyl tert-butyl ether (ETBE)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Methyl tert-Butyl Ether	0.320	0.01	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Napthalene	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Tert-amyl alcohol (TAA)	<0.040	0.04	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Tert-amyl methyl ether (TAME)	0.0109	0.01	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Tert-butyl alcohol (TBA)	<0.020	0.02	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
Tert-butyl formate (TBF)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	2:24	JCK
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	13:04	SMH

LSID-146132

MW 17

Iron, Ferrous	0.77	0	ppm	4/20/2009	13:40	JR
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Client #: 1688

Receipt Date: 21-Apr-09

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Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	12:09	AGC
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/28/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	12:09	AGC
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	12:09	AGC
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	12:09	AGC
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/28/2009	12:09	AGC
Nitrogen, Nitrate- IC	5.2	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:09	AGC
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	13:26	SMH

LSID-146133

MW 18

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Certificate of Analysis

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Client #: 1688

Contact:

Sample Date: 20-Apr-09

SDG #: SDG-066357

South Carolina Certification Number: 21117

Receipt Date: 21-Apr-09

Report Date: 07-May-09

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Iron, Ferrous	>3.30	0	ppm			4/20/2009	13:50	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	10:10	AGC
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/28/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	10:10	AGC
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	10:10	AGC
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	10:10	AGC
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/28/2009	10:10	AGC
Nitrogen, Nitrate- IC	3.2	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	10:10	AGC
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	13:47	SMH

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Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

		Reporting							
Parameter	Result	Limit	Unit	Method	Flag	Date	Time	Analyst	
LSID-146134	MW 19								
Iron,Ferrous	1.13	0	ppm			4/20/2009	13:05	JR	
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	5:33	ADI	
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/24/2009		WSF	
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	5:33	ADI	
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	5:33	ADI	
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/24/2009	5:33	ADI	
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/24/2009	5:33	ADI	
Nitrogen, Nitrate- IC	2.9	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH	
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH	
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:59	AGC	
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/28/2009	12:59	AGC	
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	12:59	AGC	
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:59	AGC	
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	5:33	ADI	
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	5:33	ADI	
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/28/2009	12:59	AGC	
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:59	AGC	
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	12:59	AGC	
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	12:59	AGC	
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	14:09	SMH	

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
SID-146135	MW 20							
Iron,Ferrous	0.83	0	ppm			4/20/2009	15:05	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	5:58	ADI
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/24/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	5:58	ADI
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	5:58	ADI
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/24/2009	5:58	ADI
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/24/2009	5:58	ADI
Nitrogen, Nitrate- IC	3.4	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	5.5	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	13:24	AGC
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/28/2009	13:24	AGC
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	13:24	AGC
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	13:24	AGC
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	5:58	ADI
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	5:58	ADI
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/28/2009	13:24	AGC
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	13:24	AGC
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/28/2009	13:24	AGC
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	13:24	AGC

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	14:31	SMH
LSID-146136 MW 21								
Iron, Ferrous	2.23	0	ppm			4/20/2009	10:35	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	13:49	AGC
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/28/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	13:49	AGC
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	13:49	AGC
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	13:49	AGC
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/28/2009	13:49	AGC
Nitrogen, Nitrate- IC	5.2	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	16:20	RJU
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/24/2009	16:20	RJU
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/24/2009	16:20	RJU
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	16:20	RJU
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	13:49	AGC
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	13:49	AGC
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/24/2009	16:20	RJU
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	16:20	RJU
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/24/2009	16:20	RJU

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

Client #: 1688

Contact:

Sample Date: 20-Apr-09

SDG #: SDG-066357

South Carolina Certification Number: 21117

Receipt Date: 21-Apr-09

Report Date: 07-May-09

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	16:20	RJU
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	14:53	SMH

LSID-146137 MW 22								
Iron, Ferrous	1.79	0	ppm			4/20/2009	10:45	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	14:14	AGC
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/28/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	14:14	AGC
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	14:14	AGC
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	14:14	AGC
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/28/2009	14:14	AGC
Nitrogen, Nitrate- IC	5.2	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	<5.0	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	16:45	RJU
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/24/2009	16:45	RJU
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/24/2009	16:45	RJU
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	16:45	RJU
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	14:14	AGC
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	14:14	AGC
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/24/2009	16:45	RJU
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	16:45	RJU

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/24/2009	16:45	RJU
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	16:45	RJU
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/27/2009	23:44	TLS
LSID-146138	MW -1-D							
Iron, Ferrous	1.05	0	ppm			4/20/2009	16:32	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	17:09	RJU
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/24/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	17:09	RJU
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	17:09	RJU
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/24/2009	17:09	RJU
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/24/2009	17:09	RJU
Nitrogen, Nitrate- IC	<0.50	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	25.8	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward

Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:09	RJU
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	15:36	SMH

LSID-146139

MW 2-D

Iron, Ferrous	0.68	0	ppm			4/20/2009	14:45	JR
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	14:38	AGC
BTEX, Total (Liquids)	<0.025	0.025	ppm	5035/8260B		4/28/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	14:38	AGC
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/28/2009	14:38	AGC
Xylene, Total	<0.010	0.01	ppm	5035/8260B	S11	4/28/2009	14:38	AGC
1,2-Dichloroethane	<0.005	0.005	ppm	8260B	S11	4/28/2009	14:38	AGC
Nitrogen, Nitrate- IC	5.5	0.5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Sulfate- IC	7.6	5	mg/L	EPA 300.0		4/21/2009	12:13	DH
Diisopropyl Ether (DIPE)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:34	RJU
Ethanol	<0.100	0.1	mg/L	EPA 8260	S11	4/24/2009	17:34	RJU
Ethyl tert-butanol (ETBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/24/2009	17:34	RJU
Ethyl tert-butyl ether (ETBE)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:34	RJU
Methyl tert-Butyl Ether	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	14:38	AGC
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/28/2009	14:38	AGC

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Certificate of Analysis

Client: B.W. STOKES OIL CO.
P.O. BOX 274
FLORENCE, S.C. 29503

South Carolina Certification Number: 21117

Client #: 1688

Receipt Date: 21-Apr-09

Contact:

Report Date: 07-May-09

Sample Date: 20-Apr-09

SDG #: SDG-066357

Approved By:

Van Ward

Van Ward
Lab Director

Parameter	Reporting			Method	Flag	Date	Time	Analyst
	Result	Limit	Unit					
Tert-amyl alcohol (TAA)	<0.020	0.02	mg/L	EPA 8260	S11	4/24/2009	17:34	RJU
Tert-amyl methyl ether (TAME)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:34	RJU
Tert-butyl alcohol (TBA)	<0.010	0.01	mg/L	EPA 8260	S11	4/24/2009	17:34	RJU
Tert-butyl formate (TBF)	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:34	RJU
EDB	<0.010	0.01	ug/L	SW 846 8011	S11	4/25/2009	15:57	SMH
LSID-146140 DITCH								
Benzene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	17:59	RJU
BTEX, Total (Liquids)	0.0193	0.025	ppm	5035/8260B		4/24/2009		WSF
Ethylbenzene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	17:59	RJU
Toluene	<0.005	0.005	ppm	5035/8260B	S11	4/24/2009	17:59	RJU
Xylene, Total	0.0193	0.01	ppm	5035/8260B	S11	4/24/2009	17:59	RJU
Methyl tert-Butyl Ether	0.155	0.005	mg/L	EPA 8260	S11	4/24/2009	17:59	RJU
Napthalene	<0.005	0.005	mg/L	EPA 8260	S11	4/24/2009	17:59	RJU

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223201	146116	Water	04/20/2009 15:27	04/22/2009 09:30
20904223202	146117	Water	04/20/2009 15:30	04/22/2009 09:30
20904223203	146118	Water	04/20/2009 16:05	04/22/2009 09:30
20904223204	146119	Water	04/20/2009 16:10	04/22/2009 09:30
20904223205	146120	Water	04/20/2009 16:32	04/22/2009 09:30
20904223206	146121	Water	04/20/2009 16:15	04/22/2009 09:30
20904223207	146122	Water	04/20/2009 15:15	04/22/2009 09:30
20904223208	146123	Water	04/20/2009 12:00	04/22/2009 09:30
20904223209	146124	Water	04/20/2009 11:45	04/22/2009 09:30
20904223210	146125	Water	04/20/2009 11:15	04/22/2009 09:30
20904223211	146126	Water	04/20/2009 11:30	04/22/2009 09:30
20904223212	146127	Water	04/20/2009 12:52	04/22/2009 09:30
20904223213	146128	Water	04/20/2009 13:45	04/22/2009 09:30
20904223214	146129	Water	04/20/2009 14:20	04/22/2009 09:30
20904223215	146130	Water	04/20/2009 14:35	04/22/2009 09:30
20904223216	146131	Water	04/20/2009 13:34	04/22/2009 09:30
20904223217	146132	Water	04/20/2009 13:40	04/22/2009 09:30
20904223218	146133	Water	04/20/2009 13:50	04/22/2009 09:30
20904223219	146134	Water	04/20/2009 13:05	04/22/2009 09:30
20904223220	146135	Water	04/20/2009 15:05	04/22/2009 09:30
20904223221	146136	Water	04/20/2009 10:35	04/22/2009 09:30
20904223222	146137	Water	04/20/2009 10:45	04/22/2009 09:30
20904223223	146138	Water	04/20/2009 16:32	04/22/2009 09:30
20904223224	146139	Water	04/20/2009 14:45	04/22/2009 09:30
20904223225	146140	Water	04/20/2009 16:45	04/22/2009 09:30

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

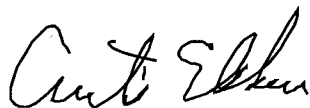
Reporting Flags Utilized in this Report

J	Indicates an estimated value
U	Indicates the compound was analyzed for but not detected
B	(ORGANICS) Indicates the analyte was detected in the associated Method Blank
B	(INORGANICS) Indicates the result is between the RDL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with ISO Guide 25 and NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.



Curios ERM
Wed Apr 26 11:28:43 2009

Robyn Migués
Technical Director
GCAL REPORT 209042232

THIS REPORT CONTAINS _____ PAGES.

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223201	146116	Water	04/20/2009 15:27	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	04/23/2009 13:25	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	44.9U	2500	44.9	ug/L
71-43-2	Benzene	7010	2500	32.5	ug/L
100-41-4	Ethylbenzene	1670J	2500	32.6	ug/L
91-20-3	Naphthalene	1070J	2500	59.1	ug/L
108-88-3	Toluene	26500	2500	37.8	ug/L
1330-20-7	Xylene (total)	8910	5000	91.7	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	12300	2500	38.5	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	25000	22400	ug/L	90	78 - 130
1868-53-7	Dibromofluoromethane	25000	25900	ug/L	104	77 - 127
2037-26-5	Toluene d8	25000	25000	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	25000	26900	ug/L	108	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	04/23/2009 13:25	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	20200U	50000	20200	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	130U	2500	130	ug/L
108-20-3	diisopropyl Ether (DIPE)	2260J	2500	265	ug/L
624-95-3	ethyl tert-butanol (ETBA)	2180U	5000	2180	ug/L
75-65-0	t-Butanol (TBA)	2060U	5000	2060	ug/L
994-05-8	t-amyl methyl ether (TAME)	1880J	2500	174	ug/L
75-85-4	tert-amyl alcohol (TAA)	27400	10000	7800	ug/L
762-75-4	tert-butyl formate (TBF)	179U	2500	179	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	25000	22400	ug/L	90	50 - 150
1868-53-7	Dibromofluoromethane	25000	25900	ug/L	104	50 - 150
2037-26-5	Toluene d8	25000	25000	ug/L	100	50 - 150
17060-07-0	1,2-Dichloroethane-d4	25000	26900	ug/L	108	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 05:51	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.487	0.010	0.00350	ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223202	146117	Water	04/20/2009 15:30	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 13:50	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	41.4	ug/L	83	78 - 130
1868-53-7	Dibromofluoromethane	50	56.2	ug/L	112	77 - 127
2037-26-5	Toluene d8	50	51.4	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	55.7	ug/L	111	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 13:50	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	41.4	ug/L	83	50 - 150
1868-53-7	Dibromofluoromethane	50	56.2	ug/L	112	50 - 150
2037-26-5	Toluene d8	50	51.4	ug/L	103	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	55.7	ug/L	111	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 06:12	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223203	146118	Water	04/20/2009 16:05	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			200	04/23/2009 14:14	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	18.0U	1000	18.0	ug/L
71-43-2	Benzene	822J	1000	13.0	ug/L
100-41-4	Ethylbenzene	1580	1000	13.0	ug/L
91-20-3	Naphthalene	685J	1000	23.6	ug/L
108-88-3	Toluene	9640	1000	15.1	ug/L
1330-20-7	Xylene (total)	12400	2000	36.7	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	15.4U	1000	15.4	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	10000	9150	ug/L	92	78 - 130
1868-53-7	Dibromofluoromethane	10000	11100	ug/L	111	77 - 127
2037-26-5	Toluene d8	10000	9930	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	10000	11300	ug/L	113	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			200	04/23/2009 14:14	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	8060U	20000	8060	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	51.8U	1000	51.8	ug/L
108-20-3	diisopropyl Ether (DIPE)	106U	1000	106	ug/L
624-95-3	ethyl tert-butanol (ETBA)	872U	2000	872	ug/L
75-65-0	t-Butanol (TBA)	824U	2000	824	ug/L
994-05-8	t-amyl methyl ether (TAME)	69.6U	1000	69.6	ug/L
75-85-4	tert-amyl alcohol (TAA)	3120U	4000	3120	ug/L
762-75-4	tert-butyl formate (TBF)	71.4U	1000	71.4	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	10000	9150	ug/L	92	50 - 150
1868-53-7	Dibromofluoromethane	10000	11100	ug/L	111	50 - 150
2037-26-5	Toluene d8	10000	9930	ug/L	99	50 - 150
17060-07-0	1,2-Dichloroethane-d4	10000	11300	ug/L	113	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 06:34	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223204	146119	Water	04/20/2009 16:10	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			200	04/23/2009 14:39	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	18.0U	1000	18.0	ug/L
71-43-2	Benzene	3930	1000	13.0	ug/L
100-41-4	Ethylbenzene	92.8J	1000	13.0	ug/L
91-20-3	Naphthalene	478J	1000	23.6	ug/L
108-88-3	Toluene	11300	1000	15.1	ug/L
1330-20-7	Xylene (total)	4090	2000	36.7	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	1920	1000	15.4	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	10000	8710	ug/L	87	78 - 130
1868-53-7	Dibromofluoromethane	10000	10500	ug/L	105	77 - 127
2037-26-5	Toluene d8	10000	10100	ug/L	101	76 - 134
17060-07-0	1,2-Dichloroethane-d4	10000	11100	ug/L	111	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			200	04/23/2009 14:39	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	8060U	20000	8060	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	51.8U	1000	51.8	ug/L
108-20-3	diisopropyl Ether (DIPE)	1100	1000	106	ug/L
624-95-3	ethyl tert-butanol (ETBA)	872U	2000	872	ug/L
75-65-0	t-Butanol (TBA)	824U	2000	824	ug/L
994-05-8	t-amyl methyl ether (TAME)	781J	1000	69.6	ug/L
75-85-4	tert-amyl alcohol (TAA)	10200	4000	3120	ug/L
762-75-4	tert-butyl formate (TBF)	71.4U	1000	71.4	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	10000	8710	ug/L	87	50 - 150
1868-53-7	Dibromofluoromethane	10000	10500	ug/L	105	50 - 150
2037-26-5	Toluene d8	10000	10100	ug/L	101	50 - 150
17060-07-0	1,2-Dichloroethane-d4	10000	11100	ug/L	111	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 06:55	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.019	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report, all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223205	146120	Water	04/20/2009 16:32	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 15:04	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	87.2	5.00	0.065	ug/L
100-41-4	Ethylbenzene	7.08	5.00	0.065	ug/L
91-20-3	Naphthalene	136	5.00	0.118	ug/L
108-88-3	Toluene	1.67J	5.00	0.076	ug/L
1330-20-7	Xylene (total)	8.75J	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	39.2	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	47.5	ug/L	95	78 - 130
1868-53-7	Dibromofluoromethane	50	51.3	ug/L	103	77 - 127
2037-26-5	Toluene d8	50	48.2	ug/L	96	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	54.6	ug/L	109	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 15:04	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	26.2	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	7.42J	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	10.0	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	323	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	47.5	ug/L	95	50 - 150
1868-53-7	Dibromofluoromethane	50	51.3	ug/L	103	50 - 150
2037-26-5	Toluene d8	50	48.2	ug/L	96	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	54.6	ug/L	109	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 07:17	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID 20904223206	Client ID 146121	Matrix Water	Collect Date/Time 04/20/2009 16:15	Receive Date/Time 04/22/2009 09:30
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SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			4	04/23/2009 15:28	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.359U	20.0	0.359	ug/L
71-43-2	Benzene	69.5	20.0	0.260	ug/L
100-41-4	Ethylbenzene	502	20.0	0.261	ug/L
91-20-3	Naphthalene	594	20.0	0.472	ug/L
108-88-3	Toluene	37.7	20.0	0.302	ug/L
1330-20-7	Xylene (total)	936	40.0	0.733	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	2.86J	20.0	0.308	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	200	194	ug/L	97	78 - 130
1868-53-7	Dibromofluoromethane	200	194	ug/L	97	77 - 127
2037-26-5	Toluene d8	200	199	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	200	203	ug/L	102	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			4	04/23/2009 15:28	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	161U	400	161	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	1.04U	20.0	1.04	ug/L
108-20-3	diisopropyl Ether (DIPE)	4.09J	20.0	2.12	ug/L
624-95-3	ethyl tert-butanol (ETBA)	17.4U	40.0	17.4	ug/L
75-65-0	t-Butanol (TBA)	16.5U	40.0	16.5	ug/L
994-05-8	t-amyl methyl ether (TAME)	11.4J	20.0	1.39	ug/L
75-85-4	tert-amyl alcohol (TAA)	124	80.0	62.4	ug/L
762-75-4	tert-butyl formate (TBF)	1.43U	20.0	1.43	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	200	194	ug/L	97	50 - 150
1868-53-7	Dibromofluoromethane	200	194	ug/L	97	50 - 150
2037-26-5	Toluene d8	200	199	ug/L	100	50 - 150
17060-07-0	1,2-Dichloroethane-d4	200	203	ug/L	102	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 07:38	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is **SCDHEC certified lab # 73006**, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223207	146122	Water	04/20/2009 15:15	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 15:53	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	2.48J	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.6	ug/L	91	78 - 130
1868-53-7	Dibromofluoromethane	50	49.9	ug/L	100	77 - 127
2037-26-5	Toluene d8	50	49.7	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49	ug/L	98	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 15:53	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.6	ug/L	91	50 - 150
1868-53-7	Dibromofluoromethane	50	49.9	ug/L	100	50 - 150
2037-26-5	Toluene d8	50	49.7	ug/L	99	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	49	ug/L	98	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 08:00	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223208	146123	Water	04/20/2009 12:00	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 16:18	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	1.99J	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.3	ug/L	91	78 - 130
1868-53-7	Dibromofluoromethane	50	51.2	ug/L	102	77 - 127
2037-26-5	Toluene d8	50	50.4	ug/L	101	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.3	ug/L	101	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 16:18	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.3	ug/L	91	50 - 150
1868-53-7	Dibromofluoromethane	50	51.2	ug/L	102	50 - 150
2037-26-5	Toluene d8	50	50.4	ug/L	101	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	50.3	ug/L	101	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 08:22	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:


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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223209	146124	Water	04/20/2009 11:45	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 16:43	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.9	ug/L	88	78 - 130
1868-53-7	Dibromofluoromethane	50	51.9	ug/L	104	77 - 127
2037-26-5	Toluene d8	50	49.7	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	51.4	ug/L	103	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 16:43	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.9	ug/L	88	50 - 150
1868-53-7	Dibromofluoromethane	50	51.9	ug/L	104	50 - 150
2037-26-5	Toluene d8	50	49.7	ug/L	99	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	51.4	ug/L	103	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 09:00	410180	SW-846 8011	1	04/25/2009 09:05	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223210	146125	Water	04/20/2009 11:15	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 17:07	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.828J	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	2.02J	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	2.58J	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.3	ug/L	85	78 - 130
1868-53-7	Dibromofluoromethane	50	52.4	ug/L	105	77 - 127
2037-26-5	Toluene d8	50	50.2	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	53	ug/L	106	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 17:07	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	1.62J	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.3	ug/L	85	50 - 150
1868-53-7	Dibromofluoromethane	50	52.4	ug/L	105	50 - 150
2037-26-5	Toluene d8	50	50.2	ug/L	100	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	53	ug/L	106	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 10:32	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223211	146126	Water	04/20/2009 11:30	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 17:32	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.1	ug/L	84	78 - 130
1868-53-7	Dibromofluoromethane	50	54.6	ug/L	109	77 - 127
2037-26-5	Toluene d8	50	49.7	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	54.1	ug/L	108	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 17:32	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.1	ug/L	84	50 - 150
1868-53-7	Dibromofluoromethane	50	54.6	ug/L	109	50 - 150
2037-26-5	Toluene d8	50	49.7	ug/L	99	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	54.1	ug/L	108	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 10:54	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223212	146127	Water	04/20/2009 12:52	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 17:57	CLH	410212

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	40.6	ug/L	81	78 - 130
1868-53-7	Dibromofluoromethane	50	56.5	ug/L	113	77 - 127
2037-26-5	Toluene d8	50	51.1	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	55.3	ug/L	111	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/23/2009 17:57	CLH	410213

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	40.6	ug/L	81	50 - 150
1868-53-7	Dibromofluoromethane	50	56.5	ug/L	113	50 - 150
2037-26-5	Toluene d8	50	51.1	ug/L	102	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	55.3	ug/L	111	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 11:16	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223213	146128	Water	04/20/2009 13:45	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	04/23/2009 13:00	CLH	410212
CAS#	Parameter		Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane		0.898U	50.0	0.898	ug/L
71-43-2	Benzene		288	50.0	0.649	ug/L
100-41-4	Ethylbenzene		0.652U	50.0	0.652	ug/L
91-20-3	Naphthalene		27.2J	50.0	1.18	ug/L
108-88-3	Toluene		0.755U	50.0	0.755	ug/L
1330-20-7	Xylene (total)		39.4J	100	1.83	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)		1150	50.0	0.769	ug/L
CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	500	433	ug/L	87	78 - 130
1868-53-7	Dibromofluoromethane	500	537	ug/L	107	77 - 127
2037-26-5	Toluene d8	500	509	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	500	552	ug/L	110	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	04/23/2009 13:00	CLH	410213
CAS#	Parameter		Result	RDL	MDL	Units
64-17-5	Ethanol		403U	1000	403	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)		2.59U	50.0	2.59	ug/L
108-20-3	diisopropyl Ether (DIPE)		138	50.0	5.29	ug/L
624-95-3	ethyl tert-butanol (ETBA)		43.6U	100	43.6	ug/L
75-65-0	t-Butanol (TBA)		41.2U	100	41.2	ug/L
994-05-8	t-amyl methyl ether (TAME)		63.1	50.0	3.48	ug/L
75-85-4	tert-amyl alcohol (TAA)		609	200	156	ug/L
762-75-4	tert-butyl formate (TBF)		3.57U	50.0	3.57	ug/L
CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	500	433	ug/L	87	50 - 150
1868-53-7	Dibromofluoromethane	500	537	ug/L	107	50 - 150
2037-26-5	Toluene d8	500	509	ug/L	102	50 - 150
17060-07-0	1,2-Dichloroethane-d4	500	552	ug/L	110	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 11:38	SMH	410465
CAS#	Parameter		Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane		0.00350U	0.010	0.00350	ug/L

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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223214	146129	Water	04/20/2009 14:20	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			20	04/23/2009 21:38	CLH	410267

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	1.80U	100	1.80	ug/L
71-43-2	Benzene	281	100	1.30	ug/L
100-41-4	Ethylbenzene	1.30U	100	1.30	ug/L
91-20-3	Naphthalene	50.2J	100	2.36	ug/L
108-88-3	Toluene	1.51U	100	1.51	ug/L
1330-20-7	Xylene (total)	134J	200	3.67	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	2420	100	1.54	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1000	841	ug/L	84	78 - 130
1868-53-7	Dibromofluoromethane	1000	1100	ug/L	110	77 - 127
2037-26-5	Toluene d8	1000	995	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	1000	1130	ug/L	113	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			20	04/28/2009 12:34	AGC	410492

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	806U	2000	806	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	5.18U	100	5.18	ug/L
108-20-3	diisopropyl Ether (DIPE)	234	100	10.6	ug/L
624-95-3	ethyl tert-butanol (ETBA)	87.2U	200	87.2	ug/L
75-65-0	t-Butanol (TBA)	103J	200	82.4	ug/L
994-05-8	t-amyl methyl ether (TAME)	125	100	6.96	ug/L
75-85-4	tert-amyl alcohol (TAA)	1080	400	312	ug/L
762-75-4	tert-butyl formate (TBF)	7.14U	100	7.14	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1000	931	ug/L	93	50 - 150
1868-53-7	Dibromofluoromethane	1000	964	ug/L	96	50 - 150
2037-26-5	Toluene d8	1000	1050	ug/L	105	50 - 150
17060-07-0	1,2-Dichloroethane-d4	1000	978	ug/L	98	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 11:59	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00840J	0.010	0.00350	ug/L

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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223215	146130	Water	04/20/2009 14:35	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 01:57	JCK	410418

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	4.14J	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	73.8	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	44.1	ug/L	88	78 - 130
1868-53-7	Dibromofluoromethane	50	48.6	ug/L	97	77 - 127
2037-26-5	Toluene d8	50	54.6	ug/L	109	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	46.5	ug/L	93	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 01:57	JCK	410416

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	15.3	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	13.2	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	5.10	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	208	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	44.1	ug/L	88	50 - 150
1868-53-7	Dibromofluoromethane	50	48.6	ug/L	97	50 - 150
2037-26-5	Toluene d8	50	54.6	ug/L	109	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	46.5	ug/L	93	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 12:21	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223216	146131	Water	04/20/2009 13:34	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	04/28/2009 02:24	JCK	410418

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.130U	10.0	0.130	ug/L
108-88-3	Toluene	0.151U	10.0	0.151	ug/L
100-41-4	Ethylbenzene	0.130U	10.0	0.130	ug/L
1330-20-7	Xylene (total)	0.367U	20.0	0.367	ug/L
91-20-3	Naphthalene	0.236U	10.0	0.236	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	320	10.0	0.154	ug/L
107-06-2	1,2-Dichloroethane	0.180U	10.0	0.180	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	80.7	ug/L	81	78 - 130
1868-53-7	Dibromofluoromethane	100	108	ug/L	108	77 - 127
2037-26-5	Toluene d8	100	105	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	100	104	ug/L	104	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	04/28/2009 02:24	JCK	410416

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	10.9	10.0	0.696	ug/L
75-65-0	t-Butanol (TBA)	8.24U	20.0	8.24	ug/L
108-20-3	diisopropyl Ether (DIPE)	25.4	10.0	1.06	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.518U	10.0	0.518	ug/L
624-95-3	ethyl tert-butanol (ETBA)	8.72U	20.0	8.72	ug/L
64-17-5	Ethanol	80.6U	200	80.6	ug/L
75-85-4	tert-amyl alcohol (TAA)	31.2U	40.0	31.2	ug/L
762-75-4	tert-butyl formate (TBF)	0.714U	10.0	0.714	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	80.7	ug/L	81	50 - 150
1868-53-7	Dibromofluoromethane	100	108	ug/L	108	50 - 150
2037-26-5	Toluene d8	100	105	ug/L	105	50 - 150
17060-07-0	1,2-Dichloroethane-d4	100	104	ug/L	104	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 13:04	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is **SCDHEC certified lab # 73006**, NELAP certification # 01955

GCAL ID 20904223217	Client ID 146132	Matrix Water	Collect Date/Time 04/20/2009 13:40	Receive Date/Time 04/22/2009 09:30
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SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 12:09	AGC	410493

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.2	ug/L	86	78 - 130
1868-53-7	Dibromofluoromethane	50	51.3	ug/L	103	77 - 127
2037-26-5	Toluene d8	50	51.2	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.4	ug/L	99	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 12:09	AGC	410492

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
64-17-5	Ethanol	40.3U	100	40.3	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.2	ug/L	86	50 - 150
1868-53-7	Dibromofluoromethane	50	51.3	ug/L	103	50 - 150
2037-26-5	Toluene d8	50	51.2	ug/L	102	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	49.4	ug/L	99	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 13:26	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223218	146133	Water	04/20/2009 13:50	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 10:10	AGC	410493

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	2.72J	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.6	ug/L	85	78 - 130
1868-53-7	Dibromofluoromethane	50	52	ug/L	104	77 - 127
2037-26-5	Toluene d8	50	51.4	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.5	ug/L	99	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 10:10	AGC	410492

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.6	ug/L	85	50 - 150
1868-53-7	Dibromofluoromethane	50	52	ug/L	104	50 - 150
2037-26-5	Toluene d8	50	51.4	ug/L	103	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	49.5	ug/L	99	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 13:47	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223219	146134	Water	04/20/2009 13:05	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/24/2009 05:33	ADI	410267

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.5	ug/L	87	78 - 130
1868-53-7	Dibromofluoromethane	50	51.9	ug/L	104	77 - 127
2037-26-5	Toluene d8	50	50.2	ug/L	100	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.5	ug/L	101	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 12:59	AGC	410492

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.8	ug/L	86	50 - 150
1868-53-7	Dibromofluoromethane	50	53.3	ug/L	107	50 - 150
2037-26-5	Toluene d8	50	51.8	ug/L	104	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	49.6	ug/L	99	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 14:09	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223220	146135	Water	04/20/2009 15:05	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/24/2009 05:58	ADI	410267
CAS#	Parameter		Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane		0.090U	5.00	0.090	ug/L
71-43-2	Benzene		0.065U	5.00	0.065	ug/L
100-41-4	Ethylbenzene		0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene		0.118U	5.00	0.118	ug/L
108-88-3	Toluene		0.076U	5.00	0.076	ug/L
1330-20-7	Xylene (total)		0.183U	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)		0.077U	5.00	0.077	ug/L
CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	41.5	ug/L	83	78 - 130
1868-53-7	Dibromofluoromethane	50	52.4	ug/L	105	77 - 127
2037-26-5	Toluene d8	50	49.7	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	53.1	ug/L	106	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 13:24	AGC	410492
CAS#	Parameter		Result	RDL	MDL	Units
64-17-5	Ethanol		40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)		0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)		0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)		4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)		4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)		0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)		15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)		0.357U	5.00	0.357	ug/L
CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	42.5	ug/L	85	50 - 150
1868-53-7	Dibromofluoromethane	50	53.7	ug/L	107	50 - 150
2037-26-5	Toluene d8	50	53.6	ug/L	107	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	50.6	ug/L	101	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 14:31	SMH	410465
CAS#	Parameter		Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane		0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223221	146136	Water	04/20/2009 10:35	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 13:49	AGC	410493

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	41.7	ug/L	83	78 - 130
1868-53-7	Dibromofluoromethane	50	54.1	ug/L	108	77 - 127
2037-26-5	Toluene d8	50	51.4	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	51.8	ug/L	104	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/24/2009 16:20	RJU	410287

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
64-17-5	Ethanol	40.3U	100	40.3	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	38.5	ug/L	77	50 - 150
1868-53-7	Dibromofluoromethane	50	59	ug/L	118	50 - 150
2037-26-5	Toluene d8	50	51.8	ug/L	104	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	58.4	ug/L	117	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 14:53	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



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NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223222	146137	Water	04/20/2009 10:45	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 14:14	AGC	410493
CAS#	Parameter		Result	RDL	MDL	Units
71-43-2	Benzene		0.065U	5.00	0.065	ug/L
108-88-3	Toluene		0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene		0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)		0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene		0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)		0.077U	5.00	0.077	ug/L
107-06-2	1,2-Dichloroethane		0.090U	5.00	0.090	ug/L
CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	40.6	ug/L	81	78 - 130
1868-53-7	Dibromofluoromethane	50	54.7	ug/L	109	77 - 127
2037-26-5	Toluene d8	50	55.4	ug/L	111	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	51.9	ug/L	104	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/24/2009 16:45	RJU	410287
CAS#	Parameter		Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)		0.348U	5.00	0.348	ug/L
75-65-0	t-Butanol (TBA)		4.12U	10.0	4.12	ug/L
108-20-3	diisopropyl Ether (DIPE)		0.529U	5.00	0.529	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)		0.259U	5.00	0.259	ug/L
624-95-3	ethyl tert-butanol (ETBA)		4.36U	10.0	4.36	ug/L
64-17-5	Ethanol		40.3U	100	40.3	ug/L
75-85-4	tert-amyl alcohol (TAA)		15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)		0.357U	5.00	0.357	ug/L
CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	38.2	ug/L	76	50 - 150
1868-53-7	Dibromofluoromethane	50	62.2	ug/L	124	50 - 150
2037-26-5	Toluene d8	50	49.6	ug/L	99	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	59	ug/L	118	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/27/2009 23:44	TLS	410546
CAS#	Parameter		Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane		0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is **SCDHEC certified lab # 73006**, NELAP certification # 01955

GCAL Report 209042232

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223223	146138	Water	04/20/2009 16:32	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/24/2009 17:09	RJU	410288

CAS#	Parameter	Result	RDL	MDL	Units
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L
71-43-2	Benzene	2.00J	5.00	0.065	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
108-88-3	Toluene	2.92J	5.00	0.076	ug/L
1330-20-7	Xylene (total)	5.04J	10.0	0.183	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	1.32J	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	39.1	ug/L	78	78 - 130
1868-53-7	Dibromofluoromethane	50	58.4	ug/L	117	77 - 127
2037-26-5	Toluene d8	50	52.5	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	57.4	ug/L	115	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/24/2009 17:09	RJU	410287

CAS#	Parameter	Result	RDL	MDL	Units
64-17-5	Ethanol	40.3U	100	40.3	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	39.1	ug/L	78	50 - 150
1868-53-7	Dibromofluoromethane	50	58.4	ug/L	117	50 - 150
2037-26-5	Toluene d8	50	52.5	ug/L	105	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	57.4	ug/L	115	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 15:36	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223224	146139	Water	04/20/2009 14:45	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/28/2009 14:38	AGC	410493

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	0.076U	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	0.183U	10.0	0.183	ug/L
91-20-3	Naphthalene	0.118U	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.077U	5.00	0.077	ug/L
107-06-2	1,2-Dichloroethane	0.090U	5.00	0.090	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	41.2	ug/L	82	78 - 130
1868-53-7	Dibromofluoromethane	50	56.3	ug/L	113	77 - 127
2037-26-5	Toluene d8	50	52	ug/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	52.6	ug/L	105	71 - 127

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/24/2009 17:34	RJU	410287

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.348U	5.00	0.348	ug/L
75-65-0	t-Butanol (TBA)	4.12U	10.0	4.12	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.529U	5.00	0.529	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.259U	5.00	0.259	ug/L
624-95-3	ethyl tert-butanol (ETBA)	4.36U	10.0	4.36	ug/L
64-17-5	Ethanol	40.3U	100	40.3	ug/L
75-85-4	tert-amyl alcohol (TAA)	15.6U	20.0	15.6	ug/L
762-75-4	tert-butyl formate (TBF)	0.357U	5.00	0.357	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	37.3	ug/L	75	50 - 150
1868-53-7	Dibromofluoromethane	50	64.2	ug/L	128	50 - 150
2037-26-5	Toluene d8	50	49.4	ug/L	99	50 - 150
17060-07-0	1,2-Dichloroethane-d4	50	60.4	ug/L	121	50 - 150

SW-846 8011

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
04/23/2009 10:00	410181	SW-846 8011	1	04/25/2009 15:57	SMH	410465

CAS#	Parameter	Result	RDL	MDL	Units
106-93-4	1,2-Dibromoethane	0.00350U	0.010	0.00350	ug/L

Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
20904223225	146140	Water	04/20/2009 16:45	04/22/2009 09:30

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	04/24/2009 17:59	RJU	410288

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.065U	5.00	0.065	ug/L
108-88-3	Toluene	1.03J	5.00	0.076	ug/L
100-41-4	Ethylbenzene	0.065U	5.00	0.065	ug/L
1330-20-7	Xylene (total)	19.3	10.0	0.183	ug/L
91-20-3	Naphthalene	1.93J	5.00	0.118	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	155	5.00	0.077	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	41.6	ug/L	83	78 - 130
1868-53-7	Dibromofluoromethane	50	49.4	ug/L	99	77 - 127
2037-26-5	Toluene d8	50	52.7	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	56	ug/L	112	71 - 127

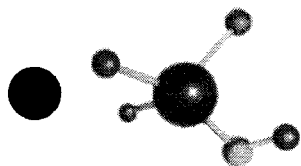
Second Tier Data Review By:



Ashley B. Amick, Project Manager
aamick@accessanalyticalinc.com

NOTE: Unless otherwise noted on report all samples analyzed at: GCAL, 7979 CSRI Ave., Baton Rouge, LA 70820-7402. GCAL is SCDHEC certified lab # 73006, NELAP certification # 01955

GCAL Report 209042232



ACCESS
ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Davis & Brown
124 W McIver Rd
Florence, SC 29501

ATTENTION

Scott Fields

PROJECT ID

29-0-591

LABORATORY REPORT NUMBER

209042232

DATE

04/29/2009

Primary Data Review By

Curtis Ekker
04/29/09 11:25:12 AM
Curtis Ekker
Data Validation Manager, GCAL

Secondary Data Review By

Ashley B. Amick
Project Manager, Access Analytical, Inc.
aamick@accessanalyticalinc.com

PLEASE NOTE:

- Unless otherwise noted, all analysis on this report performed at Gulf Coast Analytical Labs (GCAL), 7979 GSRI Rd. Baton Rouge, LA 70820.
- GCAL is SCDHEC certified laboratory # 73006, NCDENR certified lab # 618, GA certified lab # LA-01955, NELAP certified laboratory # 01955
- Local support services for this project are provided by Access Analytical, Inc.. Access Analytical is a representative of GCAL serving clients in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll free at 888.315.4243.

DAVIS & BROWN

Data Qualifiers

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" or "flag" next to the result. The data qualifier "S" indicates that the analysis was performed by another SC certified Lab. This table summarizes the South Carolina Lab Certification Numbers for those laboratories.

S	South Carolina Lab Certification Number: 23101
S1	South Carolina Lab Certification Number: 93013
S2	South Carolina Lab Certification Number: 23105
S3	South Carolina Lab Certification Number: 10120
S4	South Carolina Lab Certification Number: 84002
S5	South Carolina Lab Certification Number: 32117
S6	Agricultural Service Laboratory Clemson University
S7	South Carolina Lab Certification Number: 36001
S8	*****
S9	South Carolina Lab Certification Number: 94014001; 94014002
S10	South Carolina Lab Certification Number: 84009
S11	South Carolina Lab Certification Number: 96023; 96026; 96031; 98001; 73006
S12	AASHTO R18 Certified
S13	South Carolina Lab Certification Number: 96012
S14	South Carolina Lab Certification Number: 89002
S15	*****
S16	South Carolina Lab Certification Number: 84004
S17	South Carolina Lab Certification Number: 96037001
S18	South Carolina Lab Certification Number: 95005
S19	South Carolina Lab Certification Number: 23104
S20	South Carolina Lab Certification Number: 96027001
S21	South Carolina Lab Certification Number: 21005
S22	South Carolina Lab Certification Number: 24110
S23	South Carolina Lab Certification Number: 84001001
S24	South Carolina Lab Certification Number: 82014001
S25	Sample was analyzed by Microseeps, Inc Laboratory
S26	North Carolina Lab Certification Number: 21 (Wilson Division NC00120)
S27	South Carolina Lab Certification Number: 40569

CHAIN OF CUSTODY RECORD

Page 1 of 3

DAVIS & BROWN 66357
 Post Office Box 15038
 124 West McIver Road
 Florence, South Carolina 29501
 Telephone (843) 665-6746

Client Name / Facility Name B.I.J. STOKES (MEGG'S EXON)				SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods.										*Program Area		Use Codes in the boxes to indicate whether sample was filtered or preserved.		
SAMPLE ID	DATE	TIME	# of containers											REMARKS	LAB ID			
				TSS	BOD	COD	Nitrate	VOC	METALS - Spec.	Cyanide	TKN	Oil & Grease	Coliform - Total			Coliform - Fecal	Ammonia - Dist.	
M11 1	4/20/09	1527	7													Code: HNC ₃ = A HCL = B NAOH = C H ₂ SO ₄ = D NA ₂ S ₂ O ₃ = E FILTRATION = F ZINCACETATE = G	146116	
M11 2	4/20/09	1530	7														M1BE, EDB, 8 OXYGENATES, 1,2 DCA	146117
M11 3	4/20/09	1605	7															146118
M11 4	4/20/09	1610	7															146119
M11 5	4/20/09	1632	7															146120
M11 6	4/20/09	1615	7															146121
MW 7	4/20/09	1515	8													Code: HNC ₃ = A HCL = B NAOH = C H ₂ SO ₄ = D NA ₂ S ₂ O ₃ = E FILTRATION = F ZINCACETATE = G	146122	
M11 8	4/20/09	1200	8														Fe 1.04	146123
M11 9	4/20/09	1145	8														Fe 1.65	146124
M11 10	4/20/09	1115	8														Fe 0.09	146125
M11 11	4/20/09	1130	8														Fe 1.74	146126
Relinquished by (SIGNATURE)* <i>[Signature]</i>				Date	Time	Relinquished by (SIGNATURE)*				Date	Time	Relinquished by (SIGNATURE)*				Date	Time	
Received by (SIGNATURE)* <i>[Signature]</i>				Date	Time	Received by (SIGNATURE)*				Date	Time	Received by (SIGNATURE)*				Date	Time	

* Program Area: D - Drinking Water / G - Groundwater / S - Solid / W - Waste Water / N - NPDES / O - Other

☒ Regulatory
☐ Non Regulatory

CHAIN OF CUSTODY RECORD

Page 2 of 3

DAVIS & BROWN 6635-1
 Post Office Box 15038
 Quinby, South Carolina 29506
 Florence, South Carolina 29501
 Telephone (843) 665-6746

Client Name / Facility Name BLJ STOKES (MEGGS EXCH)				SAMPLE ANALYSIS REQUIRED (X) - use remarks area to specify specific compounds or methods										Use Codes in the boxes to indicate whether sample was filtered or preserved.					
Collected by JOSEPH RICKS / RYAN DAVIS														Code: HNO ₃ = A HCL = B NAOH = C					
SAMPLE ID	DATE	TIME	# of containers	TSS	BOD	COD	Nitrate	VOC	METALS - Spec.	Cyanide	TKN	Oil & Grease	Coliform - Total	Coliform - Fecal	Ammonia - Dist.	*Program Area	REMARKS	LAB ID	
M1112	4/20/09	1252	8						Fe				0.21				→ BTEX, NAPTH	146.127	
M1113	4/20/09	1345	8						Fe				2.50				MTBE, EDB	146.128	
M1114	4/20/09	1420	8						Fe				1.08				B, OXYGENATES	146.129	
M1115	4/20/09	1435	8						Fe				2.26				1,2 DCA	146.130	
M1116	4/20/09	1334	8						Fe				0.62				NO ₃ , SO ₄	146.131	
M1117	4/20/09	1340	8						Fe				0.77				FERROUS IRON	146.132	
M1118	4/20/09	1350	8						Fe				3.30					146.133	
M1119	4/20/09	1305	8						Fe				1.13					146.134	
M1120	4/20/09	1505	8						Fe				2.13 0.83					146.135	
M1121	4/20/09	1035	8						Fe				2.23					146.136	
M1122	4/20/09	1045	8						Fe				1.79					146.137	
M111-D	4/20/09	1632	8						Fe				1.05					146.138	
Relinquished by (SIGNATURE)* <i>Joseph Ricks</i>				Date	4/20/09	Time	1920	Relinquished by (SIGNATURE)*				Date		Time		Date			
Received by (SIGNATURE)* <i>Ryan Davis</i>				Date	4/21/09	Time	1800	Received by (SIGNATURE)*				Date		Time		Date			

☐ Regulatory
☐ Non Regulatory

* Program Area: D - Drinking Water / G - Groundwater / S - Solid / W - Waste Water / N - NPDES / O - Other

DAVIS & BROWN
 Post Office Box 15038
 Quinby, South Carolina 29506
 Telephone (843) 665-6746
 124 West McIver Road
 Florence, South Carolina 29501
 6635

Post Office Box 15038

124 West McIver Road

Quinby, South Carolina 29506

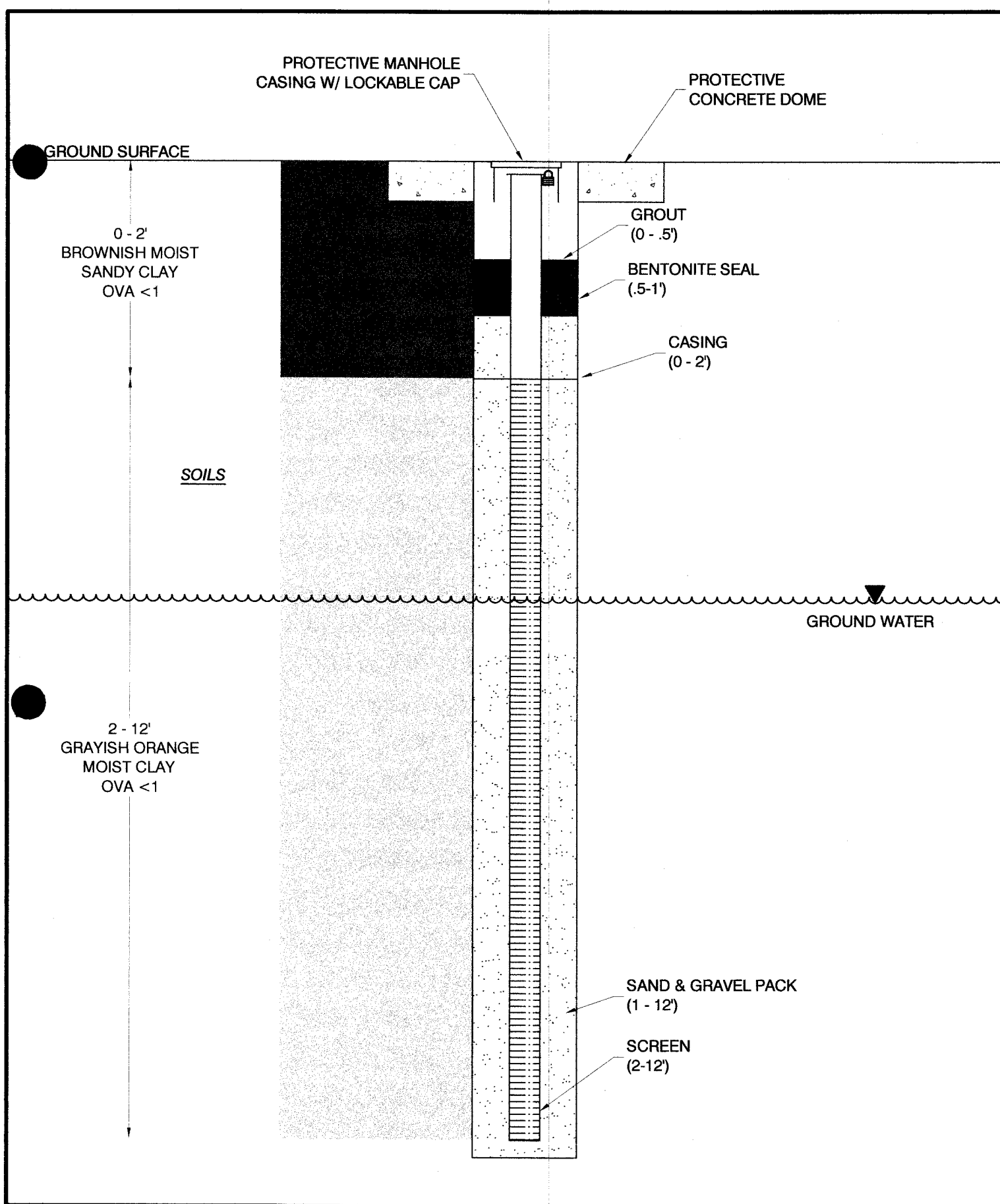
Florence, South Carolina 29501

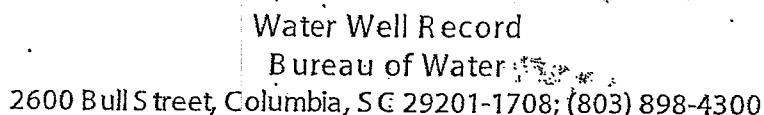
Telephone (843) 665-6746

Page 3 of 3

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APPENDIX C

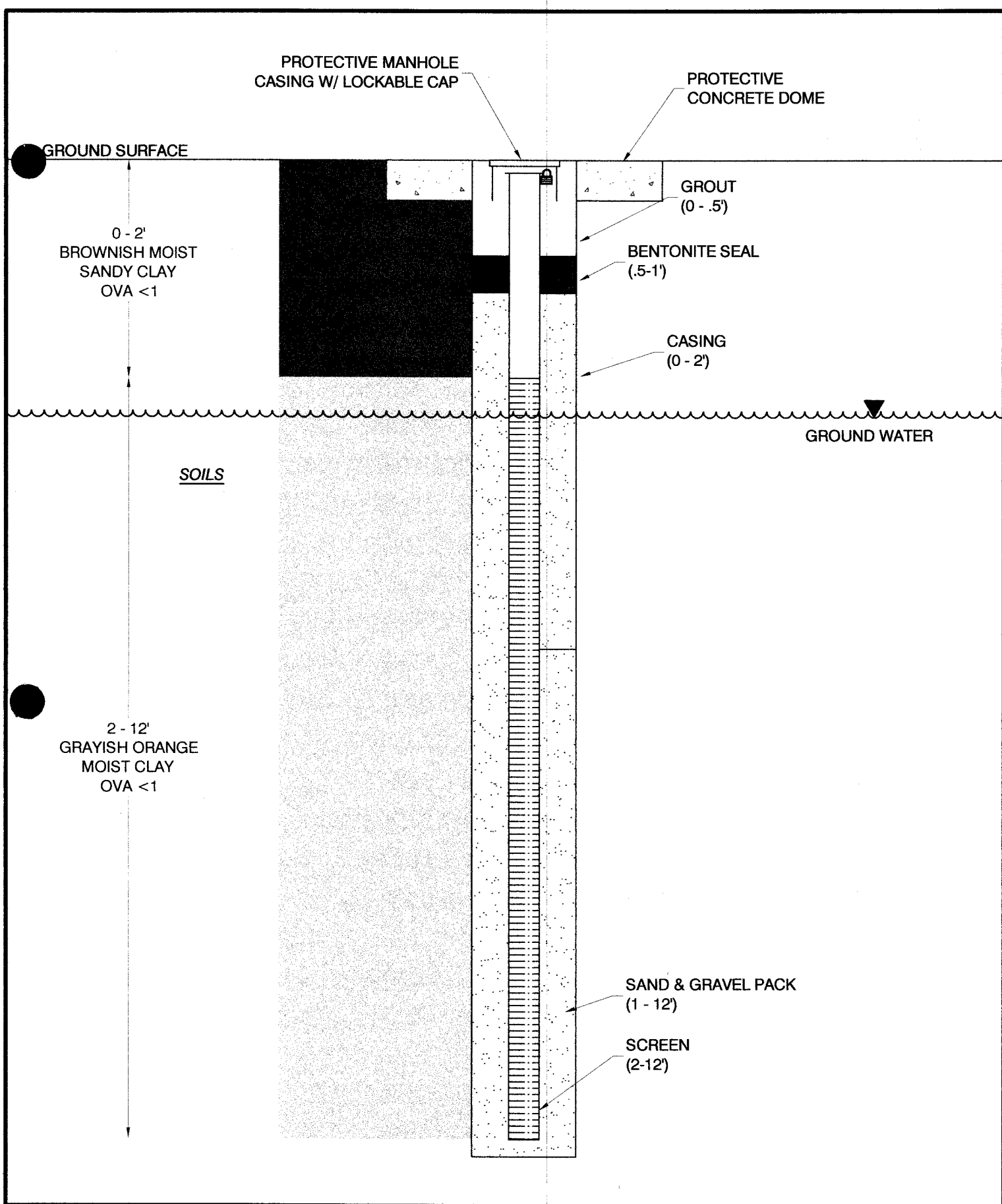


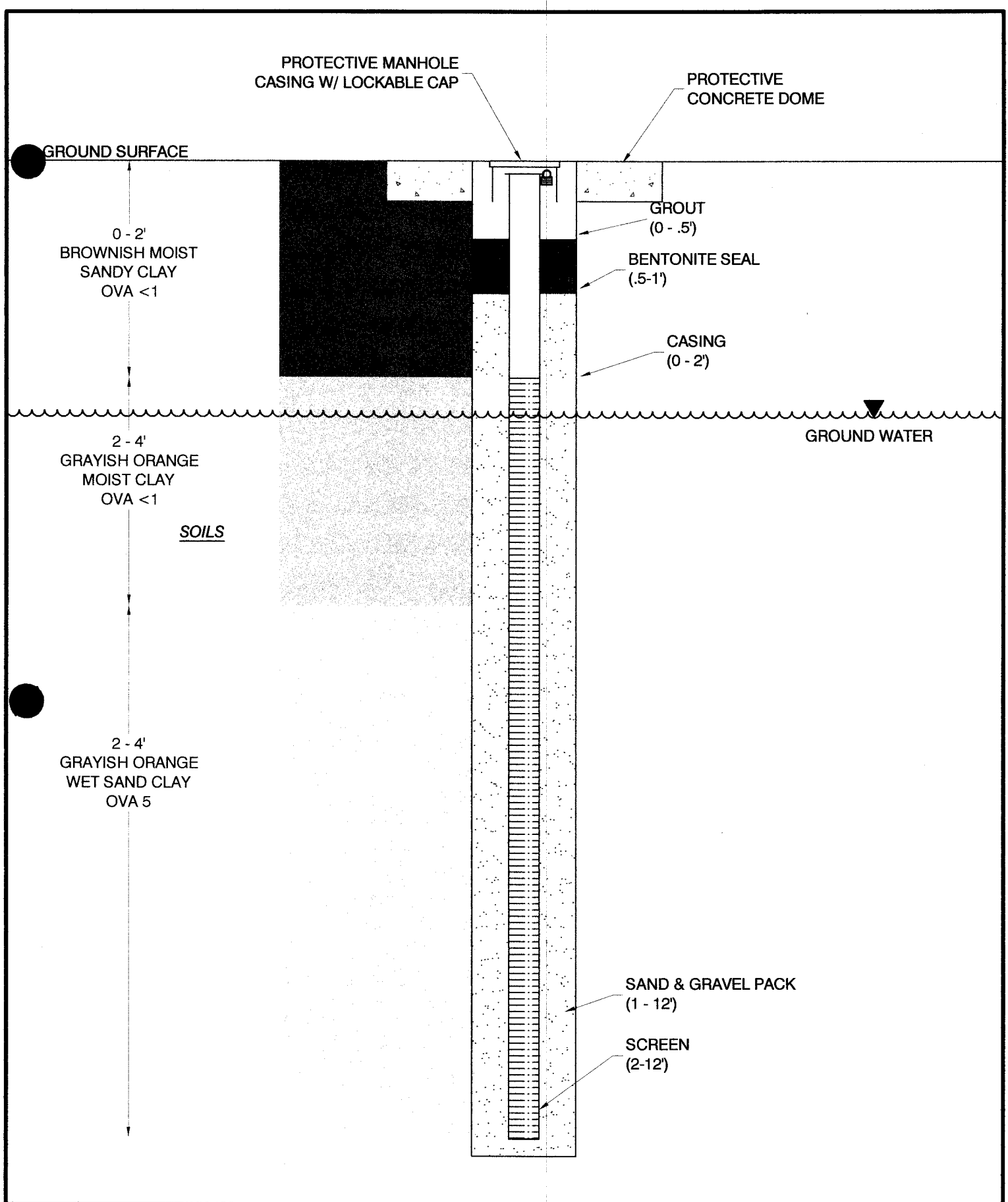


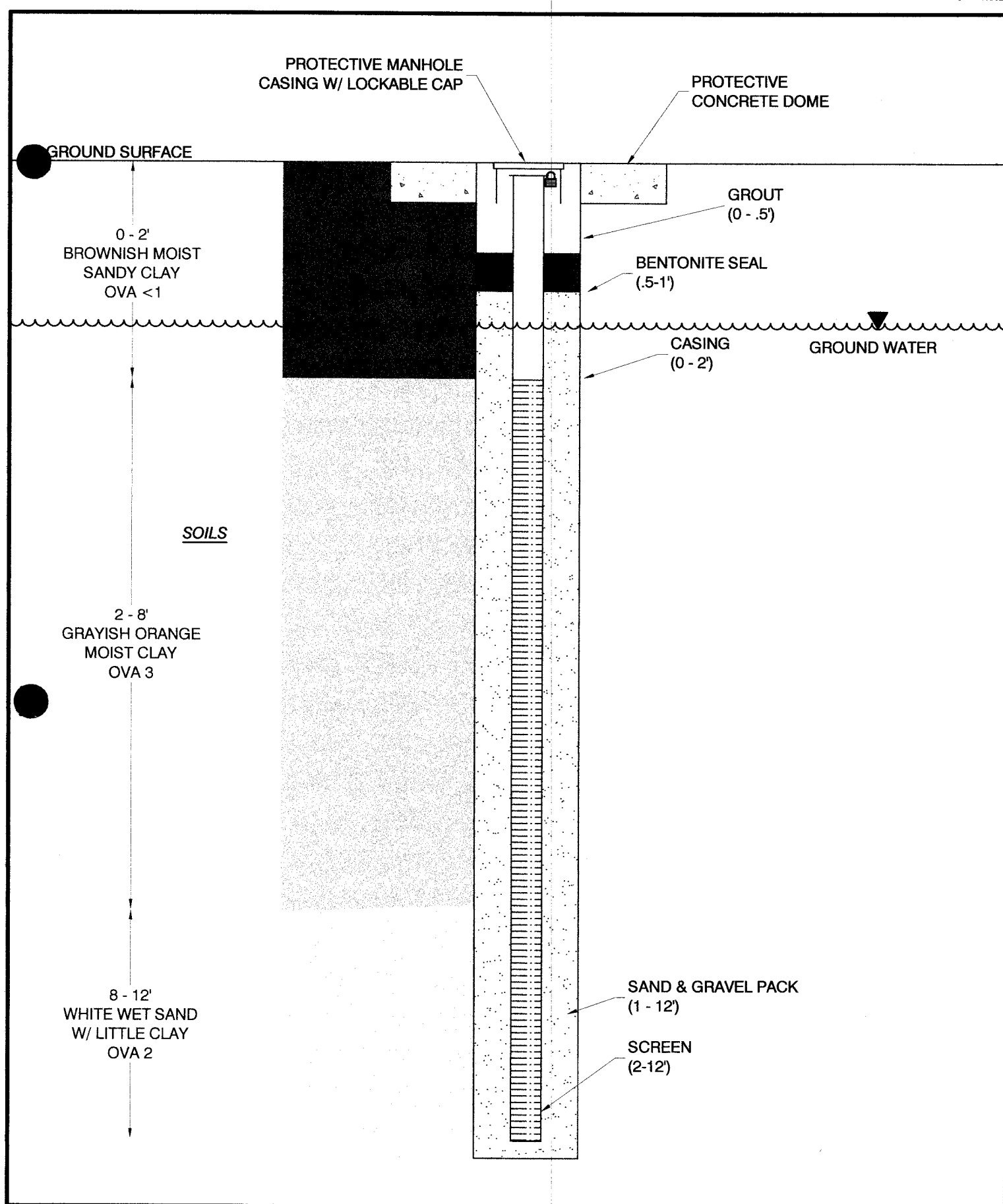
Bureau of Water

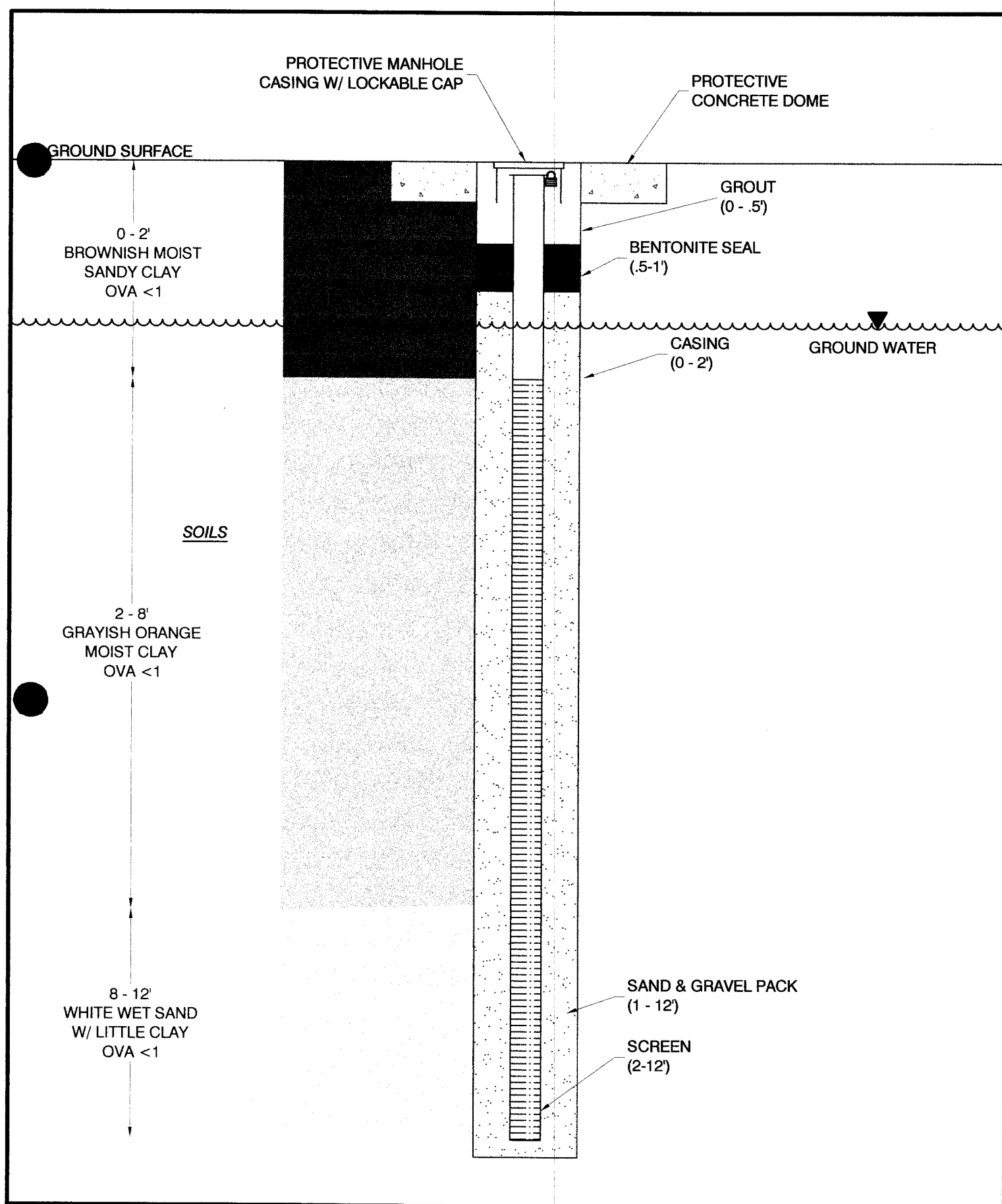
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

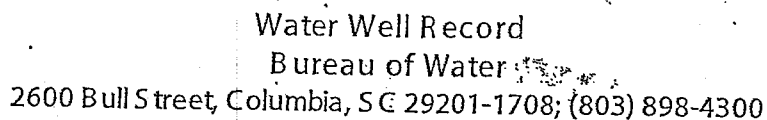
DHEC 1903 (03/2002)











6. PERMIT NUMBER: 03423

7. USE:

☐ Residential	☐ Public Supply	☐ Process
☐ Irrigation	☐ Air Conditioning	☐ Emergency
☐ Test Well	☒ Monitor Well	☐ Replacement

8. WELL DEPTH (completed) 12' ft. Date Started (MM/DD/YYYY): 3-26-09
Date Completed (MM/DD/YYYY): 3-27-09

9. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable tool ☒ Other

COUNTY: FLORENCE

10. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized
☒ Steel ☐ Other
0 in. to 2' ft. depth
_____ in. to _____ ft. depth

Height Above/Below _____ ft.
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☒ No

11. SCREEN
Type: schedule 40 PVC Diam.: 2"
Slot/Gauge: 0.010" Length: 10'
Set Between: 12' ft and 2' ft NOTE: MULTIPLE SCREENS
USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.

PUBLIC SYSTEM NUMBER:

4. ABANDONMENT: ☐ Yes ☒ No

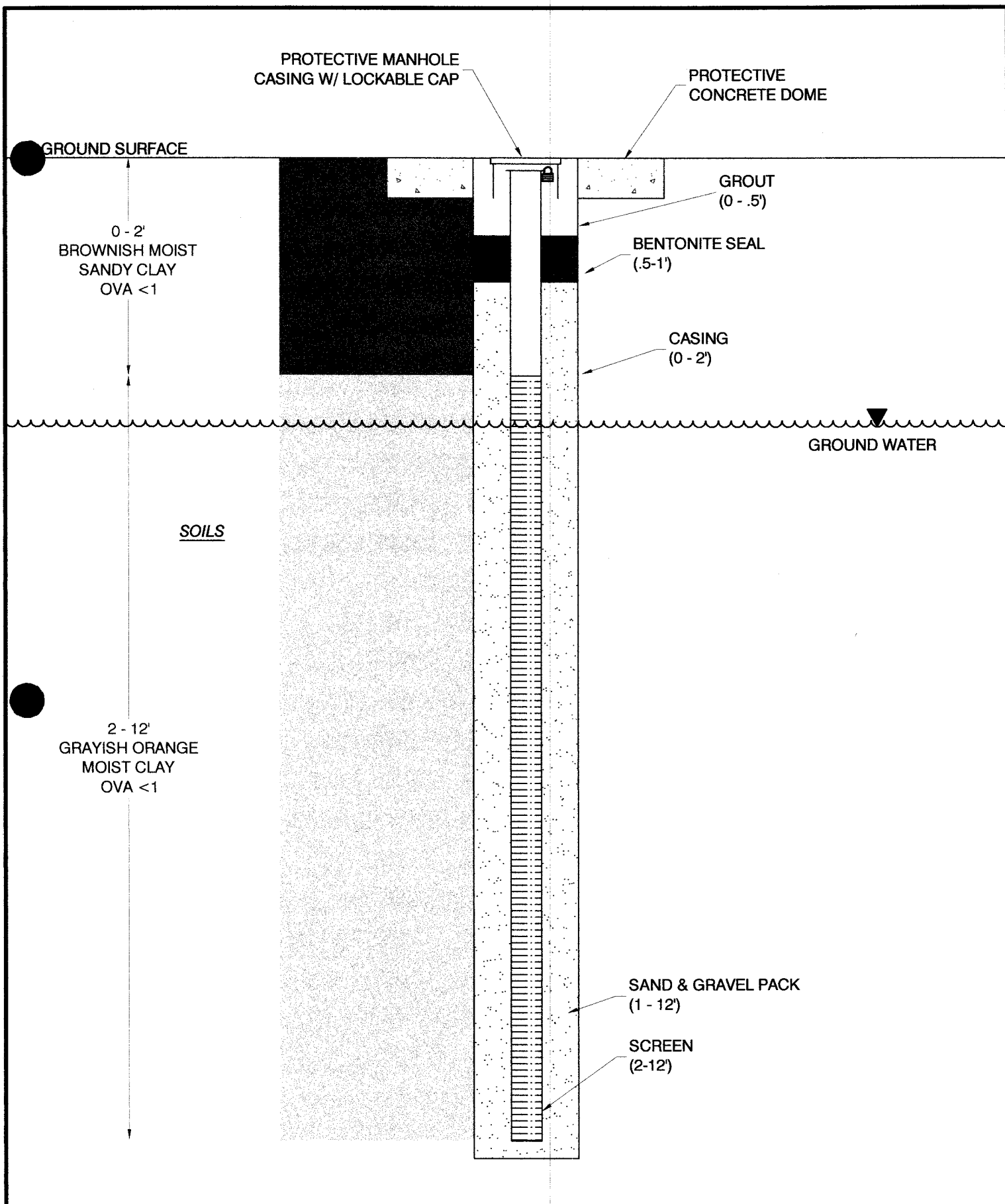
Grouted Depth: from _____ ft. to _____ ft.

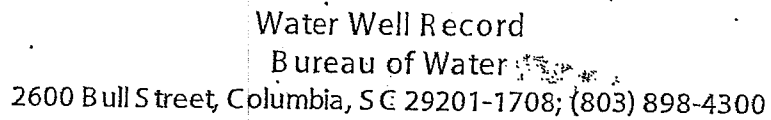
Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
see boring log		
Indicate Water Bearing Zones		
(Use a 2nd sheet if needed)		

5. REMARKS:

Signed: [Signature]
Authorized Representative

Date: 3-31-09
(MM/DD/YYYY)





6. PERMIT NUMBER: 03423

7. USE:

☐ Residential	☐ Public Supply	☐ Process
☐ Irrigation	☐ Air Conditioning	☐ Emergency
☐ Test Well	☒ Monitor Well	☐ Replacement

8. WELL DEPTH (completed) Date Started (MM/DD/YYYY): 3-26-09

_____ 12' _____ ft. Date Completed (MM/DD/YYYY): 3-27-09

COUNTY: FLORIDA

9. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable tool ☒ Other

10. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized
☐ Steel ☐ Other
0 in. to 2' ft depth
- in. to - ft depth

Height Above/Below _____ ft
Surface _____ ft
Weight _____ lb./ft
Drive Shoe? ☐ Yes ☒ No

PUBLIC SYSTEM NUMBER:

☐ Yes ☒ No

Grouted Depth: from _____ ft. to _____ ft.

11. SCREEN
Type: schedule 40 PVC Diam.: 2"
Slot/Gauge: 0.010" Length: 10'
Set Between: 12' ft. and 2' ft. NOTE: MULTIPLE SCREENS
USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

*Thickness
of
Stratum

Depth to
Bottom of
Stratum

see boring log

12. STATIC WATER LEVEL

13. PUMPING LEVEL Below Land Surface.

_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping test: ☐ Yes (please enclose) ☒ No
Yield: _____

14. WATER QUALITY

Chemical Analysis: ☐ Yes ☐ No Bacterial Analysis: ☐ Yes ☒ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☒ Yes ☐ No

Installed from 12' ft to 1' ft
Effective size #3 Uniformity Coefficient _____

16. WELL GROUTED? ☒ Yes ☐ No

☐ Neat Cement ☐ Bentonite ☒ Bentonite/Cement ☐ Other _____
Depth: From 5' ft. to 0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:

Type: _____

Well Disinfected: ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed (MM/DD/YYYY):

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:

Name: Josh Register c/o ARM Environmental Svcs
Address: P.O. Box 50285 City: Columbia
State: South Carolina Zip: 29250
Telephone No.: (803) 783-3314 Fax No.: (803) 783-2587

20. 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.

Signed: John Hyl
Authorized Representative

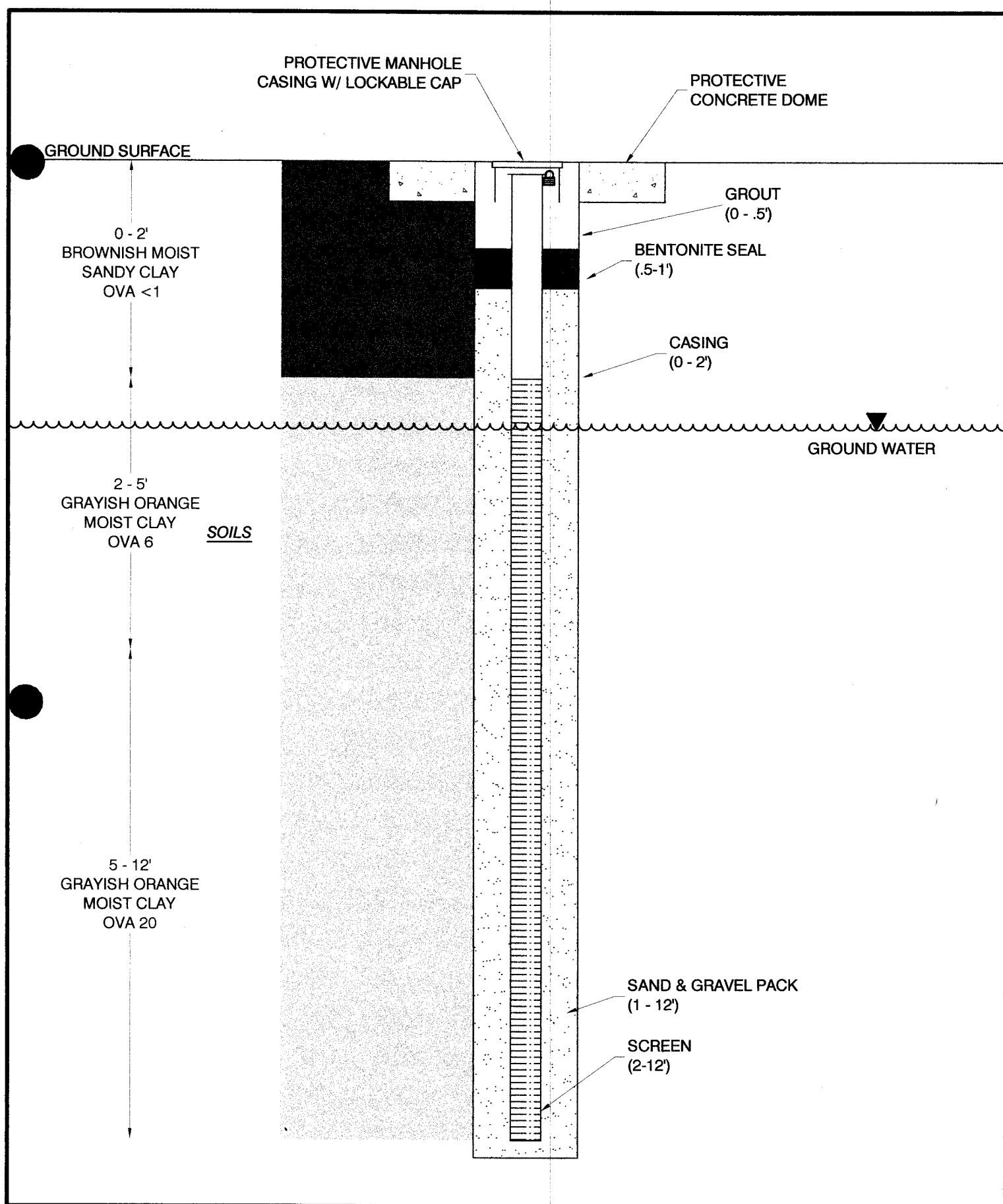
Date: 3-31-09
(MM/DD/YYYY)

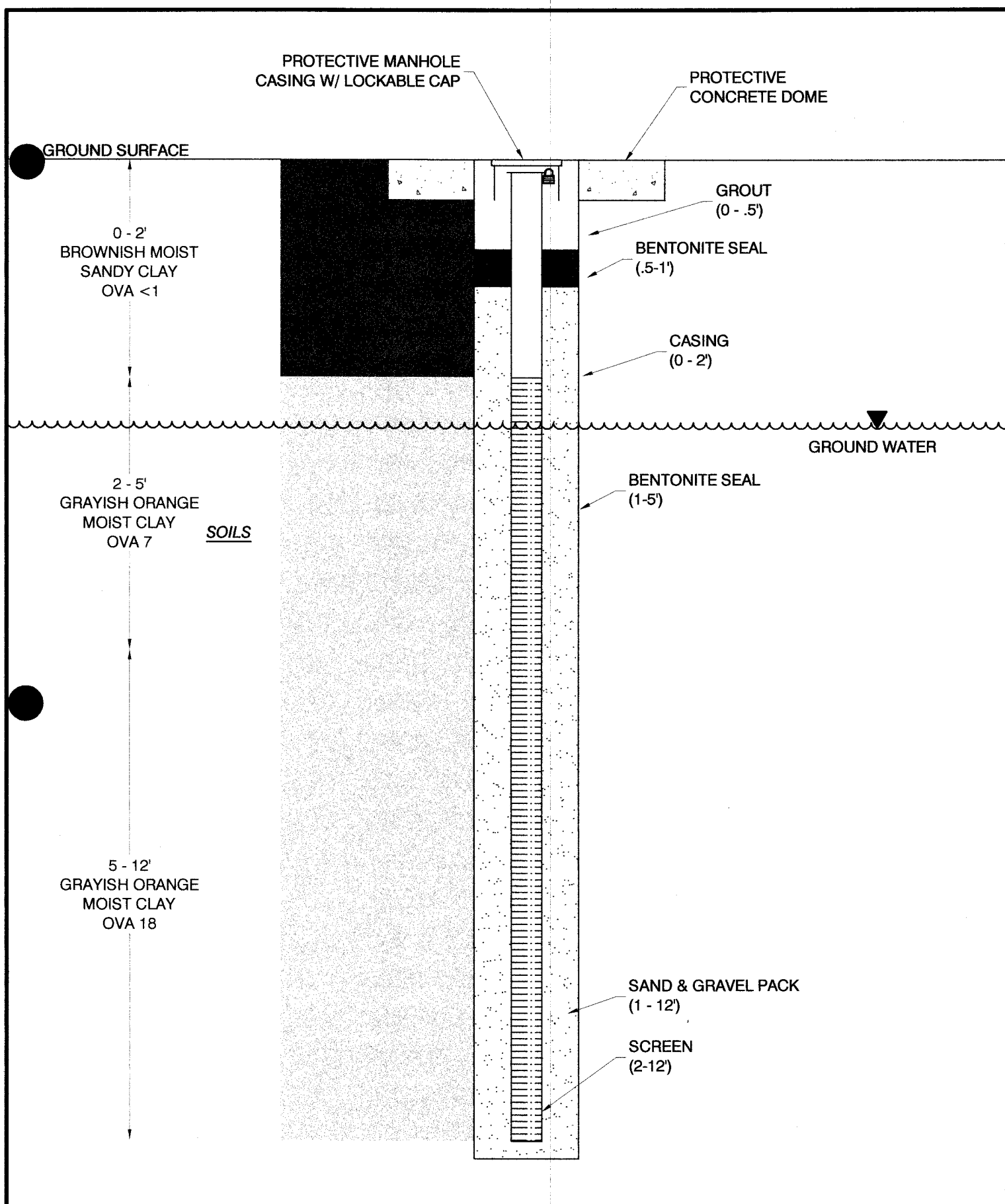
*Indicate Water Bearing Zones

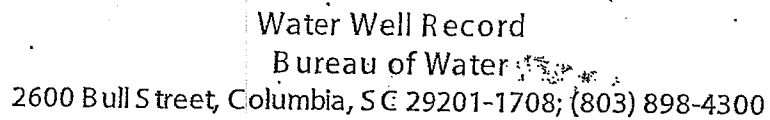
(Use a 2nd sheet if needed)

5. REMARKS:

13 3/8" Bentonite pellets from 1' to .5'





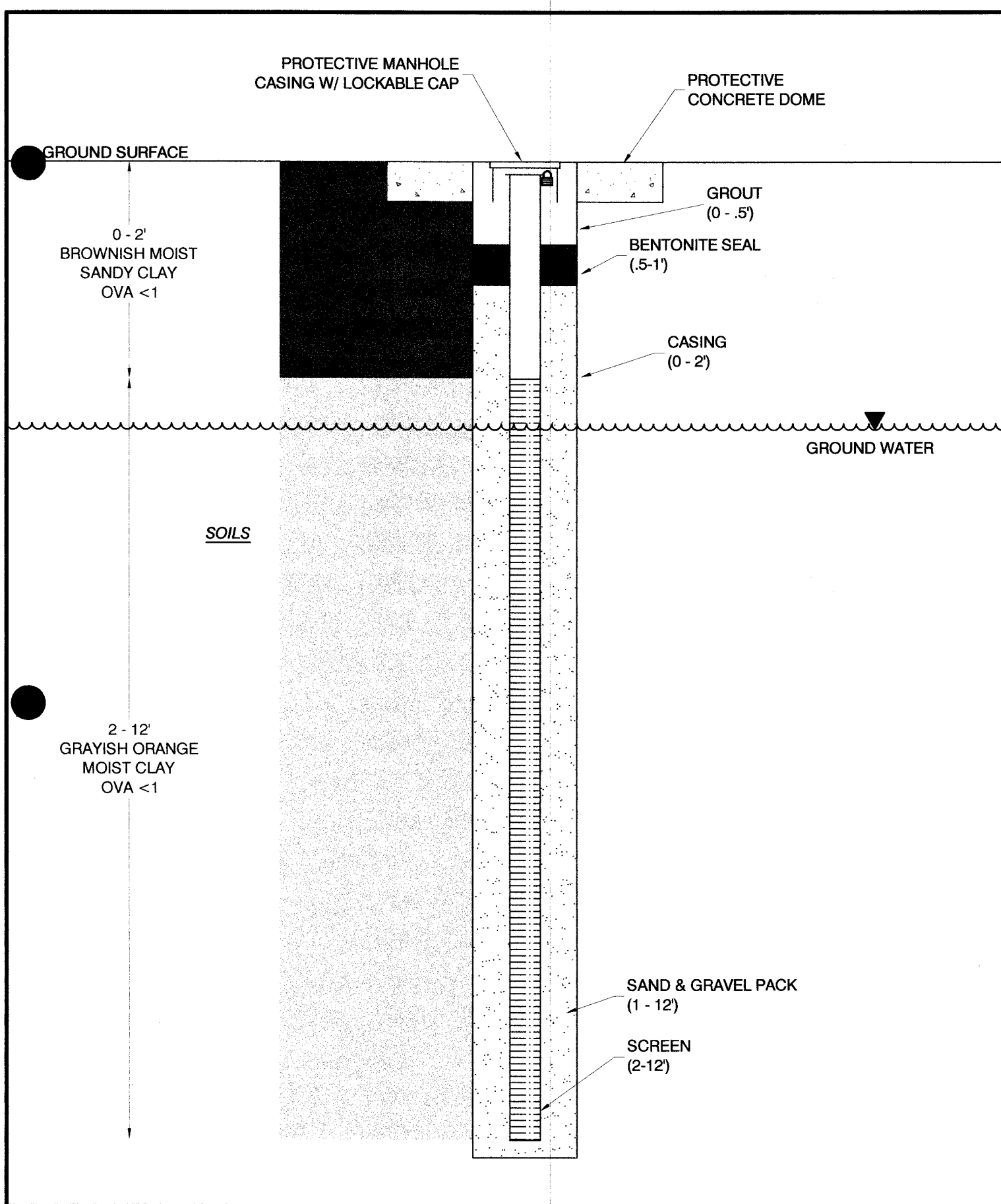


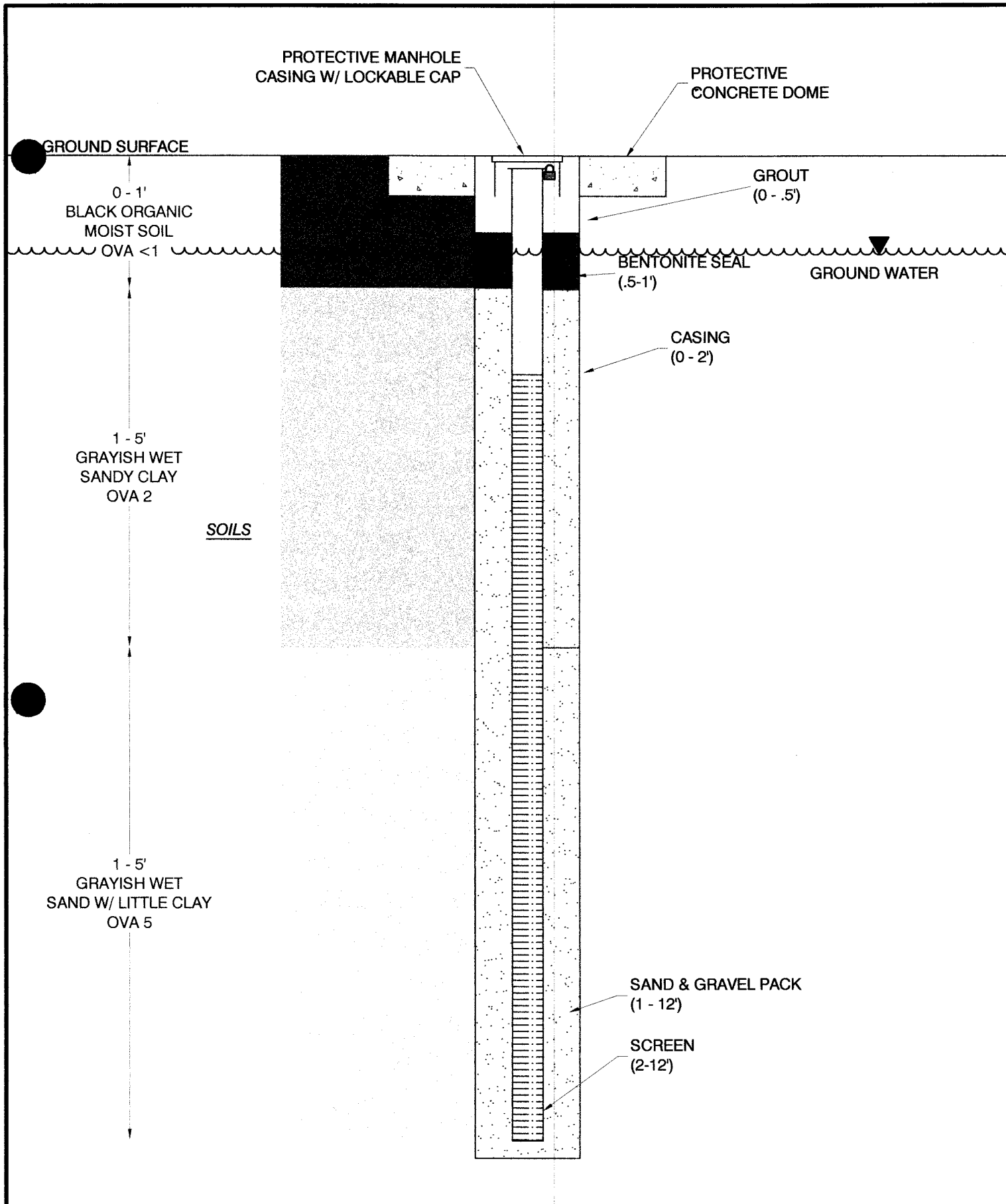
Bureau of Water:

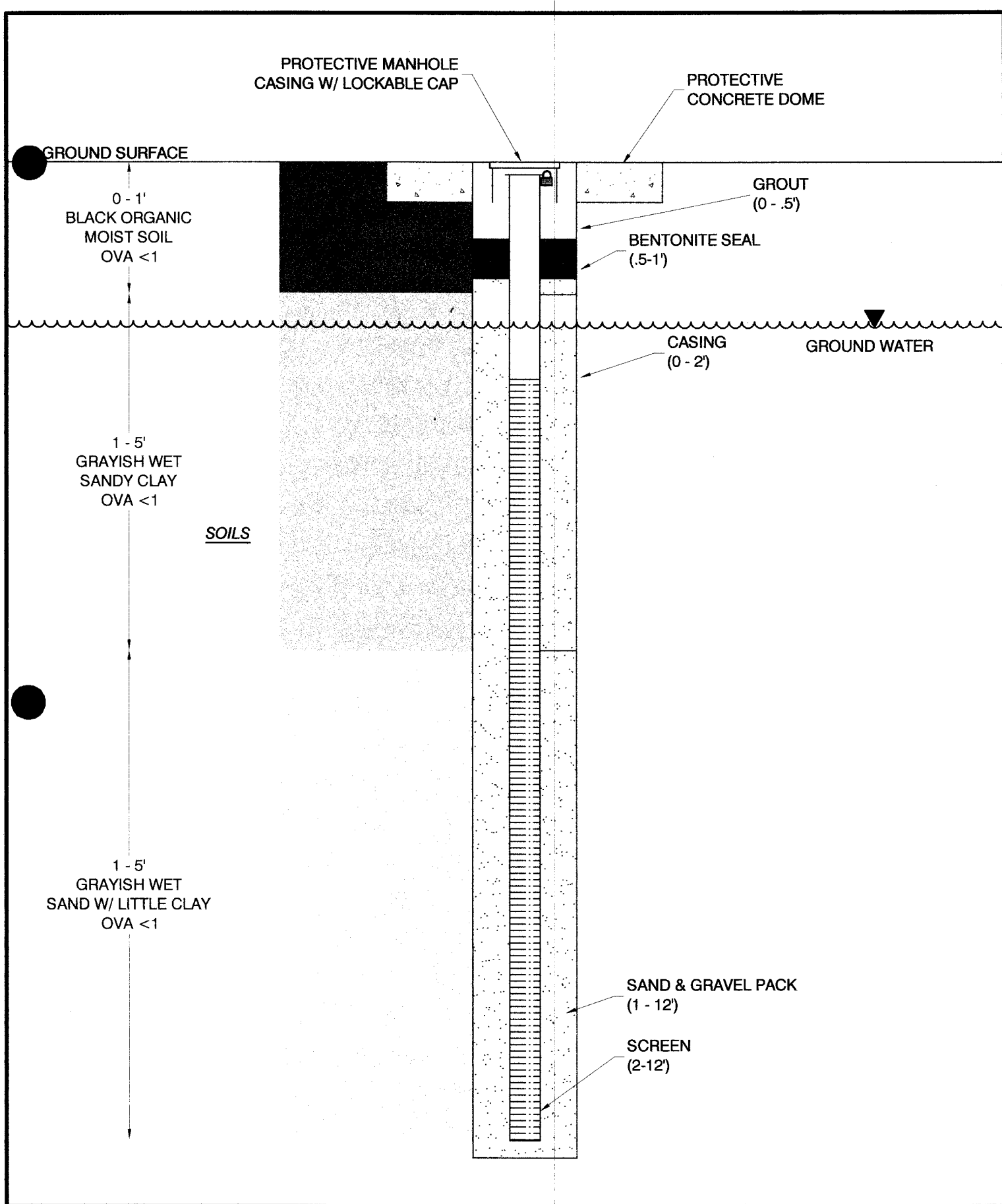
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

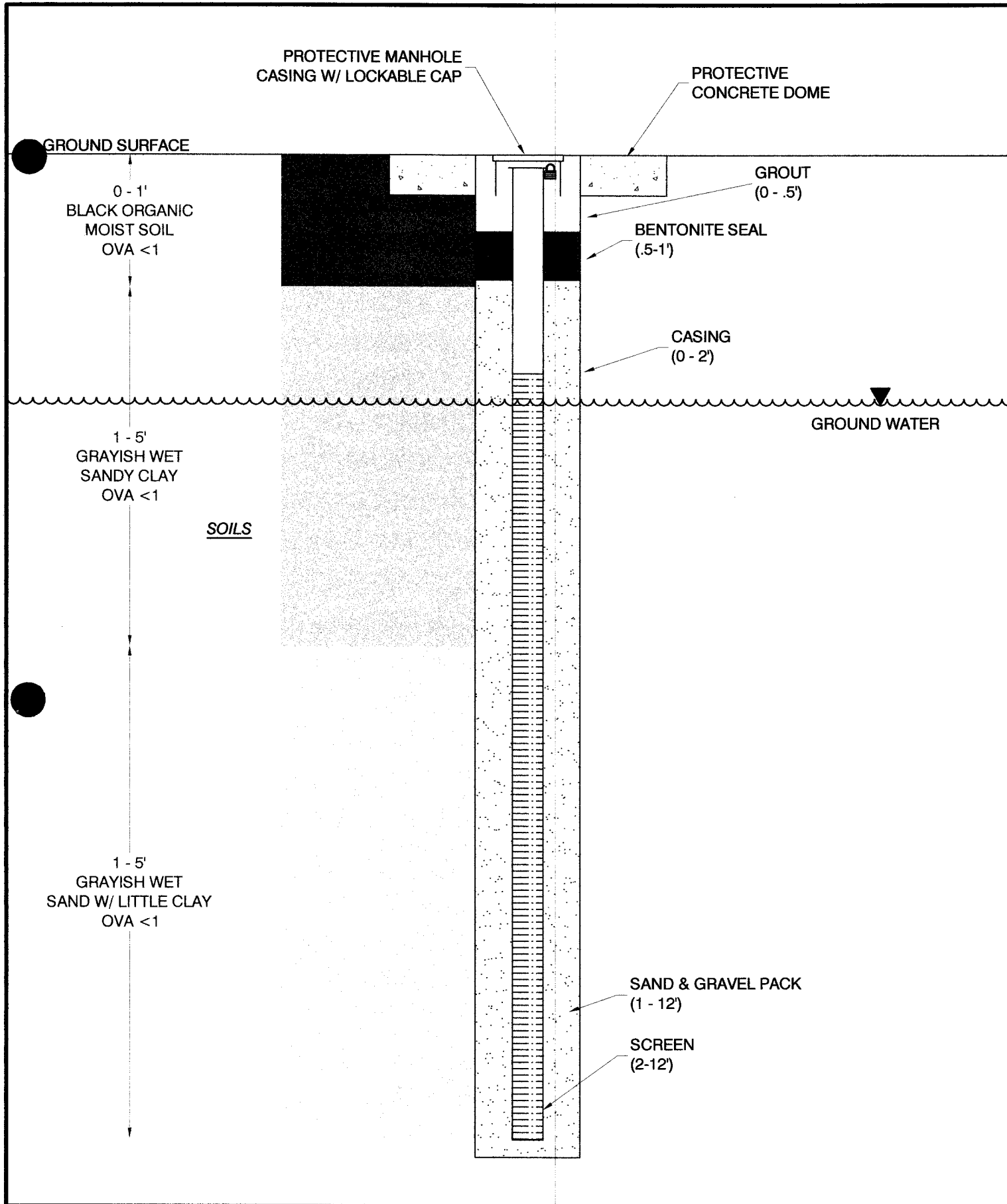
6. PERMIT NUMBER: 03423

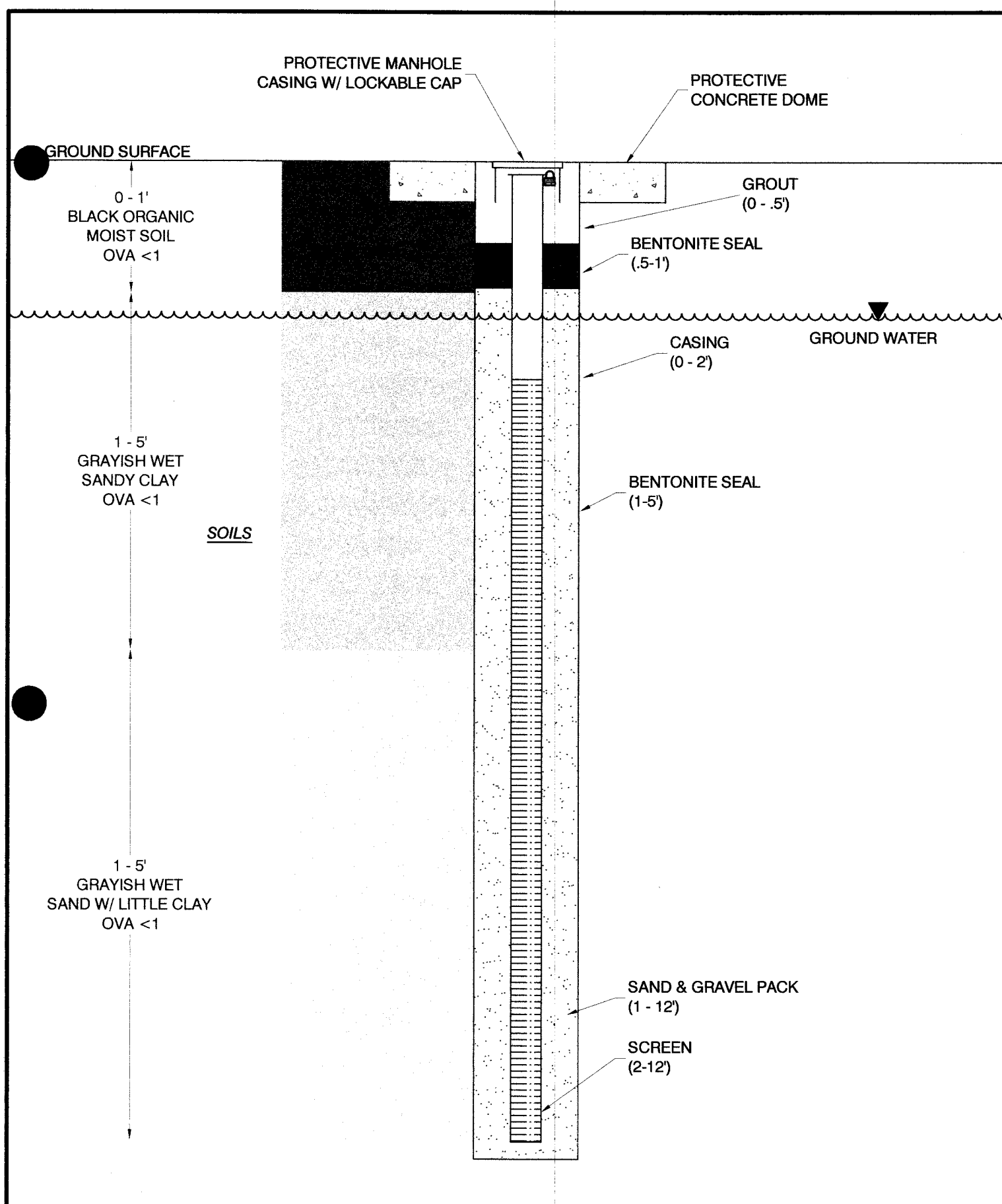
Date: 3-31-09
(MM/DD/YYYY)

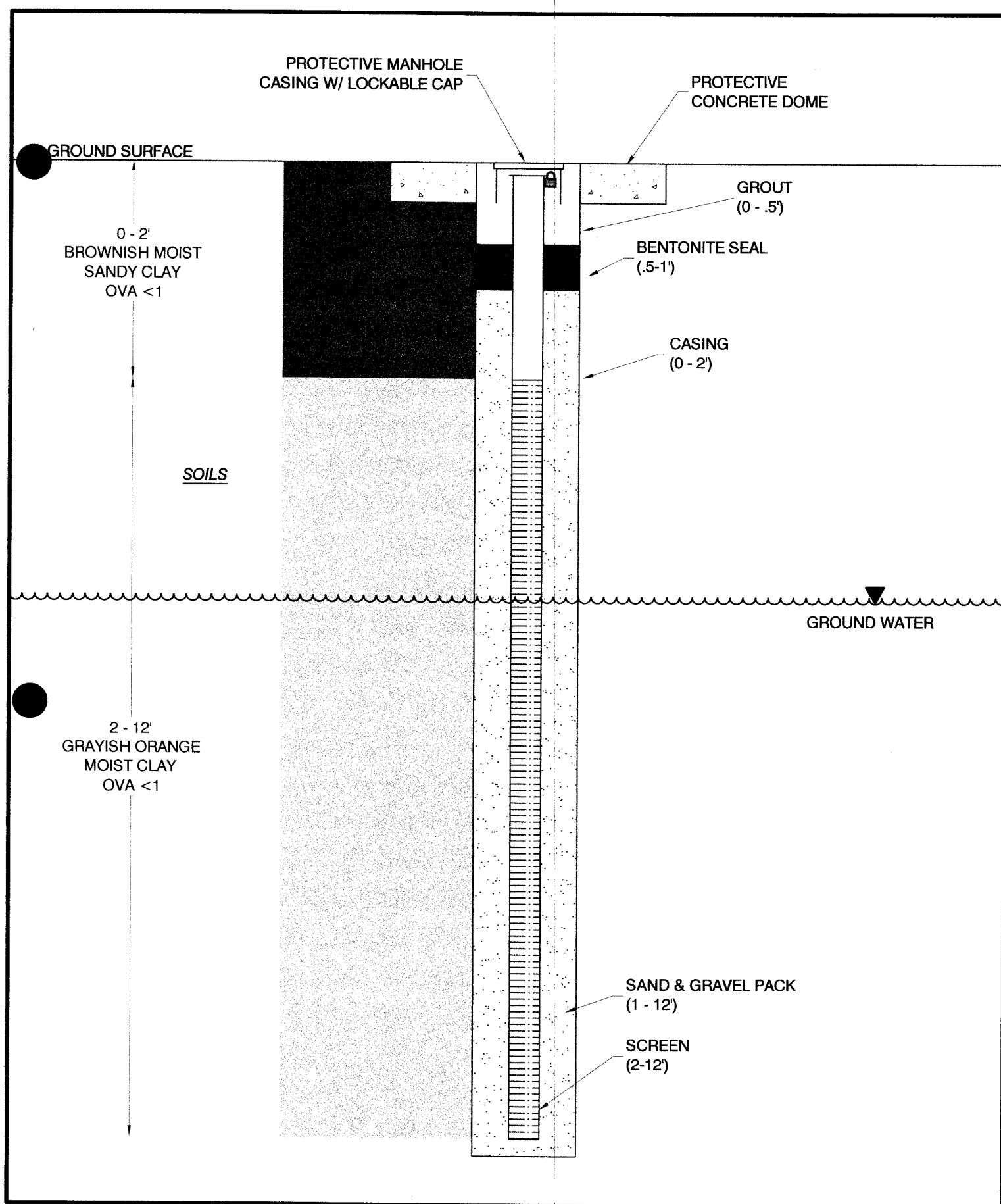


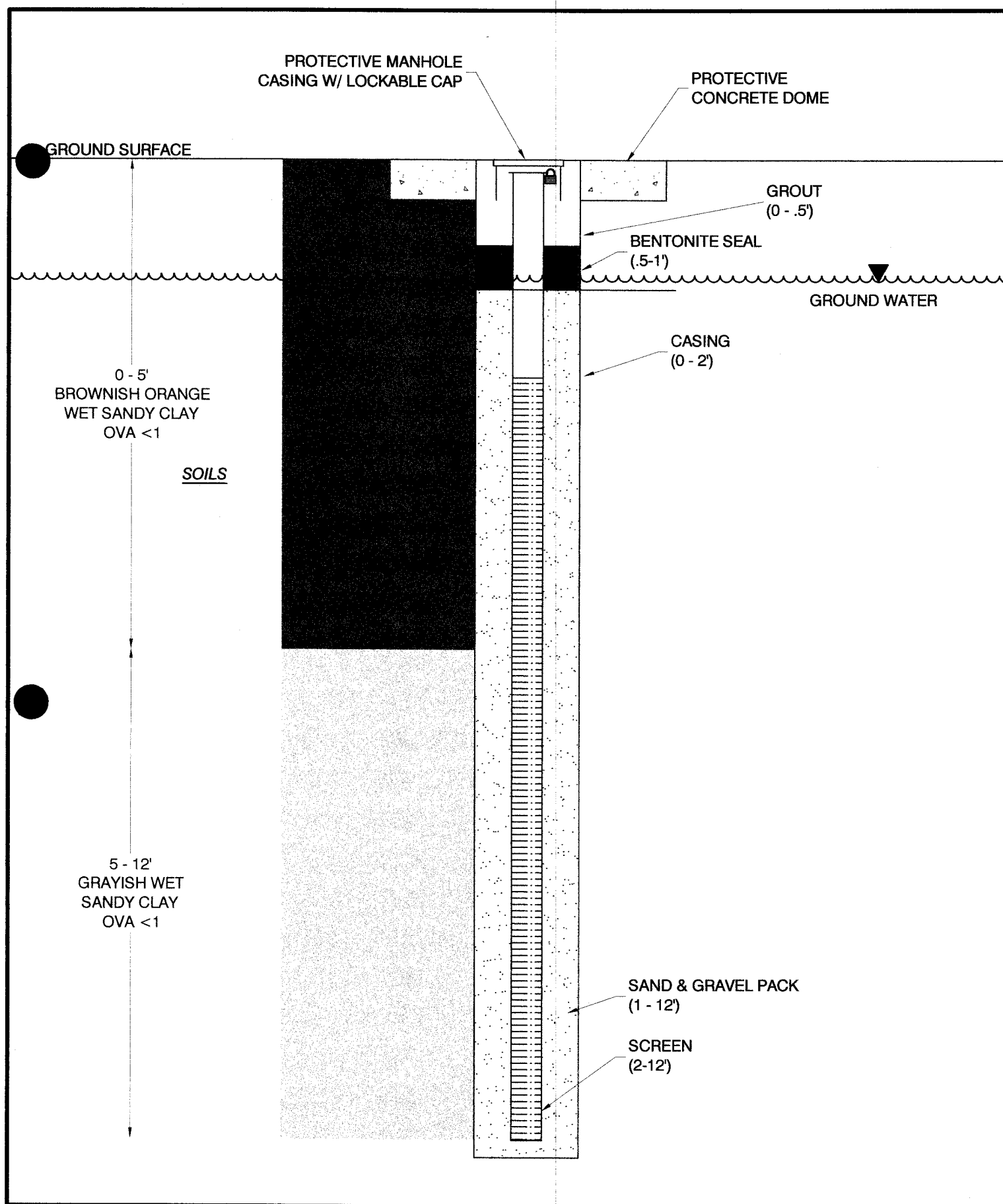


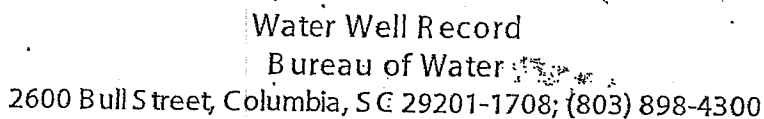












Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

Name: BIG STOKES OIL CO.
Address: PO Box 274
City: FLORHLE State: SC Zip: 29503
Telephone: Work: 843-669-6818 Home: _____

Name: OH NEGLS EXXON
Street Address: 4925 PAMPLICO HWY.
City: FLORENCE SC Zip: 29503
Latitude: _____ Longitude: _____

PUBLIC SYSTEM NUMBER:

☐ Yes ☒ No

Grouted Depth: from _____ ft. to _____ ft.

[illegible]

22 3/8" Bentonite pellets from 1' to .5'

☐ Residential	☐ Public Supply	☐ Process
☐ Irrigation	☐ Air Conditioning	☐ Emergency
☒ Test Well	☒ Monitor Well	☐ Replacement

12' ft. Date Completed (MM/DD/YYYY): 3-27-09

☐ Mud Rotary	☐ Jetted	☐ Bored
☐ Dug	☐ Air Rotary	☐ Driven
☐ Cable tool	☒ Other	

Diam.: 2"

Type: ☒ PVC ☐ Galvanized
☐ Steel ☐ Other

0 in. to 2' ft depth

 in. to ft depth

Height Above/Below

Surface _____ ft

Weight _____ lb./ft.

Drive Shoe? ☐ Yes ☒ No

Type: Schedule 40 PVC Diam.: 2"
Slot/Gauge: 0.010" Length: 10'
Set Between: 12' ft. and 2' ft. NOTE: MULTIPLE SCREENS
USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping test: ☐ Yes (please enclose) ☒ No
Yield: _____

Chemical Analysis: ☐ Yes ☐ No Bacterial Analysis: ☐ Yes ☒ No
Please enclose lab results.

Installed from 12' ft to 1' ft
Effective size #3 Uniformity Coefficient

☐ Neat Cement ☐ Bentonite ☒ Bentonite/Cement ☐ Other _____
Depth: From 0.5' ft. to 0' ft.

Well Disinfected: ☐ Yes ☐ No Type: _____ Amount: _____

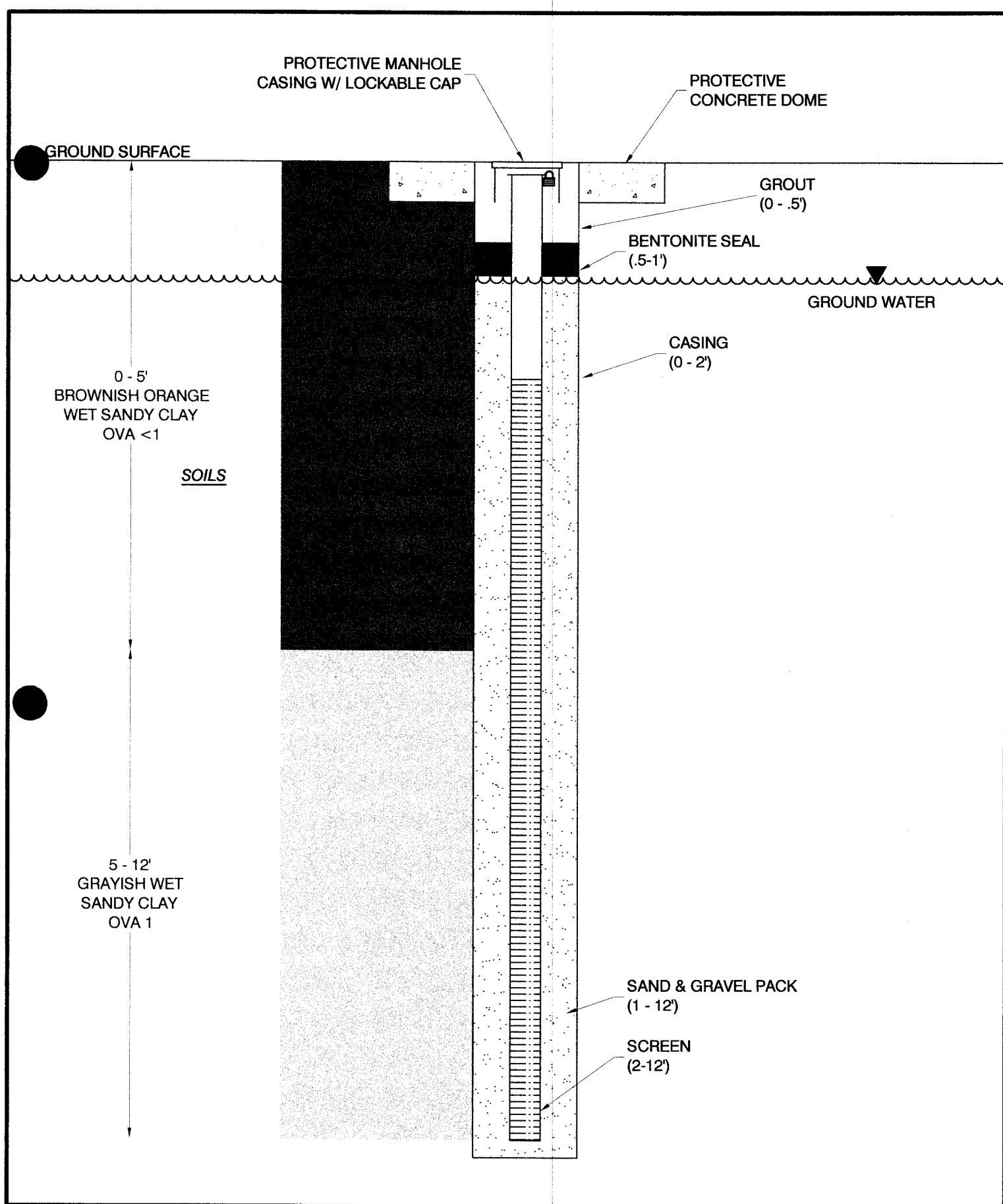
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
TYPE: ☒ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

Name: Josh Register c/o ARM Environmental Svcs
Address: P.O. Box 50285 City: Columbia
State: South Carolina Zip: 29250
Telephone No.: (803) 783-3314 Fax No.: (803) 783-2587

20. **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.

Signed: Josh Ky
Authorized Representative

Date: 3-31-09
(MM/DD/YYYY)





Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION: Name: <u>BJJ STOKES OIL CO.</u> Address: <u>PO Box 274</u> City: <u>FLORENCE</u> State: <u>SC</u> Zip: <u>29503</u> Telephone: Work: <u>843-669-6818</u> Home: _____			6. PERMIT NUMBER: <u>03423</u>																																
2. LOCATION OF WELL: COUNTY: <u>FLORENCE</u> Name: <u>OH MEGGINS EXXON</u> Street Address: <u>4925 TAMPICO HWY.</u> City: <u>FLORENCE SC</u> Zip: <u>29503</u> Latitude: _____ Longitude: _____			7. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☒ Monitor Well ☐ Replacement																																
3. PUBLIC SYSTEM NAME: _____ PUBLIC SYSTEM NUMBER: _____			8. WELL DEPTH (completed) <u>40.00</u> ft. Date Started (MM/DD/YYYY): <u>4-6-09</u> Date Completed (MM/DD/YYYY): <u>4-7-09</u>																																
4. ABANDONMENT: ☐ Yes ☒ No Grouted Depth: from _____ ft. to _____ ft.			9. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☒ Other																																
<table border="1"><thead><tr><th>Formation Description</th><th>*Thickness of Stratum</th><th>Depth to Bottom of Stratum</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>			Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum																												10. CASING: ☒ Threaded ☐ Welded Diam.: <u>2"</u> Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other <u>5</u> in. to <u>25</u> ft. depth <u>2</u> in. to <u>35</u> ft. depth Height: Above/Below Surface _____ ft. Weight _____ lb./ft. Drive Shoe? ☐ Yes ☒ No		
			Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum																														
11. SCREEN Type: <u>PVC</u> Diam.: <u>2"</u> Slot/Gauge: <u>10</u> Length: <u>5'</u> Set Between: <u>35</u> ft. and <u>40</u> ft. NOTE: MULTIPLE SCREENS USE SECOND SHEET Sieve Analysis ☐ Yes (please enclose) ☒ No																																			
12. STATIC WATER LEVEL _____ ft. below land surface after 24 hours																																			
13. PUMPING LEVEL Below Land Surface. _____ ft. after _____ hrs. Pumping _____ G.P.M. Pumping test: ☐ Yes (please enclose) ☒ No Yield: _____																																			
14. WATER QUALITY Chemical Analysis: ☒ Yes ☐ No Bacterial Analysis: ☐ Yes ☒ No Please enclose lab results.																																			
15. ARTIFICIAL FILTER (filter pack) ☐ Yes ☒ No Installed from <u>40</u> ft. to <u>33</u> ft. Effective size # <u>2</u> Uniformity Coefficient _____																																			
16. WELL GROUTED? ☒ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☒ Bentonite/Cement ☐ Other _____ Depth: From _____ ft. to _____ ft.																																			
17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction Type: _____ Well Disinfected: ☐ Yes ☒ No Type: _____ Amount: _____																																			
18. PUMP: Date installed (MM/DD/YYYY): _____ 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: CERT. NO.: <u>1505</u> Name: <u>Billy Ewing</u> Address: <u>1210 1st Street South Ext.</u> City: <u>Columbia</u> State: <u>South Carolina</u> Zip: <u>29109</u> Telephone No.: <u>783-3314</u> Fax No.: <u>783-2587</u>																																			
20. 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. Signed: <u>Arden W. Ewing (#1353)</u> Date: <u>5/12/09</u> Authorized Representative (MM/DD/YYYY)																																			
5. REMARKS: <u>Mild 1-D</u>																																			
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)																																			

Project No:

UST Permit # 03423

Log of Borehole: M12 1-D

Project: OH MEGGS EXXON

Driller: ARM

Client: B.I.W. STOKES OIL CO.

Inspector:

Location: FLORENCE SC

SUBSURFACE PROFILE				SAMPLE			Volatile Organic Concentration ppm 100 300 500 700 900	Well Data	Remarks
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
0		Ground Surface	0						
2		BROWN MOIST SAND CLAY	4						Manhole Cover
6									
8									
10									6" PVC Casing
12									
14		LIGHT ORANGE GRAY WET SANDY CLAY	20						
16									
18									
20									
22									
24									
26									Cement Grout
28									
30									
32		BLACKISH GRAY WET SAND W/ LITTLE CLAY							Bentonite Seal
34									2" PVC Casing
36									Gravel Pack
38									2" PVC Screen
40			-40						End Cap
42		End of Borehole							
44									
46									
48									
50									

Drill Method: AUGER

Drill Date: 4/6-7/09

Casing Diameter:

Total Depth of Well: 40 FT.

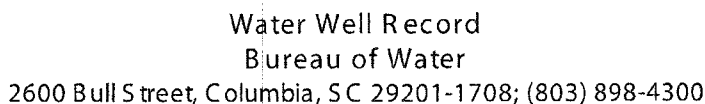
ARM

ENVIRONMENTAL
SERVICES, INC.

Depth to Water:

Latitude:

Longitude:

DHEC 1903 (03/2002)

Project No: UST Permit # 03423
 Project: OH MEGGS EXXON
 Client: B. L. STOKES OIL CO.
 Location: FLORENCE

Log of Borehole: MW 2-D

Driller: ARM

Inspector:

SUBSURFACE PROFILE				SAMPLE			Volatile Organic Concentration ppm 100 300 500 700 900	Well Data	Remarks
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
0		Ground Surface	0						
2			2						Manhole Cover
4		BROWNISH							
6		MOIST SANDY							
8		CLAY							
10									6" PVC Casing
12									
14									
16		GRAYISH WET							
18		SANDY CLAY							
20			20						
22									
24									
26									Cement Grout
28									
30									
32									Bentonite Seal
34									2" PVC Casing
36		BLACK GRAY							Gravel Pack
38		SAND W/ LITTLE							2" PVC Screen
40		CLAY	-40						End Cap
42		End of Borehole							
44									
46									
48									
50									

Drill Method: AUGER

Drill Date: 4/6-7/09

Casing Diameter:

Total Depth of Well: 40 FT

ARM ENVIRONMENTAL
SERVICES, INC.

Depth to Water:

Latitude:

Longitude:

APPENDIX D

OH MEGGS EXXON
HISTORICAL FIELD DATA
UST # 03423

MW #	1	1	1	1	2	2	2	3	3	3
DATE	7\25\02	1\06\03	7\24\08	4\20\09	1\06\03	7\24\08	4\20\09	1\06\03	7\24\08	4\20\09
PH	4.51	4.92	4.25	5.01	3.73	4.43	4.48	5.62	5.33	5.51
TEMP	28.1	18.2	27.6	21.7	19.5	26.7	20	17.6	25.8	19.1
COND	78.90	60.00	68.60	66.30	75.90	56.60	53.60	139.40	128.70	161.00
DO	1.50		0.84	1.08		2.23	2.34		1.00	1.36
FE		2.54			<0.03			>3.30		

MW #	4	4	4	5	5	6	6	7	8	9
DATE	1\06\03	7\24\08	4\20\09	1\06\03	4\20\09	7\24\08	4\20\09	4\20\09	4\20\09	4\20\09
PH	4.67	4.66	5.96	6.22	6.29	5.33	5.68	6.07	5.05	4.88
TEMP	18.1	27.6	22.7	24.6	20.0	25.2	19.6	19.1	19.5	19.4
COND	74.00	92.10	88.20	398.20	358.40	128.90	129.70	128.90	75.00	44.00
DO		1.17	1.55	0.98	1.05	1.28	1.04	3.8	1.75	2.24
FE	1.43							1.04	1.65	0.09

MW #	10	11	12	13	14	15	16	17	18	19
DATE	4\20\09	4\20\09	4\20\09	4\20\09	4\20\09	4\20\09	4\20\09	4\20\09	4\20\09	4\20\09
PH	4.62	4.78	4.93	4.34	4.64	5.07	4.55	4.93	4.8	5.31
TEMP	17.3	17.2	19.2	20.6	20.6	20.3	19.4	18.8	17.5	18.8
COND	118.00	53.00	88.50	418.00	75.20	75.00	75.60	119.00	88.00	89.20
DO	2.93	4.35	3.80	1.9	1.47	3.14	3.31	3.29	6.26	4.02
FE	1.74	2.26	0.21	2.5	1.08	2.26	0.62	0.77	>3.30	1.13

MW #	20	21	22	1-D	2-D
DATE	4\20\09	4\20\09	4\20\09	4\20\09	4\20\09
PH	6.84	4.8	4.95	7.36	6.67
TEMP	21.4	16.9	16.3	22.4	21.8
COND	122.90	107.50	88.50	193.20	357.30
DO	3.33	5.45	6.56	1.00	1.82
FE	0.83	2.23	1.79	1.05	0.68

SITE CONDITIONS: CONVIENCE STORE IN RURAL AREA

FIELD PERSON: JODY RICKS / RYAN DAVIS

DATE: 4/20/09

WEATHER: CLOUDY / WARM 80 F

NOTE: 1,2, AND ALL NEW WELLS WERE PURGED BEFORE SAMPLING

APPENDIX E

MONITORING WELL WATER COLLECTION AND DISPOSAL

OH MEGGS EXXON

FLORENCE SC

DATE'S COLLECTED:

DATE DISPOSED:

DEVELOPMENT SAMPLING

4\16\09

4\20\09

4\17\09

5\01\09

4\24\09

5\8\09

OF GALLONS DISPOSED TO FLORENCE POTW

130 GALLON

OF GALLONS DRUMED ON SITE

140 GALLON

WELL WATER DRUMED ON SITE

MW'S 13,14,15,16,1-D, AND 2-D

WERE DRUMED IN (3)55GAL. DRUMS FOR DISPOSAL

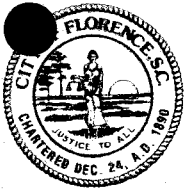
NOTE:

THE CITY OF FLORENCE PERMISSION

LETTER FOR DISPOSING OF WELL WATER

IS ATTACHED IN REPORT

CITY OF
FLORENCE
• S C •



WASTEWATER
TREATMENT DIVISION
CITY-COUNTY COMPLEX EE
FLORENCE, SOUTH CAROLINA
29501-3456
(843) 665-3240
FAX (843) 665-3245

06 April 2009

Mr. Van Ward, P.E.
Laboratory Director
Davis & Brown Labs, Inc.
PO Box 15038
Quinby, SC 29506

RE: Discharging to City Sewer System

We are in receipt of your letter dated September 1, 1999. After reviewing the concentration and volume of petroleum contaminated groundwater desired to be discharged into the City's wastewater treatment facility, Davis and Brown is hereby granted permission to discharge.

The amount of petroleum-contaminated groundwater to be discharged cannot exceed 60 gallons per week and the concentration of total BTEX must be less than 10 mg/l,

The City of Florence maintains the option to discontinue Davis and Brown from discharging to the sewer system should the wastewater treatment facility experience any adverse reactions.

If you have any questions or need further information, please call me at 665-3240.

Sincerely,

Michael Hemingway, Manager
Wastewater Treatment Division

Cc: Andrew H. Griffin, Director of Public Works and Utilities
Forrest M. Whittington, P.E., Utility Department Manager

A CITY OF
CHARACTER

APPENDIX F

SUMMARY of SLUG TEST

SOUTH CAROLINA Department of Health and Environmental Control (DHEC)

Site Data

SITE ID: # 03423 COUNTY FLORENCE

FACILITY NAME Megg's Exxon

Slug Data

See Appendix D Table _____ Figure _____ for a list of all data measurements.
(water level logs, etc.) (Complete as appropriate).

Water Level Recovery Data was measured by Water Level Indicator
(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	MW-15	MW-2D		
Initial Rise/Drawdown in well (feet)	8.28	19.62		
Radius of Well Casing (feet)	0.083	0.083		
Effective Radius of Well (feet)	0.33	0.33		
Static Saturated Aquifer Thickness (feet)	40	40		
Length of Well Screen (feet)	10	5		
Static Height of Water Column in Well (ft)	3.72	3.38		

Calculations

See Appendix D Table _____ Figure _____ for calculations. (Complete as appropriate).

The method for aquifer calculations was Bouwer-Rice (i.e. Bouwer-Rice, Cooper, etc,
Calculated values by well were as follows:

Slug Test Conducted in well(s) number	MW-15	MW-2D		
Hydraulic Conductivity (ft/day)	0.032	0.35		

Thickness of the aquifer used to calculate hydraulic conductivity was 40 feet.

The aquifer is _____ confined _____ semi-confined X water table (Check as appropriate).

The estimated seepage velocity is 3.95 feet per year based on

0.19 hydraulic conductivity of _____, a hydraulic gradient of 0.014 and
a porosity of 25 per cent for clayey sand soil (list type i.e., silty sand ,clay, etc).

AQTESOLV for Windows

Data Set: C:\DOCUME~1\ALLUSE~1\DESKTOP\DAVIS\MEGGS\STMW15.AQT

Date: 05/09/09

Time: 18:37:01

PROJECT INFORMATION

Company: Davis & Brown

Client: Megg's Exxon

Test Well: MW 15

AQUIFER DATA

Saturated Thickness: 40. ft

Anisotropy Ratio (Kz/Kr): 1.

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW 15

X Location: 0. ft

Y Location: 0. ft

No. of observations: 19

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.	8.28	10.	7.19	60.	5.36
0.1667	7.78	15.	6.98	70.	5.01
1.	7.73	20.	6.73	80.	4.71
2.	7.6	25.	6.63	90.	4.31
3.	7.56	30.	6.43	120.	3.36
4.	7.52	40.	6.03		
5.	7.48	50.	5.66		

SOLUTION

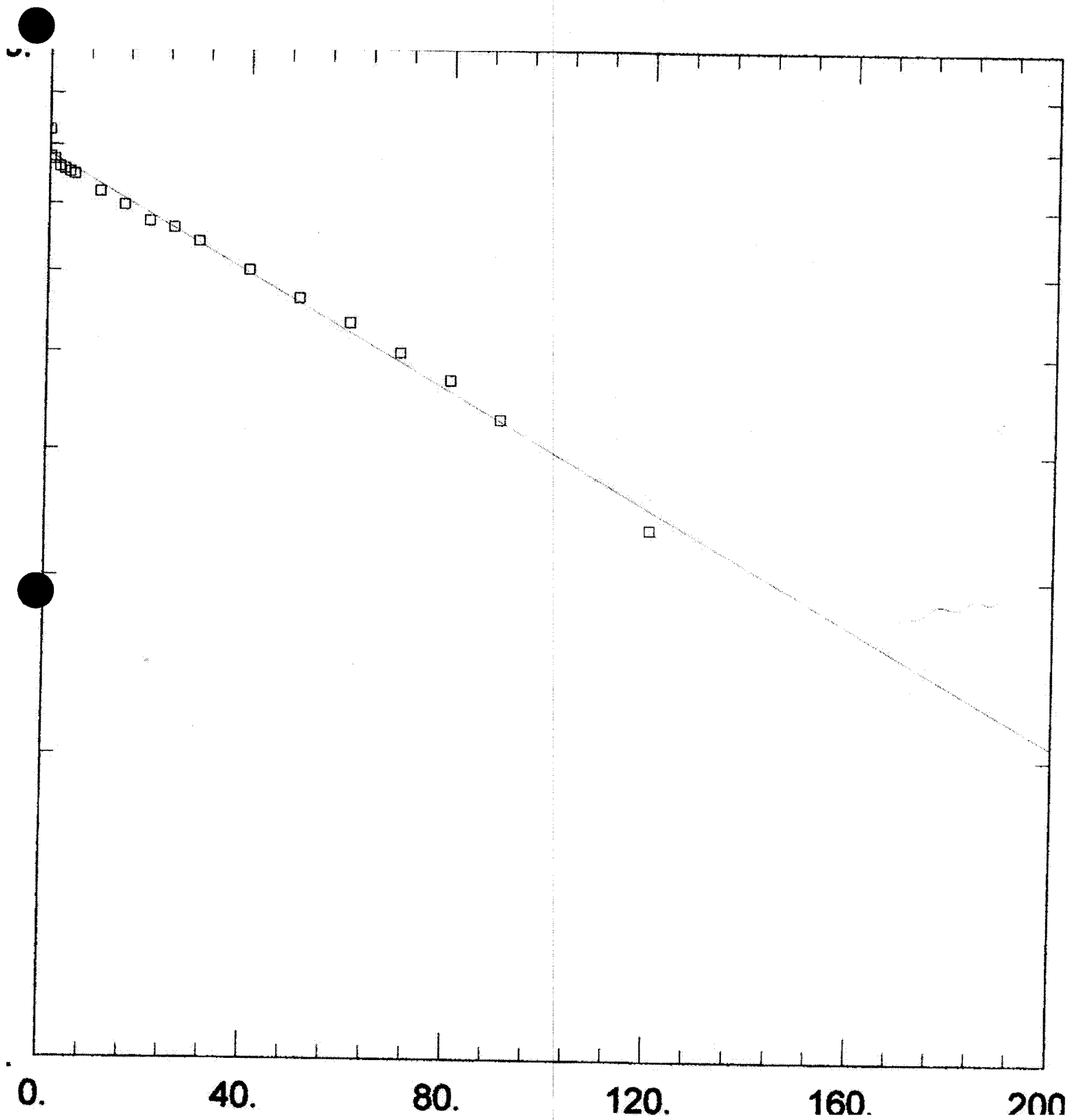
Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	2.265E-05	ft/min
y0	7.82	ft



AQTESOLV for Windows

Data Set: C:\DOCUME~1\ALLUSE~1\DESKTOP\DAVIS\MEGGS\ST2D.AQT

Date: 05/09/09

Time: 18:21:26

PROJECT INFORMATION

Company: Davis & Brown

Client: Megg's Exxon

Test Well: MW 2D

AQUIFER DATA

Saturated Thickness: 40. ft

Anisotropy Ratio (K_z/K_r): 1.

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW 2D

X Location: 0. ft

Y Location: 0. ft

No. of observations: 44

Observation Data					
Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.	19.62	3.5	16.72	15.	10.67
0.1667	19.47	4.	16.47	16.	10.33
0.333	19.3	4.5	16.2	17.	11.03
0.5	19.12	5.	16.02	22.	8.72
0.6667	18.97	5.5	15.76	27.	7.52
0.8333	18.8	6.	15.47	32.	6.52
1.	18.62	6.5	15.24	37.	5.57
1.167	18.47	7.	15.04	42.	4.82
1.333	18.25	8.	14.57	52.	3.52
1.5	18.07	9.	12.82	62.	2.67
1.667	17.92	10.	12.42	72.	1.92
1.833	17.77	11.	12.06	82.	1.42
2.	17.57	12.	11.7	92.	1.06
2.5	17.24	13.	11.34	102.	1.02
3.	17.	14.	11.		

SOLUTION

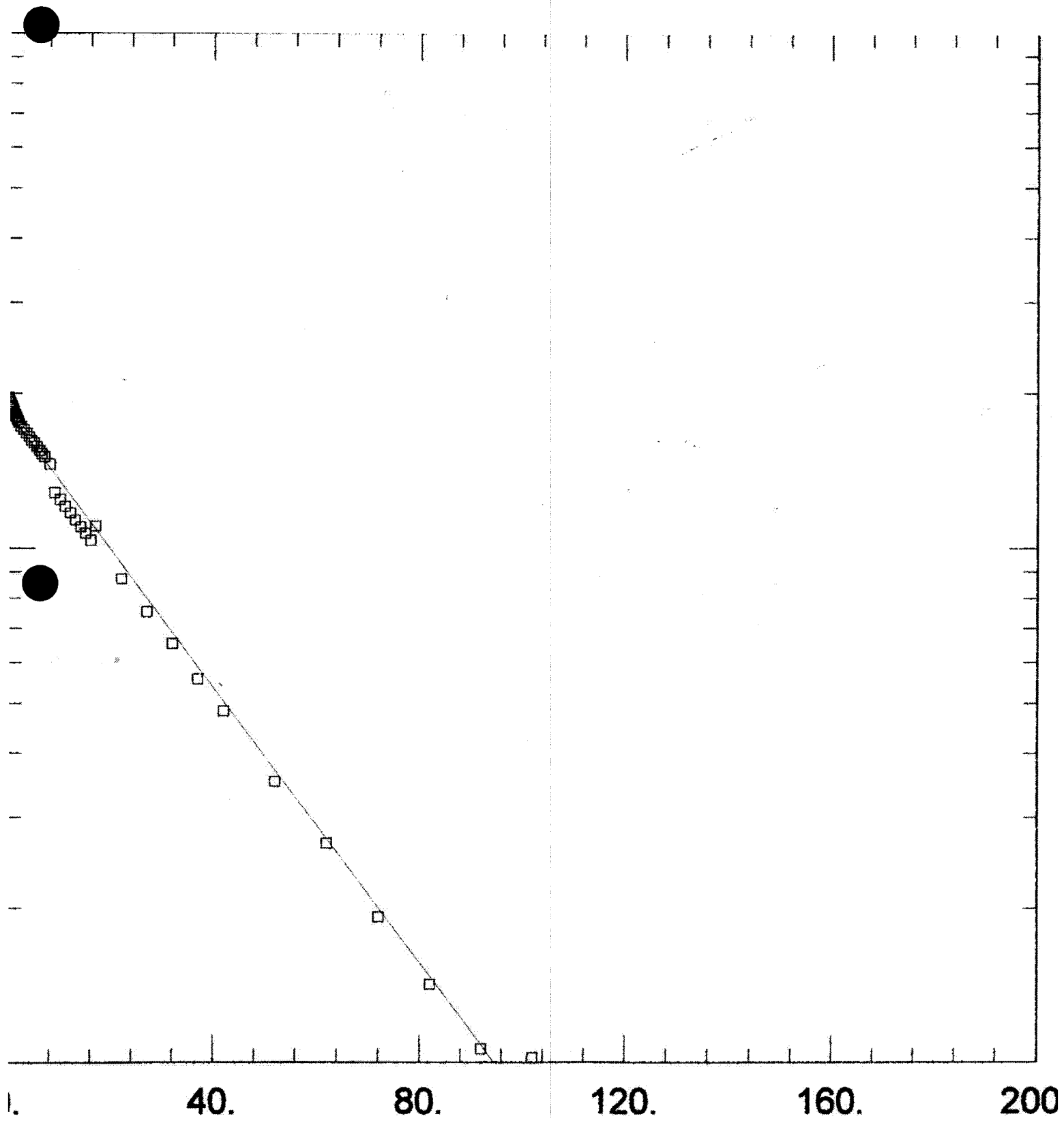
Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0002438	ft/min
y0	18.31	ft



Maps and Figures

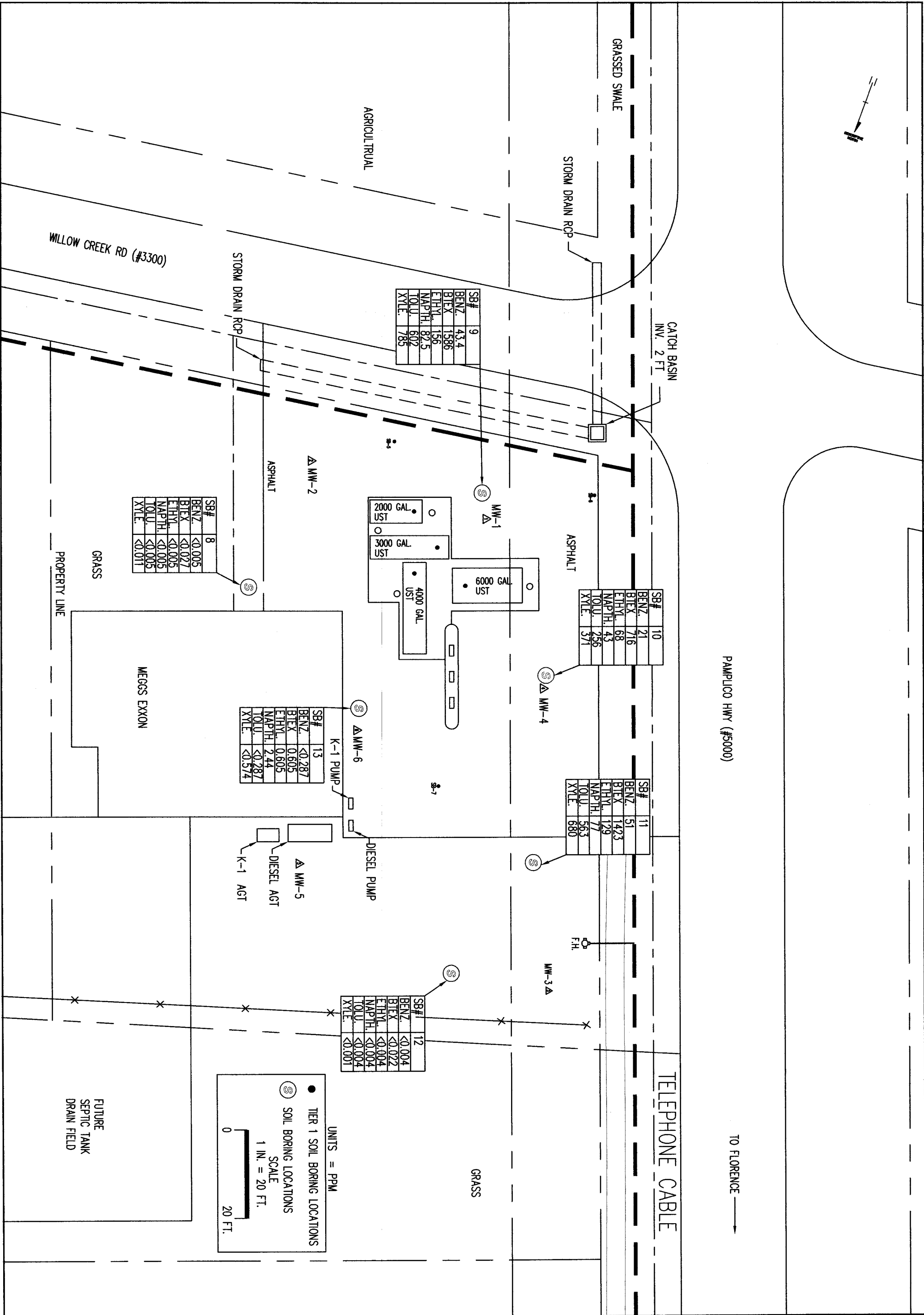
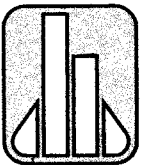


FIGURE 2



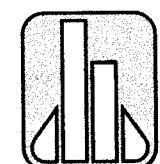
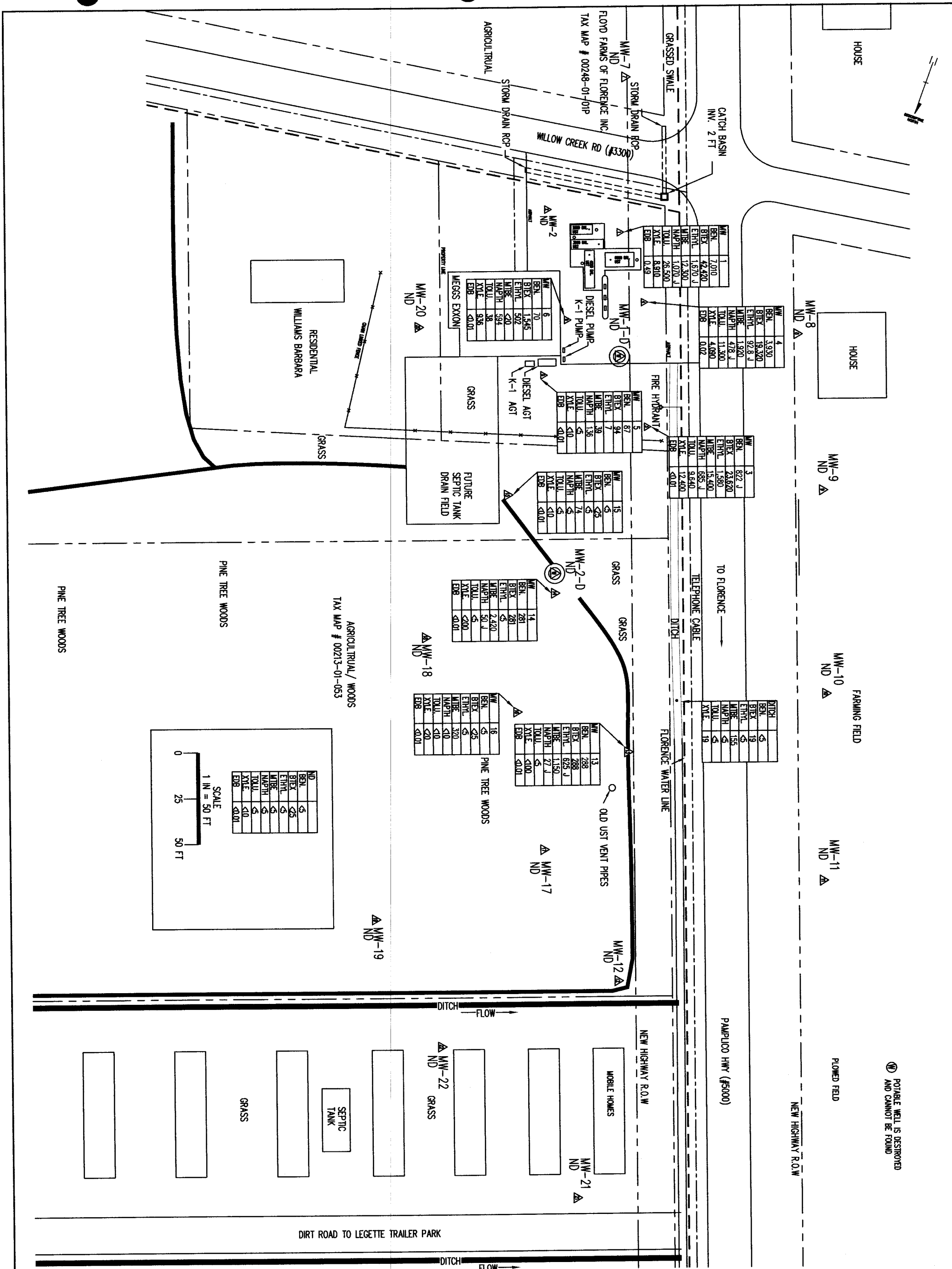
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WATER AND WASTEWATER OPERATIONS

MEGG'S EXXON

SOIL DATA
PERMIT # 03423

5/6/09	0	SOIL DATA	
DATE	REV #	REVISION	
DESIGNED BY	CHECKED BY		
DRAWN BY	CHECKED BY		



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 WATER AND WASTEWATER OPERATIONS

FIGURE 4

MEGG'S EXXON

WELL DATA
 PERMIT # 03423

5/08/09	0	WELL DATA
DATE	REV #	REVISION
DESIGNED BY	CHECKED BY	
DRAWN BY	CHECKED BY	

MONITORING WELL WATER COLLECTION AND DISPOSAL

OH MEGGS EXXON

FLORENCE SC

DEVELOPMENT SAMPLING

DATE'S COLLECTED: 4\16\09 4\20\09

DATE DISPOSED: 4\17\09 5\01\09

4\24\09 5\8\09

OF GALLONS DISPOSED TO FLORENCE POTW 130 GALLON

OF GALLONS DRUMED ON SITE 140 GALLON

WELL WATER DRUMED ON SITE

MW'S 13,14,15,16,1,1-D, AND 2-D

WERE DRUMED IN (3)55GAL. DRUMS FOR DISPOSAL

NOTE:

THE CITY OF FLORENCE PERMISSION
LETTER FOR DISPOSING OF WELL WATER
IS ATTACHED IN REPORT

REVISED

DATE 5/28/09 BY Vincent

SITE ID# 03423

SITE ID# 03423

COC	RBSL	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW3	MW3	MW3
DATE	ug/l	7\25\02	1\06\03	7\24\08	4\20\09	1\06\03	7\24\08	4\20\09	1\06\03	7\24\08	4\20\09
1,2 DCA			19.1	<180	<2.50	281	<0.090	<5	157	<45	<1,000
BENZENE	5	3,690	7,810	14,100	7,010	14.6	<0.065	<5	8,190	1,730	822
BTEX	N/A	21,170	47,280	84,090	42,420	14.6	0.793	<25	31,750	38,220	23,620
DIPE					<2,500			<5			<1,000
EDB	<0.03	1.2	4.6	0.183	0.487	<0.02	<0.003	<10	<0.02	<0.003	<0.01
ETHANOL					<50,000			<100			<20,000
ETBA					<5,000			<10			<2,000
ETBE					<2,500			<5			<1,000
ETHYLBENZENE	700	804	2,430	2,990	1670 J	<1	<0.065	<5	1,920	2,090	1,580
FERROUS											
MTBE	40	2,770	68.7	37,800	12,300	9	<5	<5	1,670	<2,500	<1,000
NAPHTHALENE	25	218	615	<236	1070 J	<1	<0.118	<5	715	2,130	685 J
NITRATE			<500			4,500			<500		
SULFATE			<2,000			<2,000			3,100		
TAA					27,400			<20			<4,000
TAME					<2,500			<5			<1,000
TBA					<5,000			<10			<2,000
TBF					<2,500			<5			<1,000
TOLUENE	1,000	10,500	25,000	46,500	26,500	<1	0.793	<5	13,600	18,200	9,640
XYLENE	10,000	6,180	12,040	20,500	8,910	<2	<0.183	<10	8,040	16,200	12,400
Pb	15	6	17	5		14	<1		5	1	
PAH		285	213			BDL			628		
METHANE			<10			<10			10		

[illegible][illegible]

Crandall

C 141645

Please print or type
(Form designed for use on site (12 - point typewriter))

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest
Document No.
39596

2. Page 1
of 1

3. Generator's Name and Mailing Address

Oh Mega Exxon

4925 Pamlico Hwy
Florence, SC 29595

4. Generator's Phone (843) 665-6746

5. Transporter 1 Company Name
Crandall Corporation

6. US EPA ID Number
3CD981864499

A. Transporter's Phone
(803) 791-4800

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Crandall Corporation
100 Rich-Lex Drive
Lexington, SC 29072

10. US EPA ID Number

3CD981864499

C. Facility's Phone

(803) 791-4800

11. Waste Shipping Name and Description

12. Containers

No.

Type

13.
Total
Quantity

14.
Unit
Wt./Vol.

a. Non - Hazardous Waste, Petroleum Contaminated Soil

002

DM

EST
0/6000

P

b. Non Hazardous Waste Water/Fuel

003

DM

EST
6000

P

c.

d.

D. Additional Descriptions for Materials Listed Above

FIELD
SERVICE

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Service Call ID: GLB0139596

Emergency Response: Infotrac - 800-535-5053

Caller must ID Crandall as registrant

11Apoohic; PAVOIS-002-C

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Signature

Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name

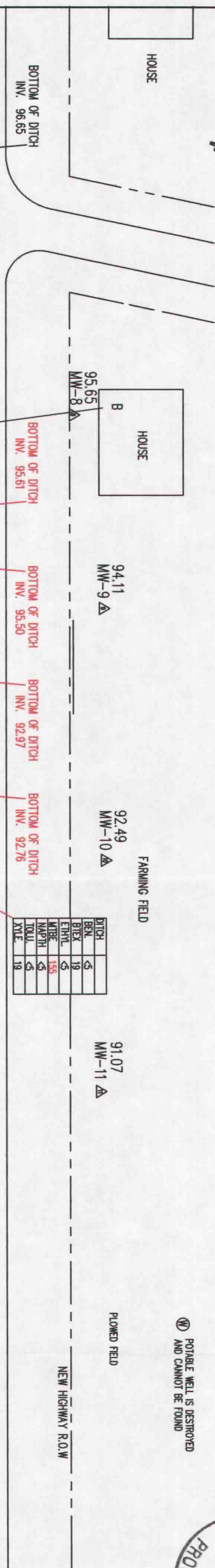
Signature

Month Day Year

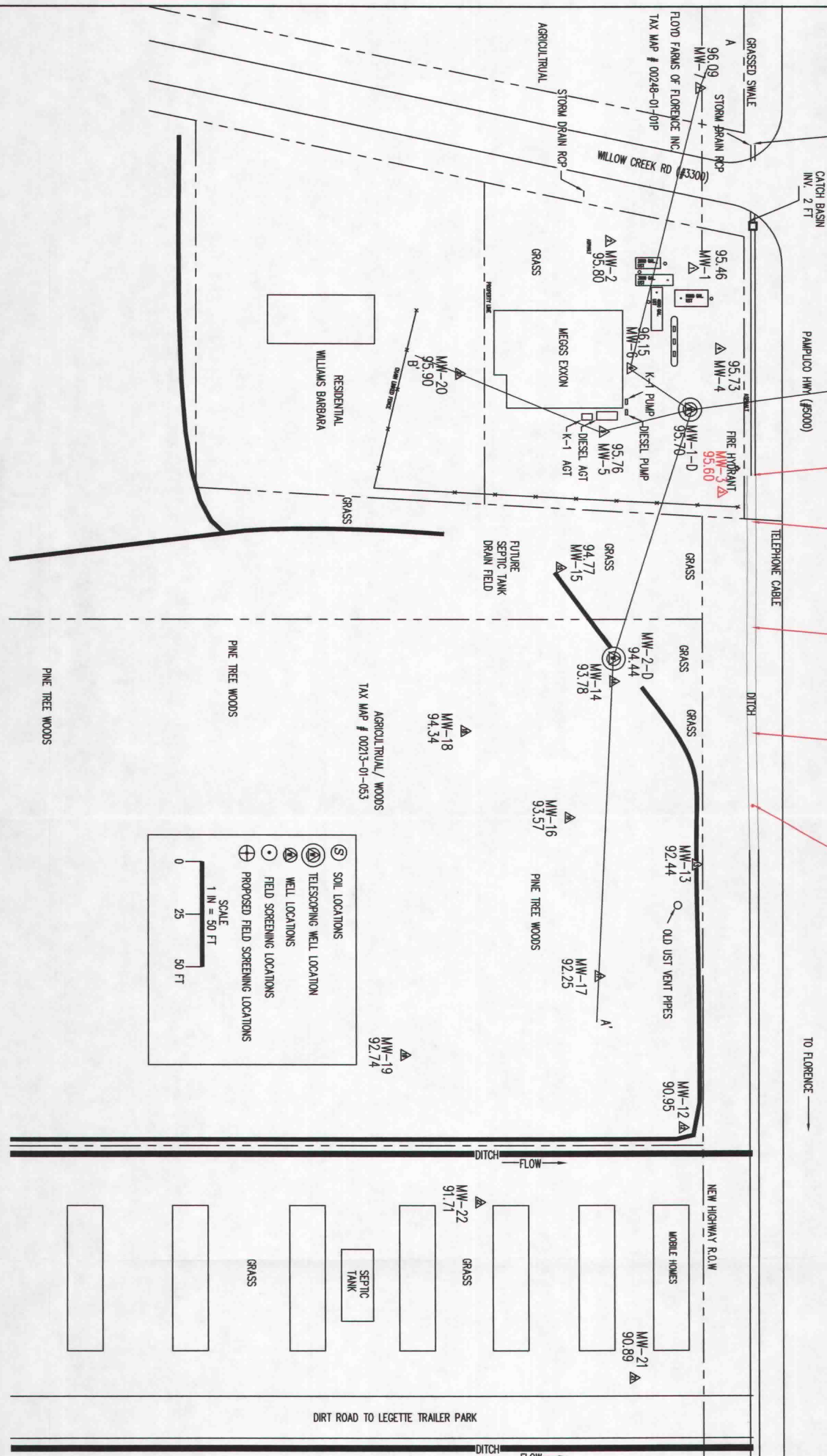
ORIGINAL TO OFFICE

12-BLG-MB

SITE ID# 03423



DITCH	19
BEN	<5
BEX	19
ETHL	<5
MIRE	155
NAPH	<5
TOLU	<5
XYLE	19



⑤ SOIL LOCATIONS

⊙ TELESCOPING WELL LOCATION

⊙ WELL LOCATIONS

⊙ FIELD SCREENING LOCATIONS

⊕ PROPOSED FIELD SCREENING LOCATIONS

SCALE

1 IN = 50 FT

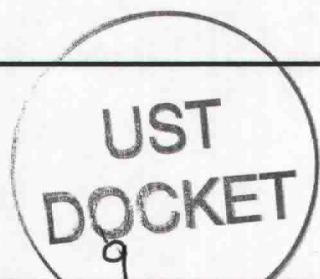
0 25 50 FT



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WATER AND WASTEWATER OPERATIONS



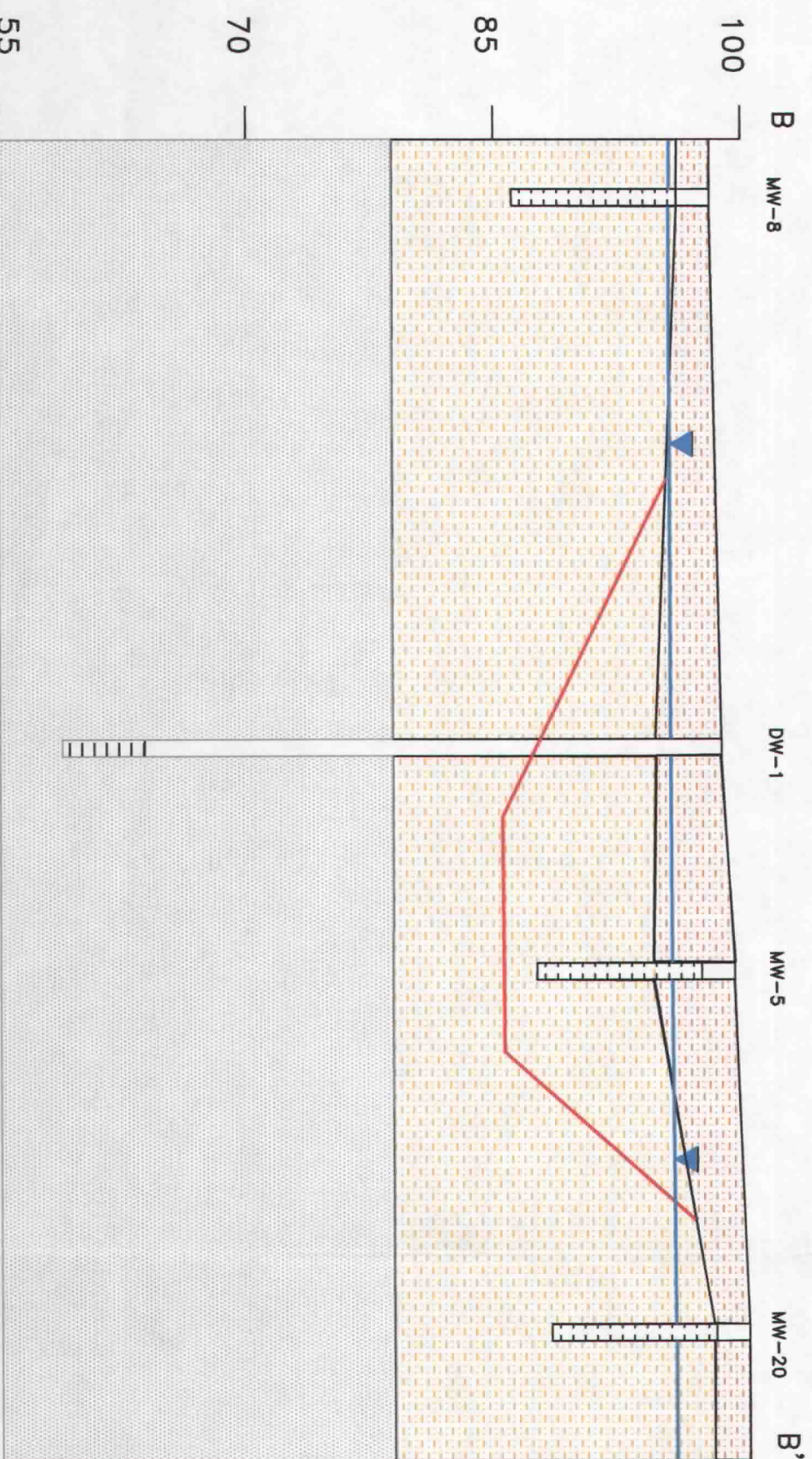
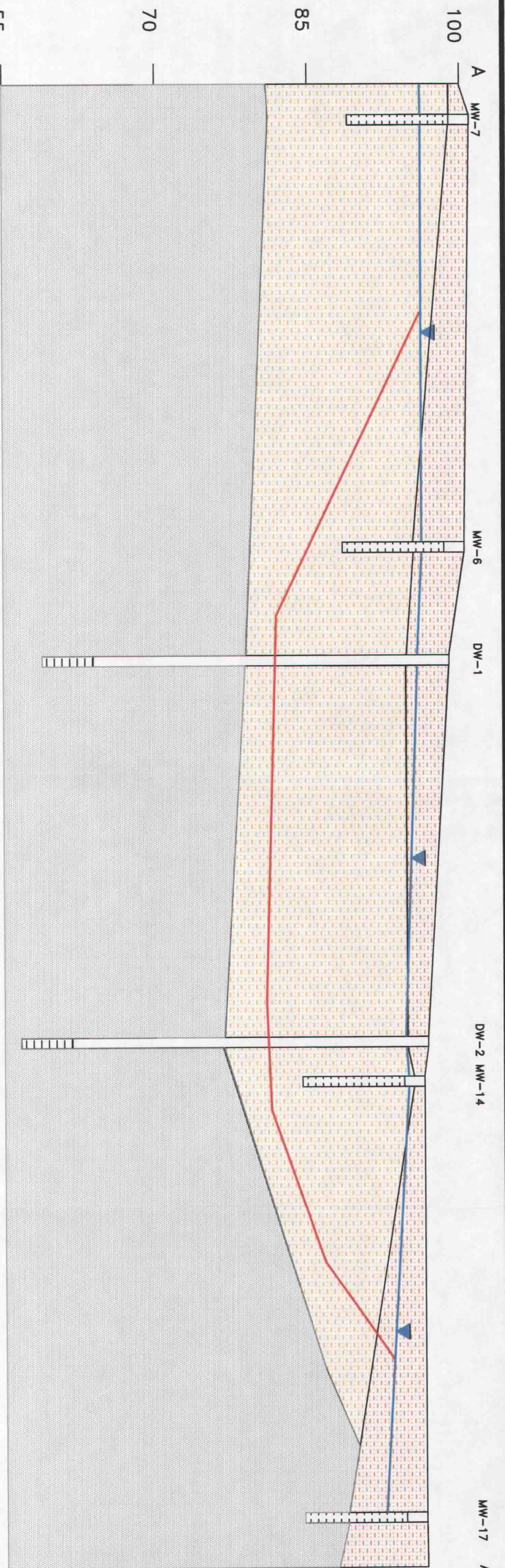
MEGG'S EXXON

CROSS SECTION PLAN VIEW

A - A' B - B'

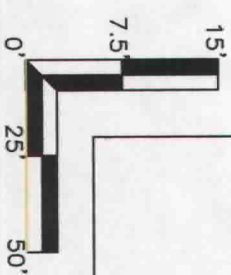
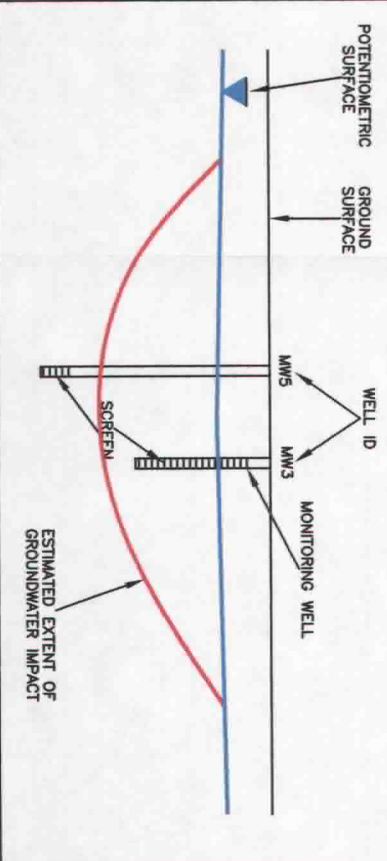
PERMIT # 03423

4/20/09	0	WELLS SAMPLED
DATE	REV #	REVISION
DESIGNED BY	CHECKED BY	
DRAWN BY	CHECKED BY	



LEGEND

- BROWN SANDY CLAY
- ORANGE-GRAY SANDY CLAY
- DARK GRAY SAND



HORIZONTAL SCALE - 1" = 50'

VERTICAL SCALE - 1" = 15'

MEGGS EXXON

CROSS SECTIONS

A-A' B-B'



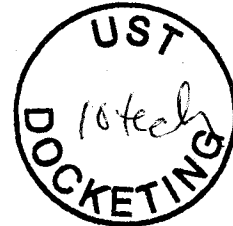
C. Earl Hunter, Commissioner

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

FEB 15 2012

SCANNED

MR JERRY ANDREWS
4925 PAMPLICO HIGHWAY
FLORENCE SC 29505



Re: **Letter of Concern**
O. H. Meggs, 4925 Pamplico Highway, Florence, SC
UST Permit #03423
Release No. 1 reported February 26, 2002
Release No. 2 reported September 17, 2002
Request received February 13, 2012
Florence County

Dear Mr. Andrews:

You requested that this office provide you with an update on the environmental conditions at the above referenced facility.

The Underground Storage Tank Management Division (UST Division) of the South Carolina Department of Health and Environmental Control (SCDHEC) received reports on February 26, 2002 and September 17, 2002 documenting subsurface contamination in the vicinity of the underground storage tank system. Our records reveal that four gasoline underground storage tank (USTs) owned by B. W. Stokes Oil Company, Inc. are currently in operation and that one kerosene UST also owned by B. W. Stokes Oil Company, Inc. was removed on May 20, 2002. In response to the initial reports of contamination, the SCDHEC directed B. W. Stokes Oil Company, Inc., as the party responsible for performing this activity under state and federal law, to assess the extent and severity of the contamination. In the future a groundwater sampling event will be required.

The UST Division would also like to clarify for you the financial and liability issues surrounding the petroleum chemicals of concern at this facility. For Release No. 1, the release of petroleum products from the gasoline USTs is qualified to receive funding from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. For Release No. 2, the release of petroleum product from the kerosene UST is qualified to receive funding from the SUPERB Account once the \$25,000 deductible has been met. This means that reasonable costs up to \$1,000,000 can be paid by the SUPERB Account for site rehabilitation actions associated with each release.

In 1997, the General Assembly amended Section 80 (B) of the SUPERB Act to clarify that persons who hold "indicia of ownership" primarily to protect a security interest in property impacted by a release from a UST are exempt from the requirements to conduct site rehabilitation activities other

Mr. Jerry Andrews
O. H. Meggs; UST Permit #03423
Page 2

than necessary abatement actions to eliminate any imminent threat to human health or the environment. The "indicia of ownership" exemption includes those persons who acquire title to property through foreclosure or other means necessary to protect their security interest, provided that person does not participate in the management of the UST and is not otherwise engaged in petroleum production, marketing, or refining. This applies equally to subsequent lenders who acquire the USTs and property through foreclosure in the future.

Section 80(C) of the SUPERB Act provides that a subsequent purchaser of property from which an UST has been removed is not responsible for site rehabilitation activities other than abatement actions necessary to eliminate any imminent threat to human health or the environment. This exemption applies to the extent that the release is eligible for compensation from the SUPERB Account, provided that the person allows reasonable access to the property for rehabilitation activities, and does not or has not had any familial, financial, or other interest with the person who owned or operated the UST. This applies equally to subsequent lenders or to those who would acquire this property through foreclosure in the future.

The UST Division is not aware of any laws or regulations that prohibit the use or development of properties where a petroleum release has occurred. Any future work required by the SCDHEC should not cause any damage to the building, disrupt deliveries, prevent access to customers, or block main access routes. To further assure you, any required activities associated with the petroleum release would be performed by a SC Certified Site Rehabilitation Contractor who maintains specific levels of insurance coverage for General and Professional Liability and Pollution/Property Damage. Such coverage is required by Section IV of the SUPERB Site Rehabilitation and Fund Access Regulations R. 61-98.

If you have any questions, please contact me by telephone at (803) 896-4078, by fax at (803) 896-6245, or by e-mail to RIVERSMS@dhec.sc.gov.

Sincerely,


Michael (Mike) Rivers, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

cc: B. W. Stokes Oil Company, Inc., P.O. Box 274, Florence, SC 29503-0274
Davis & Brown, P.O. Box 15038, Florence, SC 29506
Technical File

April 28, 2014



Mr. Tim Hunter
SCDOT
955 Park Street
Columbia, South Carolina 29202

Re: Limited Environmental Site Assessment
SC Highway 51 Widening Project
SC-51 PIN 38191 RD01; Sections 1, 3, & 4
Florence County, South Carolina
Terracon Project No. 73138143



Dear Mr. Hunter:

Terracon Consultants, Inc. (Terracon) is pleased to submit this report of Limited Environmental Site Assessment at 23 Right of Way (ROW) sites in Florence County, South Carolina. The sites were identified by the SCDOT to have potential environmental concerns that may affect the above referenced road-widening project along Florence Highway (Highway 51) near Pamplico and Effingham, South Carolina. The results of our assessments placed each site into one of five categories, set based on the predicted level of effort that may be needed during site ROW expansion activities.

Category 1 - Regulated USTs & dispensers; SCDHEC-registered USTs identified to be within the proposed ROW should be closed-out under the SCDHEC UST Closure Guidelines at the following sites:

Site 4 Tract 271 The Outpost/O H Meggs (UST # 03423), 4925 Pamplico Hwy; *mike*
Site 9 Tract 397 Midway Supply(UST Nos. 16808 & 03429), 6402 Pamplico Hwy, Effingham; *mike*
Site 10 Tract 402 Former Webb's Grocery (UST # 03563), 6412 Pamplico Hwy; *mike*
Site 12 Tract 536 Hyman Oil Car Wash (UST # 03462), 963 N. Pamplico Hwy.; *mike*
Site 22 Tract 967 Daniels Brothers, (UST#03418), 3732 S. Pamplico Hwy.

Category 2 - Non-regulated USTs; Unregistered petroleum or heating oil USTs were identified to be within the proposed ROW, and should be removed prior to or as a part of the ROW expansion at the below sites:

Site 3 Tract 238 'Sunflower Store'; 4109 Pamplico Hwy;
Site 15 Tract 566 Old Junque Shop, 853 N. Pamplico Hwy;
Site 18 Tract 831 Edwards Road Store, 1570 S. Pamplico Hwy.
Site 20 Tract 863 Mt. Zion Store, 1863 S. Pamplico Hwy.;
Site 21 Tract 916 Former Cross Roads Grocery, 3032 S. Pamplico Hwy.

Terracon Consultants, Inc. 521 Clemson Rd. Columbia, SC 29229
P (803) 741-9000 F (803) 741-9900 terracon.com

Geotechnical

Environmental

Construction Materials

Facilities

Limited Environmental Site Assessment

SC Highway 51 Widening
SC-51 PIN 38191 RD01
Sections 1, 3, & 4
Florence County, South Carolina



Terracon Project No. 73138143

April 28, 2014

Prepared for:

South Carolina Department of Transportation
Columbia, South Carolina

Prepared by:

Terracon Consultants, Inc.
Columbia, South Carolina

Offices Nationwide
Employee-Owned

Established in 1965
terracon.com

Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

April 28, 2014

Mr. Tim Hunter
SCDOT
955 Park Street
Columbia, South Carolina 29202

Re: Limited Environmental Site Assessment
SC Highway 51 Widening Project
SC-51 PIN 38191 RD01; Sections 1, 3, & 4
Florence County, South Carolina
Terracon Project No. 73138143

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Site 10 Tract 402 Former Webb's Grocery (UST # 03563), 6412 Pamplico Hwy;
Site 12 Tract 536 Hyman Oil Car Wash (UST # 03462), 963 N. Pamplico Hwy.;
Site 22 Tract 967 Daniels Brothers, (UST#03418), 3732 S. Pamplico Hwy.

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Site 3 Tract 238 'Sunflower Store"; 4109 Pamplico Hwy;
Site 15 Tract 566 Old Junque Shop, 853 N. Pamplico Hwy;
Site 18 Tract 831 Edwards Road Store, 1570 S. Pamplico Hwy.
Site 20 Tract 863 Mt. Zion Store, 1863 S. Pamplico Hwy.;
Site 21 Tract 916 Former Cross Roads Grocery, 3032 S. Pamplico Hwy.



Terracon Consultants, Inc. 521 Clemson Rd. Columbia, SC 29229
P (803) 741-9000 F (803) 741-9900 terracon.com



Category 3 – Sites with monitoring wells to abandon; Existing monitoring wells affected by the widening should be abandoned in accordance with the SC Well Standards and Regulations. Further, special handling and disposal of soils impacted by petroleum-contaminated ground water may be necessary as part of ROW expansion activities.

Site 4 Tract 271 The Outpost/O H Meggs (UST # 03423), 4925 Pamplico Hwy;
Site 13 Tract 565 Gibb's Grocery (UST # 03463), 863 N. Pamplico Hwy;
Site 22 Tract 967 Daniels Brothers, (UST#03418), 3732 S. Pamplico Hwy.

Category 4 - Low to moderately impacted soils and/or ground water with in proposed ROW; Low to moderate impact to ground water above allowable levels were identified at the edge of the right of way at the following sites. Special handling and disposal of soils impacted by petroleum contaminated ground water may be necessary.

Site 1 Tract 123 Fluorescent Light Site, 2650 Pamplico Hwy;
Site 7 Tract 353 Vacant Evergreen Store between 6309 & 6315 Pamplico Hwy;
Site 8 Tract 356 Evergreen Express (UST # 03428), 6331 Pamplico Hwy;

Category 5 - No environmental conditions expected to impact ROW widening activities; No USTs, piping, or environmental conditions were identified to impact the ROW widening activities;

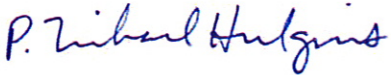
Site 2 Tract 139 Corbett Shopping Center, 2630 Pamplico Hwy;
Site 5 Tract 315 Poston Packing (UST No. 03278), 5810 Pamplico Hwy.;
Site 6 Tract 334 Feed & Seed Store, 6114 Pamplico Hwy.;
Site 11 Tract 411 Vacant Cypress Creek Store, 6806 Pamplico Hwy;
Site 14 Tract 584 Raider Station (UST # 19301), 848 N. Pamplico Hwy;
Site 16 Tract 673 Pantry 3326 (UST #13244) 103 N. Pamplico Hwy.;
Site 17 Tract 792 Baggett's Gulf (UST #s 03542 & 03556) 105 S. Walnut St.;
Site 19 Tract 851 Dunk Road Store, 1570 S. Pamplico Hwy.;
Site 23 Tract 975 Evans Grocery (UST #03475) 3801 Sandpit Rd.;

Terracon appreciates the opportunity to provide this proposal and look forward to working with you on this project. If you should have any questions or comments regarding this report, please contact the undersigned.

Sincerely,

Terracon


Regan Morris
Environmental Scientist


P. Michael Hudgins, PG
UST Services Manager

LIMITED ENVIRONMENTAL SITE ASSESSMENT
SC Highway 51 Widening Project
51 PIN 38191 RD01 Sections 1, 3, & 4
Florence County, South Carolina
Terracon Project No. 73138143
April 28, 2014

1.0 PROJECT INFORMATION

2.0 SCOPE OF SERVICES

3.0 FIELD INVESTIGATION

- 3.1 Plan Review
- 3.2 Site and Adjacent Property Reconnaissance
- 3.3 Regulatory Well Approval
- 3.4 UST Locating and Gauging
- 3.5 Soil Borings and Temporary Well Installation
- 3.6 Groundwater Sample Collection

4.0 RESULTS OF THE FIELD INVESTIGATION

SITE 1 THROUGH SITE 23

- 1.0 Site Description
- 2.0 Assessment Activities
- 3.0 Results and Findings

Table # - Analytical Data Summary Of Detected Compounds

Figure # - Site Map

Well Logs

5.0 APPENDICIES

Appendix A – Monitoring Well Approvals

Appendix B - Laboratory Analytical Data Report

LIMITED ENVIRONMENTAL SITE ASSESSMENT
SC Highway 51 Widening Project
51 PIN 38191 RD01 Sections 1, 3, & 4
Florence County, South Carolina
Terracon Project No. 73138143
April 28, 2014

1. PROJECT INFORMATION

Terracon Consultants, Inc. (Terracon) has conducted a Limited Environmental Site Assessment (LESA) at 25 sites in Florence County, South Carolina. The sites were previously identified by the SCDOT to have potential environmental concerns that may affect a road-widening project along Florence Highway (Highway 51) near Pamplico and Effingham, South Carolina (Sections 1, 3, and 4). The following sections provide an outline of the project, Terracon's scope of services, findings and conclusions.

2. SCOPE OF SERVICES

The scope of work was based on the potential or known underground storage tank (UST) or other suspected environmental conditions at 23 potential sites, as derived from information furnished by SCDOT. The proposed scope of work was prepared to evaluate the soil and groundwater conditions affected by potential releases from the UST systems that may impact the currently proposed roadway expansion activities. The sites were identified in Initial Site Assessments (ISAs) conducted by the SCDOT and in a Phase I Environmental Site Assessment (ESA) conducted by S&ME in 2011 (S&ME Project No. 1614-11-132 dated July 26, 2011).

The LESA was conducted to determine the presence or absence of indicator contaminants associated with suspected environmental conditions as it may affect the road widening activities. The scope of services was not intended to identify every chemical possibly associated with the site or to determine the extent or magnitude of any existing contamination.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and were not restricted by ASTM E1903-11.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LESA. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of the SCDOT, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of SCDOT and Terracon. Any unauthorized distribution or reuse is at SCDOT's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, LESA report, and Terracon's Agreement for Services. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to SCDOT and all relying parties unless otherwise agreed in writing.

3.0 FIELD INVESTIGATION

Terracon conducted the fieldwork under a safety plan developed for this project. Work was performed using United States Environmental Protection Agency (USEPA) Level D work attire consisting of hard hats, safety glasses, protective gloves, and protective boots.

Plan Review

Review of the proposed right-of-way expansion plans and site property surveys provided by the SCDOT to evaluate potential environmental concerns that may affect the proposed work. A site reconnaissance was conducted to identify concerns or suspect site features. The reconnaissance consisted of visual observations of the site from the boundaries and selected interior portions of the site as related to the proposed highway widening project plans.

Regulatory Well Approval

Prior to well installation, Terracon obtained monitoring well approval from the South Carolina Department of Health and Environmental Control (SCDHEC). This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and R.61-71, South Carolina Well Standards and Regulations, dated April 26, 2002.

UST Locating and Gauging

Terracon contacted the state public utility locator (811) to arrange for underground utility location and marking of public utilities (gas, water, electric, etc.) at the sites. Further, Terracon subcontracted a private utility locator to locate potential USTs in areas of suspected locations. The locator outlined areas of suspected USTs and distribution lines using conductivity (EM) equipment. The temporary wells were located based on the utility locates as identified and marked by the utility locators.

Soil Borings and Temporary Well Installation

Terracon advanced one to three borings at 20 sites utilizing a truck-mounted direct-push (Geoprobe®) drilling rig to evaluate subsurface conditions. The borings were located based on the area of potential impact, the vicinity of the USTs/ASTs, subsurface utilities as marked by utility locator, and equipment access. The drilling services were conducted by a South Carolina licensed monitoring well driller.

Soil samples were collected continuously from Macrocore sampling equipment in 4-foot sections using acetate sleeves to document lithology, color and relative moisture content. Samples collected from the cores were field screened for organic vapor analysis (OVA) using a flame ionization detector (FID) to detect the presence of volatile organic compounds (VOCs).

Based on the highest FID reading, field evidence of impact, or the judgment of the field professional, Terracon submitted one soil sample per site for laboratory analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX), MTBE, and naphthalene per EPA Method 8260. If Polynuclear Aromatic Hydrocarbons (PAHs) were suspected to be present, the samples will also be analyzed for PAHs per EPA Method 8270. The soil samples were placed in laboratory prepared containers, labeled, and placed on ice in a cooler and secured with a custody seal.

Groundwater Sample Collection

All soil borings were converted into temporary groundwater monitoring wells to allow collection of groundwater quality samples. Samples were collected through a clean Geoprobe® stainless steel screen point water sampler, placed in laboratory prepared containers, labeled, and placed on ice in a cooler and secured with a custody seal in accordance with proper environmental sampling protocol. The samples and completed chain-of-custody forms were transported to a SC certified analytical laboratory for analysis. After sample collection, the borings were abandoned in accordance with state regulations.

All ground water samples were analyzed for BTEX, 1,2 DCA, oxygenates, and naphthalene per EPA Method 8260. If PAHs were suspected to be present, a ground water sample was also analyzed for PAHs per EPA Method 8270.

4.0 RESULTS OF THE FIELD INVESTIGATION

A summary of assessment results are presented for each site individually below. The summary includes a site description, assessment summary, and results and findings. An analytical table of detected compounds is included, if soils and ground water samples were collected. A site map showing the site features and temporary well locations is included, along with temporary well logs and water well records (D-1903 Form) for each well. The following lists the sites in order by SCDOT Tract # and address:

Site 1	Tract 123	Fluorescent Light Site, 2650 Pamplico Hwy;
Site 2	Tract 139	Corbett Shopping Center, 2630 Pamplico Hwy;
Site 3	Tract 238	'Sunflower Store"; 4109 Pamplico Hwy;
Site 4	Tract 271	The Outpost/O H Meggs (UST # 03423) 4925 Pamplico Hwy;
Site 5	Tract 315	Poston Packing (UST No. 03278), 5810 Pamplico Hwy.;
Site 6	Tract 334	Feed & Seed Store, 6114 Pamplico Hwy.;
Site 7	Tract 353	Vacant Evergreen Store between 6309 & 6315 Pamplico Hwy;
Site 8	Tract 356	Evergreen Express (UST # 03428) 6331 Pamplico Hwy;
Site 9	Tract 397	Midway Supply, UST Nos. 16808 6402 Pamplico Hwy, Effingham
Site 10	Tract 402	Former Webb's Grocery (UST # 03563) 6412 Pamplico Hwy;
Site 11	Tract 411	Vacant Cypress Creek Store, 6806 Pamplico Hwy;
Site 12	Tract 536	Hyman Oil Car Wash (UST # 03462), 963 N. Pamplico Hwy.;
Site 13	Tract 565	Gibb's Grocery (UST # 03463), 863 N. Pamplico Hwy;
Site 14	Tract 584	Raider Station (UST # 19301), 848 N. Pamplico Hwy;
Site 15	Tract 566	Old Junque Shop, 853 N. Pamplico Hwy;
Site 16	Tract 673	Pantry 3326 (UST #13244), 103 N. Pamplico Hwy.;
Site 17	Tract 792	Baggett's Gulf (UST #s 03542 & 03556) 105 S. Walnut St.;
Site 18	Tract 831	Edwards Road Store, 1570 S. Pamplico Hwy.
Site 19	Tract 851	Dunk Road Store, 1570 S. Pamplico Hwy.;
Site 20	Tract 863	Mt. Zion Store, 1863, S. Pamplico Hwy.;
Site 21	Tract 916	Former Cross Roads, Grocery, 3032 S. Pamplico Hwy.
Site 22	Tract 967	Daniels Brothers, 3732 S. Pamplico Hwy.
Site 23	Tract 975	Evans Grocery (UST #03475), 3801 Sandpit Rd.;

Following the individual summaries, the monitoierng well approvals and the soil and ground water laboratory data report for all sites are included the Appendix a and B, respectively

SITE 1 - TRACT 123 FLUORESCENT LIGHT SITE, 2650 PAMPLICO HWY

1.0 Site Description

This site is an abandoned former gas station property with a dispenser island located within five feet of the proposed new ROW. A storm ditch is located approximately 22 feet from the dispenser within the proposed ROW.

No evidence of a UST was observed, and no records of a UST system were available from the SCDHEC UST registry. Due to the site layout, a UST (if present), was not suspected to be located in the proposed ROW, therefore an EM survey was not conducted at this site.

2.0 Assessment Activities

Two temporary wells were advanced using direct-push sampling equipment in the vicinity of the dispenser islands. Soil samples were collected from each boring and analyzed for OVA using a Foxboro Century 128 Flame Ionization Detector (FID). The OVA results are included on the boring logs generated for each temporary well, attached.

Soil Sample SB-2 was submitted for laboratory analysis for petroleum compounds per EPA Method 8260 and Polynuclear Aromatic Hydrocarbons (PAHs) per EPA Method 8270. Ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. The analytical results are shown on Table 1, below. A site layout with boring/temporary well locations is attached as Figure 1.

3.0 Results and Findings

Elevated OVA reading (2,760 ppm) was recorded at soil boring SB-2. The depth to ground water was recorded at depths ranging from 10- 12 feet, and is suspected to discharge to the adjacent storm water ditch. Ground water was impacted above Risk-Based Screening Levels (RBSLs) in temporary well TW-2.

The UST (if present) and dispenser system are located outside of new ROW. Low to moderate impact to ground water was detected above allowable levels at the edge of the right of way.

Special handling and disposal of soils impacted by petroleum contaminated ground water may be necessary during ROW expansion activities.

Site 1 - Tract 123 - Fluorescent Light Site, 2650 Pamplico Hwy

Table 1 – Analytical Data Summary of Detected Compounds

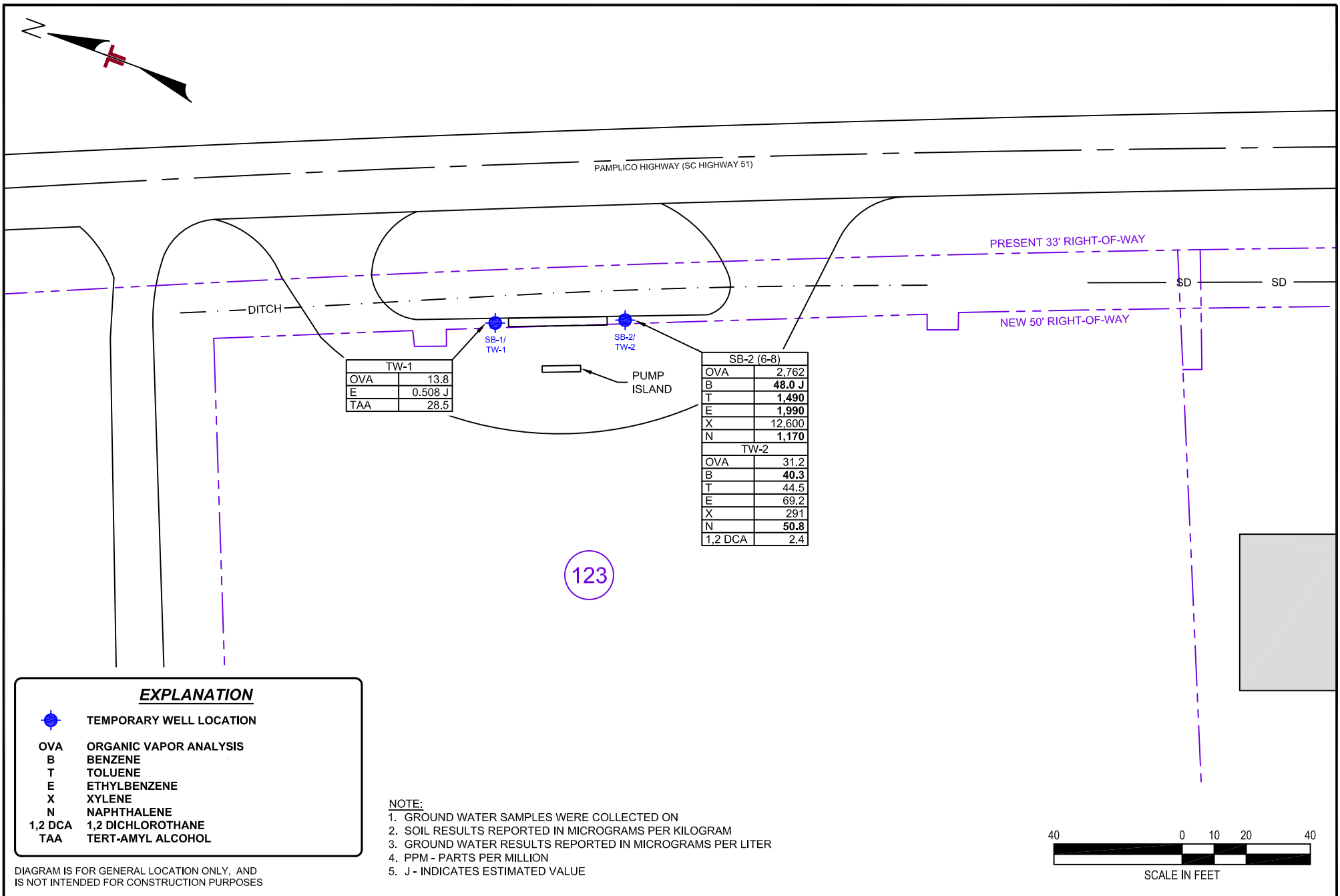
Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-2 (6 - 8)	RBSL	TW-1 (13 - 18)	TW-2 (13 - 18)	RBSL / AL
OVA (ppm)	2,762	ne	13.8	31.2	ne
Benzene	48.0J	7	< 0.111	40.3	5
Toluene	1,490	1,450	< 0.122	44.5	1,000
Ethylbenzene	1,990	1,150	0.508J	69.2	700
Xylene	12,600	14,500	< 0.179	291	10,000
Naphthalene	1,170	36	< 0.176	50.8	25
MTBE	na	ne	< 0.078	< 0.078	40
1,2 DCA	na	ne	< 0.116	2.4	5
Tert-amyl Alcohol (TAA)	na	ne	< 1.01	28.5	240

NOTES:

- | | |
|---|---|
| 1) All samples collected on February 10, 2014 | 8) RBSL/AL - SCDHEC Risk Based Screening Levels or Action Level |
| 2) $\mu\text{g/kg}$ - micrograms per kilogram | |
| 3) $\mu\text{g/l}$ - micrograms per liter | |
| 4) OVA- Organic Vapor Analysis | 9) Concentrations in bold represent RBSL or AI exceedance |
| 5) parts per million (PPM) | 10) ne - no regulatory action level established |
| 6) MTBE - tert-Butyl methyl ether | 11) J - indicates an estimated value |
| 7) 1,2-DCA - 1,2-Dichloroethane | 12) NA - Not Analyzed |

Attachments

Figure 1 – Site Map
 Well Logs



Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

Terracon
 Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
 PH. (803) 741-9000 FAX. (803) 741-9900

SITE MAP - TRACT 123(FLORESCENT LIGHT)
RIGHT-OF-WAY PAMPLICO HIGHWAY 2650 PAMPLICO HIGHWAY FLORENCE, SOUTH CAROLINA
7

Fig No.
1

WELL LOG NO. SB-1/TW-1

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 1 - Tract 123
Florence, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 1	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
		<u>SAND (SP)</u> , medium grained, orange, moist, loose	Not Grouted to Surface				5.08
1.5		<u>SAND (SP)</u> , trace clay, fine to coarse grained, light tan and orange, moist, dense					8.41
4.5		<u>CLAYEY SAND (SC)</u> , fine to medium grained, mottled (gray, red, orange), diesel odor, moist, dense to very dense					9.83
							20.76
9.0							10.41
		<u>LEAN CLAY (CL)</u> , medium plasticity, mottled (gray, red, orange), no odor, moist, very dense	13.5' to 14.5' - #2 Filter Sand				2.32
14.0							4.51
		<u>SAND (SP)</u> , coarse grained, gray to tan, saturated, loose					14.5' to 18' - 2" (0.010) Slotted PVC
18.0	Macro Core Terminated at 18 Feet						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Direct Push

Advancement Method:
Direct Push

Notes:

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

13.8' on 2/10/2014

Terracon
521 Clemson Road
Columbia, South Carolina

Well Started: 2/10/2014

Well Completed: 2/10/2014

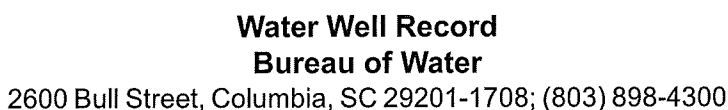
Drill Rig: Geoprobe

Driller: J. Chiorazzi

Project No.: 73138143

Exhibit: B-1

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-1.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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WELL LOG NO. SB-2/TW-2

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 1 - Tract 123
Florence, South Carolina

GRAPHIC LOG	LOCATION See Figure 1		INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH	MATERIAL DESCRIPTION	Well Completion:					
	1.5	<u>SAND (SP)</u> , medium grained, orange, moist, loose	Not Grouted to Surface		5			6.3
		<u>SAND (SP)</u> , fine to medium grained, light tan and orange, moist, dense						4.56
5.0	<u>CLAYEY SAND (SC)</u> , fine to medium grained, mottled (gray, red, orange), petroleum odor, moist, dense to very dense	1,754						
		2762.0						
	9.0	<u>LEAN CLAY (CL)</u> , medium plasticity, mottled (gray, red, orange, tan), moist, very dense	12' to 18' - #2 Filter Sand		10			768
								99.8
	15.0	<u>SAND (SP)</u> , coarse grained, gray to tan, saturated, loose	13' to 18' - 2" (0.010) Slotted PVC		15			109
	18.0							
	Macro Core Terminated at 18 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Direct Push

Advancement Method:
Direct Push

Notes:

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

10.5' on 2/10/2014

Terracon
521 Clemson Road
Columbia, South Carolina

Well Started: 2/10/2014

Well Completed: 2/10/2014

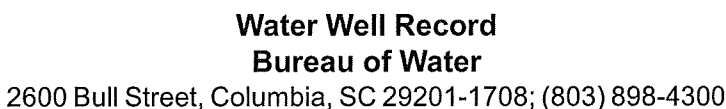
Drill Rig: Geoprobe

Driller: J. Chiorazzi

Project No.: 73138143

Exhibit: B-2

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-1.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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SITE 2 - TRACT 139 CORBETT SHOPPING CENTER, 2630 PAMPLICO HWY;

1.0 Site Description

This site is an abandoned former gas station property with evidence of four former dispenser islands located within twenty feet of the proposed new ROW. The site has two existing monitoring wells located outside of the proposed new ROW. A storm drain is located within the proposed ROW, approximately 22 feet from the dispenser islands.

No evidence of a UST was observed, and no records of a UST system were available from the SCDHEC UST registry. Due to the site layout, a UST (if present), was not suspected to be located in the proposed ROW, therefore an EM survey was not conducted at this site.

2.0 Assessment Activities

Two temporary wells were advanced using direct-push sampling equipment downgradient from of the dispenser islands. Soil Samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil Sample SB-2 was submitted for laboratory analysis for petroleum compounds per EPA Method. The analytical results are shown on Table 2, below. A site layout with boring/temporary well locations is attached as Figure 2.

3.0 Results and Findings

Low OVA readings were recorded at soil borings SB-1 and SB-2. The depth to ground water was recorded at depths ranging from 9 -10 feet. No petroleum compounds were detected above RBSLs in either of the ground water samples collected.

No USTs, piping, or environmental conditions are expected to impact the ROW widening at this site.

Site 2 - Tract 139 Corbett Shopping Center, 2630 Pamplico Hwy;

Table 2 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (2 - 4)	RBSL	TW-1 (13 - 18)	TW-2 (13 - 18)	RBSL / AL
OVA (ppm)	18	ne	13.8	31.2	ne
Benzene	NO COMPOUNDS DETECTED		1.48	0.635J	5
Toluene			0.815J	< 0.122	1,000
Ethylbenzene			0.634J	0.57J	700

NOTES:

1) All samples collected on February 10, 2014

2) $\mu\text{g/kg}$ - micrograms per kilogram

3) $\mu\text{g/l}$ - micrograms per liter

4) OVA- Organic Vapor Analysis

5) parts per million (PPM)

6) MTBE - tert-Butyl methyl ether

7) 1,2-DCA - 1,2-Dichloroethane

8) RBSL/AL - SCDHEC Risk Based
Screening

Levels or Action Level

9) Concentrations in bold represent RBSL
or

AI exceedance

10) ne - no regulatory action level
established

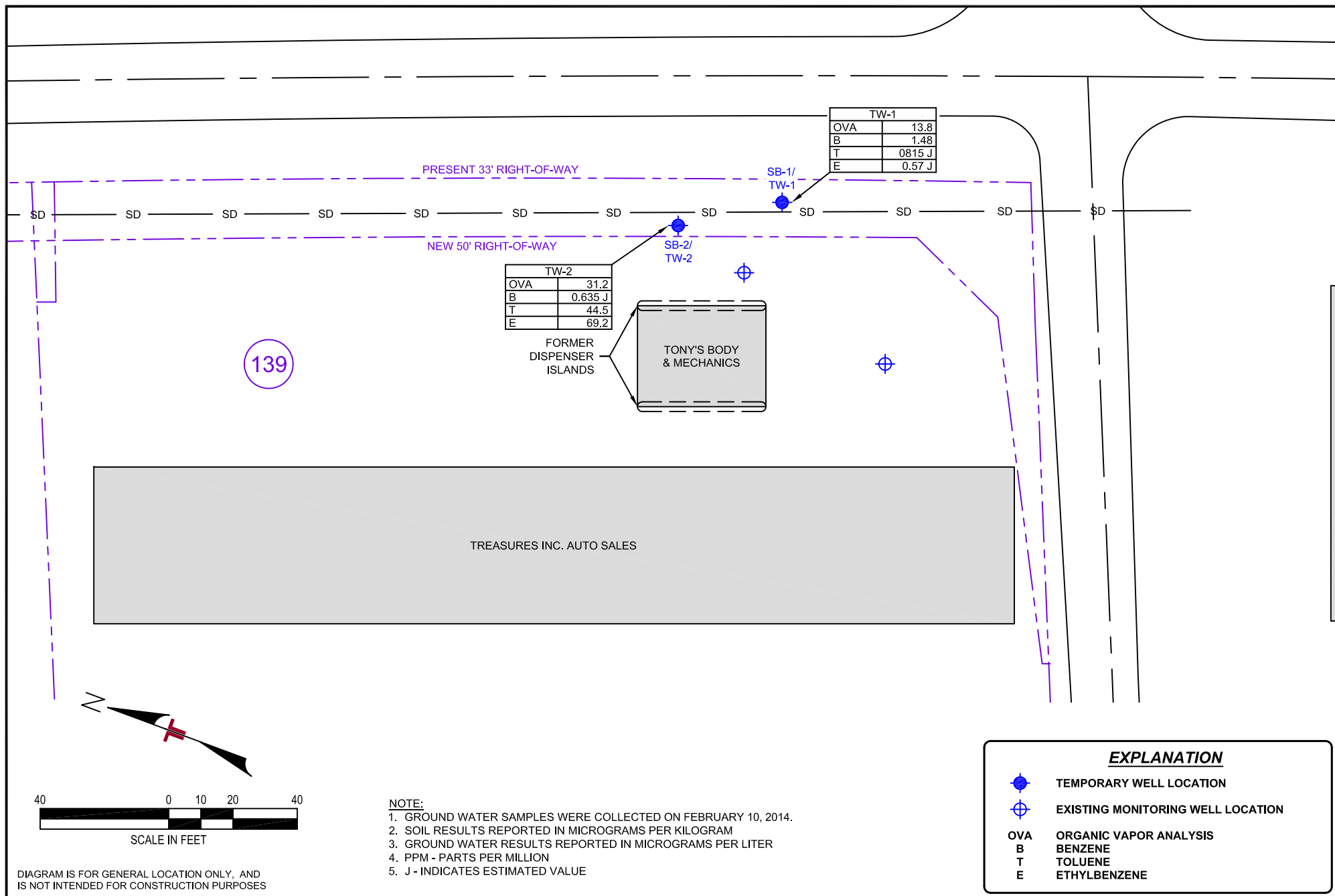
11) J - indicates an estimated value

12) NA - Not Analyzed

Attachments

Figure 2 – Site Map

Well Logs



Project Mng:	RWN
Drawn By:	PTK
Checked By:	RWN
Approved By:	PMH

Project No.	73138143
Scale:	AS SHOWN
File No.	73138143
Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
PH. (803) 741-9000 FAX. (803) 741-9900

SITE MAP - TRACT 139 (CORBETT SHOPPING CENTER)		Fig No. 2
RIGHT-OF-WAY PAMPLICO HIGHWAY 2630 PAMPLICO HIGHWAY FLORENCE, SOUTH CAROLINA 14		

WELL LOG NO. SB-1/TW-1

Page 1 of 1

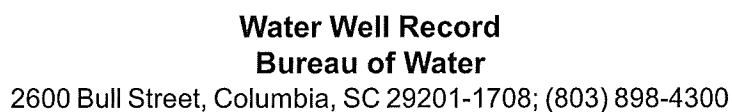
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 2 - Tract 139
Florence, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 2	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
2.0	SAND (SP) , medium grained, tan, moist, loose	Not Grouted to Surface					10.7
4.0	SANDY LEAN CLAY (CL) , fine to medium grained, tannish gray, moist, dense, sticky						17.6
9.0	SANDY LEAN CLAY (CL) , fine to medium grained, tannish gray, wet to moist, dense, sticky						1.34
10.0	SAND (SP) , medium grained, tan, saturated, loose	5.5' to 6.5' - #2 Filter Sand					2.3
	SAND (SP) , medium grained, tan, saturated, loose	6.5' to 10' - 2" (0.010) Slotted PVC					
Boring Terminated at 10 Feet				10			
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS 9.7' on 2/10/2014		521 Clemson Road Columbia, South Carolina		Well Started: 2/10/2014		Well Completed: 2/10/2014	
				Drill Rig: Geoprobe		Driller: J. Chiorazzi	
				Project No.: 73138143		Exhibit: B-1	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-2.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/28/14

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WELL LOG NO. SB-2/TW-2

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 2 - Tract 139
Florence, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 2	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
2.0	SAND (SP) , medium grained, tan, moist, loose	Not Grouted to Surface		9.2			
4.0	SANDY LEAN CLAY (CL) , fine to medium grained, tannish gray, moist, dense, sticky			11.01			
9.0	SANDY LEAN CLAY (CL) , fine to medium grained, tannish gray, wet, dense, sticky			2.37			
10.0	SAND (SP) , medium grained, tan, saturated, loose	6.5' to 10' - 2" (0.010) Slotted PVC		1.41			
Boring Terminated at 10 Feet				10			
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS 9.5' on 2/10/2014		Terracon 521 Clemson Road Columbia, South Carolina		Well Started: 2/10/2014 Well Completed: 2/10/2014		Drill Rig: Geoprobe Driller: J. Chiorazzi	
		Project No.: 73138143		Exhibit: B-2		17	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-2.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/28/14

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SITE 3 TRACT 238 'SUNFLOWER STORE'; 4109 PAMPLICO HWY;

1.0 Site Description

This site is an abandoned former gas station property with evidence of a former dispenser island located within the proposed new ROW. The site has two existing monitoring wells located outside of the proposed new ROW. A storm drain is located within the proposed ROW, approximately 22 feet from the dispenser islands.

USTs fill ports were noted within 10 feet of the dispensers. No records of a UST system were available from the SCDHEC UST registry. A UST vent pipe was observed at the corner of the building.

2.0 Assessment Activities

An EM survey was conducted at this site to locate the position of the UST with respect to fill ports and vent pipe. The survey indicated four USTs were determined to be located within the proposed ROW. The approximate UST locations are shown on Figure 3.

Two temporary wells were advanced using direct-push sampling equipment in the vicinity of the dispenser islands. Soil Samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil Sample SB-2 and ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. A site layout with boring/temporary well locations is attached as Figure 3.

3.0 Results and Findings

Low OVA readings were recorded at soil boring SB-1 and SB-2. The depth to ground water was recorded at a depth of 6.5 feet, and is suspected to discharge to the adjacent storm drain utility. Petroleum compounds were detected above RBSLs in soil and ground water samples collected from both borings/temporary wells. The analytical results are shown on Table 3.

Four USTs identified to be within the proposed ROW should be removed prior to or as a part of the ROW expansion. Special handling and disposal of soils impacted by petroleum contaminated ground water may be necessary.

Site 3 Tract 238 Sunflower Store; 4109 Pamplico Hwy;

Table 3 – Analytical Data Summary of Detected Compounds

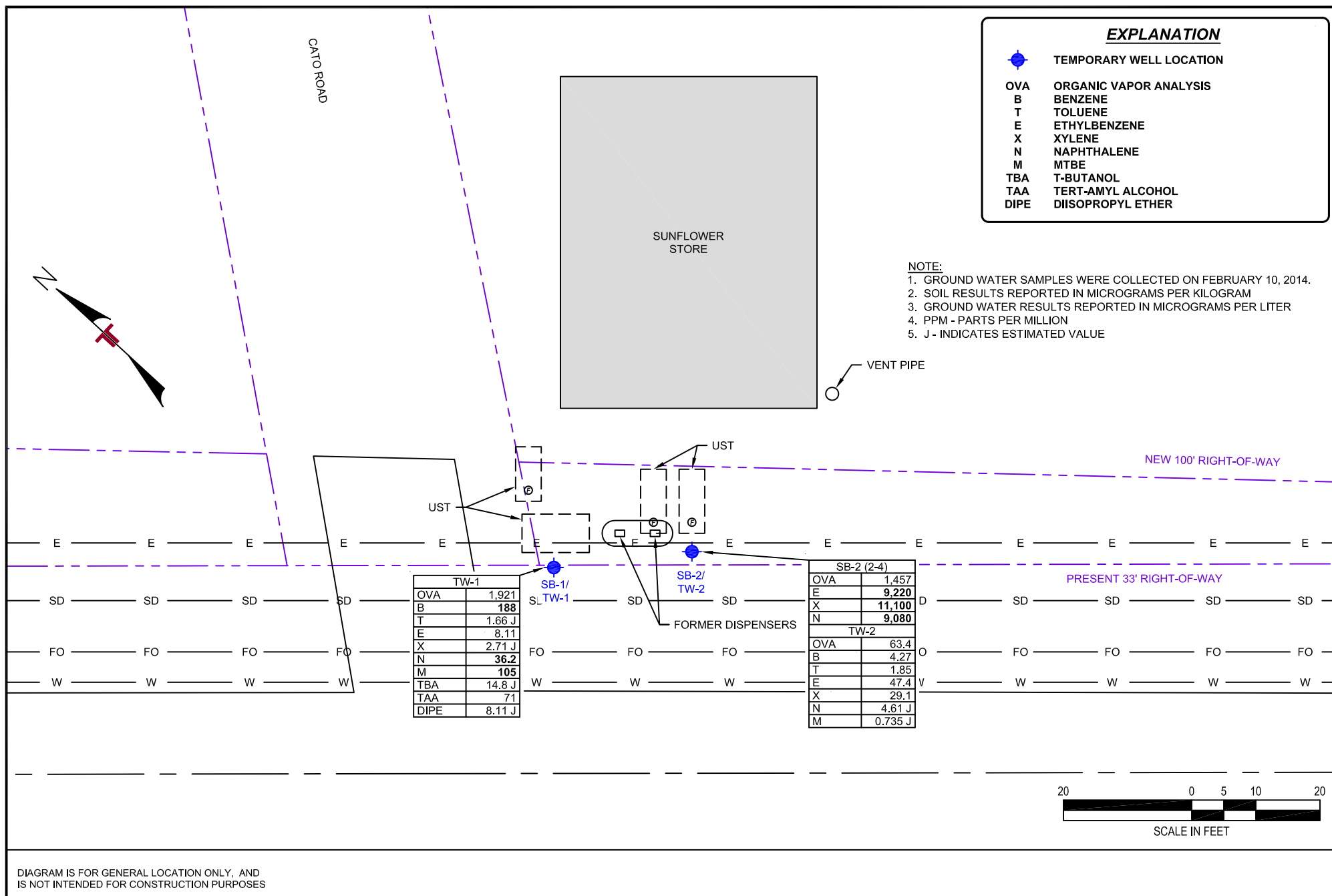
Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-2 (2 - 4)	RBSL	TW-1 (13 - 18)	TW-2 (13 - 18)	RBSL / AL
OVA (ppm)	2,762	ne	1,921	63.4	ne
Benzene	<6.38	7	188	4.27	5
Toluene	<13.5	1,450	1.66J	1.85	1,000
Ethylbenzene	9,220	1,150	8.11	47.4	700
Xylene	11,100	14,500	2.71J	29.1	10,000
Naphthalene	9,080	36	36.2	4.61J	25
MTBE	na	ne	105	0.735J	40
1,2 DCA	na	ne	< 0.232	< 0.116	5
Tert-amyl Alcohol (TAA)	na	ne	71	< 1.01	240
t-butanol (TBA)	na	ne	14.8J	< 0.29	1,400
Di-isopropyl ether (DIPE)	na	ne	8.11J	< 0.24	150

NOTES:

- | | |
|---|--|
| 1) All samples collected on February 10, 2014 | 8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level |
| 2) µg/kg - micrograms per kilogram | |
| 3) µg/l - micrograms per liter | 9) Concentrations in bold represent RBSL or AI exceedance |
| 4) OVA- Organic Vapor Analysis | |
| 5) parts per million (PPM) | 10) ne - no regulatory action level established |
| 6) MTBE - tert-Butyl methyl ether | 11) J - indicates an estimated value |
| 7) 1,2-DCA - 1,2-Dichloroethane | 12) na - Not analyzed |

Attachments

Figure 3 – Site Map
 Well Logs



Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
PH. (803) 741-9000 FAX. (803) 741-9900

SITE MAP - TRACT 238 (SUNFLOWER STORE)

RIGHT-OF-WAY PAMPLICO HIGHWAY
4109 PAMPLICO HIGHWAY
FLORENCE, SOUTH CAROLINA

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Fig No.

3

WELL LOG NO. SB-1/TW-1

Page 1 of 1

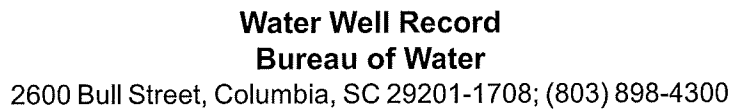
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

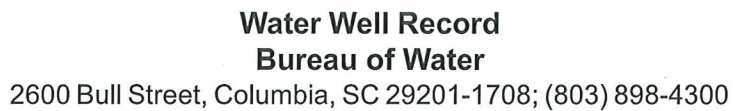
CLIENT: SCDOT

SITE: Site 3 - Tract 238
Florence, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 3	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
0.3	ASPHALT		Not Grouted to Surface	5	▽	X	91.2
	SAND (SP) , medium to coarse grained, orange, moist, loose						
2.0	CLAYEY SAND (SC) , gray, slight petroleum odor, moist, medium dense						
5.5	CLAYEY SAND (SC) , mottled (orange, tan, gray), heavy petroleum odor, moist, medium dense to dense						
7.5	CLAYEY SAND (SC) , mottled (orange, tan, gray), heavy petroleum odor, wet, medium dense to dense		5.5' to 15' - #2 Filter Sand				430
10.0	Soil Boring Terminated at 10 Feet		6.5' to 10' - 2" (0.010) Slotted PVC				410
Temporary Well Terminated at 15 Feet			11.5' to 15' - 2" (0.010) Slotted PVC	15			
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS ▽ 6.4' on 2/10/2014			Well Started: 2/10/2014 Well Completed: 2/10/2014				
			Drill Rig: Geoprobe Driller: J. Chiorazzi				
			Project No.: 73138143 Exhibit: B-1				

Terracon
521 Clemson Road
Columbia, South Carolina

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SITE 4 TRACT 271 THE OUTPOST CONVENIENCE STORE, 4925 PAMPLICO HWY

1.0 Site Description

This site is an active gas station convenience store operating as The Outpost, Convenience store (formerly Meggs Exxon), under UST Permit # 03423. The site maintains a UST system consisting of four gasoline USTs, distribution lines, kerosene and diesel USTs, pump islands and canopy. The UST system and majority of the store and is within the proposed ROW, and will require complete demolition and removal. The approximate UST and ROW locations are shown on Figure 4. A septic tank drain field is also located within the proposed ROW.

In 1992, a release was reported from this system. There are as many as 24 monitoring wells on this property and adjacent properties. A site map and ground water quality table obtained from the SCDHEC UST files is attached (Davis & Brown assessment report, 2009). Review of the ground water quality data collected in 2009 indicates significant petroleum impact to soils and ground water in monitoring wells located near the UST system.

2.0 Assessment Activities

Based on the 2009 groundwater data review, and since the entire UST system is within the proposed ROW, no assessment was conducted at this site.

3.0 Results and Findings

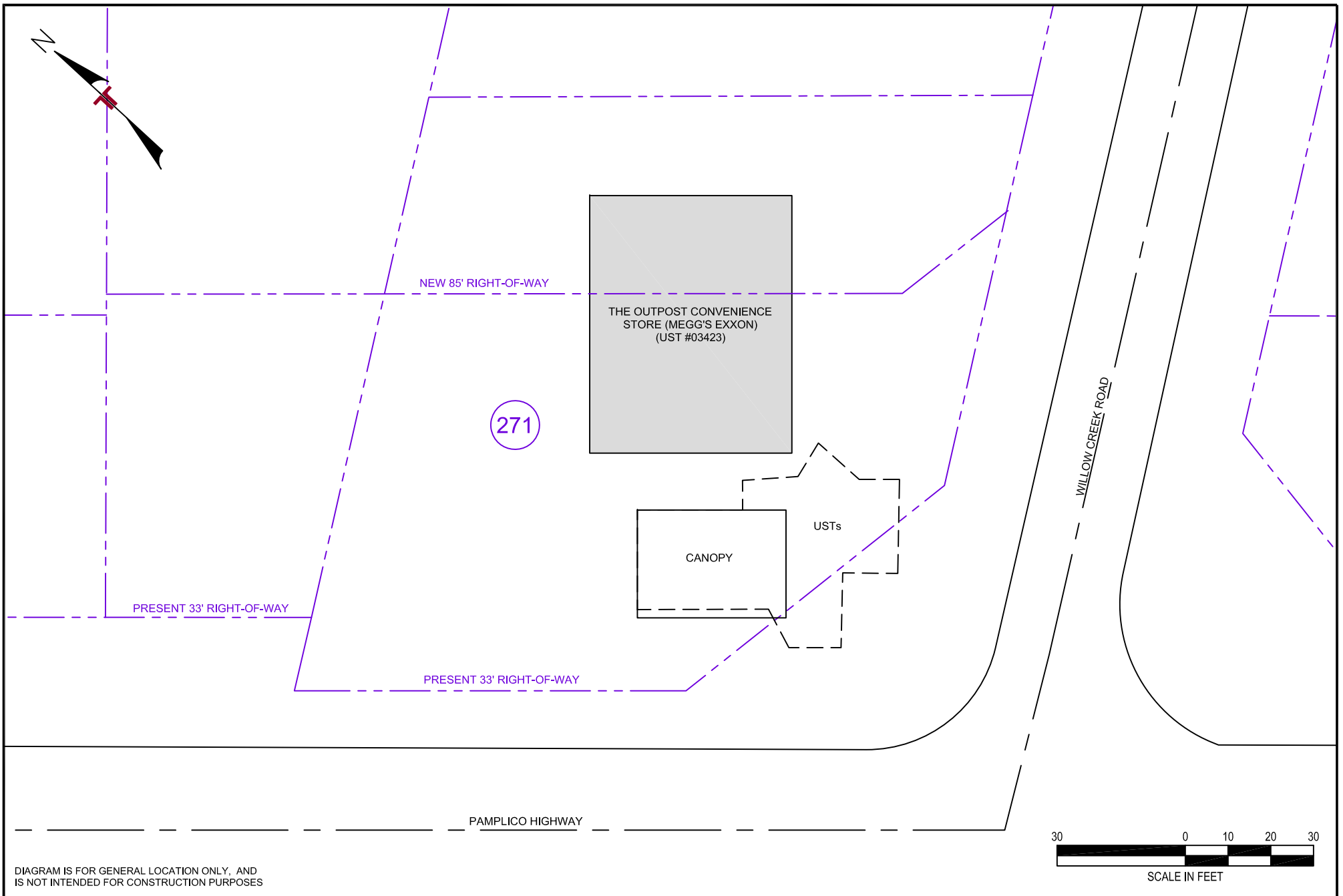
The UST system and majority of the store and is within the proposed ROW, and will require complete demolition and removal. Accordingly, the following activities should be conducted prior to site widening activities:

- Monitoring wells affected by the widening should be abandoned in accordance with the SC Well Standards and Regulations,
- Regulatory notice and assessment activities should be conducted in accordance with the SCDHEC UST Closure Assessment guidelines,
- Special handling and disposal of soils impacted by petroleum contaminated ground water and septic drain field likely may be necessary.

Attachments

Figure 4 – Site Map

Site map and historical ground water quality table from previous SCDHEC UST assessment (Davis & Brown assessment report, 2009).



Project Mng'r:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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SITE MAP - TRACT 271 (THE OUTPOST CONVENIENCE STORE)	
RIGHT-OF-WAY PAMPLICO HIGHWAY 4925 PAMPLICO HIGHWAY FLORENCE, SOUTH CAROLINA UST PERMIT #03423	
27	

Fig No.
4

SITE 5 TRACT 315 POSTON PACKING (UST NO. 03278), 5810 PAMPLICO HWY.

1.0 Site Description

This site is operated as Poston's Packing, a meat processing facility. Two 1,000 gallon USTs (gasoline and diesel) are listed on the SCDHEC UST Registry (UST Permit # 03278), reportedly abandoned by removal in 1993. Upon interview with the property owner, the location of these former USTs are not known. No evidence of a UST was noted. A septic tank drainage field is located near east front side of the building.

The facility currently operates one large fuel above-ground storage tank (AST) located at the rear of the property 250 feet from the proposed ROW. A storm drain culvert diverts surface runoff from this AST to a storm drain catch basin constructed within the proposed new ROW (Figure 5).

2.0 Assessment Activities

Due to the reported UST removal, a UST is not suspected to be located in the proposed ROW, therefore an EM survey was not conducted at this site.

Two temporary wells were advanced in the vicinity of the surface runoff catch basin and septic drain field. A site layout with boring/temporary well locations is attached as Figure 5. Soil samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil sample SB-2 and ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. The analytical results are shown on Table 5, below.

3.0 Results and Findings

Low OVA readings were recorded at soil boring SB-1 and SB-2. The depth to ground water was recorded at depths ranging from 3.5 - 4 feet, and is suspected to discharge to the adjacent storm drain utility.

No petroleum compounds were detected in the soil or ground water above RBSLs or ALs.

No USTs, piping, or environmental conditions are expected to impact the ROW widening at this site.

Poston Packing (UST No. 03278), 5810 Pamplico Hwy.

Table 5 – Analytical Data Summary of Detected Compounds

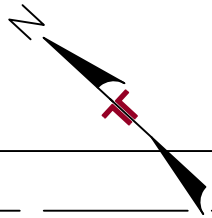
Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (2 - 4)	RBSL	TW-1 (6.5 - 10)	TW-2	RBSL / AL
OVA	2.3	ne	3.52		ne
Benzene	NO COMPOUNDS DETECTED		4.04	< 0.111	5
Toluene			7.71	< 0.122	1,000
Ethylbenzene			0.907J	< 0.109	700
Xylene			3.19	< 0.179	10,000
Naphthalene			4.42J	< 0.176	25

NOTES:

- | | |
|---|--|
| 1) All samples collected on February 10, 2014 | 8) RBSL/AL - SCDHEC Risk Based Screening Levels or Action Levels |
| 2) $\mu\text{g/kg}$ - micrograms per kilogram | 9) ne - no regulatory action level established |
| 3) $\mu\text{g/l}$ - micrograms per liter | 10) J - indicates an estimated value |
| 4) OVA- Organic Vapor Analysis | 11) NA - Not Analyzed |
| 5) parts per million (PPM) | |
| 6) MTBE - tert-Butyl methyl ether | |
| 7) 1,2-DCA - 1,2-Dichloroethane | |

Attachments

Figure 5 – Site Map
 Well Logs



NOTE:

1. GROUND WATER SAMPLES WERE COLLECTED ON FEBRUARY 10, 2014
2. SOIL RESULTS REPORTED IN MICROGRAMS PER KILOGRAM
3. GROUND WATER RESULTS REPORTED IN MICROGRAMS PER LITER
4. PPM - PARTS PER MILLION
5. J - INDICATES ESTIMATED VALUE

PAMPLICO HIGHWAY (SC HIGHWAY 51)

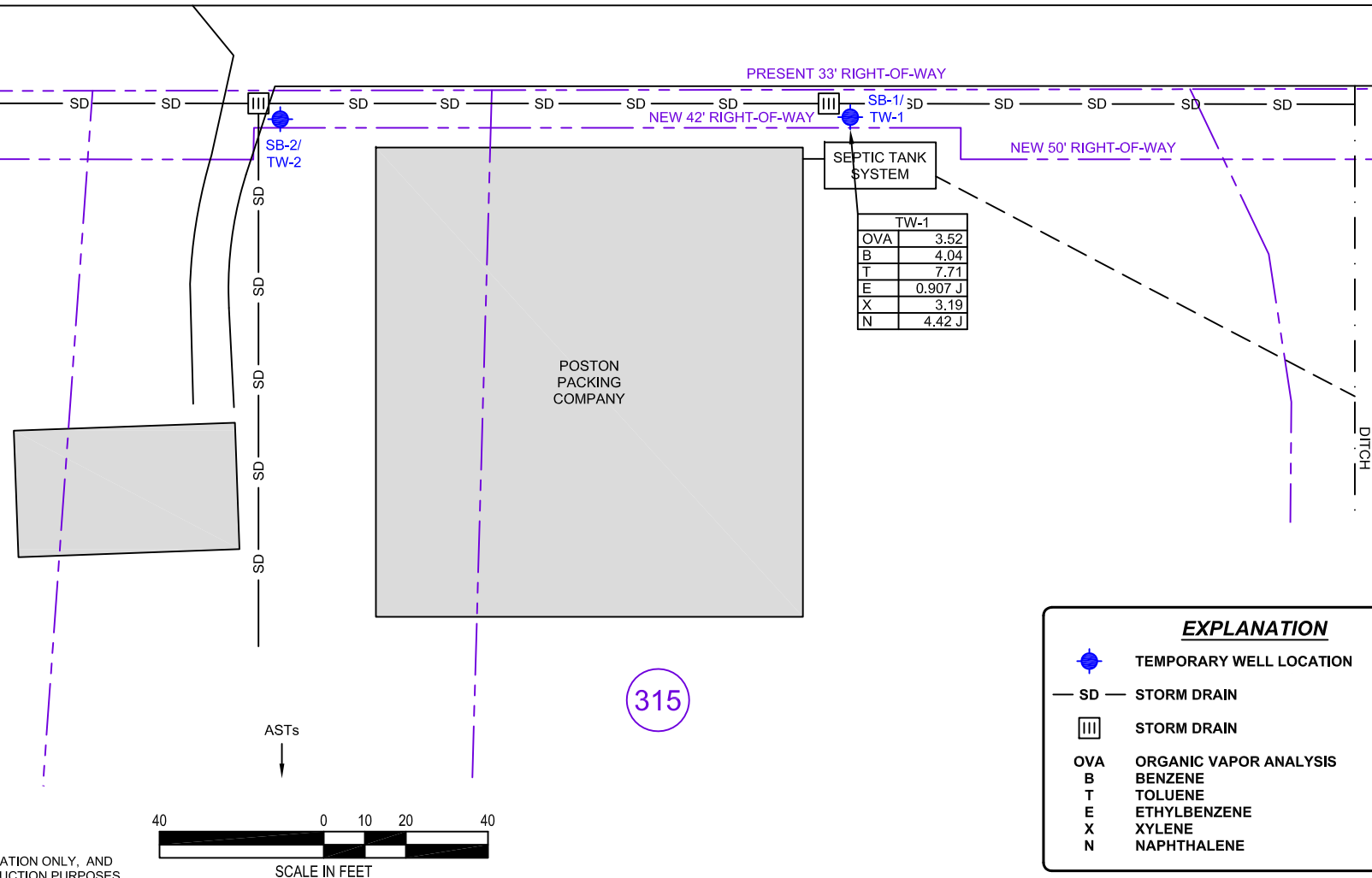


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists
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PH. (803) 741-8000 FAX. (803) 741-9900

SITE MAP - TRACT 315 (POSTON PACKING) UST PERMIT #03278

RIGHT-OF-WAY PAMPLICO HIGHWAY
5810 PAMPLICO HIGHWAY
FLORENCE, SOUTH CAROLINA
UST PERMIT #03278

30

Fig No.

5

WELL LOG NO. SB-1/TW-1

Page 1 of 1

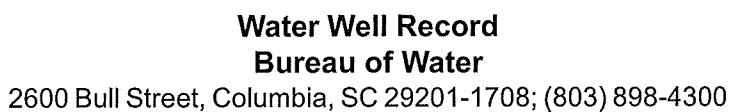
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 5 - Tract 315 (Poston Packing)
Florence, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	
	See Figure 5	Well Completion:						
DEPTH	MATERIAL DESCRIPTION							
0.5	ASPHALT	Not Grouted to Surface		5	▽	X	2.3	
	CLAYEY SAND (SC) , medium to coarse grained, mottled (tan, orange, dark orange), moist, dense							
3.5								1.1
	SAND (SP) , medium grained, tan, moist to wet, medium dense	5.5' to 6.5' - #2 Filter Sand		5		X	< 0.1	
6.0								
	SAND (SP) , fine to medium grained, gray with tan, saturated, loose	6.5' to 10' - 2" (0.010) Slotted PVC		10		X	< 0.1	
8.0								
Soil Boring Terminated at 8 Feet								
Temporary Well Terminated at 10 Feet								
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push								
Advancement Method: Direct Push		Notes:						
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.								
WATER LEVEL OBSERVATIONS		Well Started: 2/10/2014		Well Completed: 2/10/2014				
▽ 3.5' on 2/10/2014		Drill Rig: Geoprobe		Driller: J. Chiorazzi				
		Project No.: 73138143		Exhibit: B-1				

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WELL LOG NO. SB-2/TW-2

Page 1 of 1

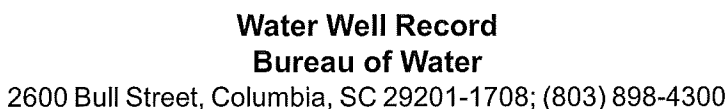
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 5 - Tract 315 (Poston Packing)
Florence, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 5	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
0.5	ASPHALT	Not Grouted to Surface					
	SAND (SP) , medium grained, tan, moist, medium dense						
3.0							
3.5	CLAYEY SAND (SC) , dense						
4.0	SAND (SP) , medium grained, tan to orange, moist to wet, medium dense	5.5' to 6.5' - #2 Filter Sand		5			6.02
	Soil Boring Terminated at 4 Feet	6.5' to 10' - 2" (0.010) Slotted PVC					
	Temporary Well Terminated at 10 Feet			10			
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS		Well Started: 2/10/2014		Well Completed: 2/10/2014			
 4.0' on 2/10/2014		Drill Rig: Geoprobe		Driller: J. Chiorazzi			
		Project No.: 73138143		Exhibit: B-2			

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SITE 6 TRACT 334 FEED & SEED STORE, 6114 PAMPLICO HWY.

1.0 Site Description

This site is an operating as the Evergreen Feed & Produce. No evidence of USTs are present. An Initial Site Assessment conducted by the SCDOT in 2012 recommended that the site be checked for the presence of USTs or environmental impact.

2.0 Assessment Activities

An EM survey was conducted in the driveway and parking areas in front of the store as the most likely location of USTs or dispenser islands. No evidence of a UST was observed.

Two temporary wells were advanced using direct-push sampling equipment in the front of the store. Soil Samples were collected from each boring and analyzed for Organic Vapor Analysis (OVA) using a Foxboro Century 128 Flame Ionization Detector (FID). The OVA results are included on the boring logs generated for each temporary well, attached.

Soil Sample SB-1 was submitted for laboratory analysis for petroleum compounds per EPA Method 8260. Ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. The analytical results are shown on Table 1, below. A site layout with boring/temporary well locations is attached as Figure 1.

3.0 Results and Findings

Background OVA readings (12 ppm) was recorded at soil boring SB-1. The depth to ground water was recorded at depths ranging from 2.5 – 3 feet. No petroleum compounds were detected above Risk-Based Screening Levels (RBSLs).

No USTs, piping, or environmental conditions are expected to impact the ROW widening at this site.

Site 6 Tract 334 Feed & Seed Store, 6114 Pamplico Hwy.

Table 6 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-2 (0 - 2)	RBSL	TW-1 (4.5 - 8)	TW-2 (4.5 - 8)	RBSL / AL
OVA (ppm)	12	ne	<0.1	2.3	ne
Benzene	< 0.034	7	0.963J	0.871J	5
Toluene	< 0.071	1,450	0.631J	< 0.122	1,000
Ethylbenzene	2.91J	1,150	4.31	6.61	700
Xylene	14.7	14,500	7.56	20.9	10,000
Naphthalene	< 0.258	36	3.91J	5.76	25
MTBE	NA	ne	< 0.078	< 0.078	40
1,2 DCA	NA	ne	< 0.116	< 0.116	5

NOTES:

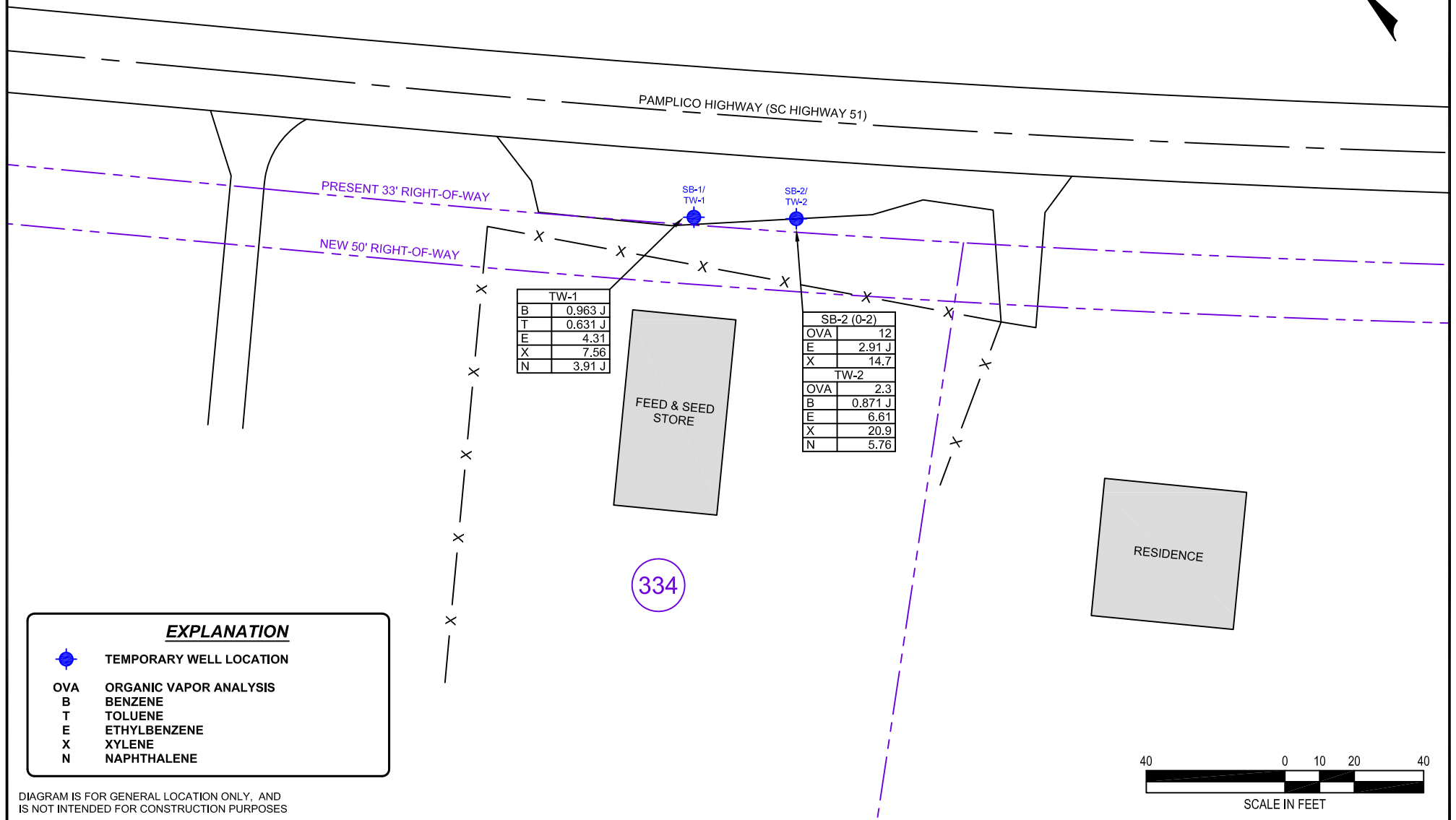
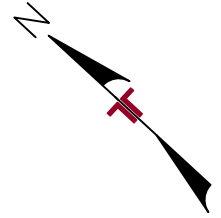
- | | |
|---|---|
| 1) All samples collected on February 7, 2014 | 8) RBSL/AL - SCDHEC Risk Based Screening Levels or Action Level |
| 2) $\mu\text{g/kg}$ - micrograms per kilogram | 9) Concentrations in bold represent RBSL or Al exceedance |
| 3) $\mu\text{g/l}$ - micrograms per liter | 10) ne - no regulatory action level established |
| 4) OVA- Organic Vapor Analysis | 11) J - indicates an estimated value |
| 5) parts per million (PPM) | 12) NA - Not Analyzed |
| 6) MTBE - tert-Butyl methyl ether | |
| 7) 1,2-DCA - 1,2-Dichloroethane | |

Attachments

Figure 6 – Site Map
 Well Logs

NOTE:

1. GROUND WATER SAMPLES WERE COLLECTED ON FEBRUARY 7, 2014
2. SOIL RESULTS REPORTED IN MICROGRAMS PER KILOGRAM
3. GROUND WATER RESULTS REPORTED IN MICROGRAMS PER LITER
4. PPM - PARTS PER MILLION
5. J - INDICATES ESTIMATED VALUE



Project Mng'r:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists

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PH. (803) 741-8000 FAX. (803) 741-9900

SITE MAP - TRACT 334 (FEED & SEED STORE)

RIGHT-OF-WAY PAMPLICO HIGHWAY
6114 PAMPLICO HIGHWAY
FLORENCE, SOUTH CAROLINA

WELL LOG NO. SB-1/TW-1

Page 1 of 1

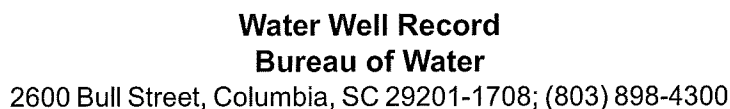
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 6 - Tract 344
Florence, South Carolina

GRAPHIC LOG	LOCATION See Figure 6		INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH	MATERIAL DESCRIPTION	Well Completion:					
	0.5	ASPHALT	Not Grouted to Surface		5			12
	1.5	SAND (SP) , fine to medium grained, gray, moist, medium dense						
	3.5	SAND (SP) , fine to medium grained, tan, moist, medium dense						
	4.0	SAND (SP) , fine to medium grained, tan, wet, medium dense						
	Soil Boring Terminated at 4 Feet		3.5' to 8' - #2 Filter Sand					
	Temporary Well Terminated at 8 Feet		4.5' to 8' - 2" (0.010) Slotted PVC					
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push								
Advancement Method: Direct Push			Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.								
WATER LEVEL OBSERVATIONS 2.3' on 2/7/2014			 521 Clemson Road Columbia, South Carolina		Well Started: 2/7/2014		Well Completed: 2/7/2014	
					Drill Rig: Geoprobe		Driller: J. Chiorazzi	
					Project No.: 73138143		Exhibit: B-1	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-6.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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WELL LOG NO. SB-2/TW-2

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

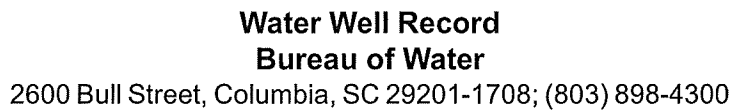
CLIENT: SCDOT

SITE: Site 6 - Tract 344
Florence, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 6	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
0.5	ASPHALT	Not Grouted to Surface		5			12.2
	SAND (SP) , fine to medium grained, gray, moist, medium dense						
1.5	SAND (SP) , fine to medium grained, tan, moist, medium dense						
3.5	SAND (SP) , fine to medium grained, tan, wet, medium dense						
4.0	SAND (SP) , fine to medium grained, tan, wet, medium dense	3.5' to 8' - #2 Filter Sand					1.4
Soil Boring Terminated at 4 Feet		4.5' to 8' - 2" (0.010) Slotted PVC					
Temporary Well Terminated at 8 Feet							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS		Well Started: 2/7/2014 Drill Rig: Geoprobe Project No.: 73138143		Well Completed: 2/7/2014 Driller: J. Chiorazzi Exhibit: B-2			
 2.3' on 2/7/2014							

Terracon
521 Clemson Road
Columbia, South Carolina

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-6.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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SITE 7 TRACT 353 VACANT EVERGREEN STORE BETWEEN 6309 & 6315 PAMPLICO HWY

1.0 Site Description

This site is vacant, rural store with a vent pipe located on the northwest corner of the abandoned building. Further, a UST fill pipe was observed in the vicinity of the pipe. There is no evidence of a dispensing island in front of the store.

Due to the possibility of an underground storage tank associated with the vent pipes two borings were advanced to a depth of ten in front of the store inside of the proposed new ROW.

2.0 Assessment Activities

An EM survey was conducted in areas in front of the store. No evidence of a UST was detected by the survey. The fill port and vent pipe are suspected to be associated with a heating oil UST.

Two temporary wells (TW-1, TW-2) were advanced using direct-push sampling equipment at the edge of the proposed ROW. TW-1 was located closest to the fill port, and TW-2 was located downgradient from this area. Soil Samples were collected from each boring and analyzed for Organic Vapor Analysis (OVA) using a Foxboro Century 128 Flame Ionization Detector (FID). The OVA results are included on the boring logs generated for each temporary well, attached.

Soil Sample SB-1 was submitted for laboratory analysis for petroleum compounds per EPA Method 8260 and Polynuclear Aromatic Hydrocarbons (PAHs) per EPA Method 8270. Ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260, and TW-1 was also sampled for PAHs per Method 8270. The analytical results are shown on Table 7, below. A site layout with temporary well locations is attached as Figure 7.

3.0 Results and Findings

An elevated OVA reading (1,232 ppm) was recorded in a ground water sample collected from TW-1. The depth to ground water was recorded at depths ranging from 2 - 3 feet, and is suspected to discharge to the adjacent storm drain.

Elevated petroleum compounds (> 100,000 ppb) were detected in the soil sample collected from SB-1, above RBLSS for soil. Ground water was impacted above RBSLs for ground water in both temporary wells TW-1 and TW-2.

Low to moderate impact to ground water was detected above allowable levels at the edge of the right of way. Special handling and disposal of soils impacted by petroleum-contaminated ground water may be necessary.

Site 7 Tract 353 Vacant Evergreen Store between 6309 & 6315 Pamplico Hwy

Table 7 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (0 - 2)	RBSL	TW-1 (2 - 6)	TW-2 (2 - 6)	RBSL / AL
OVA (ppm)	> 10,000	ne	1,232	1,023	ne
Benzene	< 146	7	12.9J	11.6	5
Toluene	109,000	1,450	31.9	139	1,000
Ethylbenzene	170,000	1,150	950	1,570	700
Xylene	899,000	14,500	3,750	3,150	10,000
Naphthalene	66,500	36	639	533	25
MTBE	NA	ne	< 1.94	< 0.777	40
1,2 DCA	NA	ne	< 2.9	< 1.16	5
Acenaphthene	NA	ne	0.935J	NA	ne
Fluorene	NA	ne	0.7J	NA	ne
Naphthalene	NA	ne	596	NA	25

NOTES:

1) All samples collected on February 7, 2014

2) µg/kg - micrograms per kilogram

3) µg/l - micrograms per liter

4) OVA- Organic Vapor Analysis

5) parts per million (PPM)

6) MTBE - tert-Butyl methyl ether

7) 1,2-DCA - 1,2-Dichloroethane

8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level

9) Concentrations in bold represent RBSL or AL exceedance

10) ne - no regulatory action level established

11) J - indicates an estimated value

12) na - Not Analyzed

Attachments

Figure 7 – Site Map
 Well Logs

EXPLANATION



TEMPORARY WELL LOCATION

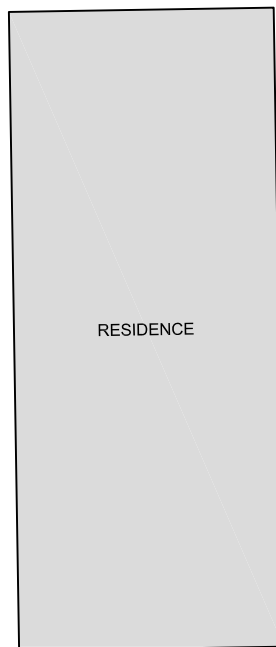
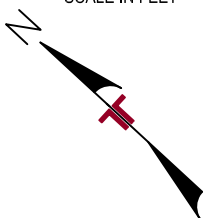
SD — STORM DRAIN



UST FILL PORT

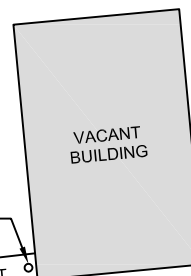
OVA ORGANIC VAPOR ANALYSIS

B BENZENE
T TOLUENE
E ETHYLBENZENE
X XYLENE
N NAPHTHALENE
A ACENAPHTHENE
F FLUORENE



RESIDENCE

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VACANT BUILDING

SB-1 (0-2)	
OVA	> 10,000
T	109,000
E	170,000
X	899,000
N	66,500
TW-1	
OVA	1,232
B	12.9 J
T	31.9
E	950
X	3,750
N	639
A	0.935 J
F	0.7 J

VENT PIPE



TW-2	
OVA	1,023
B	11.6
T	139
E	1,570
X	3,150
N	533

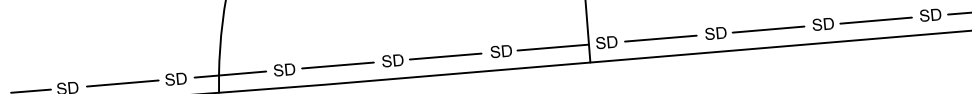
SB-1/
TW-1

ASPHALT

SB-2/
TW-2

NEW 50' RIGHT-OF-WAY

PRESENT 33' RIGHT-OF-WAY



PAMPLICO HIGHWAY (SC HIGHWAY 51)

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

NOTE:

1. GROUND WATER SAMPLES WERE COLLECTED ON FEBRUARY 7, 2014
2. SOIL RESULTS REPORTED IN MICROGRAMS PER KILOGRAM
3. GROUND WATER RESULTS REPORTED IN MICROGRAMS PER LITER
4. PPM - PARTS PER MILLION
5. J - INDICATES ESTIMATED VALUE

Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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Consulting Engineers and Scientists

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SITE MAP - TRACT 353 (VACANT EVERGREEN STORE)

RIGHT-OF-WAY PAMPLICO HIGHWAY
BETWEEN 6309 & 6315 PAMPLICO HIGHWAY
EFFINGHAM, SOUTH CAROLINA

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Fig No.

7

WELL LOG NO. SB-1/TW-1

Page 1 of 1

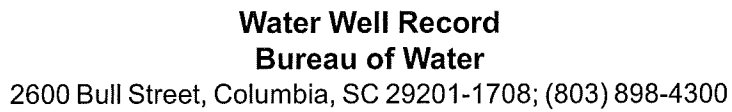
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 7 - Tract 353 Effingham, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 7	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
0.5	ASPHALT		Not Grouted to Surface 1.5' to 2.5' - #2 Filter Sand				7.25%
	SAND (SP) , medium grained, orange, high petroleum odor, dry, loose						
2.5							
	SAND (SP) , medium grained, gray, very high petroleum odor, wet, medium dense		8.5' to 6' - 2" (0.010) Slotted PVC	5			
4.0							
Soil Boring Terminated at 4 Feet							
Temporary Well Terminated at 6 Feet							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS  2.3' on 2/7/2014			Terracon 521 Clemson Road Columbia, South Carolina		Well Started: 2/7/2014 Well Completed: 2/7/2014		
			Drill Rig: Geoprobe		Driller: J. Chiorazzi		
			Project No.: 73138143		Exhibit: B-1		

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-7.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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WELL LOG NO. SB-2/TW-2

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

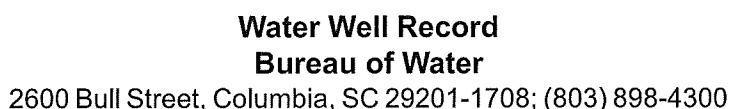
CLIENT: SCDOT

SITE: Site 7 - Tract 353 Effingham, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 7	Well Completion:					
	DEPTH	MATERIAL DESCRIPTION					
	0.5	ASPHALT	Not Grouted to Surface	1.5' to 2.5' - #2 Filter Sand			1,060
		SAND (SP) , medium grained, orange, high petroleum odor, dry, loose					
	2.5	SAND (SP) , medium grained, gray, very high petroleum odor, wet, medium dense	8.5' to 6' - 2" (0.010) Slotted PVC	5			
	4.0	Soil Boring Terminated at 4 Feet					
Temporary Well Terminated at 6 Feet							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS			Well Started: 2/7/2014		Well Completed: 2/7/2014		
2.3' on 2/7/2014			Drill Rig: Geoprobe		Driller: J. Chiorazzi		
			Project No.: 73138143		Exhibit: B-2		

Terracon
521 Clemson Road
Columbia, South Carolina

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-7.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

DHEC 1903 (07/2003)

SITE 8 TRACT 356 EVERGREEN EXPRESS (UST # 03428) 6331 PAMPLICO HWY

1.0 Site Description

This site is an active gas station operating as the Evergreen express (UST Site 03428). The site maintains one gasoline and one diesel UST system. The site had a reported UST release in 1998. A Tier I Assessment was conducted in 2003 which indicated elevated levels of hydrocarbon compounds in ground water.

2.0 Assessment Activities

Due to the proximity of the UST tank basins to the new proposed right of way, an EM survey was performed as depicted on Figure 2. The results of the EM survey indicated that the tank basins are not located within the new ROW boundary; however, the gasoline USTs and dispensers are within five feet of the proposed ROW.

Four soil borings were advanced in the vicinity of the USTs and dispenser islands. Temporary wells (TW-1 through TW-4) were advanced using direct-push sampling equipment at the edge of the proposed ROW. Soil Samples were collected from each boring and analyzed for Organic Vapor Analysis (OVA) using a Foxboro Century 128 Flame Ionization Detector (FID). The OVA results are included on the boring logs generated for each temporary well, attached.

Soil Sample SB-1 was submitted for laboratory analysis for petroleum compounds per EPA Method 8260 and Polynuclear Aromatic Hydrocarbons (PAHs) per EPA Method 8270. Ground water samples were submitted for laboratory analysis for petroleum compounds per EPA Method 8260.

The analytical results are shown on Table 8, below. A site layout with boring/temporary well locations is attached as Figure 8.

3.0 Results and Findings

An elevated OVA reading (> 10,000 ppm) was recorded in a soil sample collected from TW-1. The depth to ground water was recorded at depths ranging from 3 - 4 feet.

Elevated petroleum compounds (> 50,000 ppb) were detected in the soil sample collected from SB-1, above RBLs for soil. Ground water was impacted above RBLs for ground water in both temporary wells TW-1 and TW-2.

Based on the EM survey, the UST (if present) and dispenser system are likely located outside of new ROW; however may be affected by ROW activities. Low to moderate impact to ground water was detected above allowable levels at the edge of the right of way. Special handling and disposal of soils impacted by petroleum-contaminated ground water is may be necessary.

Site 8 Tract 356 Evergreen Express (UST # 03428) 6331 Pamplico Hwy

Table 8 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)				
	SB-1 (0 - 2)	RBSL	TW-1 6.5-10	TW-2 6.5-10	TW-3 6.5-10	TW-4 6.5-10	RBSL / AL
OVA (ppm)	5,916	ne	234	349	118	2,090	ne
Benzene	941J	7	41.7	43.5	26	49.4	5
Toluene	<67.7	1,450	2.23	19.3	5.75	3.62J	1,000
Ethylbenzene	40,400	1,150	13.4	71.9	81.1	18.7	700
Xylene	58,300	14,500	17.8	87	88.9	19	10,000
Naphthalene (8260)	17,600	36	5.1	44.8	25	18.7J	25
MTBE	NA	ne	< 0.078	2.75	2.35	4.77	40
tert-butyl formate (TBA)	NA	ne	< 0.29	198	< 0.29	38.2J	1,400
tert-amyl alcohol (TAA)	NA	ne	81.8	521	46.8	68.1J	240
Naphthalene (8270)	NA	ne	24.3	NA	NA	24.3	25
Fluorene	NA	ne	1.3J	NA	NA	1.3J	ne

NOTES:

1) All samples collected on February 7, 2014

2) µg/kg - micrograms per kilogram

3) µg/l - micrograms per liter

4) OVA- Organic Vapor Analysis

5) parts per million (PPM)

6) MTBE - tert-Butyl methyl ether

7) 1,2-DCA - 1,2-Dichloroethane

8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level

9) Concentrations in bold represent RBSL or AL exceedance

10) ne - no regulatory action level established

11) J - indicates an estimated value

12) na - Not Analyzed

Attachments

Figure 8– Site Map
 Well Logs

EXPLANATION

-  PROPOSED TEMPORARY WELL LOCATION
-  EXISTING MONITORING WELL LOCATION
- SD STORM DRAIN
- OVA ORGANIC VAPOR ANALYSIS
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X XYLENE
- N NAPHTHALENE
- M MTBE
- TBA T-BUTANOL
- TAA TERT-AMYL ALCOHOL
- F FLUORENE

NOTE:

1. GROUND WATER SAMPLES WERE COLLECTED ON FEBRUARY 7, 2014
2. SOIL RESULTS REPORTED IN MICROGRAMS PER KILOGRAM
3. GROUND WATER RESULTS REPORTED IN MICROGRAMS PER LITER
4. PPM - PARTS PER MILLION
5. J - INDICATES ESTIMATED VALUE

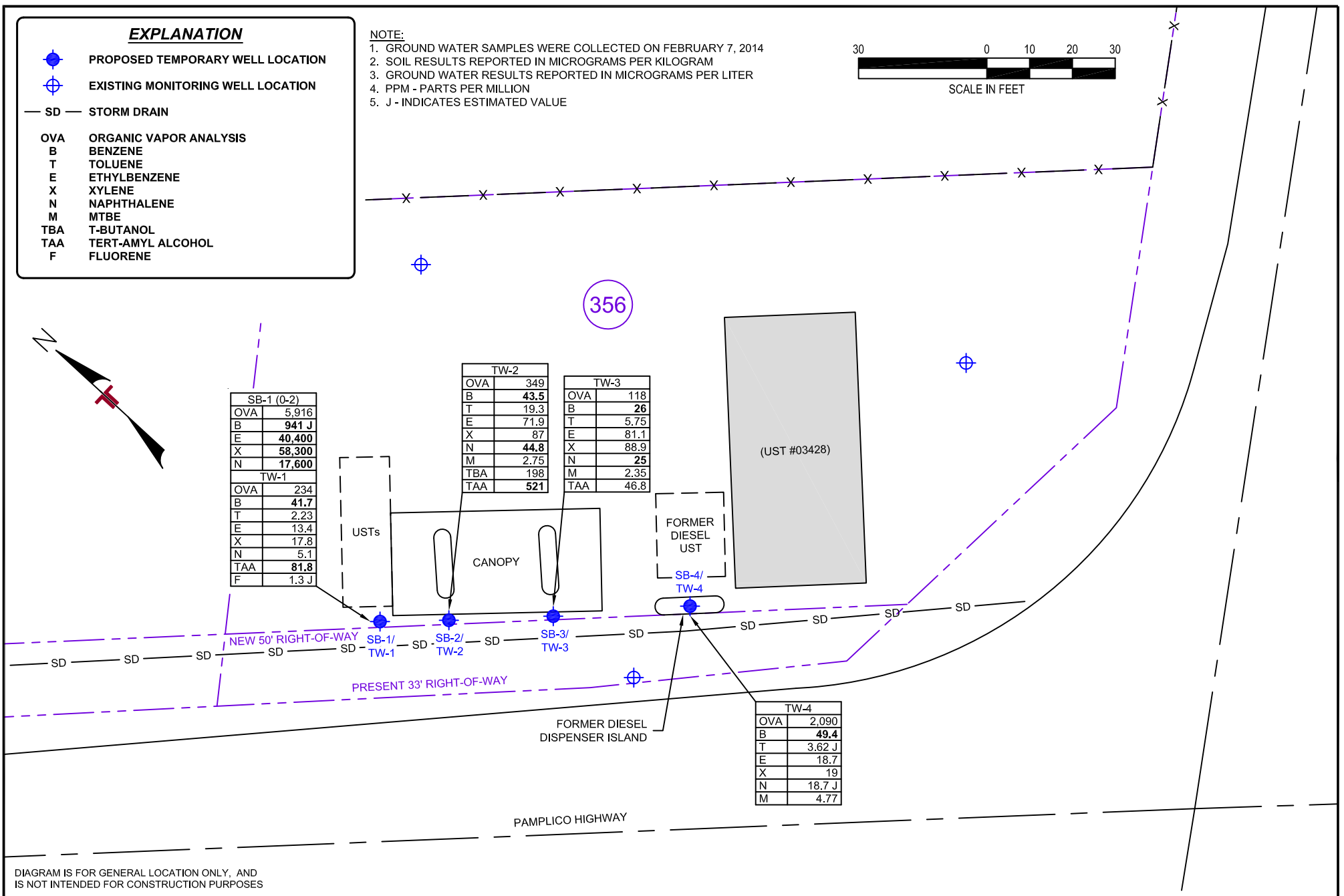


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
PH. (803) 741-9000 FAX. (803) 741-9900

SITE MAP - TRACT 356(EVERGREEN EXPRESS) UST PERMIT #03428

RIGHT-OF-WAY PAMPLICO HIGHWAY
6331 PAMPLICO HIGHWAY
EFFINGHAM, SOUTH CAROLINA
UST PERMIT #03428

Fig No.

8

WELL LOG NO. SB-1/TW-1

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PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

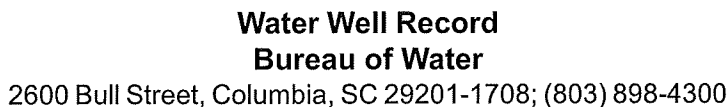
CLIENT: SCDOT

SITE: Site 8 - Tract 356
Effingham, South Carolina

GRAPHIC LOG	LOCATION See Exhibit A-2	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH MATERIAL DESCRIPTION	Well Completion:				
	0.5 ASPHALT	Not Grouted to Surface				
	SAND (SP) , fine to medium grained, dark gray, moist, medium dense					5,916
	1.5 SAND (SP) , fine to medium grained, gray to tan, petroleum odor, moist, medium dense					
	3.5 SAND (SP) , fine to medium grained, gray to tan, petroleum odor, wet, medium dense					639
	4.0 SAND (SP) , fine to medium grained, gray to tan, petroleum odor, wet, medium dense					
	Soil Boring Terminated at 4 feet					
		1.5' to 2.5' - #2 Filter Sand	5			
		8.5' to 6' - 2" (0.010) Slotted PVC				
	Temporay Well Terminated at 10 Feet		10			
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push						
Advancement Method: Direct Push		Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.						
WATER LEVEL OBSERVATIONS		Well Started: 2/7/2014		Well Completed: 2/7/2014		
3.6' on 2/7/2014		Drill Rig: Geoprobe		Driller: J. Chiorazzi		
		Project No.: 73138143		Exhibit: B-1		

Terracon
521 Clemson Road
Columbia, South Carolina

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WELL LOG NO. SB-2/TW-2

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PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

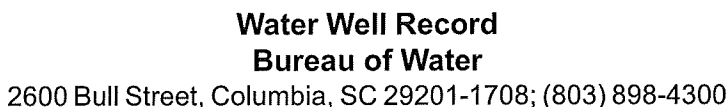
SITE: Site 8 - Tract 356 Effingham, South Carolina

CLIENT: SCDOT

GRAPHIC LOG	LOCATION See Exhibit A-2	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH MATERIAL DESCRIPTION	Well Completion:				
	0.5 ASPHALT	Not Grouted to Surface				73.0
	SAND (SP) , fine to medium grained, dark gray, moist, medium dense					
	2.5 SAND (SP) , fine to medium grained, light gray, petroleum odor, moist, medium dense					242
	3.5 SAND (SP) , fine to medium grained, light gray, petroleum odor, wet, medium dense					
	4.0 SAND (SP) , fine to medium grained, light gray, petroleum odor, wet, medium dense	1.5' to 2.5' - #2 Filter Sand				
	Soil Boring Terminated at 4 feet					
		8.5' to 6' - 2" (0.010) Slotted PVC				
	Temporay Well Terminated at 10 Feet		10			
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push						
Advancement Method: Direct Push		Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.						
WATER LEVEL OBSERVATIONS		Well Started: 2/7/2014		Well Completed: 2/7/2014		
3.6' on 2/7/2014		Drill Rig: Geoprobe		Driller: J. Chiorazzi		
		Project No.: 73138143		Exhibit: B-2		

Terracon
521 Clemson Road
Columbia, South Carolina

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WELL LOG NO. SB-3/TW-3

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PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

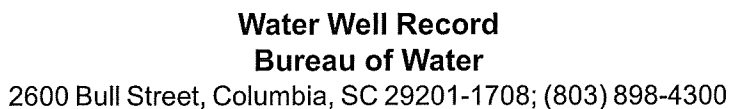
CLIENT: SCDOT

SITE: Site 8 - Tract 356
Effingham, South Carolina

GRAPHIC LOG	LOCATION See Exhibit A-2	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH MATERIAL DESCRIPTION	Well Completion:				
	0.5 ASPHALT	Not Grouted to Surface				92.4
	SAND (SP) , fine to medium grained, dark gray, moist, medium dense					
	3.0					1.34%
	SAND (SP) , fine to medium grained, light grayish tan, petroleum odor, moist, medium dense					
	4.5 Soil Boring Terminated at 4 feet	1.5' to 2.5' - #2 Filter Sand				
	SAND (SP) , fine to medium grained, light grayish tan, petroleum odor, wet, medium dense					
	10.0	8.5' to 6' - 2" (0.010) Slotted PVC				
	Temporay Well Terminated at 10 Feet		10			
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push						
Advancement Method: Direct Push		Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.						
WATER LEVEL OBSERVATIONS 3.6' on 2/7/2014		Well Started: 2/7/2014 Well Completed: 2/7/2014				
		Drill Rig: Geoprobe Driller: J. Chiorazzi				
		Project No.: 73138143 Exhibit: B-3				

521 Clemson Road
 Columbia, South Carolina

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WELL LOG NO. SB-4/TW-4

Page 1 of 1

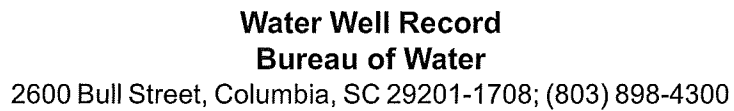
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 8 - Tract 356 Effingham, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Exhibit A-2	Well Completion:					
	DEPTH	MATERIAL DESCRIPTION					
	0.5	ASPHALT					
		SAND (SP) , fine to medium grained, dark gray, moist, medium dense					26.7
	2.5	SAND (SP) , fine to medium grained, dark gray, petroleum odor, moist, medium dense					461
	4.5	Soil Boring Terminated at 4 feet					
		SAND (SP) , fine to medium grained, dark gray, petroleum odor, wet, medium dense					
	10.0	Temporay Well Terminated at 10 Feet					
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS		 521 Clemson Road Columbia, South Carolina		Well Started: 2/7/2014		Well Completed: 2/7/2014	
 3.6' on 2/7/2014				Drill Rig: Geoprobe		Driller: J. Chiorazzi	
				Project No.: 73138143		Exhibit: B-4	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-8.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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SITE 9 TRACT 397 MIDWAY SUPPLY, UST NOS. 16808 & 03429) 6402 PAMPLICO HWY.

1.0 Site Description

This site is an active gas station convenience store operating as Midway Supply Convenience store under UST Permit # 03429. The site maintains a UST system consisting of four gasoline USTs, distribution lines, kerosene and diesel USTs, pump islands and canopy. The UST system and canopy is within the proposed ROW, and will require complete demolition and removal. The approximate UST and ROW locations are shown on Figure 9.

No release has been reported from this system.

2.0 Assessment Activities

Two soil borings were advanced in the vicinity of the USTs and dispenser islands. Temporary wells (TW-1 and TW-2) were advanced using direct-push sampling equipment at the edge of the proposed ROW. Soil Samples were collected from each boring and analyzed for OVA using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached.

Soil Sample SB-1 and ground water samples collected from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. The analytical results are shown on Table 9, below. A site layout with boring/temporary well locations is attached as Figure 9.

3.0 Results and Findings

The depth to ground water was recorded at depths ranging from 4 - 4.5 feet. Low petroleum compound concentrations (<500 ppb) were detected in the soil sample collected from SB-1, above RBLs for soil. Ground water was impacted above RBLs for ground water in both temporary wells TW-1 and TW-2.

The UST system is within the proposed ROW, and will require complete demolition and removal. Accordingly, the following activities should be conducted prior to site widening activities:

- Regulatory notice and assessment activities should be conducted in accordance with the SCDHEC UST Closure Assessment guidelines,
- Special handling and disposal of soils impacted by petroleum contaminated ground water may likely be necessary.

Site 9 Tract 397 Midway Supply, UST Nos. 16808 & 03429) 6402 Pamplico Hwy.

Table 9 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (0 - 2)	RBSL	TW-1 6.5-10	TW-2 6.5-10	RBSL / AL
OVA (ppm)	1,687	ne	2,614	85.6	ne
Benzene	11.5J	7	420	6.83	5
Toluene	< 3.41	1,450	5.78	3.38	1,000
Ethylbenzene	189	1,150	67.8	4.9	700
Xylene	< 7.86	14,500	35.4	4.9J	10,000
Naphthalene	464	36	299	73.5	25
MTBE	NA	ne	257	385	40
tert-butyl formate TBA	NA	ne	< 1.45	41.1	1,400

NOTES:

1) All samples collected on February 7, 2014

2) $\mu\text{g/kg}$ - micrograms per kilogram

3) $\mu\text{g/l}$ - micrograms per liter

4) OVA- Organic Vapor Analysis

5) parts per million (PPM)

6) MTBE - tert-Butyl methyl ether

7) 1,2-DCA - 1,2-Dichloroethane

8) RBSL/AL - SCDHEC Risk Based Screening

Level or Action Level

9) Concentrations in bold represent RBSL or AL exceedance

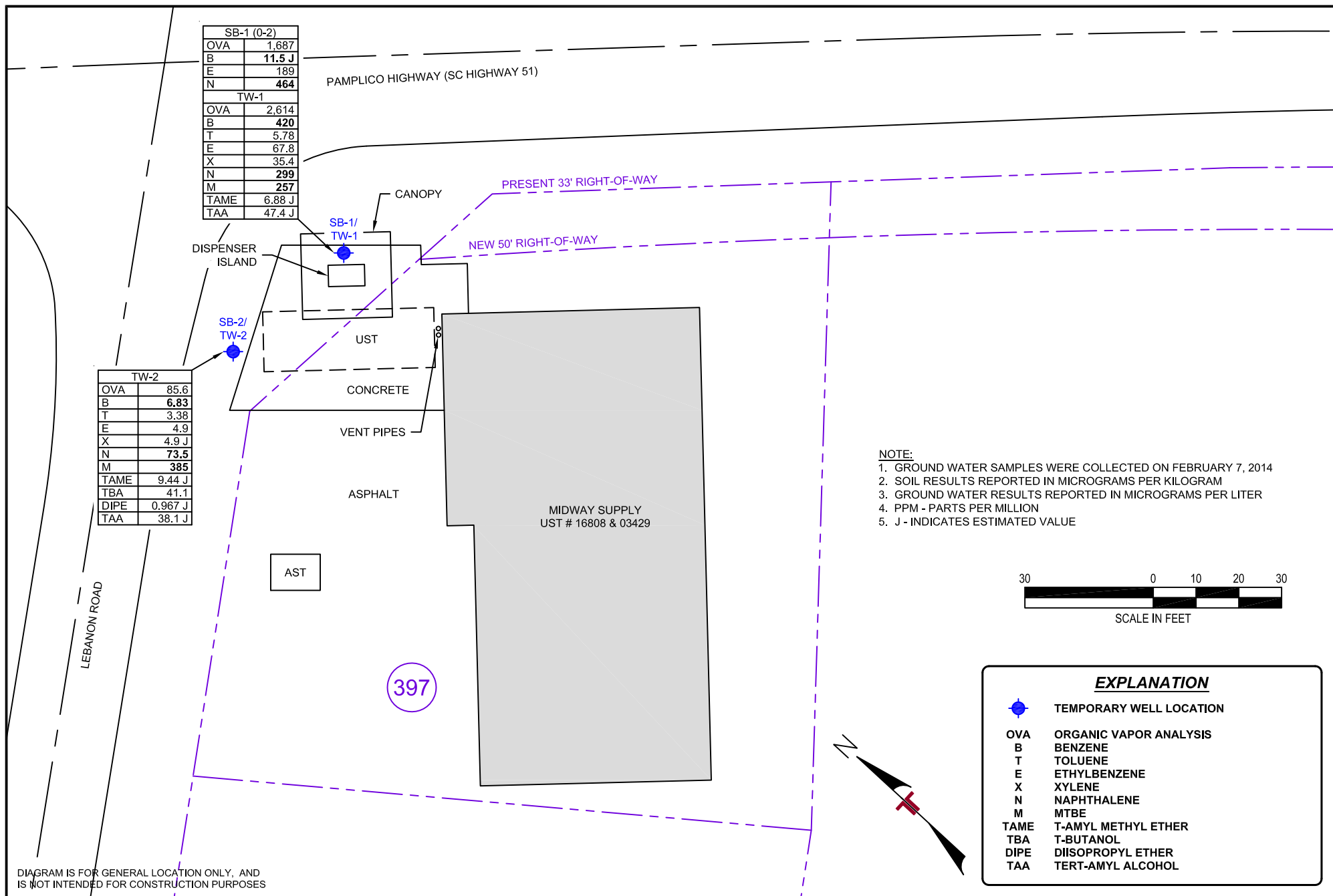
10) ne - no regulatory action level established

11) J - indicates an estimated value

12) na - Not Analyzed

Attachments

Figure 9 – Site Map
 Well Logs



Project Mngr:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
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SITE MAP - TRACT 397 (MIDWAY SUPPLY) UST PERMIT #16808 & 03249

RIGHT-OF-WAY PAMPLICO HIGHWAY
6402 PAMPLICO HIGHWAY
EFFINGHAM, SOUTH CAROLINA
UST PERMIT #16808 & 03249

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Fig No.

9

WELL LOG NO. SB-1/TW-1

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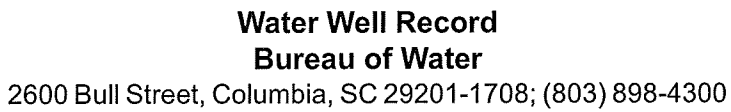
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 9 - Tract 397 Effingham, South Carolina

GRAPHIC LOG	LOCATION See Exhibit A-2		INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH	MATERIAL DESCRIPTION	Well Completion:					
	0.5	CONCRETE	Not Grouted to Surface 1.5' to 2.5' - #2 Filter Sand 8.5' to 6' - 2" (0.010) Slotted PVC					
		SAND (SP) , fine grained, brown, slight petroleum odor, moist, dense						
	3.8							
	4.0	SAND (SP) , fine grained, brown, slight petroleum odor, wet, dense						
	Soil Boring Terminated at 4 Feet							
	Temporay Well Terminated at 10 Feet							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.								
Advancement Method: Direct Push			Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.								
WATER LEVEL OBSERVATIONS			Well Started: 2/7/2014			Well Completed: 2/7/2014		
 4.3' on 2/7/2014			Drill Rig: Geoprobe			Driller: J. Chiorazzi		
			Project No.: 73138143			Exhibit: B-1		

Terracon
521 Clemson Road
Columbia, South Carolina

DHEC 1903 (07/2003)

WELL LOG NO. SB-2/TW-2

Page 1 of 1

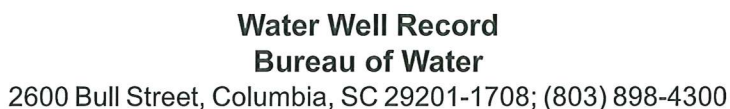
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 9 - Tract 397 Effingham, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Exhibit A-2	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
0.5	ASPHALT		Not Grouted to Surface				
	SAND (SP) , fine grained, brown, slight petroleum odor, moist, dense						
3.5							
4.0	SAND (SP) , fine grained, brown, slight petroleum odor, wet, dense						
			1.5' to 2.5' - #2 Filter Sand	5			
			8.5' to 6' - 2" (0.010) Slotted PVC	10			
<i>Temporay Well Terminated at 10 Feet</i>							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS			Well Started: 2/7/2014		Well Completed: 2/7/2014		
4.2' on 2/7/2014			Drill Rig: Geoprobe		Driller: J. Chiorazzi		
			Project No.: 73138143		Exhibit: B-2		

Terracon
521 Clemson Road
Columbia, South Carolina

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SITE 10 TRACT 402 FORMER WEBB'S GROCERY (UST # 03563) 6412 PAMPLICO HWY;

1.0 Site Description

This site is an abandoned former gas station property, as evidenced by an existing former dispenser island. According to SCDHEC records, a release was reported in 1991. Two USTs were reportedly removed, and one UST was reported filled with sand. Three monitoring wells associated with the release are located within the proposed ROW. The closest receptor to the monitoring wells is an underground storm drain culvert located approximately 5 feet from the front of the store.

2.0 Assessment Activities

Due to the proximity of the UST tank basin to the new proposed right of way an EM survey was performed as depicted on Figure 10. The results of the EM survey indicated that one UST is located within the new proposed ROW. This presence of this tank location was confirmed with a hand auger prior to boring installation.

Temporary wells (TW-1, TW-2, and TW-3) were advanced using direct-push sampling equipment at the edge of the proposed ROW. Soil Samples were collected from each boring and analyzed for OVA using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached.

Soil sample SB-1 and ground water samples TW-1, TW-2, and TW-3 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. The analytical results are shown on Table 10, below. A site layout with boring/temporary well locations is attached as Figure 10.

3.0 Results and Findings

An elevated OVA reading (> 10,000 ppm) was recorded in a soil sample collected from TW-1. The depth to ground water was recorded at depths ranging from 3 - 4 feet.

Low to moderate petroleum compound concentrations (1,620 ppb, naphthalene) were detected in the soil sample collected from SB-1, above RBLs for soil. Ground water was impacted above RBLs for ground water in both temporary wells TW-1 and TW-2.

Based on the EM survey and subsequent confirmation, a filled in-place UST is located with the new ROW. Low to moderate impact to ground water was detected above allowable levels at the edge of the right of way. Special handling and disposal of soils impacted by petroleum-contaminated ground water is may be necessary.

Site 10 Tract 402 Former Webb's Grocery (UST # 03563) 6412 Pamplico Hwy;

Table 10 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)			
	SB-1 (0 - 2)	RBSL	TW-1 4.5-8	TW-2 4.5-8	TW-3 4.5-8	RBSL / AL
OVA (ppm)	1,412	ne	2,213	749	850	ne
Benzene	38.0J	7	213	37.7	20	5
Toluene	25.8J	1,450	44	20.8	3.17	1,000
Ethylbenzene	981	1,150	659	1,140	234	700
Xylene	414	14,500	777	1,880	26.4	10,000
Naphthalene	1,620	36	109	560	136	25
MTBE	NA	ne	118	< 0.777	10.1	40

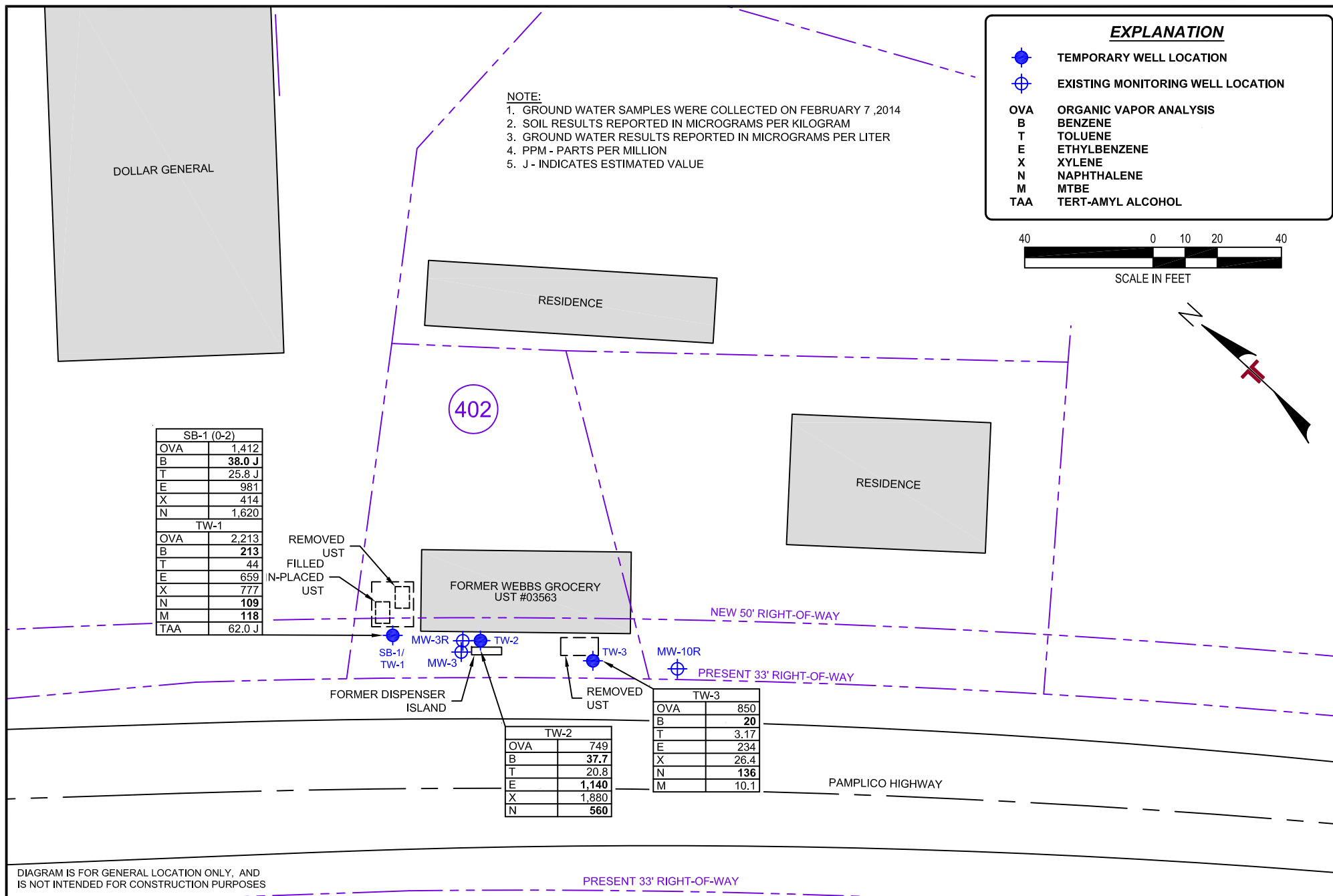
NOTES:

- 1) All samples collected on February 7, 2014
- 2) $\mu\text{g/kg}$ - micrograms per kilogram
- 3) $\mu\text{g/l}$ - micrograms per liter
- 4) OVA- Organic Vapor Analysis
- 5) parts per million (PPM)
- 6) MTBE - tert-Butyl methyl ether
- 7) 1,2-DCA - 1,2-Dichloroethane

- 8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level
- 9) Concentrations in bold represent RBSL or AI exceedance
- 10) ne - no regulatory action level established
- 11) J - indicates an estimated value
- 12) na - Not Analyzed

Attachments

Figure 10 – Site Map
 Well Logs



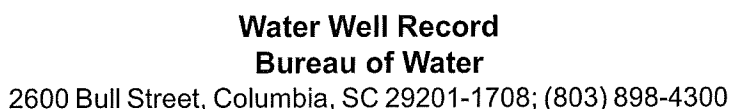
Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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SITE MAP - TRACT 402 (FORMER WEBB'S GROCERY) (UST #03563)	
RIGHT-OF-WAY PAMPLICO HIGHWAY 6412 PAMPLICO HIGHWAY EFFINGHAM, SOUTH CAROLINA UST PERMIT #03563	
69	

Fig No.
10

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WELL LOG NO. TW-2

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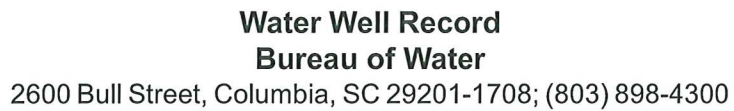
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 10 - Tract 402 Effingham, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 11	Well Completion:					
	DEPTH	MATERIAL DESCRIPTION					
	TW-2 was pushed to 8 Feet		Not Grouted to Surface 3.5' to 8' - #2 Filter Sand 4.5' to 8' - 2" (0.010) Slotted PVC				
	8.0	Temporay Well Terminated at 8 Feet					
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS				Well Started: 2/7/2014 Well Completed: 2/7/2014			
2.7' on 2/7/2014		521 Clemson Road Columbia, South Carolina		Drill Rig: Geoprobe Driller: J. Chiorazzi			
		Project No.: 73138143		Exhibit: B-2			

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-10.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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WELL LOG NO. SB-2/TW-3

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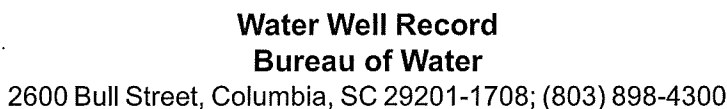
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 10 - Tract 402
Effingham, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 11	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
	FILL - SAND (SP) , with rock, coarse grained, orange, wet, loose	Not Grouted to Surface		3.0			3.2
	FILL - SAND (SP) , with rock, coarse grained, orange, saturated, loose			4.0			4.5
	Soil Boring Terminated at 4 Feet	3.5' to 8' - #2 Filter Sand		5			
		4.5' to 8' - 2" (0.010) Slotted PVC					
	Temporay Well Terminated at 8 Feet						
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS		 521 Clemson Road Columbia, South Carolina		Well Started: 2/7/2014		Well Completed: 2/7/2014	
 2.7' on 2/7/2014				Drill Rig: Geoprobe		Driller: J. Chiorazzi	
				Project No.: 73138143		Exhibit: B-3	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-10.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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SITE 11 TRACT 411 VACANT CYPRESS CREEK STORE, 6806 PAMPLICO HWY

1.0 Site Description

This site is an abandoned former gas station property with evidence of a former dispenser island within the new proposed ROW and UST vent pipes located at the building edge. The closest receptor to the dispenser island is a wetland that is located approximately 180 feet southwest from the dispenser islands.

2.0 Assessment Activities

An EM survey of areas adjacent to the ROW was conducted, as depicted on Figure 2. Two USTs were indicated by the survey and are located approximately 20 feet outside of the proposed new ROW.

Due to the shallow depth to ground water (< 2 feet), no soil samples were submitted for analysis. Two temporary wells were advanced in the vicinity of the USTs (TW-1) and dispenser island (TW-2). A site layout with boring/temporary well locations is attached as Figure 11. Ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. The analytical results are shown on Table 5, below.

3.0 Results and Findings

Low OVA readings were recorded at soil boring SB-1 and SB-2. The depth to ground water was recorded at depths ranging from 2- 3 feet, and is suspected to discharge to the adjacent wetlands.

No petroleum compounds were detected in the soil or ground water above RBSLs or AIs except for benzene (11 micrograms per liter) detected in a ground water sample collected from TW-1.

No USTs or environmental conditions are expected to impact the ROW widening at this site.

Site 11 Tract 411 Vacant Cypress Creek Store, 6806 Pamplico Hwy

Table 11 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	TW-1 (4.5 - 8)	TW-2 (4.5 - 8)	RBSL / AL
OVA (ppm)	6.8	3.6	ne
Benzene	11.3	3.6	5
Toluene	17.1	2.99	1,000
Ethylbenzene	5.28	< 0.109	700
Xylene	18.3	7.24	10,000
Naphthalene	4.71	< 0.176	25
MTBE	< 0.078	< 0.078	40
1,2 DCA	< 0.116	< 0.116	5

NOTES:

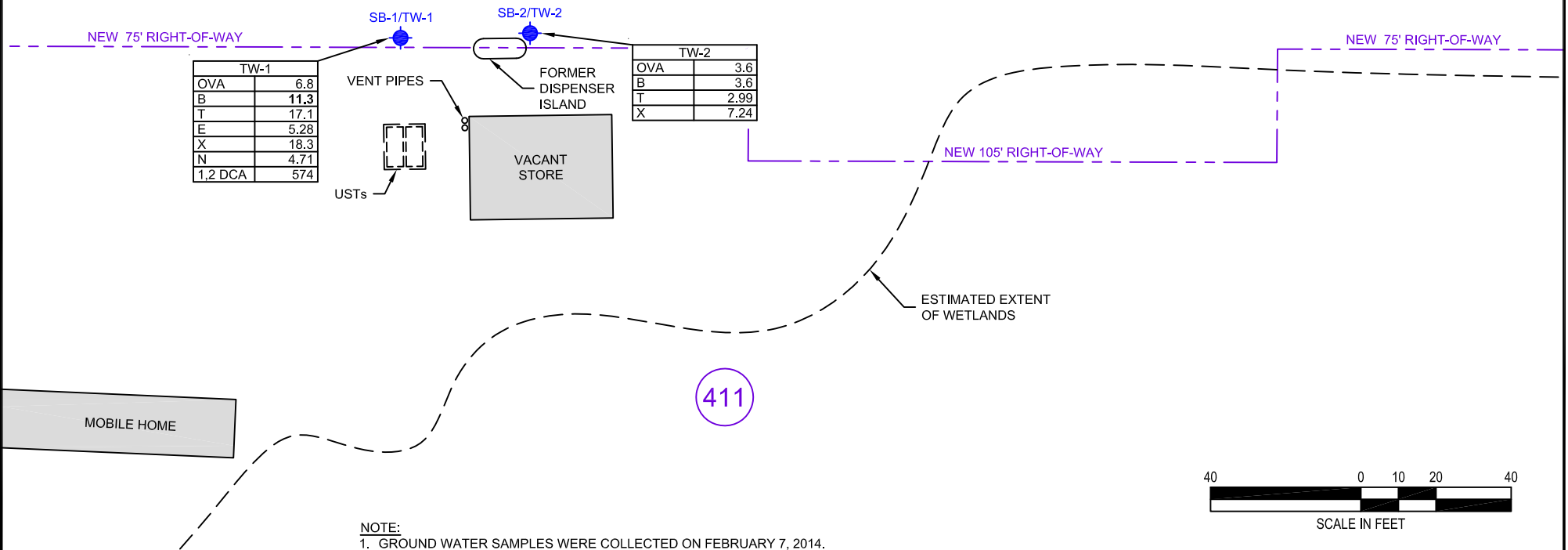
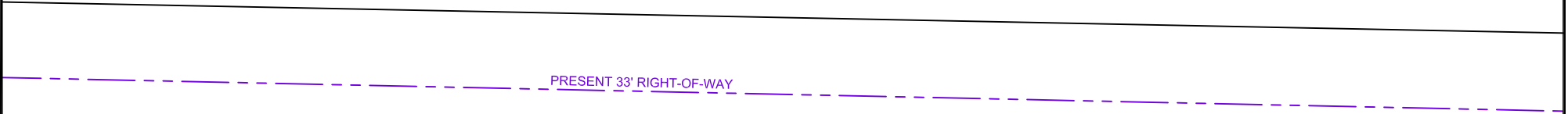
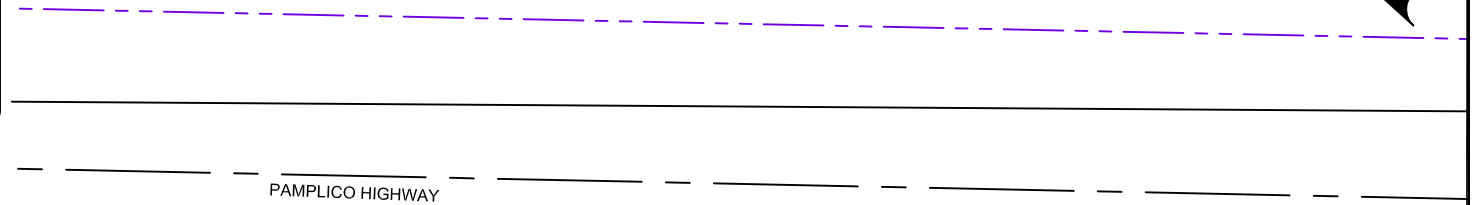
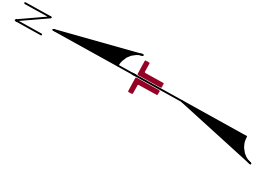
- 9) Concentrations in bold represent RBSL or
 10) ne - no regulatory action level established
 12) na - Not Analyzed

Attachments

Figure 11 – Site Map
 Well Logs

EXPLANATION

	TEMPORARY WELL LOCATION
OVA	ORGANIC VAPOR ANALYSIS
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENE
N	NAPHTHALENE
1,2 DCA	1,2 DICHLOROTHANE



- NOTE:
1. GROUND WATER SAMPLES WERE COLLECTED ON FEBRUARY 7, 2014.
 2. SOIL RESULTS REPORTED IN MICROGRAMS PER KILOGRAM
 3. GROUND WATER RESULTS REPORTED IN MICROGRAMS PER LITER
 4. PPM - PARTS PER MILLION
 5. J - INDICATES ESTIMATED VALUE

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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SITE MAP - TRACT 411 (VACANT CYPRESS CREEK STORE)

RIGHT-OF-WAY PAMPLICO HIGHWAY
6806 PAMPLICO HIGHWAY
EFFINGHAM, SOUTH CAROLINA

Fig No.

11

WELL LOG NO. SB-1/TW-1

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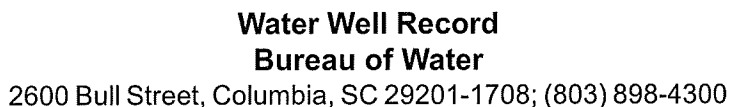
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 11 - Tract 411
Effingham, South Carolina

GRAPHIC LOG	LOCATION See Figure 11		INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)			
	DEPTH	MATERIAL DESCRIPTION	Well Completion:								
	2.5	<u>SAND (SP)</u> , fine to medium grained, tan, moist, loose	Not Grouted to Surface		5			1.85			
	3.5	<u>SAND (SP)</u> , fine to medium grained, tan, saturated, loose									
	5.0	<u>SAND (SP)</u> , fine to medium grained, gray, saturated, medium dense, hydric soils	3.5' to 8' - #2 Filter Sand								
			4.5' to 8' - 2" (0.010) Slotted PVC								
Temporay Well Terminated at 8 Feet											
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push											
Advancement Method: Direct Push						Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.											
WATER LEVEL OBSERVATIONS 2.6' on 2/7/2014			 521 Clemson Road Columbia, South Carolina			Well Started: 2/7/2014			Well Completed: 2/7/2014		
						Drill Rig: Geoprobe			Driller: J. Chiorazzi		
						Project No.: 73138143			Exhibit: B-1		

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WELL LOG NO. SB-2/TW-2

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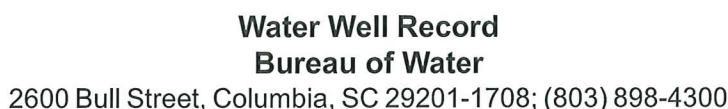
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 11 - Tract 411 Effingham, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 11	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
2.0	<u>SAND (SP)</u> , fine to medium grained, tan, moist, loose		Not Grouted to Surface	5			1.79
4.0	<u>SAND (SP)</u> , fine to medium grained, tan, wet, loose						
6.0	<u>SAND (SP)</u> , fine to medium grained, gray, saturated, medium dense, hydric soil		3.5' to 8' - #2 Filter Sand				
7.0	<u>SAND (SP)</u> , medium grained, light tan, saturated, medium dense		4.5' to 8' - 2" (0.010) Slotted PVC				
8.0	<u>SAND (SP)</u> , medium to coarse grained, gray, saturated, medium dense, hydric soil						
Temporay Well Terminated at 8 Feet							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS 2.7' on 2/7/2014			Terracon 521 Clemson Road Columbia, South Carolina		Well Started: 2/7/2014 Well Completed: 2/7/2014		
			Drill Rig: Geoprobe		Driller: J. Chiorazzi		
			Project No.: 73138143		Exhibit: B-2		

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-11.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

DHEC 1903 (07/2003)

SITE 12 TRACT 536 HYMAN OIL CAR WASH (UST # 03462), 963 N. PAMPLICO HWY

1.0 Site Description

The site is an abandoned former gas station property, registered under UST Permit # 03462. The site is currently operating as a self-service car wash. Based on a FOI review, two USTs were removed from the ground in 1993 from an area located outside of the proposed ROW. A site layout with boring/temporary well locations is attached as Figure 12

The site is under active corrective action through the SCHEC UST Program via monitored natural attenuation (MNA). The site contains 15 monitoring or extraction wells surrounding the former dispenser island, located inside of the proposed R/W.

2.0 Assessment Activities

Due to the location of the abandoned USTs outside of the proposed R/W, an EM survey was not conducted at this site.

Two temporary wells (TW-1, TW-2) were advanced using direct-push sampling equipment in the dispenser island area. Soil Samples were collected from each boring and analyzed for OVA using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached.

Ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. The analytical results are shown on Table 12, below.

3.0 Results and Findings

Elevated OVA readings were recorded at soil boring SB-1 and SB-2. The depth to ground water was recorded at depths ranging from 5-6 feet.

Elevated petroleum compounds (> 100,000 ppb) were detected in the soil sample collected from SB-1, above RBLs for soil. Ground water was impacted above RBSLs for ground water in both temporary wells TW-1 and TW-2.

The UST dispenser system is within the proposed ROW, and will require complete demolition and removal. Accordingly, the following activities should be conducted prior to site widening activities:

- Monitoring wells affected by the widening should be abandoned in accordance with the SC Well Standards and Regulations,
- Based on the analytical results, special handling and disposal of soils impacted by petroleum contaminated ground water will be necessary.

Site 12 Tract 536 Hyman Oil Car Wash (UST # 03462), 963 N. Pamplico Hwy

Table 12 – Analytical Data Summary of Detected Compounds

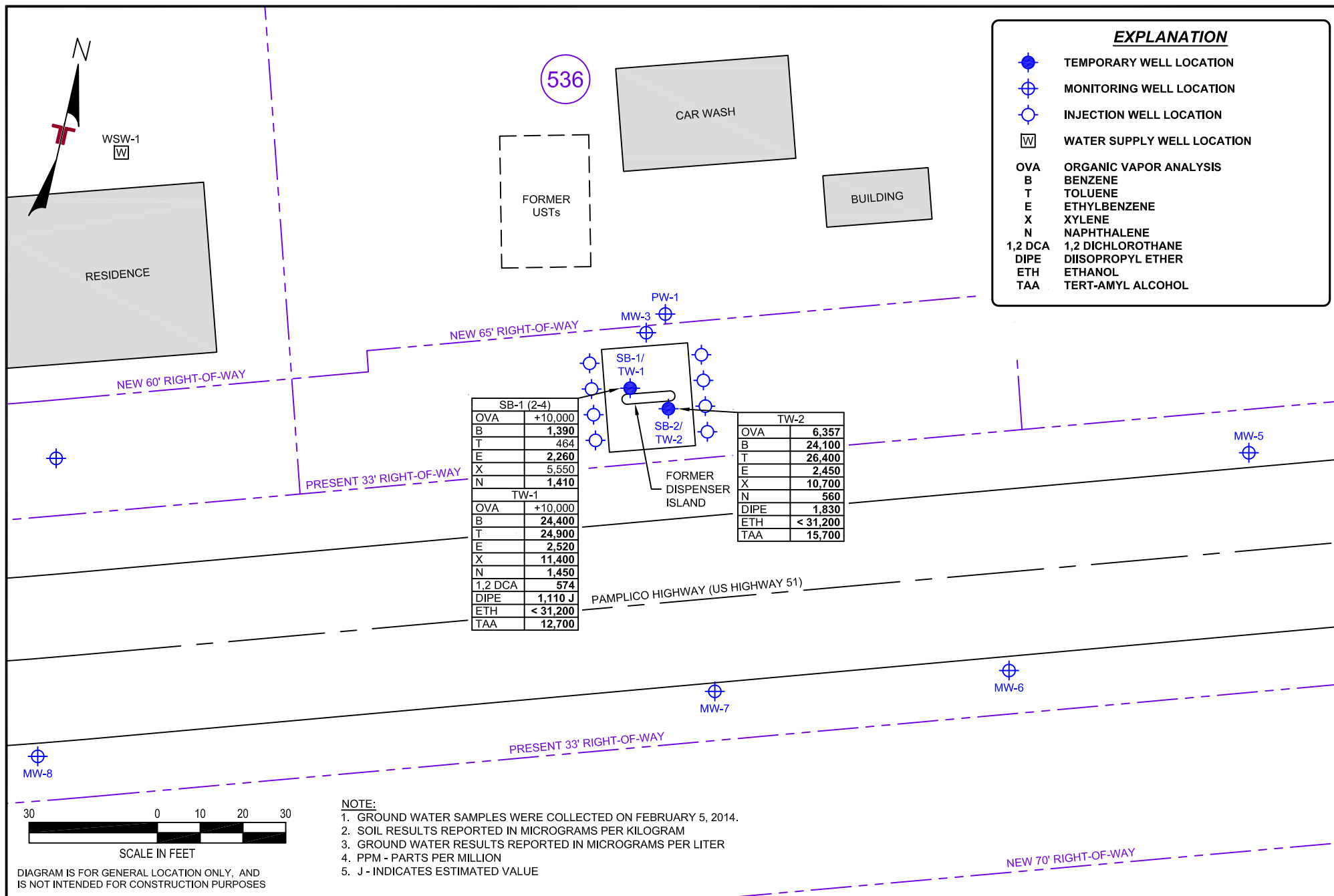
Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (2-4)	RBSL	TW-1 8.5-12	TW-2 8.5-12	RBSL / AL
OVA (ppm)	+10,000	ne	+10,000	+10,000	ne
Benzene	1,390	7	24,400	24,100	5
Toluene	464	1,450	24,900	26,400	1,000
Ethylbenzene	2,260	1,150	2,520	2,450	700
Xylene	5,550	14,500	11,400	10,700	10,000
Naphthalene	1,410	36	1,450	560	25
MTBE	NA	ne	< 19.4	< 19.4	40
1,2 DCA	NA	ne	574	< 1.16	5
Di-isopropyl ether (DIPE)	NA	ne	1,110J	1,830	150
Tert-amyl alcohol (TAA)	NA	ne	12,700	15,700	240

NOTES:

- | | |
|---|--|
| 1) All samples collected on February 5, 2014 | 8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level |
| 2) $\mu\text{g/kg}$ - micrograms per kilogram | 9) Concentrations in bold represent RBSL or AL exceedance |
| 3) $\mu\text{g/l}$ - micrograms per liter | 10) ne - no regulatory action level established |
| 4) OVA- Organic Vapor Analysis | 11) J - indicates an estimated value |
| 5) parts per million (PPM) | 12) na - Not Analyzed |
| 6) MTBE - tert-Butyl methyl ether | |
| 7) 1,2-DCA - 1,2-Dichloroethane | |

Attachments

Figure 12 – Site Map
 Well Logs



Project Mng'r:	RWN
Drawn By:	PTK
Checked By:	RWN
Approved By:	PMH

Project No.	73138143
Scale:	AS SHOWN
File No.	73138143
Date:	APRIL 2014

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SITE MAP - TRACT 536 (HYMAN OIL CAR WASH)

RIGHT-OF-WAY PAMPLICO HIGHWAY
 963 N. PAMPLICO HIGHWAY
 PAMPLICO, SOUTH CAROLINA
 UST PERMIT #03462

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Fig No.

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WELL LOG NO. SB-1/TW-1

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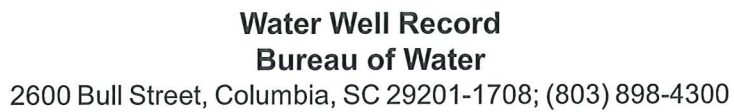
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 12 - Tract 536
Pamplico, South Carolina

GRAPHIC LOG	LOCATION See Figure 12		INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH	MATERIAL DESCRIPTION	Well Completion:					
	0.5	CONCRETE	Not Grouted to Surface		5			2,870
	3.0	SAND (SP) , some organics, fine to medium grained, dark brown, high petroleum odor, dry, medium dense						
	4.5	SAND (SP) , fine to medium grained, brown, high petroleum odor, dry, medium dense						
	8.5	CLAYEY SAND (SC) , fine to medium grained, mottled (orange, red, gray), high petroleum odor, wet, dense	7.5' to 12' - #2 Filter Sand				3.67%	
	12.0	CLAYEY SAND (SC) , fine to medium grained, mottled (orange, red, gray), high petroleum odor, saturated, dense						
Temporay Well Terminated at 12 Feet			8.5' to 12' - 2" (0.010) Slotted PVC		10			21.0
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push								
Advancement Method: Direct Push			Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.								
WATER LEVEL OBSERVATIONS			Terracon 521 Clemson Road Columbia, South Carolina		Well Started: 2/7/2014 Well Completed: 2/7/2014		Drill Rig: Geoprobe Driller: J. Chiorazzi	
			Project No.: 73138143		Exhibit: B-1		86	

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WELL LOG NO. SB-2/TW-2

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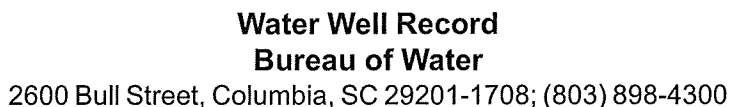
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 12 - Tract 536
Pamplico, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 12	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
0.5	CONCRETE		Not Grouted to Surface	5	▽	X	2,213
	SAND (SP) , medium grained, brown, high petroleum odor, moist, loose						7,477
4.5	CLAYEY SAND (SC) , fine to medium grained, mottled (orange, tan, gray), high petroleum odor, moist, dense						5,584
8.0	CLAYEY SAND (SC) , fine to medium grained, mottled (orange, tan, gray), high petroleum odor, saturated, dense		7.5' to 12' - #2 Filter Sand	10			5.83%
12.0	CLAYEY SAND (SC) , fine to medium grained, mottled (orange, tan, gray), high petroleum odor, saturated, dense		8.5' to 10' - 2" (0.010) Slotted PVC				
Temporay Well Terminated at 12 Feet							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS ▽ 5.3' on 2/7/2014			Terracon 521 Clemson Road Columbia, South Carolina		Well Started: 2/7/2014 Well Completed: 2/7/2014		
			Drill Rig: Geoprobe		Driller: J. Chiorazzi		
			Project No.: 73138143		Exhibit: B-2		

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-12.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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SITE 13 TRACTS 565 GIBB'S GROCERY (UST # 03463), 863 N. PAMPLICO HWY

1.0 Site Description

The site is an abandoned former gas station property, registered under UST permit #03463. Based on a FOI data review, three USTs were removed from the ground in 1993, and one 2,000 gallon UST still remains at the site. A former dispenser island is constructed above the current UST. A site layout with site features is attached as Figure 13.

The closest receptor to the monitoring wells is an irrigation supply well (WSW-3) located approximately 80 feet from the former dispenser island. The site is under Active Corrective Action and is currently reported to be Monitored Natural Attenuation. Six monitoring wells are located inside of the proposed R/W.

2.0 Assessment Activities

Due to the reported location of the USTs inside and outside of the proposed ROW, an EM survey was conducted at this site. The results of the survey indicate the current tank basin is located within 10 feet outside of the proposed R/W.

Two temporary wells (TW-1, TW-2) were advanced using direct-push sampling equipment in the dispenser island area. Soil Samples were collected from each boring and analyzed for Organic Vapor Analysis (OVA) using a Foxboro Century 128 Flame Ionization Detector (FID). The OVA results are included on the boring logs generated for each temporary well, attached.

Ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. The analytical results are shown on Table 13, below.

3.0 Results and Findings

Elevated OVA readings were recorded at soil borings SB-1 and SB-2. The depth to ground water was recorded at depths ranging from 5- 6 feet.

Elevated petroleum compounds (> 100,000 ppb) were detected in the soil sample collected from SB-1, above RBLs for soil. Ground water was impacted above RBLs for ground water in both temporary wells TW-1 and TW-2.

The following activities should be conducted prior to site widening activities:

- Monitoring wells affected by the widening should be abandoned in accordance with the SC Well Standards and Regulations,
- Based on the analytical results, special handling and disposal of soils impacted by petroleum contaminated ground water will be necessary.

Site 13 Tract 565 Gibb's Grocery (UST # 03463), 863 N. Pamplico Hwy

Table 13 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (0-2)	RBSL	TW-1 3.5-7	TW-2 4.5-8	RBSL / AL
OVA (ppm)	> 10,000	ne	6,357	> 10,000	ne
Benzene	25,400	7	1,870	2,050	5
Toluene	6950J	1,450	51.8	1,010	1,000
Ethylbenzene	199,000	1,150	661	3,340	700
Xylene	414,000	14,500	426	7,900	10,000
Naphthalene	95,700	36	651	847	25
MTBE	NA	ne	79.7	29.7J	40
1,2 DCA	NA	ne	< 2.9	< 5.81	5
Diisopropyl ether (DIPE)	NA	ne	85.5J	180J	150
Tert-Amyl Alcohol (TAA)	NA	ne	312J	919J	240

NOTES:

1) All samples collected on February 5, 2014

2) µg/kg - micrograms per kilogram

3) µg/l - micrograms per liter

4) OVA- Organic Vapor Analysis

5) parts per million (PPM)

6) MTBE - tert-Butyl methyl ether

7) 1,2-DCA - 1,2-Dichloroethane

8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level

9) Concentrations in bold represent RBSL or AL exceedance

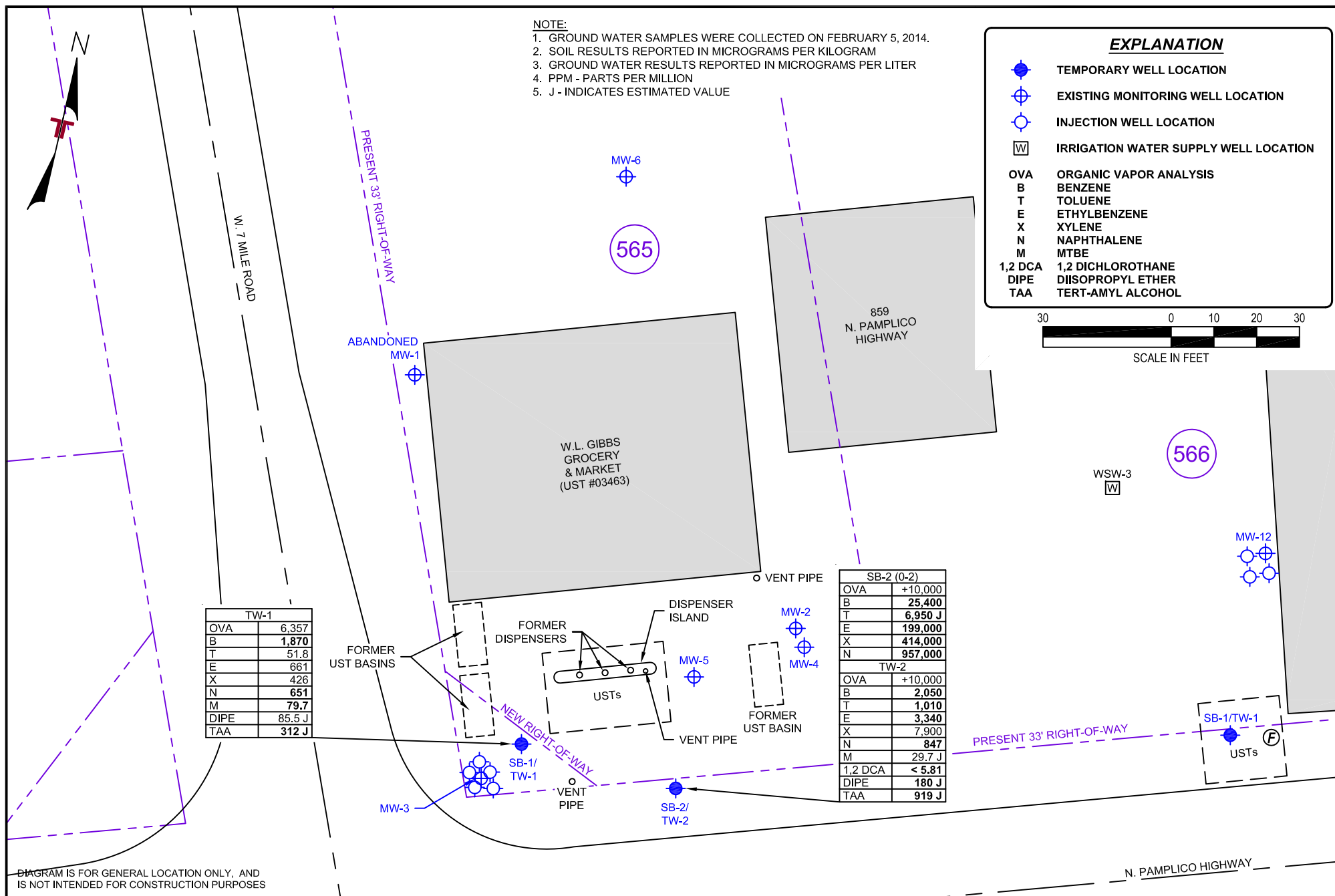
10) ne - no regulatory action level established

11) J - indicates an estimated value

12) na - Not Analyzed

Attachments

Figure 13 – Site Map
 Well Logs



Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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 Consulting Engineers and Scientists
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SITE MAP - TRACT 565 (GIBB'S GROCERY)

RIGHT-OF-WAY PAMPLICO HIGHWAY
 863 N. PAMPLICO HIGHWAY
 PAMPLICO, SOUTH CAROLINA
 UST PERMIT #03463

92

Fig No.

13

WELL LOG NO. SB-1/TW-1

Page 1 of 1

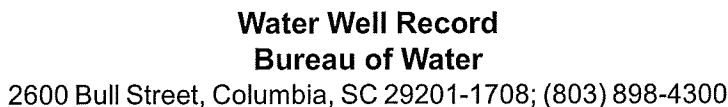
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 13 - Tract 565
Pamplico, South Carolina

GRAPHIC LOG	LOCATION See Figure 13	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	
	DEPTH MATERIAL DESCRIPTION	Well Completion:					
	0.5 CONCRETE	Not Grouted to Surface				945	
	3.0 SAND (SP) , medium grained, gray, high petroleum odor, moist, loose, poorly sorted						
	7.0 SAND (SP) , medium grained, gray, high petroleum odor, saturated, loose, poorly sorted	2.5' to 3.5' - #2 Filter Sand 3.5' to 7' - 2" (0.010) Slotted PVC					
Refusal on Concrete of Old Tank Basin at 7 Feet							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS 2.5' on 2/6/2014				Well Started: 2/6/2014		Well Completed: 2/6/2014	
				Drill Rig: Geoprobe		Driller: J. Chiorazzi	
				Project No.: 73138143		Exhibit: B-1	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-13.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

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WELL LOG NO. SB-2/TW-2

Page 1 of 1

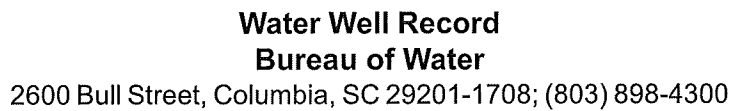
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 13 - Tract 565
Pamplico, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 13	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
0.5	ASPHALT		Not Grouted to Surface				
	SAND (SP) , medium grained, tan to brown, high petroleum odor, moist, loose						
2.0	SAND (SP) , medium grained, gray, high petroleum odor, moist to wet, loose						
3.5	3.5' to 4.5' - #2 Filter Sand						
4.5	4.5' to 8' - 2" (0.010) Slotted PVC						
8.0	Boring Terminated at 8 Feet						
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS			Well Started: 2/6/2014		Well Completed: 2/6/2014		
2.6' on 2/6/2014			Drill Rig: Geoprobe		Driller: J. Chiorazzi		
			Project No.: 73138143		Exhibit: B-2		

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SITE 14 TRACT 584 RAIDER STATION (UST # 19301), 848 N. PAMPLICO HWY

1.0 Site Description

This site is an operating as the Raider Station convenience store (UST # 19301). A UST system is operated at the site, all outside of the proposed ROW. There have been no reported releases from this system.

2.0 Assessment Activities

Since the location of the existing USTs are known, an EM survey was not conducted at this site. No USTs are suspected to be within the proposed ROW area.

Three temporary wells were advanced using direct-push sampling equipment within the ROW in front the dispenser islands. Soil Samples were collected from each boring and analyzed for OVA using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached.

Soil Sample SB-2 was submitted for laboratory analysis for petroleum compounds per EPA Method 8260. Ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260. A site layout with boring/temporary well locations is attached as Figure 1.

3.0 Results and Findings

The depth to ground water was recorded between 2 to 3.2 feet. No petroleum compounds were detected in the soil or ground water samples collected.

No USTs, piping, or environmental conditions are expected to impact the construction activities for the ROW widening at this site.

(No compounds were detected; therefore, no analytical data summary table was generated for this site.)

Attachments

**Figure 14 – Site Map
Well Logs**

SITE 15 TRACT 566 OLD JUNQUE SHOP, 853 N. PAMPLICO HWY

1.0 Site Description

The site is former tractor sales and repair facility, currently operated as a Thrift Store. A former dispenser island was suspected to be located near the west side of the Thrift Store building in the proposed ROW. No records of a UST system were available from the SCDHEC UST registry.

The site is located one parcel over from The Former Gibbs Grocery (UST#03463). Monitoring wells and remediation injection wells are located on this property associated with the UST #03463 release. A site layout with boring/temporary well locations is attached as Figure 2.

2.0 Assessment Activities

An EM survey was conducted at this site to locate the position of the UST with respect to the a fill port located within the existing ROW. The survey indicated USTs are present within the present ROW. The approximate UST and ROW locations are shown on Figure 15.

A temporary well was advanced using direct-push sampling equipment in the vicinity of the suspected UST area. Soil Samples were collected and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil and ground water samples from TW-1 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260.

3.0 Results and Findings

Low OVA readings were recorded at soil boring SB-1. The depth to ground water was recorded at a depth of 3.5 feet. Petroleum compounds were detected above RBSLs for benzene in a ground water sample. The analytical results are shown on Table 15.

A non-regulated UST identified to be within the proposed ROW should be removed prior to or as a part of the ROW expansion. Special handling and disposal of soils impacted by petroleum contaminated ground water may be necessary.

Site 15 Tract 566 Old Junque Shop, 853 N. Pamplico Hwy

Table 15 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)	GROUND WATER (ug/l)	
	SB-1 (6 - 8)	TW-1 8.5-12	RBSL / AL
OVA (ppm)	9.83	6,357	ne
Benzene	NO COMPOUNDS DETECTED	39	5
Toluene		17.9	1,000
Ethylbenzene		35.8	700
Xylene		43.4	10,000
Naphthalene		21.4	25
MTBE		0.845J	40
TAA		42.7	240

NOTES:

- 1) All samples collected on February 5, 2014
- 2) $\mu\text{g/kg}$ - micrograms per kilogram
- 3) $\mu\text{g/l}$ - micrograms per liter
- 4) OVA- Organic Vapor Analysis
- 5) parts per million (PPM)
- 6) MTBE - tert-Butyl methyl ether
- 7) 1,2-DCA - 1,2-Dichloroethane

- 8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level
- 9) Concentrations in bold represent RBSL or AL exceedance
- 10) ne - no regulatory action level established
- 11) J - indicates an estimated value
- 12) na - Not Analyzed

Attachments

Figure 15 – Site Map
 Well Log

NOTE:

1. GROUND WATER SAMPLES WERE COLLECTED ON FEBRUARY 5, 2014.
2. SOIL RESULTS REPORTED IN MICROGRAMS PER KILOGRAM
3. GROUND WATER RESULTS REPORTED IN MICROGRAMS PER LITER
4. PPM - PARTS PER MILLION
5. J - INDICATES ESTIMATED VALUE

EXPLANATION

-  TEMPORARY WELL LOCATION
-  EXISTING MONITORING WELL LOCATION
-  INJECTION WELL LOCATION
-  IRRIGATION WATER SUPPLY WELL LOCATION
-  UST FILL PORT
- OVA** ORGANIC VAPOR ANALYSIS
- B** BENZENE
- T** TOLUENE
- E** ETHYLBENZENE
- X** XYLENE
- N** NAPHTHALENE
- M** MTBE
- DIPE** DIISOPROPYL ETHER
- TAA** TERT-AMYL ALCOHOL

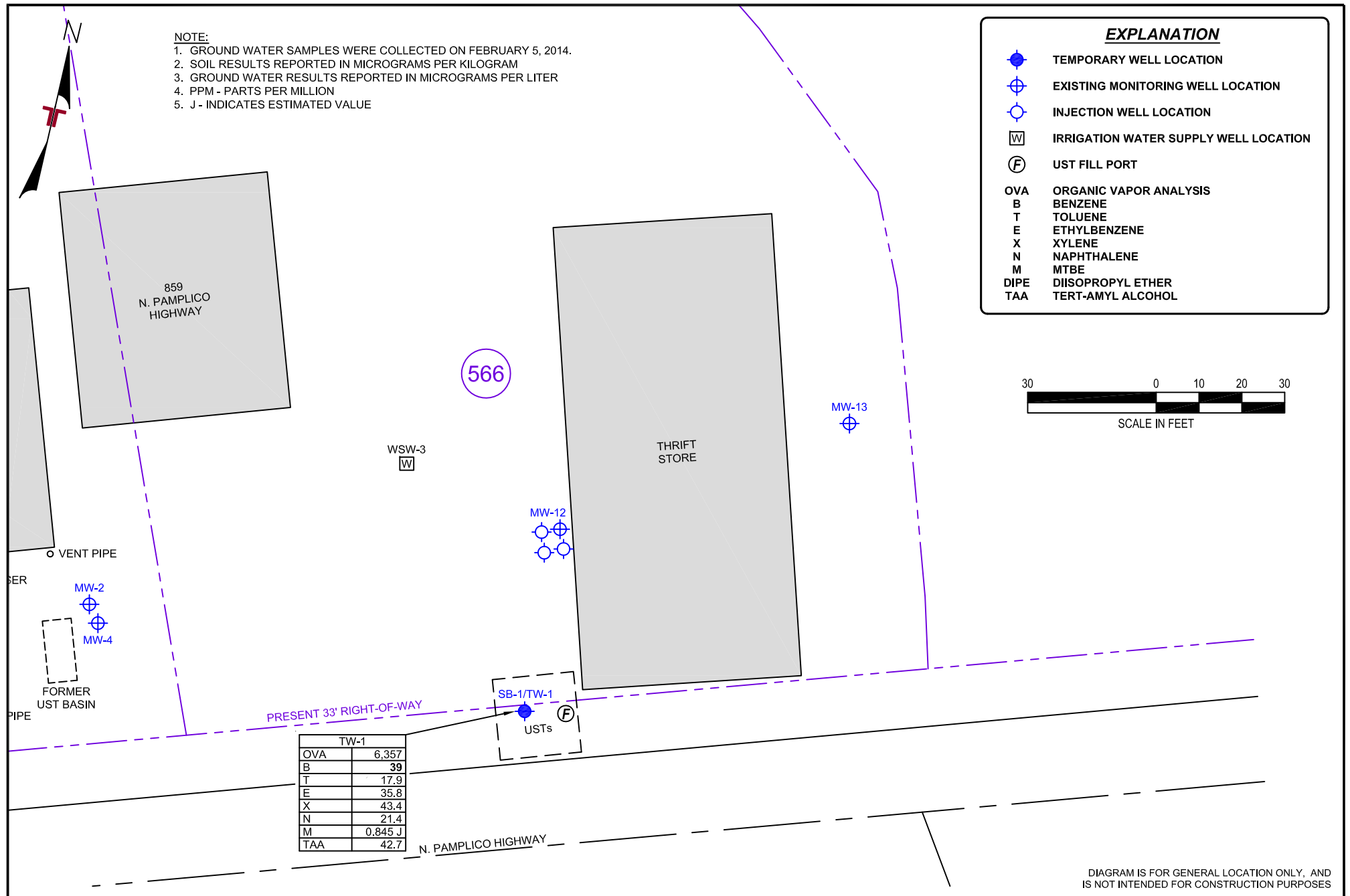
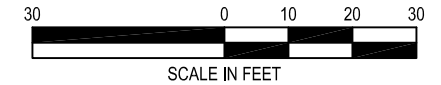


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mng'r:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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SITE MAP - TRACT 566 (OLD JUNQUE SHOP)

RIGHT-OF-WAY PAMPLICO HIGHWAY
853 N. PAMPLICO HIGHWAY
HYMAN, SOUTH CAROLINA

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Fig No.

15

WELL LOG NO. SB-1/TW-1

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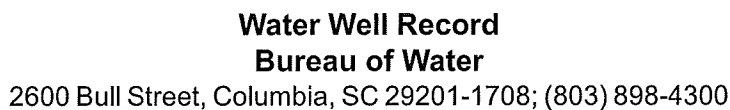
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 15 - Tract 566
Hyman, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 15	Well Completion:					
	DEPTH	MATERIAL DESCRIPTION					
		<u>SAND (SP)</u> , medium grained, tan, moist, loose					5.69
	3.0						
		<u>CLAYEY SAND (SC)</u> , medium grained, tan, moist, medium dense					3.85
	4.5						
		<u>CLAYEY SAND (SC)</u> , fine to medium grained, mottled (orange, red, gray), moist, very dense					4.16
	8.5						
		<u>SAND (SP)</u> , medium grained, orange, saturated, loose					9.83
	10.5						
		<u>SAND (SP)</u> , medium grained, gray, moist, medium dense					
	11.5						
		<u>SAND (SP)</u> , medium grained, tan, saturated, loose					
	12.0						
	Temporay Well Terminated at 12 Feet						
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push				Notes:			
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS				Well Started: 2/6/2014		Well Completed: 2/6/2014	
3.4' on 2/6/2014				Drill Rig: Geoprobe		Driller: J. Chiorazzi	
				Project No.: 73138143		Exhibit: B-1	

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SITE 16 TRACT 673 - PANTRY 3326 (UST # 03556), 103 N. PAMPLICO HWY.

This site is an active gas station convenience store operating as Pantry 3326 convenience store under UST Permit # 13244. The site maintains a UST system consisting of four gasoline USTs, distribution lines, pump islands and canopy. The UST system is located adjacent to the current ROW. According to the SCDOT, there are currently no plans for ROW expansion at this parcel. The approximate UST and ROW locations are shown on Figure 16.

In 1989, a release was reported from this system from UST # 03556 (Formerly SC-654). Assessment has been conducted since 1992 that has defined the extent of the hydrocarbon plume. Six monitoring wells are located adjacent to the current ROW. A comprehensive ground water sampling event was conducted in December 2013. Based on the 2013 results, four of these wells have petroleum hydrocarbon concentrations above RBLs. The depth to ground water was reported to be approximately five feet in the vicinity of these wells.

2.0 Assessment Activities

Based on the 2013 groundwater data review, and since the entire UST system is outside of the proposed ROW, no assessment was conducted at this site. A site map showing the December 2003 ground water quality conditions (Terracon assessment report) is included below.

3.0 Results and Findings

Since there is no proposed ROW expansion, the UST system should not be affected by the proposed activity. However, should road improvements require excavation to the ground water, impacted soils special handling and disposal of soils impacted by petroleum contaminated ground water may be necessary.

Attachments

Figure 16 – Site map and ground water quality from previous SCDHEC UST assessment (Terracon, December 2013).

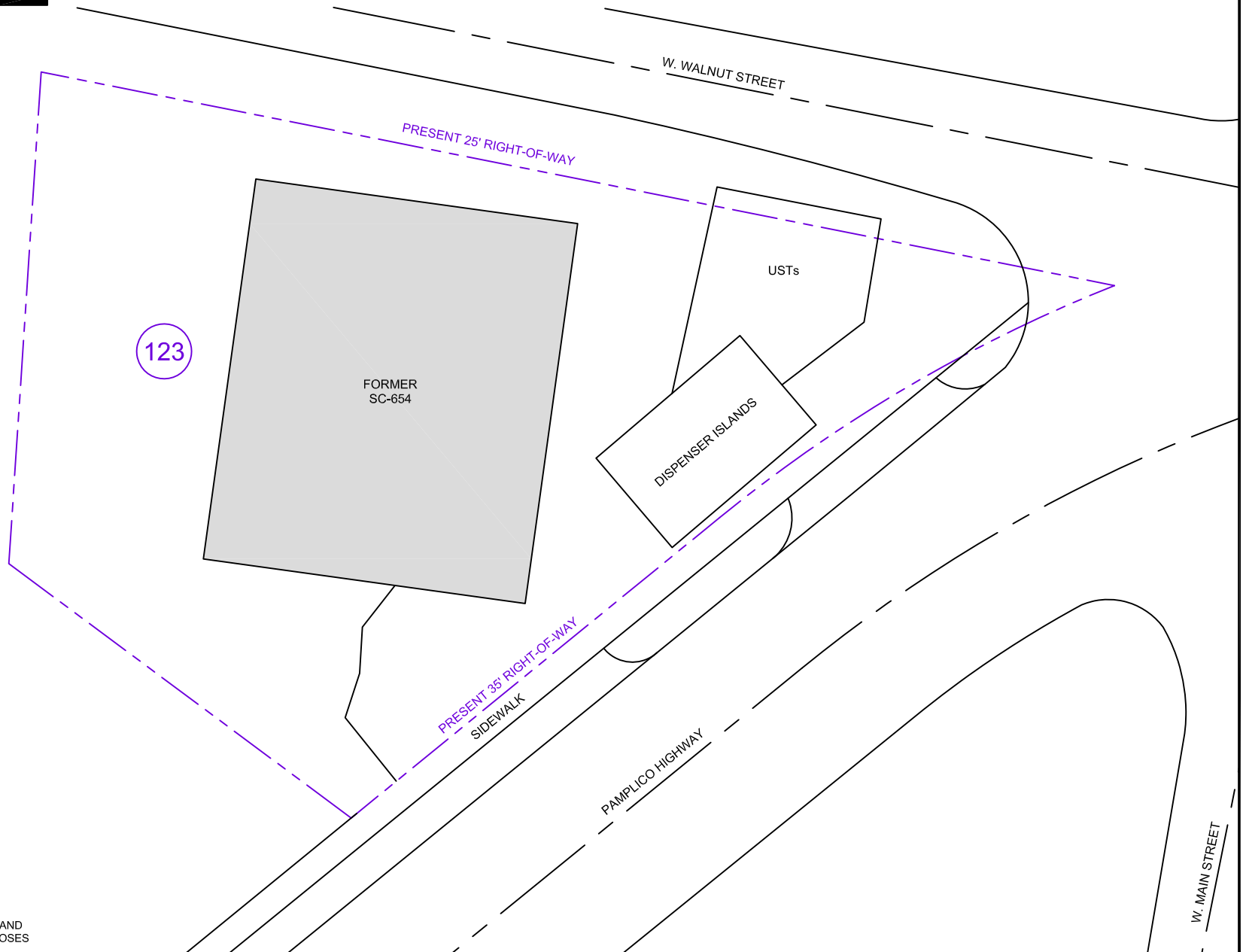
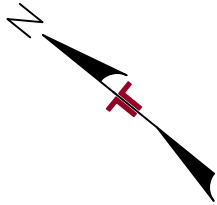
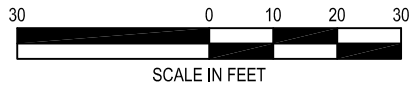


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND
IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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Consulting Engineers and Scientists

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SITE MAP - TRACT 673 (PANTRY 3326)

RIGHT-OF-WAY PAMPLICO HIGHWAY
103 N. PAMPLICO HIGHWAY
PAMPLICO, SOUTH CAROLINA
UST PERMIT #13244

104

Fig No.

16

SITE 17 TRACT 792 BAGGETT'S GULF (UST# 03542) 105 S. WALNUT ST.

This site is a former service gas station previously operated as Baggett's Gulf under UST Permit # 03542. Six UST were reportedly abandoned by removal prior to 1992.

According to the SCDOT, there are currently no plans for ROW expansion at this parcel. The approximate former UST and ROW locations are shown on Figure 17.

In 1991, a release was reported from this system. Assessment has been conducted since 1992 to define the extent of the hydrocarbon plume. Three shallow monitoring wells (MW-1, MW-2, MW-5) are located adjacent to the current ROW, shown on Figure 17. A comprehensive ground water sampling event was conducted in 2004 by Delta Environmental Consultants. Based on the 2004 results, these wells have petroleum hydrocarbon concentrations above RBSLs. The depth to ground water was reported to be approximately five feet in the vicinity of these wells.

2.0 Assessment Activities

Based on the 2004 groundwater data review, and since the entire UST system is outside of the proposed ROW, no assessment was conducted at this site.

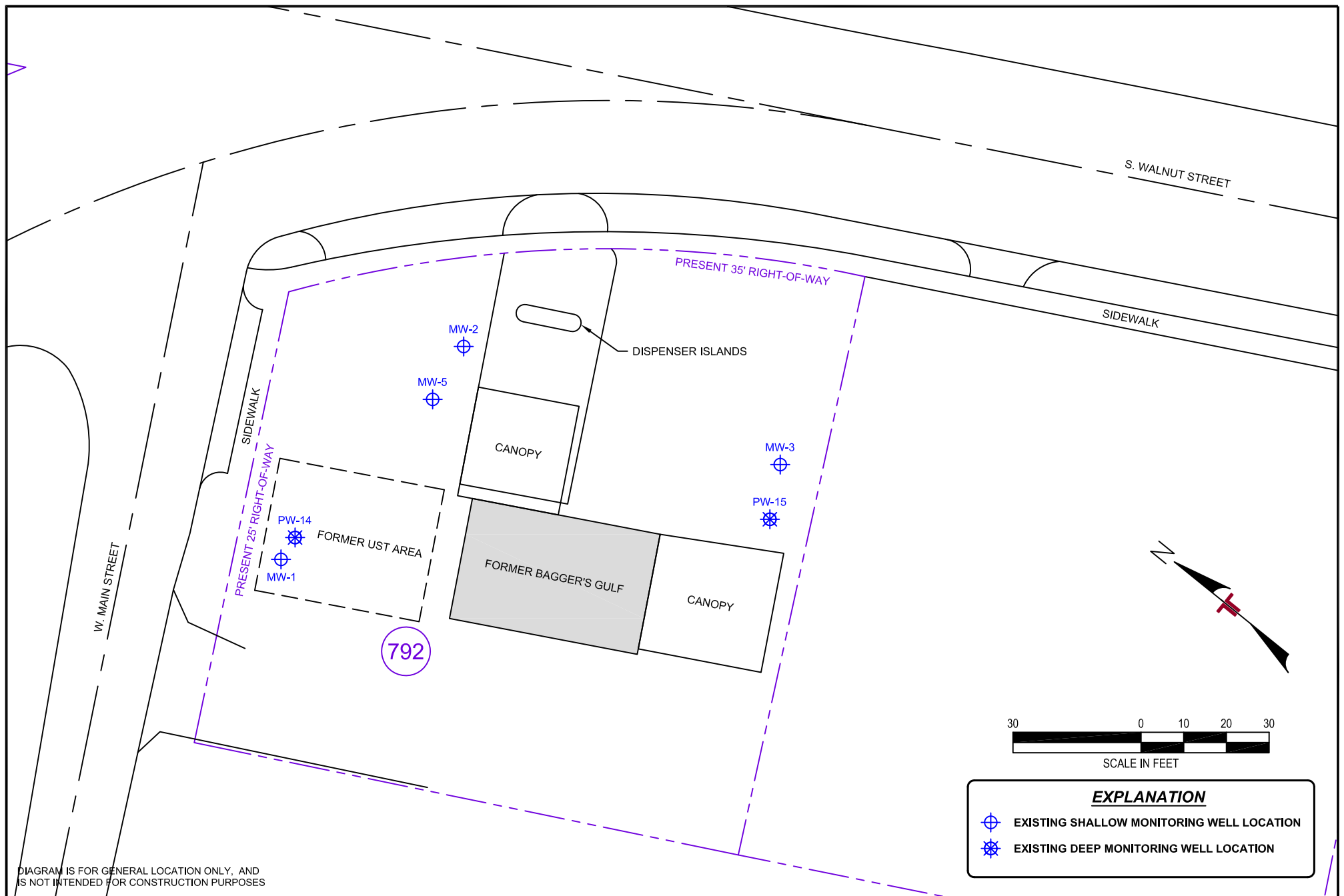
3.0 Results and Findings

Since there is no proposed ROW expansion, the UST system should not be affected by the proposed activity. However, should road improvements require excavation to the ground water, impacted soils special handling and disposal of soils impacted by petroleum contaminated ground water field may be necessary.

Attachments

Figure 17 – Site Map

Site maps and ground water quality from previous SCDHEC UST assessment (Delta Environmental report, October 2004).



Project Mngr:	RWN
Drawn By:	PTK
Checked By:	RWN
Approved By:	PMH
Project No.	73138143
Scale:	AS SHOWN
File No.	73138143
Date:	APRIL 2014

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SITE MAP - TRACT 792 (BAGGETT'S GULF) RIGHT-OF-WAY PAMPLICO HIGHWAY 105 S. WALNUT STREET PAMPLICO, SOUTH CAROLINA UST PERMIT #03542 & 03556	106
--	------------

Fig No.
17

SITE 18 TRACT 831 EDWARDS ROAD STORE, 1570 S. PAMPLICO HWY.

1.0 Site Description

The site is a vacant, former country store with a visible heating oil fill port located at the corner of the store building, inside of the proposed ROW. The UST system and majority of the store and is within the proposed ROW, and will require complete demolition and removal. The approximate UST and ROW locations are shown on Figure 18.

2.0 Assessment Activities

An EM survey was not conducted at this site due to the known location of the heating oil tank with respect to fill ports and vent pipe.

Two temporary wells were advanced using direct-push sampling equipment at each end of the UST. Soil samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil sample SB-1 and ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260.

3.0 Results and Findings

Low OVA readings were recorded at soil boring SB-1. The depth to ground water was recorded at depths ranging from 6-7.6 feet. Petroleum compounds were detected above RBSLs in the soil sample collected from TW-1. The analytical results are shown, below.

The abandoned store and UST were identified to be within the proposed ROW should be removed prior to or as a part of the ROW expansion. Special handling and disposal of soils impacted by petroleum contaminated ground water may be necessary.

Site 18 Tract 831 Edwards Road Store, 1570 S. Pamplico Hwy.

Table 18 – Analytical Data Summary of Detected Compounds

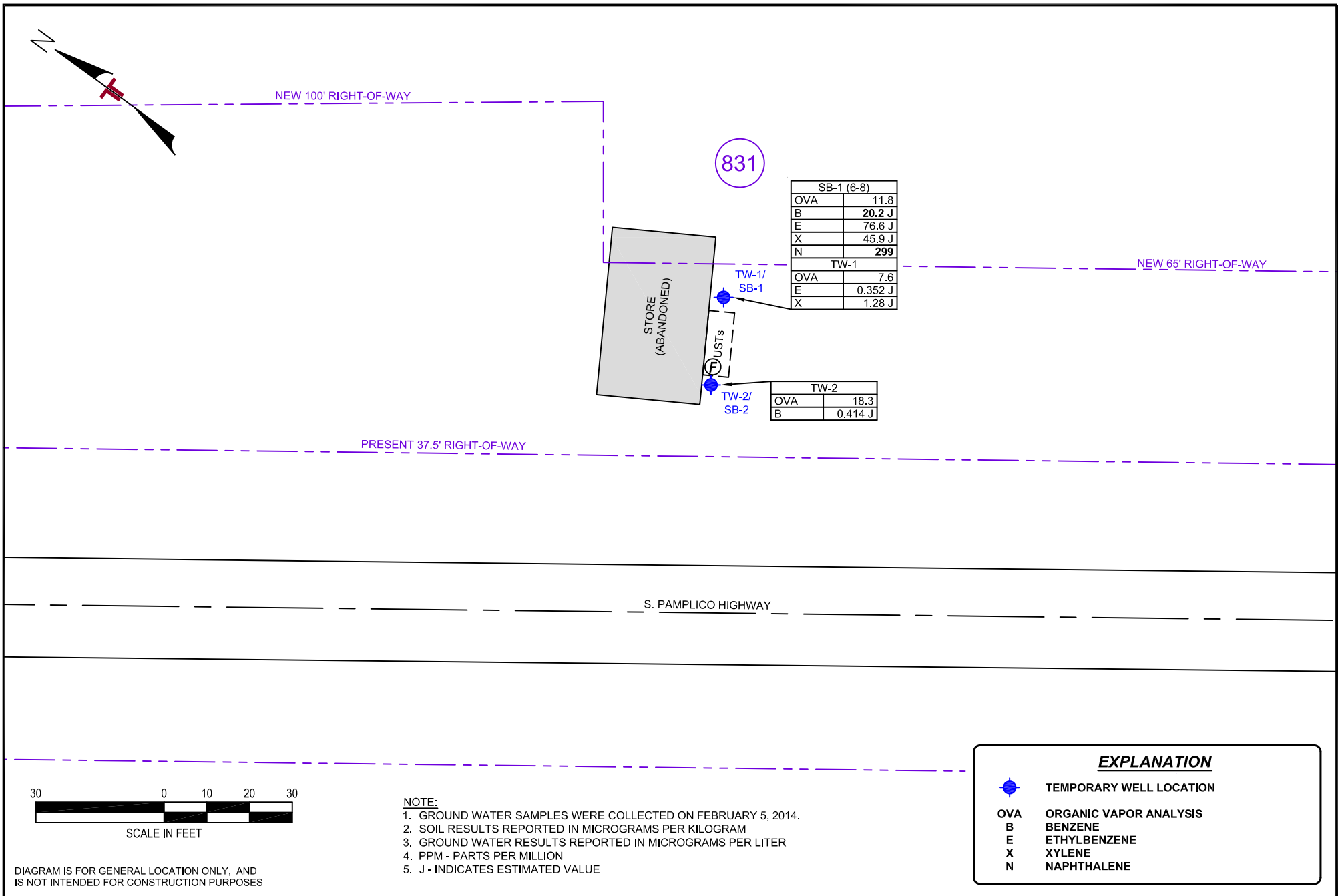
Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (6-8)	RBSL	TW-1 10.5-14	TW-2 10.5-14	RBSL / AL
OVA (ppm)	11.8	ne	7.6	18.3	ne
Benzene	20.2J	7	< 0.111	0.414J	5
Naphthalene	299	36	< 0.176	< 0.176	25

NOTES:

- | | |
|--|--|
| 1) All samples collected on February 6, 2014 | 6) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level |
| 2) µg/kg - micrograms per kilogram | 7) Concentrations in bold represent RBSL or AI exceedance |
| 3) µg/l - micrograms per liter | 8) ne - no regulatory action level established |
| 4) OVA- Organic Vapor Analysis | |
| 5) parts per million (PPM) | |

Attachments

Figure 18 – Site Map
 Well Logs



Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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SITE MAP - TRACT 831 (EDWARDS ROAD STORE - VACANT)
RIGHT-OF-WAY PAMPLICO HIGHWAY 1570 S. PAMPLICO HIGHWAY PAMPLICO, SOUTH CAROLINA
109

Fig No.
18

WELL LOG NO. SB-1/TW-1

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PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

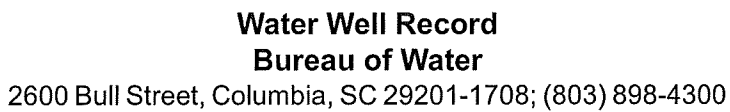
CLIENT: SCDOT

SITE: Site 18 - Tract 831
Pamplico, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 19	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
2.0	<u>SAND (SP)</u> , with organics, medium grained, dark gray, dry, loose	Not Grouted to Surface		5			4.0
3.5	<u>SAND (SP)</u> , medium grained, light tan, wet, loose						4.24
6.0	<u>CLAYEY SAND (SC)</u> , medium grained, mottled (orange, red, gray), moist, medium dense						4.52
8.0	<u>CLAYEY SAND (SC)</u> , medium grained, gray, heating oil odor, moist, very dense						11.72
Soil Boring Terminated at 4 Feet		9.5' to 14' - #2 Filter Sand	10.5' to 14' - 2" (0.010) Slotted PVC	10			
Temporay Well Terminated at 14 Feet							
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push		Notes:					
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS		Well Started: 2/5/2014 Drill Rig: Geoprobe Project No.: 73138143		Well Completed: 2/5/2014 Driller: J. Chiorazzi Exhibit: B-1			
7.6' on 2/5/2014							

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WELL LOG NO. SB-2/TW-2

Page 1 of 1

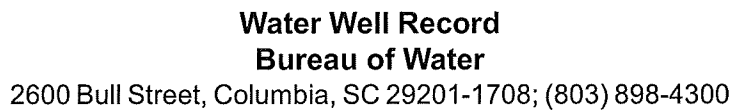
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 18 - Tract 831
Pamplico, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 19	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
	2.0	SAND (SP) , medium grained, dark gray, dry, loose	Not Grouted to Surface				4.07
	3.5	SAND (SP) , medium grained, gray, moist, loose					4.19
	6.0	CLAYEY SAND (SC) , medium grained, mottled (tan, orange, gray), slight heating oil odor, wet, medium dense					38.74
	14.0	CLAYEY SAND (SC) , medium grained, gray, high heating oil odor, wet, very dense					3,320
Boring Terminated at 14 Feet			9.5' to 14' - #2 Filter Sand	10			
			10.5' to 14' - 2" (0.010) Slotted PVC				
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS			Well Started: 2/5/2014		Well Completed: 2/5/2014		
 5.9' on 2/5/2014			Drill Rig: Geoprobe		Driller: J. Chiorazzi		
			Project No.: 73138143		Exhibit: B-2		

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Columbia, South Carolina

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SITE 19 TRACT 851 DUNK ROAD STORE, 1570 S. PAMPLICO HWY.

1.0 Site Description

The site is a vacant, former retail store. The site has a visible pump island in the front of the vacant store that located inside of the proposed new R/W. There are two visible fill ports located just outside of the proposed ROW, it is assumed that the tanks are still presently in the ground. The status of abandonment (removed/filled) is not known.

No records of a UST system were available from the SCDHEC UST registry. Due to the site layout, a UST (if present), was not suspected to be located in the proposed ROW, therefore an EM survey was not conducted at this site. The approximate UST fill port and ROW locations are shown on Figure 19.

2.0 Assessment Activities

Two borings (SB-1, SB-2) were installed in the vicinity of the former dispenser island and UST (respectively) to determine current soil and ground water conditions.

Two temporary wells (TW-1, TW-2) were advanced using direct-push sampling equipment at each end of the UST. Soil samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil sample SB-1 and ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260.

3.0 Results and Findings

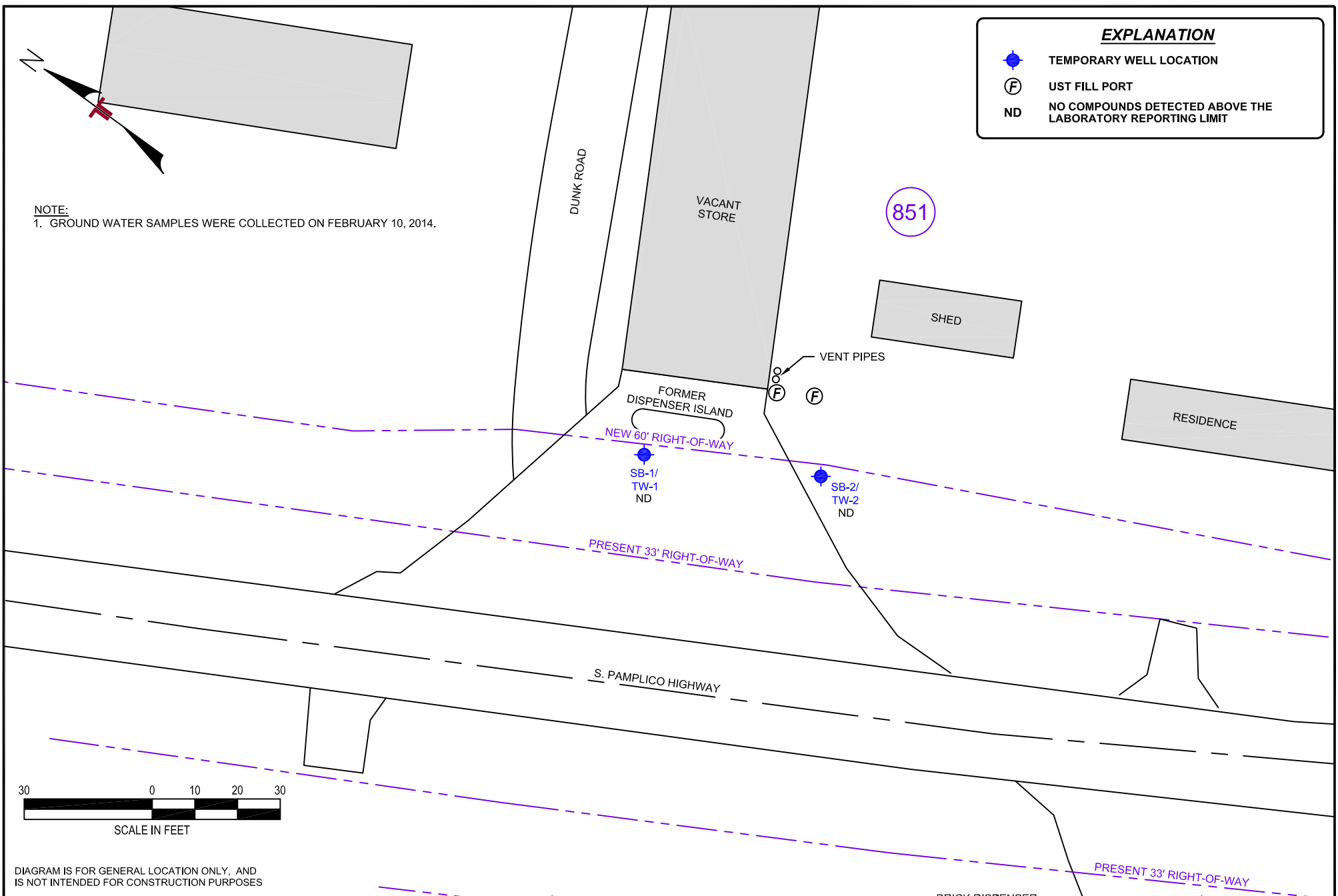
The depth to ground water was recorded at depths ranging from approximately 6-9 feet. No petroleum compounds were detected the soil or ground water samples collected. The UST and dispenser were identified to be outside the proposed ROW. No petroleum compounds were identified in the soils or ground water.

No USTs, piping, or environmental conditions are expected to impact the construction activities for the ROW widening at this site.

(No compounds were detected; therefore, no analytical data summary table was generated for this site.)

Attachments

**Figure 19 – Site Map
Well Logs**



Project Mng'r:	RWN
Drawn By:	PTK
Checked By:	RWN
Approved By:	PMH

Project No.	73138143
Scale:	AS SHOWN
File No.	73138143
Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
PH. (803) 741-8000 FAX. (803) 741-9900

SITE MAP - TRACT 851 (DUNK ROAD STORE - VACANT)
RIGHT-OF-WAY PAMPLICO HIGHWAY 1870 S. PAMPLICO HIGHWAY PAMPLICO, SOUTH CAROLINA
115

Fig No.
19

WELL LOG NO. SB-1/TW-1

Page 1 of 1

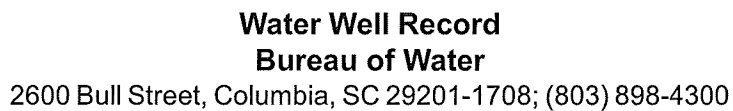
PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 19 - Tract 851
Pamplico, South Carolina

GRAPHIC LOG	LOCATION	INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	See Figure 19	Well Completion:					
DEPTH	MATERIAL DESCRIPTION						
0.3	CONCRETE						
1.3	FILL - SAND (SP) , coarse grained, yellow, dry, loose						2.3
	SAND (SP) , fine grained, tan to light gray, moist, dense						2.3
4.0	SAND (SP) , trace clay, fine grained, tan to light gray, wet, dense						
			Not Grouted to Surface				
			10.5' to 15' - #2 Filter Sand				
			11.5' to 15' - 2" (0.010) Slotted PVC				
15.0	Boring Terminated at 15 Feet						
The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown. Hammer Type: Direct Push							
Advancement Method: Direct Push			Notes:				
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.							
WATER LEVEL OBSERVATIONS			Well Started: 2/5/2014		Well Completed: 2/5/2014		
6.2' on 2/5/2014			Drill Rig: Geoprobe		Driller: J. Chiorazzi		
			Project No.: 73138143		Exhibit: B-1		

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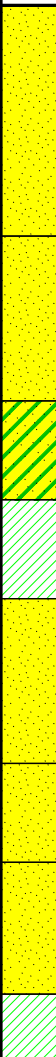
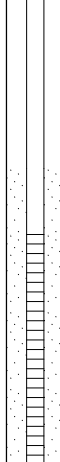
WELL LOG NO. SB-2/TW-2

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 19 - Tract 851
Pamplico, South Carolina

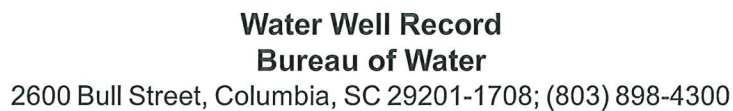
GRAPHIC LOG	LOCATION See Figure 19		INSTALLATION DETAILS		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH	MATERIAL DESCRIPTION	Well Completion:					
		<u>SAND (SP)</u> , fine to medium grained, gray, moist, medium dense	Not Grouted to Surface					2.52
	3.5							3.8
		<u>SAND (SP)</u> , trace clay, fine to medium grained, tan, very moist to wet, medium dense			5			2.4
	6.0							3.4
		<u>CLAYEY SAND (SC)</u> , fine grained, mottled (yellow, orange, gray), dry, very dense						
	7.5							
		<u>LEAN CLAY (CL)</u> , medium plasticity, mottled (orange, red, gray), moist, very dense						
	9.0					▽		3.12
		<u>SAND (SP)</u> , medium grained, tan, wet, medium dense			10			3.02
	11.5							3.27
		<u>SAND (SP)</u> , medium grained, light gray, moist to wet, dense	11.5' to 16' - #2 Filter Sand					
	13.0							
		<u>SAND (SP)</u> , medium grained, tan, wet, medium dense						
	15.0		12.5' to 16' - 2" (0.010) Slotted PVC		15			2.68
	<u>LEAN CLAY (CL)</u> , medium plasticity, gray, moist, dense							
16.0								
Boring Terminated at 16 Feet								

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Direct Push

Advancement Method: Direct Push		Notes:
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.		
WATER LEVEL OBSERVATIONS		Well Started: 2/5/2014
▽ 9.2' on 2/5/2014		Well Completed: 2/5/2014
		Drill Rig: Geoprobe
		Driller: J. Chiorazzi
		Project No.: 73138143
		Exhibit: B-2

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-19.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/25/14

119

SITE 20 TRACT 863 MT. ZION STORE 1863 S. PAMPLICO HWY.

1.0 Site Description

The site is a vacant, former country store with a visible heating oil vent pipe located at the corner of the store building, inside of the proposed ROW. The UST system and majority of the store and is within the proposed ROW, and will require complete demolition and removal. The approximate UST and ROW locations are shown on Figure 20.

2.0 Assessment Activities

An EM survey was conducted at this site with respect to the dispenser structure and fill ports. Based on the EM survey, two USTs are located adjacent to a brick dispenser structure

Two temporary wells were advanced using direct-push sampling equipment based on EM survey results and UST vent pipe locations. Soil samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil sample SB-1 and ground water samples from TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260.

3.0 Results and Findings

The depth to ground water was recorded at depths ranging from 2-3 feet. Petroleum compounds were detected above RBSLs in the soil sample collected from TW-2. The analytical results are shown on Table 20, below.

The USTs and dispenser structure were identified to be within the proposed ROW should be removed prior to or as a part of the ROW expansion. Special handling and disposal of soils impacted by petroleum contaminated ground water may be necessary.

Site 20 Tract 863 Mt. Zion Store 1863 S. Pamplico Hwy.

Table 20 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (2-4)	RBSL	TW-1 11.5-15	TW-2 11.5-15	RBSL / AL
OVA (ppm)	35.5	ne	17.5	12.8	ne
Benzene	< 0.038	7	0.455J	6.23	5
Toluene	< 0.08	1,450	< 0.122	51.7	1,000
Ethylbenzene	< 0.137	1,150	< 0.109	168	700
Xylene	< 0.185	14,500	< 0.179	557	10,000
Naphthalene	< 0.26	36	7.82	110	25
TAA	NA	ne	< 1.01	77.8	240

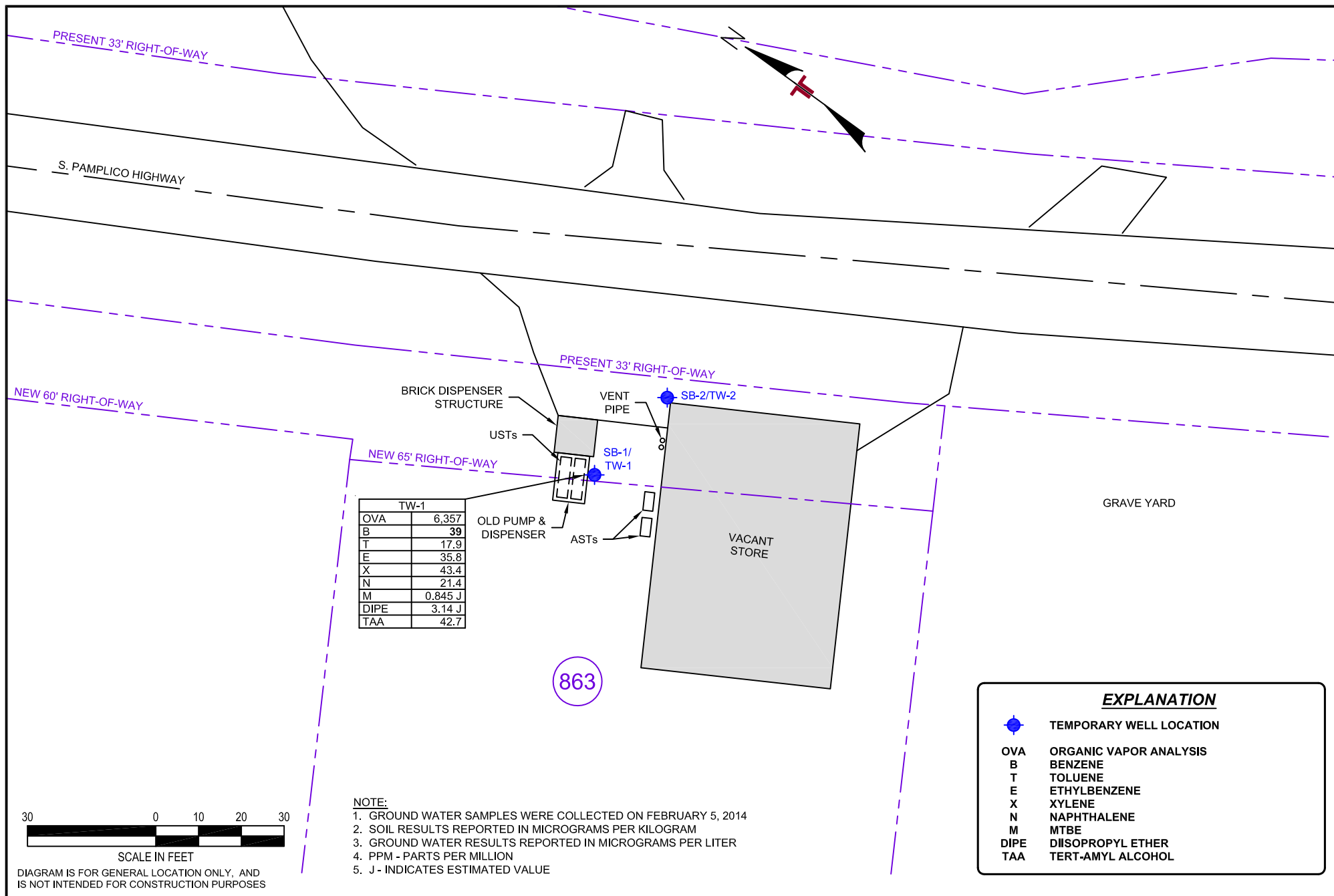
NOTES:

- 1) All samples collected on February 5, 2014
- 2) $\mu\text{g/kg}$ - micrograms per kilogram
- 3) $\mu\text{g/l}$ - micrograms per liter
- 4) OVA- Organic Vapor Analysis
- 5) parts per million (PPM)
- 6) MTBE - tert-Butyl methyl ether
- 7) 1,2-DCA - 1,2-Dichloroethane

- 8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level
- 9) Concentrations in bold represent RBSL or AL exceedance
- 10) ne - no regulatory action level established
- 11) J - indicates an estimated value
- 12) na - Not Analyzed

Attachments

Figure 20 – Site Map
 Well Logs



Project Mng'r:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
PH. (803) 741-9000 FAX. (803) 741-9900

SITE MAP - TRACT 863 (MT. ZION STORE - VACANT)

RIGHT-OF-WAY PAMPLICO HIGHWAY
1873 S. PAMPLICO HIGHWAY
PAMPLICO, SOUTH CAROLINA

Page 1 of 1

CLIENT: SCDOT

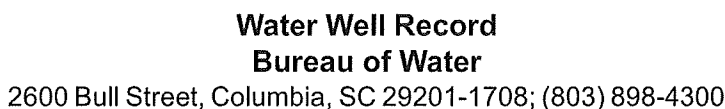
GRAPHIC LOG		LOCATION	See Figure 20	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
DEPTH	MATERIAL DESCRIPTION						
0.3	TOPSOIL						
	SANDY LEAN CLAY (CL) , brown to orange, dry, stiff, medium dense						5.73
2.0	SANDY LEAN CLAY (CL) , medium to coarse grained, mottled (tan, gray, orange), moist, dense						35.53
4.0	MacroCore Terminated at 4 Feet Water Point driven to 15 Feet. Ground water sample collected from screen - point water sampler from 11-15 Feet. Direct Push Terminated at 4 Feet						

Hammer Type: Direct Push

Notes:

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Columbia, South Carolina

Exhibit: B-1.

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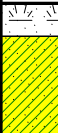
BORING LOG NO. SB-2

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 20 - Tract 863
Pamplico, South Carolina

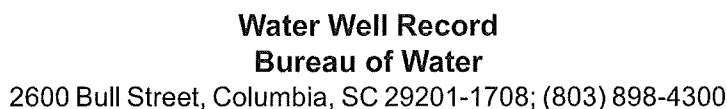
GRAPHIC LOG	LOCATION See Figure 20		DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)
	DEPTH	MATERIAL DESCRIPTION				
	0.5	TOPSOIL				
		SANDY LEAN CLAY (CL) , medium to coarse grained, gray to orange, dry, stiff, medium dense				12.39
	2.0					
		SANDY FAT CLAY (CH) , medium grained, orange, moist, dense				12.98
	4.0					
MacroCore Terminated at 4 Feet Water Point driven to 15 Feet. Ground water sample collected from screen - point water sampler from 11-15 Feet. Direct Push Terminated at 4 Feet						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Hammer Type: Direct Push

Advancement Method: Direct Push		Notes:	
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.			
WATER LEVEL OBSERVATIONS	 521 Clemson Road Columbia, South Carolina	Boring Started: 2/5/2014	Boring Completed: 2/5/2014
No free water observed		Drill Rig: Geoprobe	Driller: J. Chiorazzi
		Project No.: 73138143	Exhibit: B-2

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 73138143-20.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/28/14

126

SITE 21 TRACT 916 FORMER CROSS ROADS GROCERY, 3032 S. PAMPLICO HWY.

1.0 Site Description

The site is a vacant, former gas station and convenience store. The site has an abandoned dispenser island, a underground dispenser lines to an AST tank farm consisting of four ASTs. Additionally, a UST fill port for a suspected heating oil UST is located in the inside of the proposed ROW. The approximate dispenser, line, ASTs, and UST locations are shown on Figure 21.

2.0 Assessment Activities

An EM survey was conducted at this site with respect to the dispenser lines and UST fill ports. Based on the EM survey, one UST and the former dispenser island is located in the proposed ROW.

Four temporary wells were advanced using direct-push sampling equipment based on EM survey results and dispenser and UST locations. Soil samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil sample SB-1 and ground water samples from TW-1 through TW-4 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260.

3.0 Results and Findings

Petroleum compounds were detected above RBSLs in the soil sample collected from TW-2. The analytical results are shown on Table 21, below.

The UST and dispenser lines were identified to be within the proposed ROW should be removed prior to or as a part of the ROW expansion. Special handling and disposal of soils impacted by petroleum contaminated ground water may be necessary.

Site 21 Tract 916 Former Cross Roads Grocery, 3032 S. Pamplico Hwy.

Table 21 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)				
	SB-2 (2-4)	RBSL	TW-1 11.5-15	TW-2 11.5-15	TW-3 11.5-15	TW-4 11.5-15	RBSL / AL
OVA (ppm)	395.0	ne	15.9	171.0	11.9	19.3	ne
Benzene	68.8J	7	2.81	167	1.14	0.958J	5
Toluene	< 3.79	1,450	4.44	4.82	< 0.122	1.81	1,000
Ethylbenzene	3,210	1,150	0.646J	181	< 0.109	< 0.109	700
Xylene	350J	14,500	1.6J	102	< 0.179	< 0.179	10,000
Naphthalene	1,080	36	3.03J	116	< 0.176	< 0.176	25
MTBE	NA	ne	< 0.078	57.3	< 0.078	< 0.078	40
Tert-Amyl Methyl Ether (TAME)	NA	ne	< 0.240	31.8	< 0.240	< 0.240	128
t-butynol (TBA)	NA	ne	< 0.290	7.36J	< 0.290	< 0.290	1,400
tert-amyl alcohol (TAA)	NA	ne	< 1.01	94.2	< 1.01	< 1.01	240

NOTES:

1) All samples collected on February 5, 2014

2) µg/kg - micrograms per kilogram

3) µg/l - micrograms per liter

4) OVA- Organic Vapor Analysis

5) parts per million (PPM)

6) MTBE - tert-Butyl methyl ether

7) 1,2-DCA - 1,2-Dichloroethane

8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level

9) Concentrations in bold represent RBSL or AI exceedance

10) ne - no regulatory action level established

11) J - indicates an estimated value

12) na - Not Analyzed

Attachments

Figure 21 – Site Map
 Well Logs

EXPLANATION

-  TEMPORARY WELL LOCATION
-  EXISTING MONITORING WELL LOCATION
-  UST FILL PORT
- OVA ORGANIC VAPOR ANALYSIS
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X XYLENE
- N NAPHTHALENE
- M MTBE
- TAME TERT-AMYL METHYL ETHER
- TBA T-BUTANOL
- TAA TERT-AMYL ALCOHOL

NOTE:

1. GROUND WATER SAMPLES WERE COLLECTED ON FEBRUARY 7, 2014.
2. SOIL RESULTS REPORTED IN MICROGRAMS PER KILOGRAM
3. GROUND WATER RESULTS REPORTED IN MICROGRAMS PER LITER
4. PPM - PARTS PER MILLION
5. J - INDICATES ESTIMATED VALUE

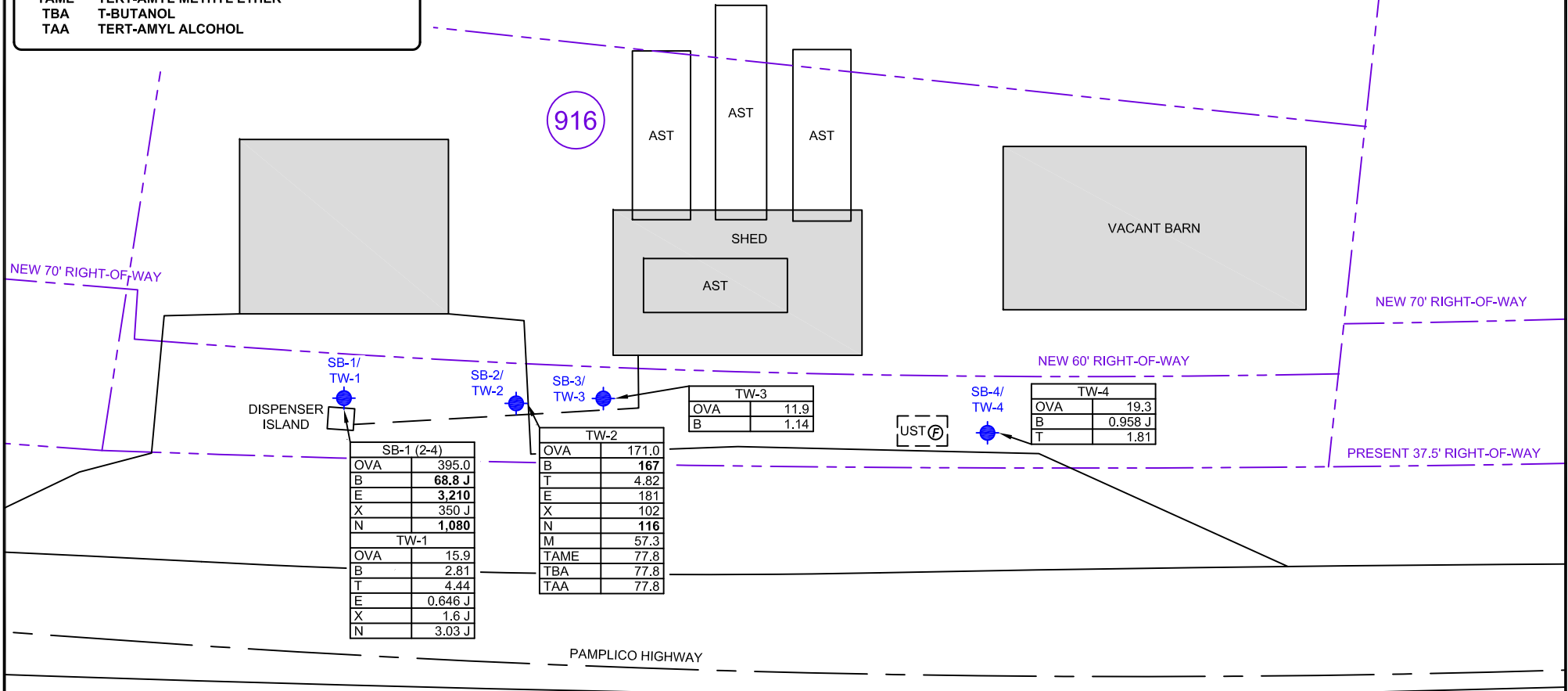
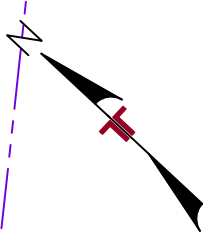
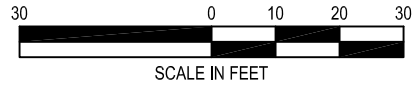


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

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SITE MAP - TRACT 916 (FORMER CROSS ROADS GROCERY & VACANT GARAGE)

RIGHT-OF-WAY PAMPLICO HIGHWAY
3032 & 3034 S. PAMPLICO HIGHWAY
PAMPLICO, SOUTH CAROLINA

Fig No.

21

BORING LOG NO. SB-1/TW-1

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 21 - Tract 916
Pamplico, South Carolina

GRAPHIC LOG	LOCATION See Figure 21	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	DEPTH			
	0.5 ASPHALT			
	SAND (SP) , fine grained, mottled (gray, brown, orange), medium dense, poorly sorted			
	2.0			
	FAT CLAY (CH) , tannish orange, moderate petroleum odor			
	4.0			
	MacroCore Terminated at 4 Feet Water Point driven to 15 Feet. Ground water sample collected from screen - point water sampler from 11-15 Feet.	5		
		10		
		15		
	Direct Push Terminated at 15 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Direct Push

Advancement Method:
Direct Push

Notes:

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

Terracon
521 Clemson Road
Columbia, South Carolina

Boring Started: 2/5/2014

Boring Completed: 2/5/2014

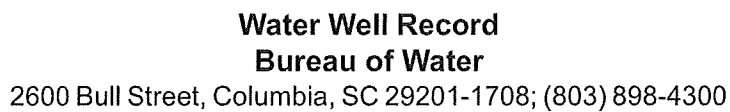
Drill Rig: Geoprobe

Driller: J. Chiorazzi

Project No.: 73138143

Exhibit: B-1

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 73138143-21.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/28/14

131

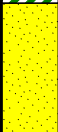
BORING LOG NO. SB-2/TW-2

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 21 - Tract 916
Pamplico, South Carolina

GRAPHIC LOG	LOCATION See Figure 21	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	DEPTH			
	FAT CLAY (CH) , tannish gray to orange, strong petroleum odor, very dense			
2.0				
	SAND (SP) , with quartz, coarse grained, subrounded, strong petroleum odor, loose			
4.0				
	MacroCore Terminated at 4 Feet Water Point Driven to 12 Feet. Groundwater Sample collected from Screen - point water sample from 8-12 Feet.	5		
		10		
	Direct Push Terminated at 12 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Direct Push

Advancement Method:
Direct Push

Notes:

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

Terracon
521 Clemson Road
Columbia, South Carolina

Boring Started: 2/5/2014

Boring Completed: 2/5/2014

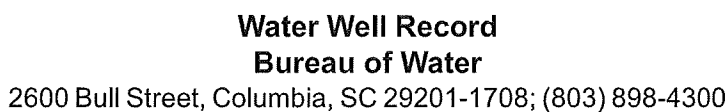
Drill Rig: Geoprobe

Driller: J. Chiorazzi

Project No.: 73138143

Exhibit: B-2

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 73138143-21.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/28/14

DHEC 1903 (07/2003)

BORING LOG NO. SB-3/TW-3

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 21 - Tract 916
Pamplico, South Carolina

GRAPHIC LOG	LOCATION See Figure 21	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	DEPTH			
	FAT CLAY (CH) , medium to coarse grained, dark brown to tannish orange, medium dense			
	2.0			
	FAT CLAY (CH) , tan to orange, medium stiff, dense			
	4.0			
	MacroCore Terminated at 4 Feet Water Point Driven to 12 Feet. Groundwater Sample collected from Screen - point water sample from 8-12 Feet.	5		
		10		
	Direct Push Terminated at 12 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Direct Push

Advancement Method:
Direct Push

Notes:

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

Terracon
521 Clemson Road
Columbia, South Carolina

Boring Started: 2/5/2014

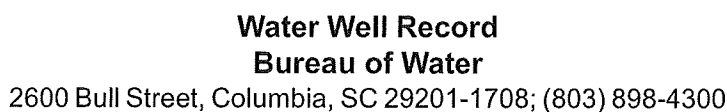
Boring Completed: 2/5/2014

Drill Rig: Geoprobe

Driller: J. Chiorazzi

Project No.: 73138143

Exhibit: B-3

DHEC 1903 (07/2003)

BORING LOG NO. SB-4/TW-4

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 21 - Tract 916
Pamplico, South Carolina

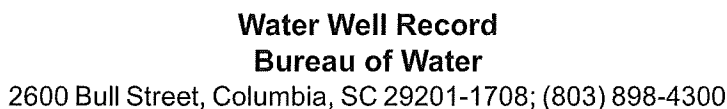
GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	See Figure 21			
	DEPTH			
	0.5 TOPSOIL			
	SAND (SP) , with clay, medium to coarse grained, brownish orange, medium dense			
	2.0			
	FAT CLAY (CH) , mottled (dark brown, tan, orange), weak petroleum odor, dense			
	4.0			
	MacroCore Terminated at 4 Feet Water Point driven to 15 Feet. Ground water sample collected from screen - point water sampler from 11-15 Feet.	5		
		10		
		15		
	Direct Push Terminated at 15 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Direct Push

Advancement Method: Direct Push		Notes:	
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.			
WATER LEVEL OBSERVATIONS	 521 Clemson Road Columbia, South Carolina	Boring Started: 2/5/2014	Boring Completed: 2/5/2014
		Drill Rig: Geoprobe	Driller: J. Chiorazzi
		Project No.: 73138143	Exhibit: B-4

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 73138143-21.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/28/14

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SITE 22 TRACT 967 DANIELS BROTHERS (UST#03418), 3732 S. PAMPLICO HWY.

1.0 Site Description

This site is an abandoned former gas station property that operated under UST Permit # 03418. The site formally operated two gasoline USTs at the site which were reportedly removed in 1997. Two releases were reported at the site. No files are available from the SCDHEC. The site release was issued a No Further Action (NFA) status in 1998 and 2003.

Monitoring wells associated with the releases reported at the site are present on-site and across Pamplico Highway. The majority of the monitoring well network is located inside of the proposed new ROW. The approximate dispenser, line, ASTs, and UST locations are shown on Figure 22.

2.0 Assessment Activities

An EM survey was conducted at this site with respect to the dispenser lines and UST fill ports. Based on the EM survey, two USTs are located in the proposed ROW.

Two temporary wells were advanced using direct-push sampling equipment based on EM survey results and dispenser and UST locations. Soil samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil sample SB-1 and ground water samples TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260.

3.0 Results and Findings

Petroleum compounds were detected above RBSLs in the soil sample collected from TW-2. The analytical results are shown on Table 22, below.

The UST system and majority of the store and is within the proposed ROW, and will require complete demolition and removal. Accordingly, the following activities should be conducted prior to site widening activities:

- Monitoring wells affected by the widening should be abandoned in accordance with the SC Well Standards and Regulations,
- Special handling and disposal of soils impacted by petroleum contaminated ground water likely may be necessary.

Site 22 Tract 967 Daniels Brothers (UST#03418), 3732 S. Pamplico Hwy.

Table 22 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-2 (2-4)	RBSL	TW-1 8.5-12	TW-2 11.5-15	RBSL / AL
OVA (ppm)	68.6	ne	751.0	171.0	ne
Benzene	< 0.058	7	13.4J	167	5
Toluene	< 0.123	1,450	1,280	4.82	1,000
Ethylbenzene	< 0.211	1,150	828.0	181	700
Xylene	< 0.285	14,500	4,260	102	10,000
Naphthalene	< 0.447	36	152	116	25
MTBE	NA	ne	< 1.55	57.3	40
Diisopropyl ether (DIPE)	NA	ne	NA	77.0J	150
tert-amyl alcohol (TAA)	NA	ne	NA	3,130	240

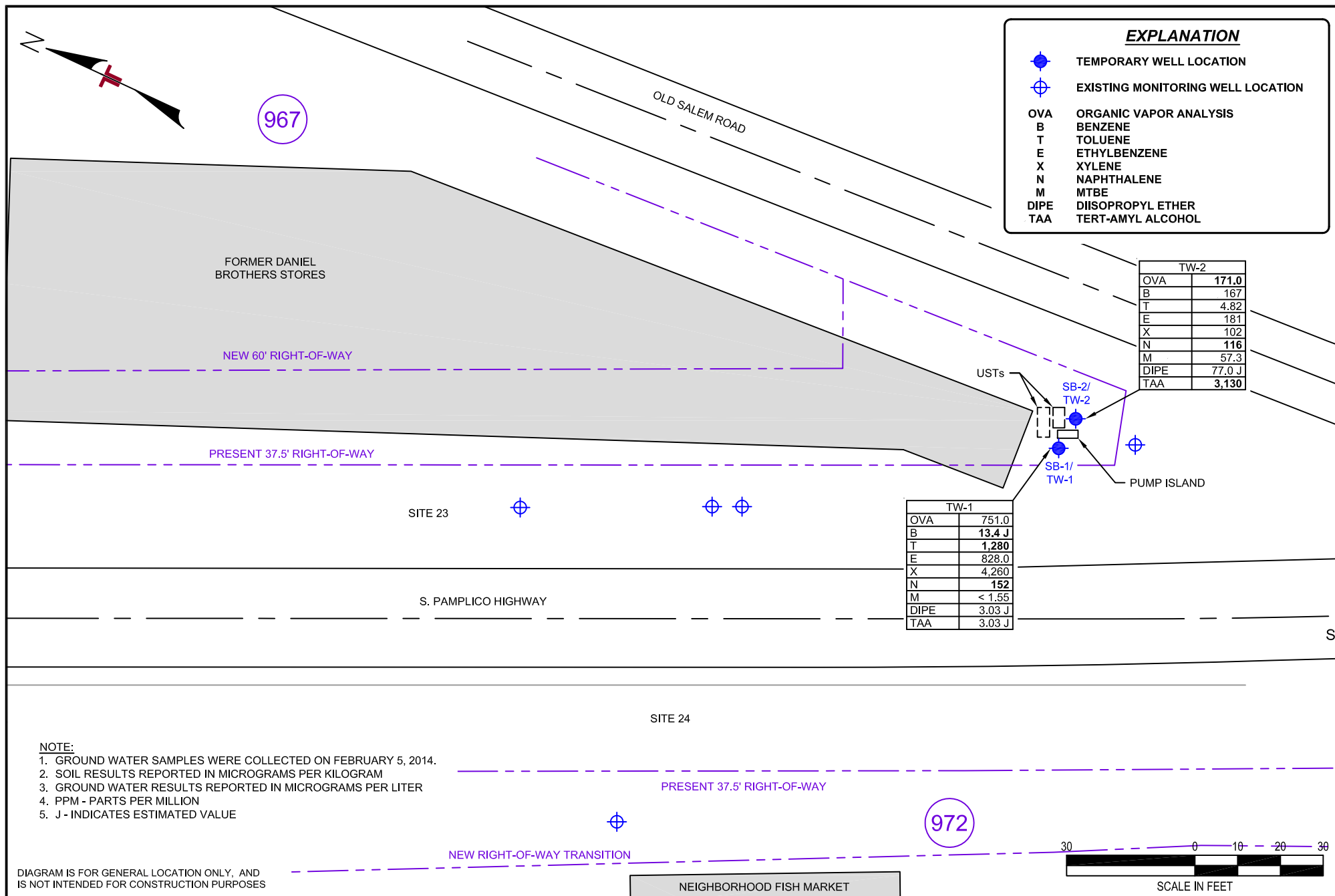
NOTES:

- 1) All samples collected on February 5, 2014
- 2) $\mu\text{g/kg}$ - micrograms per kilogram
- 3) $\mu\text{g/l}$ - micrograms per liter
- 4) OVA- Organic Vapor Analysis
- 5) parts per million (PPM)
- 6) MTBE - tert-Butyl methyl ether
- 7) 1,2-DCA - 1,2-Dichloroethane

- 8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level
- 9) Concentrations in bold represent RBSL or AL exceedance
- 10) ne - no regulatory action level established
- 11) J - indicates an estimated value
- 12) na - Not Analyzed

Attachments

Figure 22 – Site Map
 Well Logs



Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
PH. (803) 741-9000 FAX. (803) 741-9900

SITE MAP - TRACT 967 & 972 (DANIELS BROTHERS) RIGHT-OF-WAY PAMPLICO HIGHWAY 3732 S. PAMPLICO HIGHWAY PAMPLICO, SOUTH CAROLINA UST PERMIT #03418 (DANIEL BROTHERS)		140
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Fig No.	22
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BORING LOG NO. SB-1

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 22 - Tract 967
Pamplico, South Carolina

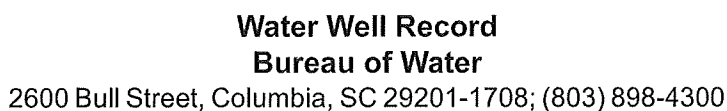
GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	See Figure 22			
	DEPTH			
	0.5 ASPHALT			
	FILL - SAND (SP) , medium to coarse grained, orange, poorly sorted			
	2.0			
	FILL - SAND (SP) , medium to coarse grained, orange, poorly sorted			
	4.0			
	MacroCore Terminated at 4 Feet Water Point Driven to 12 Feet. Groundwater Sample collected from Screen - point water sample from 8-12 Feet.	5		
		10		
	Direct Push Terminated at 12 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Direct Push

Advancement Method: Direct Push		Notes:	
Abandonment Method: Borings backfilled with cement-bentonite grout upon completion.			
WATER LEVEL OBSERVATIONS	 521 Clemson Road Columbia, South Carolina	Boring Started: 2/5/2014	Boring Completed: 2/5/2014
		Drill Rig: Geoprobe	Driller: J. Chiorazzi
		Project No.: 73138143	Exhibit: B-1

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 73138143-22.GPJ TEMPLATE UPDATE 3-31-14.GPJ 4/28/14

DHEC 1903 (07/2003)

BORING LOG NO. SB-2

Page 1 of 1

PROJECT: SC-51 PIN 38191 - Right of Way Expansion Hwy 51

CLIENT: SCDOT

SITE: Site 22 - Tract 967
Pamplico, South Carolina

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	See Figure 22			
	DEPTH			
	0.5 ASPHALT			
	FILL - SAND (SP) , medium to coarse grained, orange to gray, poorly sorted			
	4.0			
	MacroCore Terminated at 4 Feet Water Point Driven to 15 Feet. Groundwater Sample collected from Screen - point water sample from 11-15 Feet.	5		
		10		
		15		
	Direct Push Terminated at 15 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Direct Push

Advancement Method:
Direct Push

Notes:

Abandonment Method:
Borings backfilled with cement-bentonite grout upon completion.

WATER LEVEL OBSERVATIONS

Terracon
521 Clemson Road
Columbia, South Carolina

Boring Started: 2/5/2014

Boring Completed: 2/5/2014

Drill Rig: Geoprobe

Driller: J. Chiorazzi

Project No.: 73138143

Exhibit: B-2

SITE 23 TRACT 975 EVANS GROCERY (UST #03475) 3801 SANDPIT RD

1.0 Site Description

This site is an abandoned former grocery store which previously operated under UST Permit No. 03175. A former dispenser island located in front of the store, and there are two vent pipes located on the side of the building just outside of the proposed ROW. Three USTs were reportedly removed in 1993, and was issued a no further action (NFA) status in 1993. The former dispenser and vent pipe locations are shown on Figure 23.

2.0 Assessment Activities

An EM survey was conducted in the vicinity of the dispenser island. No indications of a UST was indicated by the survey.

Two temporary wells were advanced using direct-push sampling equipment based on EM survey results and dispenser and UST locations. One boring was advanced at the dispenser island and one boring was placed in the proximity of the vent pipes.

Soil samples were collected from each boring and analyzed using a Foxboro Century 128 FID. The OVA results are included on the boring logs generated for each temporary well, attached. Soil sample SB-1 and ground water samples TW-1 and TW-2 were submitted for laboratory analysis for petroleum compounds per EPA Method 8260.

3.0 Results and Findings

No petroleum compounds were detected above RBSLs in the soil or ground water samples collected from TW-1 or TW-2. The analytical results are shown on Table 23, below.

No USTs, piping, or environmental conditions are expected to impact the ROW widening at this site.

Site 23 Tract 975 Evans Grocery (UST #03475) 3801 Sandpit Rd

Table 23 – Analytical Data Summary of Detected Compounds

Sample (Sample Depth, ft.)	SOIL (ug/kg)		GROUND WATER (ug/l)		
	SB-1 (2-4)	RBSL	TW-1 8.5-12	TW-2 8.5-12	RBSL / AL
OVA (ppm)	12.9	ne	31.9	15.4	ne
Benzene	< 0.040	7	4.12	<0.11	5
Toluene	< 0.084	1,450	11.3	< 0.12	1,000
Ethylbenzene	< 0.144	1,150	1.57	<0.10	700
Xylene	< 0.194	14,500	5.29	< 0.18	10,000
Naphthalene	< 0.304	36	3.57J	<0.17	25
MTBE	NA	ne	< 0.078	< 0.078	40
1,2 DCA	NA	ne	< 0.116	< 0.116	5

NOTES:

- 1) All samples collected on February 5, 2014
- 2) $\mu\text{g/kg}$ - micrograms per kilogram
- 3) $\mu\text{g/l}$ - micrograms per liter
- 4) OVA- Organic Vapor Analysis
- 5) parts per million (PPM)
- 6) MTBE - tert-Butyl methyl ether
- 7) 1,2-DCA - 1,2-Dichloroethane
- 8) RBSL/AL - SCDHEC Risk Based Screening Level or Action Level
- 9) Concentrations in bold represent RBSL or AI exceedance
- 10) ne - no regulatory action level established
- 11) J - indicates an estimated value
- 12) na - Not Analyzed

Attachments

Figure 23 – Site Map
 Well Logs

NOTE:

1. GROUND WATER SAMPLES WERE COLLECTED ON FEBRUARY 5, 2014.
2. SOIL RESULTS REPORTED IN MICROGRAMS PER KILOGRAM
3. GROUND WATER RESULTS REPORTED IN MICROGRAMS PER LITER
4. PPM - PARTS PER MILLION
5. J - INDICATES ESTIMATED VALUE

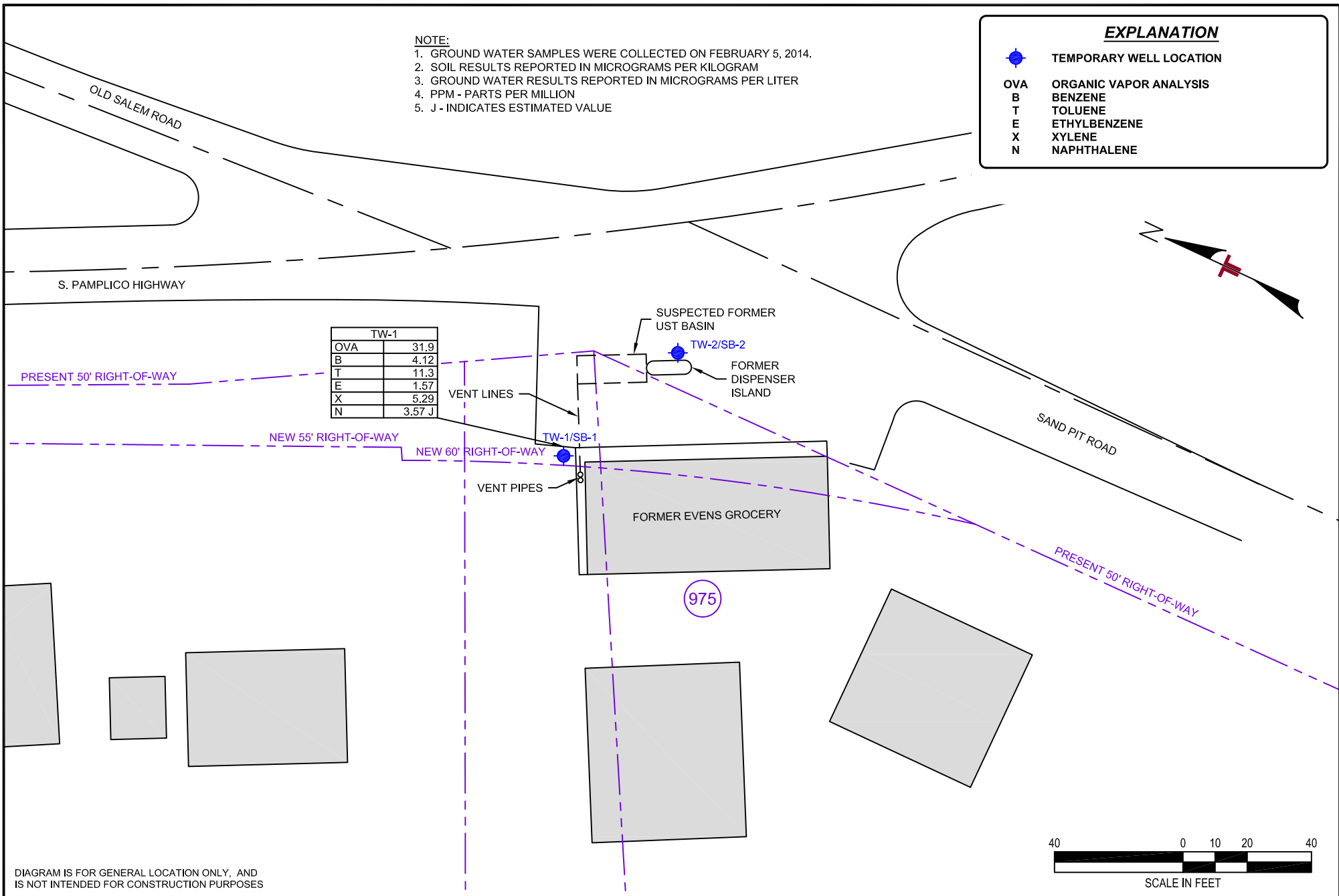
EXPLANATION



TEMPORARY WELL LOCATION

OVA
B
T
E
X
N

ORGANIC VAPOR ANALYSIS
BENZENE
TOLUENE
ETHYLBENZENE
XYLENE
NAPHTHALENE



Project Mng:	RWN	Project No.	73138143
Drawn By:	PTK	Scale:	AS SHOWN
Checked By:	RWN	File No.	73138143
Approved By:	PMH	Date:	APRIL 2014

Terracon
Consulting Engineers and Scientists

521 CLEMSON ROAD COLUMBIA, SC 29229
PH. (803) 741-9000 FAX. (803) 741-9900

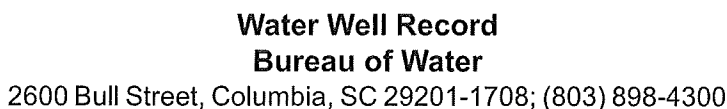
SITE MAP - TRACT 975 (EVANS GROCERY)

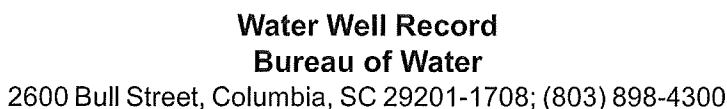
RIGHT-OF-WAY PAMPLICO HIGHWAY
3801 SANDPIT ROAD
PAMPLICO, SOUTH CAROLINA
UST PERMIT #03475

147

Fig No.

23

148

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APPENDIX A

Monitoring Well Approvals



Site (

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18474

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



Site 1

South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
2650 Pamplico Hwy
18474
Florence

This approval is for the installation of 2 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09481

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Site 2

South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
2630 Pamplico Hwy
18475
Florence

This approval is for the installation of 2 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09482

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



site 2

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18475

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



South Carolina Department of Health
and Environmental Control

January 21, 2014

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18476

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
4109 Pamplico Hwy
18476
Florence

This approval is for the installation of 3 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09483

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18477

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
6114 Pamplico Hwy
18477
Florence

This approval is for the installation of 2 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09484

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Site 6

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

January 22, 2014

Tim Hunter
SC DOT
P.O. Box 191
Columbia, SC 29202

Re: Poston Packing
5810 Pamlico Hwy, Florence, SC 29505
MWA # UMW-25376
Request to Install Groundwater Monitoring Wells received January 21, 2014
Florence County

Dear Mr. Hunter:

The UST Management Division has received your request to install monitoring wells at the referenced location. The submittal has been placed on file. Monitoring well approval to install monitoring wells/borings in accordance with *South Carolina Well Standards*, R.61-71 is enclosed. Please submit a monitoring well record form (DHEC Form 1903) and analytical results of all soil and/or groundwater sampling to me within 30 days of receipt of the analytical results.

On all correspondence concerning this facility, please reference the monitoring well approval number. If you have any questions, please contact me at (803) 898-0647.

Sincerely,

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management

Monitoring Well Approval

Approval is hereby granted to: Terracon Consultants, Inc.
On Behalf of: SC DOT
Location: 5810 Pamplico Hwy, Florence, SC
County: Florence County
Permit: 03278

This approval is for the installation of 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 Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. 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 Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department changes, notification to Denise M. Place (tel: 803-898-0647 or e-mail: placedm@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. Departmental approval 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: 1/22/14

Approval #: UMW-25376

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management



Site 7

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18478

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



Site 7

South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to: Michael Hudgins/Terracon
on behalf of: Tim Hunter/SCDOT
Facility: Between 6309 & 6315 Pamplico Hwy
Site Identification: 18478
County: Florence

This approval is for the installation of 2 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09485

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR MICHAEL HUDGINS
TERRACON CONSULTANTS INC
521 CLEMSON ROAD
COLUMBIA SC 29229

JAN 23 2014

Re: Monitoring Well Approval
Evergreen Express, 6331 Pamplico Hwy, Effingham, SC 29541
UST Permit # 03428
Release reported October 30, 1998
Request to Install Groundwater Monitoring Wells received January 21, 2014
Florence County

Dear Mr. Hudgins:

The UST Management Division has received your request to install monitoring wells at the referenced location. The submittal has been placed on file. Monitoring well approval to install monitoring wells/borings in accordance with *South Carolina Well Standards*, R.61-71 is enclosed. Please submit a monitoring well record form (DHEC Form 1903) and analytical results of all soil and/or groundwater sampling to me within 30 days of receipt of the analytical results.

On all correspondence concerning this facility, please reference the monitoring well approval number. If you have any questions, please contact me at (803) 898-0592.

Sincerely,

Maia Milenkova, Hydrogeologist
Assessment Section
UST Management Division
Bureau of Land and Waste Management



Site 8

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

Monitoring Well Approval Form

Approval is hereby granted to: Terracon Consultants, Inc.
On behalf of: SCDOT
UST Permit #: 03428
Facility: Evergreen Express, 6331 Pamplico Hwy, Effingham, SC
County: Florence

This approval is for the installation of four temporary wells. The temporary wells are to be installed in the approved locations and 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.

Date of Issuance: January 21, 2014

Approval #: UMW-25375

Maia Milenkova, Hydrogeologist
Assessment Section
UST Management Division
Bureau of Land and Waste Management

Site 9



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

March 28, 2014

Tim Hunter
SC DOT
P.O. Box 191
Columbia, SC 29202

Re: Midway Supply (DOT right of way)
6402 Pamlico Hwy, Effingham, SC 29511
MWA # UMW-25449
Request to Install Groundwater Monitoring Wells received March 27, 2014
Florence County

Dear Mr. Hunter:

The UST Management Division has received your request to install monitoring wells at the referenced location. The submittal has been placed on file. Monitoring well approval to install monitoring wells/borings in accordance with *South Carolina Well Standards*, R.61-71 is enclosed. Please submit a monitoring well record form (DHEC Form 1903) and analytical results of all soil and/or groundwater sampling to me within 30 days of receipt of the analytical results.

On all correspondence concerning this facility, please reference the monitoring well approval number. If you have any questions, please contact me at (803) 898-0647.

Sincerely,

Denise M. Place

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management

Monitoring Well Approval

Approval is hereby granted to: Terracon Consultants, Inc.
On Behalf of: SC DOT
Location: 6402 Pamplico Hwy, Effingham, SC
County: Florence County
Permit: 16808

This approval is for the installation of 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 Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. 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 Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department changes, notification to Denise M. Place (tel: 803-898-0647 or e-mail: placedm@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. Departmental approval 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: 3/28/14

Approval #: UMW-25449

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

Site 10

RECEIVED MAR 31 2014

MAR 28 2014

**MR REGAN NORRIS
TERRACON CONSULTANTS INC
521 CLEMSON ROAD
COLUMBIA SC 29229**

Re: Monitoring Well Approval

Webb's Grocery (former), 6411 Pamplico Highway, Evergreen, SC
UST Permit #03563; Monitoring Well Approval #UMW-25450
Release reported August 16, 1991
Well Approval Request received via e-mail March 25, 2014
Florence County

Dear Mr. Norris:

On behalf of the SCDOT, Terracon Consultants, Inc. submitted on March 25, 2014 a monitoring well application (DHEC Form 3736, 9/2007) for the installation of three (3) temporary monitoring wells at the referenced site. Accordingly, enclosed is monitoring well approval #UMW-25450 for the installation of temporary monitoring wells TW-1, TW-2, and TW-3.

Please note, as no financial pre-approval has been provided, costs associated with the work are not reimbursable from the State Underground Petroleum Environmental Response Bank account. Copies of the boring logs, construction details (1903 forms), and analytical results should be submitted to the Underground Storage Tank Management Division within thirty (30) days of well installation.

On all correspondence concerning this site, please reference **UST Permit #03563**. If you have any questions, please contact me by telephone at (803) 898-0671 or by e-mail to RiversMS@dhec.sc.gov.

Sincerely,

Michael Rivers, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Monitoring Well Approval

cc: Mr. Tim Hunter, SCDOT, P.O. Box 191, Columbia, SC 29202 (w/ enc.)
Technical file (w/ enc.)

MR/MWAPPROV03.28.14



Site 10

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

Monitoring Well Approval

Approval is hereby granted to: Terracon Consultants, Inc.

(On behalf of): SCDOT

Facility: Webb's Grocery (former), 6411 Pamplico Highway, Evergreen, SC

UST Permit Number: 03563

County: Florence

This approval is for the installation of three (3) temporary groundwater monitoring wells designated TW-1, TW-2, and TW-3. The monitoring wells are to be installed in the approved locations in accordance with 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 (DHEC 1903) 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 the Agency has approved another schedule. 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 Mike Rivers at (803) 898-0671 or e-mail to RiversMS@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. Agency approval 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:

Approval #: UMW-25450

Michael Rivers, Hydrogeologist

Corrective Action Section

Underground Storage Tank Management Division

Bureau of Land and Waste Management



site 11

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18479

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
6806 Pamplico Hwy
18479
Florence

This approval is for the installation of 3 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09486

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Site 12

RECEIVED JAN 27 2014

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

**MR P MICHAEL HUDGINS
TERRACON CONSULTANTS INC
521 CLEMSON ROAD
COLUMBIA SC 29229**

JAN 24 2014

Re: Monitoring Well Approval

Hyman Oil Company, 363 North Pamplico Highway, Pamplico, SC
UST Permit #03462; Monitoring Well Approval #UMW-25380
Release reported December 9, 1991
Well Approval Request received via e-mail January 21, 2014
Florence County

Dear Mr. Hudgins:

On behalf of the SCDOT, Terracon Consultants, Inc. submitted on January 21, 2014 a monitoring well application (DHEC Form 3736, 9/2007) for the installation of 2 temporary monitoring wells (GeoProbe points) at the referenced site. Accordingly, enclosed is monitoring well approval #UMW-25380 for the installation of monitoring wells TMW-1 and TMW-2. Please note, as no financial pre-approval has been provided, costs associated with the work are not reimbursable from the SUPERB Account. Copies of the boring logs, construction details (1903 forms), and analytical results should be submitted to the UST Division within thirty days of well installation.

On all correspondence concerning this site, please reference **UST Permit #03462**. If you have any questions, please contact me by telephone at (803) 898-0671 or by e-mail to RiversMS@dhec.sc.gov.

Sincerely,

Michael Rivers, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Monitoring Well Approval

cc: Technical file (w/ enc.)

MR/MWAPPROV01.22.14



site 12

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

Monitoring Well Approval

Approval is hereby granted to: Terracon Consultants, Inc.

(On behalf of): SCDOT

Facility: Hyman Oil Company, 363 North Pamplico Highway, Pamplico, SC

UST Permit Number: 03462

County: Florence

This approval is for the installation of two (2) temporary groundwater monitoring wells designated TMW-1 and TMW-2. The monitoring wells are to be installed adjacent to the former dispenser island in accordance with 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 (1903) or other form provided or approved by the Department shall be completed and submitted to the Agency within 30 days after well completion or abandonment unless the Agency has approved another schedule. 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 Michael Rivers, the project manager, (telephone: (803) 898-0671 or e-mail: RiversMS@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.

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: January 22, 2014

Approval #: UMW-25380

Michael Rivers, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management



Site 13

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

RECEIVED JAN 27 2014

**MR P MICHAEL HUDGINS
TERRACON CONSULTANTS INC
521 CLEMSON ROAD
COLUMBIA SC 29229**

JAN 24 2014

Re: **Monitoring Well Approval**
Gibbs Grocery, 863 North Pamplico Highway, Pamplico, SC
UST Permit #03463; Monitoring Well Approval #UMW-25381
Release reported December 27, 1991
Well Approval Request received via e-mail January 21, 2014
Florence County

Dear Mr. Hudgins:

On behalf of the SCDOT, Terracon Consultants, Inc. submitted on January 21, 2014 a monitoring well application (DHEC Form 3736, 9/2007) for the installation of 3 temporary monitoring wells (GeoProbe points) at the referenced site and adjacent property located at 859 North Pamplico Highway. Accordingly, enclosed is monitoring well approval #UMW-25381 for the installation of monitoring wells TMW-1, TMW-1, and TMW-3. Please note, as no financial pre-approval has been provided, costs associated with the work are not reimbursable from the SUPERB Account. Copies of the boring logs, construction details (1903 forms), and analytical results should be submitted to the UST Division within thirty days of well installation.

On all correspondence concerning this site, please reference **UST Permit #03463**. If you have any questions, please contact me by telephone at (803) 898-0671 or by e-mail to RiversMS@dhec.sc.gov.

Sincerely,

Michael Rivers, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Monitoring Well Approval

cc: Technical file (w/ enc.)

MR/MWAPPROV01.22.14



Site 13

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

Monitoring Well Approval

Approval is hereby granted to: Terracon Consultants, Inc.

(On behalf of): SCDOT

Facility: Gibbs Grocery, 863 North Pamplico Highway, Pamplico, SC

UST Permit Number: 03463

County: Florence

This approval is for the installation of three (3) temporary groundwater monitoring wells designated TMW-1, TMW-2, and TMW-3. The monitoring wells are to be installed at the Gibbs Grocery site and adjacent property located at 859 North Pamplico Highway in accordance with 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 (1903) or other form provided or approved by the Department shall be completed and submitted to the Agency within 30 days after well completion or abandonment unless the Agency has approved another schedule. 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 Michael Rivers, the project manager, (telephone: (803) 898-0671 or e-mail: RiversMS@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.

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: January 22, 2014

Approval #: UMW-25381

Michael Rivers, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management



Site 14

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

January 22, 2014

Tim Hunter
SC DOT
P.O. Box 191
Columbia, SC 29202

Re: Raider Station
848 N. Pamlico Hwy, Pamplico, SC 29583
MWA # UMW-25377
Request to Install Groundwater Monitoring Wells received January 21, 2014
Florence County

Dear Mr. Hunter:

The UST Management Division has received your request to install monitoring wells at the referenced location. The submittal has been placed on file. Monitoring well approval to install monitoring wells/borings in accordance with *South Carolina Well Standards*, R.61-71 is enclosed. Please submit a monitoring well record form (DHEC Form 1903) and analytical results of all soil and/or groundwater sampling to me within 30 days of receipt of the analytical results.

On all correspondence concerning this facility, please reference the monitoring well approval number. If you have any questions, please contact me at (803) 898-0647.

Sincerely,

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management

Monitoring Well Approval

Site 14

Approval is hereby granted to: Terracon Consultants, Inc.
On Behalf of: SC DOT
Location: 848 N. Pamplico Hwy, Pamplico, SC
County: Florence County
Permit: 19301

This approval is for the installation of 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 Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. 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 Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department changes, notification to Denise M. Place (tel: 803-898-0647 or e-mail: placedm@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. Departmental approval 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: 1/22/14

Approval #: UMW-25377

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management



site 15

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18480

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
853 N Pamplico Hwy
18480
Florence

This approval is for the installation of 2 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09487

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Site 18

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18481

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

A handwritten signature in black ink, reading 'Jonathan G. McInnis'.

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
1570 S Pamplico Hwy
18481
Florence

This approval is for the installation of 3 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09488

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Site 19

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18482

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



Site 19

South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to: Michael Hudgins/Terracon
on behalf of: Tim Hunter/SCDOT
Facility: 1870 S Pamplico Hwy
Site Identification: 18482
County: Florence

This approval is for the installation of 3 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09489

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Site 20

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18483

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



Site 20

South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
1873 S Pamplico Hwy
18483
Florence

This approval is for the installation of 2 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09490

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Site 21

January 21, 2014

South Carolina Department of Health
and Environmental Control

Tim Hunter
SCDOT
P O Box 191
Columbia, SC 29202

Re: Temporary Monitoring Well Approval Request received 1/21/14
Florence County Site ID: 18484

Dear Mr. Hunter :

The South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed and approved the referenced temporary monitoring well approval request submitted 1/21/14. The original temporary monitoring well approval has been sent to Michael Hudgins/Terracon, Inc. and a copy is enclosed for your records. The analytical results from the groundwater samples should be submitted to my attention on or before 3/22/14. Please note the following:

- Well construction and sampling derived waste including but not limited to drill cuttings, drilling fluids, and development/purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regards to contents, source, and date of activity.
- Monitoring wells are to yield groundwater samples representative of the zone monitored per R.61-71 H.1.c of the South Carolina Well Standards and Regulations (e.g. low flow sampling techniques are recommended for samples to be analyzed for metals to reduce induced turbidity).
- If this investigation is conducted as part of a potential real estate transaction, the potential purchaser may want to contact SCDHEC's Brownfields Program before this work is performed. The Brownfields Program offers a mechanism to avoid liability for contamination that may be found during this investigation. The investigation proposed may satisfy part or all of the required assessment if pre-approved by the Brownfields Program. The Brownfields Program may be reached at 1-866-576-3432.

If you have any questions, please contact me at (803) 898-0802.

Sincerely,

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment Section

enc: Monitor well approval

cc: SCDHEC EQC Region
Michael Hudgins – Terracon
521 Clemson Rd – Columbia, SC 29229



site 21

South Carolina Department of Health
and Environmental Control

Temporary Monitoring Well Approval

Approval is hereby granted to:
on behalf of:
Facility:
Site Identification:
County:

Michael Hudgins/Terracon
Tim Hunter/SCDOT
3032 S Pamplico Hwy
18484
Florence

This approval is for the installation of 6 temporary groundwater-monitoring wells. The temporary wells are to be installed in the locations as illustrated on the submitted map and per the proposed construction details provided by your correspondence dated 1/21/14. The temporary wells are to be installed following all of the applicable requirements of R.61-71.

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. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless the Department has approved another schedule. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
3. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
4. 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.
5. If any of the information provided to the Department changes, Jonathan McInnis (803 896-4061, mcinnijg@dhec.sc.gov) shall be notified a minimum of twenty-four hours prior to well construction 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.

Date of Issuance: 1/21/14

Approval #: MW-09491

Jonathan G. McInnis, Program Manager
Federal & State Site Assessment
Site Assessment Remediation & Revitalization Division
Bureau of Land & Waste Management



Site 22

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

January 22, 2014

Tim Hunter
SC DOT
P.O. Box 191
Columbia, SC 29202

Re: Evans Grocery
3801 S. Pamlico Hwy, Pamplico, SC 29583
MWA # UMW-25379
Request to Install Groundwater Monitoring Wells received January 21, 2014
Florence County

Dear Mr. Hunter:

The UST Management Division has received your request to install monitoring wells at the referenced location. The submittal has been placed on file. Monitoring well approval to install monitoring wells/borings in accordance with *South Carolina Well Standards*, R.61-71 is enclosed. Please submit a monitoring well record form (DHEC Form 1903) and analytical results of all soil and/or groundwater sampling to me within 30 days of receipt of the analytical results.

On all correspondence concerning this facility, please reference the monitoring well approval number. If you have any questions, please contact me at (803) 898-0647.

Sincerely,

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management

Site 22

Monitoring Well Approval

Approval is hereby granted to: Terracon Consultants, Inc.
On Behalf of: SC DOT
Location: 3801 S. Pamplico Hwy, Pamplico, SC
County: Florence County
Permit: 03475

This approval is for the installation of 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 Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. 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 Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department changes, notification to Denise M. Place (tel: 803-898-0647 or e-mail: placedm@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. Departmental approval 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: 1/22/14

Approval #: UMW-25379

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management



Site 23

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

January 22, 2014

Tim Hunter
SC DOT
P.O. Box 191
Columbia, SC 29202

Re: Daniels Bros
3732 S. Pamlico Hwy, Pamplico, SC 29583
MWA # UMW-25378
Request to Install Groundwater Monitoring Wells received January 21, 2014
Florence County

Dear Mr. Hunter:

The UST Management Division has received your request to install monitoring wells at the referenced location. The submittal has been placed on file. Monitoring well approval to install monitoring wells/borings in accordance with *South Carolina Well Standards*, R.61-71 is enclosed. Please submit a monitoring well record form (DHEC Form 1903) and analytical results of all soil and/or groundwater sampling to me within 30 days of receipt of the analytical results.

On all correspondence concerning this facility, please reference the monitoring well approval number. If you have any questions, please contact me at (803) 898-0647.

Sincerely,

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management

Monitoring Well Approval

Site 23

Approval is hereby granted to: Terracon Consultants, Inc.
On Behalf of: SC DOT
Location: 3732 S. Pamplico Hwy, Pamplico, SC
County: Florence County
Permit: 03418

This approval is for the installation of 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 Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. 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 Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.
5. If any of the information provided to the Department changes, notification to Denise M. Place (tel: 803-898-0647 or e-mail: placedm@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. Departmental approval 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: 1/22/14

Approval #: UMW-25378

Denise M. Place
Regulatory Compliance Section
UST Management Division
Bureau of Land and Waste Management

APPENDIX B

ANALYTICAL REPORTS AND CHAIN OF CUSTODIES

Access Analytical Report Nos.

214020715 - 2/17/14

214021509 - 2/28/14

214021278 - 3/11/14



ACCESS
ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Terracon
521 Clemson Rd
Columbia, SC 29201

ATTENTION

Regan Norris

PROJECT ID

Pamplico R/W Project

LABORATORY REPORT NUMBER

214020715

DATE

02/17/2014

Primary Data Review By


Robyn Miguels/Director Data Del

Authorized Signature

Secondary Data Review By

Ashley B. Amick

Project Manager, Access Analytical, Inc.
aamick@accessanalyticalinc.com

PLEASE NOTE:

- Unless otherwise noted, all analysis on this report performed at Gulf Coast Analytical Labs (GCAL), 7979 Innovation Park Dr., Baton Rouge, LA 70820.
- GCAL is SCDHEC certified laboratory # 73006, NCDENR certified lab # 618, GA certified lab # LA-01955, NELAP certified laboratory # 01955
- Local support services for this project are provided by Access Analytical, Inc.. Access Analytical is a representative of GCAL serving clients in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll free at 888.315.4243.

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 Innovation Park Dr.

Baton Rouge, LA 70820

Report Date 02/17/2014

GCAL Report 214020715



Deliver To Terracon
521 Clemson Rd
Columbia, SC 29201

Attn Regan Norris

Project Pamplico R/W Project

CASE NARRATIVE

Client: Access Analytical **Report:** 214020715

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the EPA 8260B analysis, samples 21402071504 (SITE 21 TW-2), 21402071507 (SITE 21 SB-2 (2-4)), and 21402071509 (SITE 20 TW-2) had to be diluted to bracket the concentration of target compounds within the calibration range of the instrument. The dilutions are reflected in elevated detection limits.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

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This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.


Robyn Migues/Director Data Del

Authorized Signature

GCAL REPORT 214020715

THIS REPORT CONTAINS 26 PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071501	SITE 23 SB-1 (2-4)	Solid	02/05/2014 00:00	02/07/2014 10:15
21402071502	SITE 22 SB-2 (2-4)	Solid	02/05/2014 10:10	02/07/2014 10:15
21402071503	SITE 21 TW-1	Water	02/05/2014 15:10	02/07/2014 10:15
21402071504	SITE 21 TW-2	Water	02/05/2014 15:20	02/07/2014 10:15
21402071505	SITE 21 TW-3	Water	02/05/2014 15:45	02/07/2014 10:15
21402071506	SITE 21 TW-4	Water	02/05/2014 16:00	02/07/2014 10:15
21402071507	SITE 21 SB-2 (2-4)	Solid	02/05/2014 15:00	02/07/2014 10:15
21402071508	SITE 20 TW-1	Water	02/05/2014 17:00	02/07/2014 10:15
21402071509	SITE 20 TW-2	Water	02/05/2014 17:00	02/07/2014 10:15
21402071510	SITE 20 SB-1 (2-4)	Solid	02/05/2014 17:00	02/07/2014 10:15
21402071511	TRIP BLANK	Water	02/05/2014 00:00	02/07/2014 10:15

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071503	SITE 21 TW-1	Water	02/05/2014 15:10	02/07/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	2.81	1.00	0.111	ug/L
108-88-3	Toluene	4.44	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.646J	1.00	0.109	ug/L
1330-20-7	Xylene (total)	1.60J	3.00	0.179	ug/L
91-20-3	Naphthalene	3.03J	5.00	0.176	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071504	SITE 21 TW-2	Water	02/05/2014 15:20	02/07/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	31.8	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	7.36J	10.0	0.290	ug/L
75-85-4	tert-amyl alcohol (TAA)	94.2	20.0	1.01	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	167	2.00	0.222	ug/L
108-88-3	Toluene	4.82	2.00	0.244	ug/L
100-41-4	Ethylbenzene	181	2.00	0.218	ug/L
1330-20-7	Xylene (total)	102	6.00	0.358	ug/L
91-20-3	Naphthalene	116	10.0	0.352	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	57.3	2.00	0.155	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071505	SITE 21 TW-3	Water	02/05/2014 15:45	02/07/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1.14	1.00	0.111	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071506	SITE 21 TW-4	Water	02/05/2014 16:00	02/07/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.958J	1.00	0.111	ug/L
108-88-3	Toluene	1.81	1.00	0.122	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071507	SITE 21 SB-2 (2-4)	Solid	02/05/2014 15:00	02/07/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	68.8J	177	1.80	ug/Kg
100-41-4	Ethylbenzene	3210	177	6.49	ug/Kg
1330-20-7	Xylene (total)	350J	354	8.75	ug/Kg
91-20-3	Naphthalene	1080	177	13.7	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071508	SITE 20 TW-1	Water	02/05/2014 17:00	02/07/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.455J	1.00	0.111	ug/L
91-20-3	Naphthalene	7.82	5.00	0.176	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071509	SITE 20 TW-2	Water	02/05/2014 17:00	02/07/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-85-4	tert-amyl alcohol (TAA)	77.8	20.0	1.01	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	6.23	2.00	0.222	ug/L
108-88-3	Toluene	51.7	2.00	0.244	ug/L
100-41-4	Ethylbenzene	168	2.00	0.218	ug/L
1330-20-7	Xylene (total)	557	6.00	0.358	ug/L
91-20-3	Naphthalene	110	10.0	0.352	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071501	SITE 23 SB-1 (2-4)	Solid	02/05/2014 00:00	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/11/2014 22:04	CEK	525332

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.040U	3.92	0.040	ug/Kg
108-88-3	Toluene	0.084U	3.92	0.084	ug/Kg
100-41-4	Ethylbenzene	0.144U	3.92	0.144	ug/Kg
1330-20-7	Xylene (total)	0.194U	7.84	0.194	ug/Kg
91-20-3	Naphthalene	0.304U	3.92	0.304	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	36.5	35.6	ug/Kg	98	62 - 127
1868-53-7	Dibromofluoromethane	36.5	37.1	ug/Kg	102	65 - 130
2037-26-5	Toluene d8	36.5	34.8	ug/Kg	95	71 - 132
17060-07-0	1,2-Dichloroethane-d4	36.5	38.4	ug/Kg	105	62 - 125

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071502	SITE 22 SB-2 (2-4)	Solid	02/05/2014 10:10	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/11/2014 22:27	CEK	525332

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.058U	5.77	0.058	ug/Kg
108-88-3	Toluene	0.123U	5.77	0.123	ug/Kg
100-41-4	Ethylbenzene	0.211U	5.77	0.211	ug/Kg
1330-20-7	Xylene (total)	0.285U	11.5	0.285	ug/Kg
91-20-3	Naphthalene	0.447U	5.77	0.447	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	53.9	53.6	ug/Kg	99	62 - 127
1868-53-7	Dibromofluoromethane	53.9	53.3	ug/Kg	99	65 - 130
2037-26-5	Toluene d8	53.9	51.6	ug/Kg	96	71 - 132
17060-07-0	1,2-Dichloroethane-d4	53.9	58	ug/Kg	108	62 - 125

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071503	SITE 21 TW-1	Water	02/05/2014 15:10	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/08/2014 22:58	CLH	525130

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	2.81	1.00	0.111	ug/L
108-88-3	Toluene	4.44	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.646J	1.00	0.109	ug/L
1330-20-7	Xylene (total)	1.60J	3.00	0.179	ug/L
91-20-3	Naphthalene	3.03J	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43	ug/L	86	78 - 130
1868-53-7	Dibromofluoromethane	50	50.4	ug/L	101	77 - 127
2037-26-5	Toluene d8	50	45.2	ug/L	90	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.4	ug/L	97	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/08/2014 22:58	CLH	525129

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43	ug/L	86	78 - 130
1868-53-7	Dibromofluoromethane	50	50.4	ug/L	101	77 - 127
2037-26-5	Toluene d8	50	45.2	ug/L	90	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.4	ug/L	97	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071504	SITE 21 TW-2	Water	02/05/2014 15:20	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	02/09/2014 15:56	JCK	525142

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	167	2.00	0.222	ug/L
108-88-3	Toluene	4.82	2.00	0.244	ug/L
100-41-4	Ethylbenzene	181	2.00	0.218	ug/L
1330-20-7	Xylene (total)	102	6.00	0.358	ug/L
91-20-3	Naphthalene	116	10.0	0.352	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	57.3	2.00	0.155	ug/L
107-06-2	1,2-Dichloroethane	0.232U	2.00	0.232	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	87.8	ug/L	88	78 - 130
1868-53-7	Dibromofluoromethane	100	104	ug/L	104	77 - 127
2037-26-5	Toluene d8	100	92.7	ug/L	93	76 - 134
17060-07-0	1,2-Dichloroethane-d4	100	96.9	ug/L	97	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/08/2014 23:21	CLH	525129

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	31.8	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	7.36J	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	94.2	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.7	ug/L	87	78 - 130
1868-53-7	Dibromofluoromethane	50	52.7	ug/L	105	77 - 127
2037-26-5	Toluene d8	50	46.7	ug/L	93	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.1	ug/L	100	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071505	SITE 21 TW-3	Water	02/05/2014 15:45	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/09/2014 00:08	CLH	525130

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1.14	1.00	0.111	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	0.176U	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.3	ug/L	87	78 - 130
1868-53-7	Dibromofluoromethane	50	50.4	ug/L	101	77 - 127
2037-26-5	Toluene d8	50	47.3	ug/L	95	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.3	ug/L	97	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/09/2014 00:08	CLH	525129

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	43.3	ug/L	87	78 - 130
1868-53-7	Dibromofluoromethane	50	50.4	ug/L	101	77 - 127
2037-26-5	Toluene d8	50	47.3	ug/L	95	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.3	ug/L	97	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071506	SITE 21 TW-4	Water	02/05/2014 16:00	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/09/2014 00:32	CLH	525130

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.958J	1.00	0.111	ug/L
108-88-3	Toluene	1.81	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	0.176U	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.8	ug/L	92	78 - 130
1868-53-7	Dibromofluoromethane	50	50.2	ug/L	100	77 - 127
2037-26-5	Toluene d8	50	47.6	ug/L	95	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.5	ug/L	99	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/09/2014 00:32	CLH	525129

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.8	ug/L	92	78 - 130
1868-53-7	Dibromofluoromethane	50	50.2	ug/L	100	77 - 127
2037-26-5	Toluene d8	50	47.6	ug/L	95	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	49.5	ug/L	99	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071507	SITE 21 SB-2 (2-4)	Solid	02/05/2014 15:00	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	02/15/2014 02:11	CLH	525595

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	68.8J	177	1.80	ug/Kg
108-88-3	Toluene	3.79U	177	3.79	ug/Kg
100-41-4	Ethylbenzene	3210	177	6.49	ug/Kg
1330-20-7	Xylene (total)	350J	354	8.75	ug/Kg
91-20-3	Naphthalene	1080	177	13.7	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1550	1430	ug/Kg	93	62 - 127
1868-53-7	Dibromofluoromethane	1550	1440	ug/Kg	93	65 - 130
2037-26-5	Toluene d8	1550	1520	ug/Kg	98	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1550	1930	ug/Kg	125	62 - 125

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071508	SITE 20 TW-1	Water	02/05/2014 17:00	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/10/2014 16:50	CEK	525219

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.455J	1.00	0.111	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	7.82	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	47.5	ug/L	95	78 - 130
1868-53-7	Dibromofluoromethane	50	50.3	ug/L	101	77 - 127
2037-26-5	Toluene d8	50	47.4	ug/L	95	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.3	ug/L	101	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/10/2014 01:08	CLH	525153

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	44.7	ug/L	89	78 - 130
1868-53-7	Dibromofluoromethane	50	49.7	ug/L	99	77 - 127
2037-26-5	Toluene d8	50	45.8	ug/L	92	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.1	ug/L	96	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071509	SITE 20 TW-2	Water	02/05/2014 17:00	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	02/09/2014 16:20	JCK	525142

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	6.23	2.00	0.222	ug/L
108-88-3	Toluene	51.7	2.00	0.244	ug/L
100-41-4	Ethylbenzene	168	2.00	0.218	ug/L
1330-20-7	Xylene (total)	557	6.00	0.358	ug/L
91-20-3	Naphthalene	110	10.0	0.352	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.155U	2.00	0.155	ug/L
107-06-2	1,2-Dichloroethane	0.232U	2.00	0.232	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	90.5	ug/L	91	78 - 130
1868-53-7	Dibromofluoromethane	100	106	ug/L	106	77 - 127
2037-26-5	Toluene d8	100	93.2	ug/L	93	76 - 134
17060-07-0	1,2-Dichloroethane-d4	100	104	ug/L	104	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/09/2014 00:54	CLH	525129

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	77.8	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.8	ug/L	92	78 - 130
1868-53-7	Dibromofluoromethane	50	52.7	ug/L	105	77 - 127
2037-26-5	Toluene d8	50	46.3	ug/L	93	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	59.5	ug/L	119	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071510	SITE 20 SB-1 (2-4)	Solid	02/05/2014 17:00	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/11/2014 22:50	CEK	525332

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.038U	3.74	0.038	ug/Kg
108-88-3	Toluene	0.080U	3.74	0.080	ug/Kg
100-41-4	Ethylbenzene	0.137U	3.74	0.137	ug/Kg
1330-20-7	Xylene (total)	0.185U	7.48	0.185	ug/Kg
91-20-3	Naphthalene	0.290U	3.74	0.290	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	30.7	30.1	ug/Kg	98	62 - 127
1868-53-7	Dibromofluoromethane	30.7	31.2	ug/Kg	102	65 - 130
2037-26-5	Toluene d8	30.7	29.8	ug/Kg	97	71 - 132
17060-07-0	1,2-Dichloroethane-d4	30.7	32.5	ug/Kg	106	62 - 125

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402071511	TRIP BLANK	Water	02/05/2014 00:00	02/07/2014 10:15

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/08/2014 01:31	CLH	525098

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	0.176U	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.7	ug/L	91	78 - 130
1868-53-7	Dibromofluoromethane	50	50.2	ug/L	100	77 - 127
2037-26-5	Toluene d8	50	48.5	ug/L	97	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.5	ug/L	101	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/08/2014 01:31	CLH	525096

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	45.7	ug/L	91	78 - 130
1868-53-7	Dibromofluoromethane	50	50.2	ug/L	100	77 - 127
2037-26-5	Toluene d8	50	48.5	ug/L	97	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.5	ug/L	101	71 - 127

GC/MS Volatiles Quality Control Summary

Analytical Batch Prep Batch	525098 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525098 1281339 Method Blank 02/07/2014 19:19 Water	ug/L RDL	Units Result	Spike Added	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8260B													
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0		52.2	104	71 - 129	50.7	101	3	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0		55.6	111	74 - 126	51.0	102	9	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0		52.6	105	71 - 125	53.3	107	1	30
1330-20-7	Xylene (total)		0.179U	0.179	150		169	113	74 - 127	155	103	9	30
91-20-3	Naphthalene		0.176U	0.176	50.0		49.8	100	57 - 138	52.5	105	5	35
71-43-2	Benzene		0.111U	0.111	50.0		56.9	114	70 - 129	54.5	109	4	20
108-88-3	Toluene		0.122U	0.122	50.0		52.8	106	72 - 120	51.7	103	2	20
Surrogate													
460-00-4	4-Bromofluorobenzene		42.3	85	50		47.7	95	78 - 130	47.2	94		
1868-53-7	Dibromofluoromethane		50.5	101	50		50	100	77 - 127	49.8	100		
2037-26-5	Toluene d8		47.4	95	50		49.4	99	76 - 134	49.6	99		
17060-07-0	1,2-Dichloroethane-d4		48.4	97	50		50.2	100	71 - 127	50.1	100		

Analytical Batch Prep Batch	525130 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525130 1281539 Method Blank 02/08/2014 20:38 Water	ug/L RDL	Units Result	Spike Added	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8260B													
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0		49.0	98	71 - 129	51.5	103	5	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0		48.6	97	74 - 126	46.0	92	5	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0		51.0	102	71 - 125	52.9	106	4	30
1330-20-7	Xylene (total)		0.179U	0.179	150		147	98	74 - 127	145	97	1	30
91-20-3	Naphthalene		0.176U	0.176	50.0		46.0	92	57 - 138	44.5	89	3	35
71-43-2	Benzene		0.111U	0.111	50.0		53.1	106	70 - 129	53.9	108	1	20
108-88-3	Toluene		0.122U	0.122	50.0		49.8	100	72 - 120	48.3	97	3	20
Surrogate													
460-00-4	4-Bromofluorobenzene		44.8	90	50		45.9	92	78 - 130	46.4	93		
1868-53-7	Dibromofluoromethane		49.5	99	50		50.2	100	77 - 127	50.4	101		
2037-26-5	Toluene d8		46.7	93	50		47.1	94	76 - 134	47.1	94		
17060-07-0	1,2-Dichloroethane-d4		48.4	97	50		47.6	95	71 - 127	51.2	102		

GC/MS Volatiles Quality Control Summary

Analytical Batch Prep Batch	525142 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525142 1281595 Method Blank 02/09/2014 13:14 Water	ug/L RDL	Spike Added	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8260B												
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	51.4	103	71 - 129	46.9	94	9	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	49.0	98	74 - 126	46.4	93	5	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	53.4	107	71 - 125	48.9	98	9	30
1330-20-7	Xylene (total)		0.179U	0.179	150	152	101	74 - 127	142	95	7	30
91-20-3	Naphthalene		0.176U	0.176	50.0	44.6	89	57 - 138	43.5	87	2	35
71-43-2	Benzene		0.111U	0.111	50.0	56.9	114	70 - 129	49.5	99	14	20
108-88-3	Toluene		0.122U	0.122	50.0	50.3	101	72 - 120	44.6	89	12	20
Surrogate												
460-00-4	4-Bromofluorobenzene		44.9	90	50	47.7	95	78 - 130	47.6	95		
1868-53-7	Dibromofluoromethane		50.9	102	50	53.2	106	77 - 127	53.1	106		
2037-26-5	Toluene d8		45.6	91	50	45.9	92	76 - 134	45.7	91		
17060-07-0	1,2-Dichloroethane-d4		49.8	100	50	52.2	104	71 - 127	50.6	101		

Analytical Batch Prep Batch	525219 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525219 1281930 Method Blank 02/10/2014 13:36 Water	ug/L RDL	Spike Added	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8260B												
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	54.4	109	71 - 129	56.0	112	3	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	53.0	106	74 - 126	49.9	100	6	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	56.6	113	71 - 125	53.0	106	7	30
1330-20-7	Xylene (total)		0.179U	0.179	150	175	117	74 - 127	153	102	13	30
91-20-3	Naphthalene		0.176U	0.176	50.0	58.4	117	57 - 138	58.8	118	1	35
71-43-2	Benzene		0.111U	0.111	50.0	59.7	119	70 - 129	58.6	117	2	20
108-88-3	Toluene		0.122U	0.122	50.0	58.5	117	72 - 120	55.7	111	5	20
Surrogate												
460-00-4	4-Bromofluorobenzene		55.3	111	50	55.8	112	78 - 130	50.2	100		
1868-53-7	Dibromofluoromethane		49.1	98	50	53.5	107	77 - 127	44.3	89		
2037-26-5	Toluene d8		54.9	110	50	53.6	107	76 - 134	51.4	103		
17060-07-0	1,2-Dichloroethane-d4		50.9	102	50	52.8	106	71 - 127	51.7	103		

GC/MS Volatiles Quality Control Summary

Analytical Batch	525332	Client ID	MB525332	ug/Kg	Spike	Result	% R	Control	Result	% R	RPD	Limit
Prep Batch	N/A	GCAL ID	1282564	RD	Added			Limits				
		Sample Type	Method Blank					% R				
		Analytical Date	02/11/2014 19:20									
		Matrix	Solid									
EPA 8260B												
100-41-4	Ethylbenzene		0.183U	0.183	50.0	46.1	92	74 - 130	46.3	93	0	30
1330-20-7	Xylene (total)		0.247U	0.247	150	139	93	71 - 129	138	92	1	30
91-20-3	Naphthalene		0.388U	0.388	50.0	48.1	96	54 - 132	54.1	108	12	35
71-43-2	Benzene		0.051U	0.051	50.0	49.3	99	73 - 128	47.7	95	3	20
108-88-3	Toluene		0.107U	0.107	50.0	44.3	89	74 - 121	46.4	93	5	20
Surrogate												
460-00-4	4-Bromofluorobenzene		48.2	96	50	48.9	98	62 - 127	48.8	98		
1868-53-7	Dibromofluoromethane		49.1	98	50	51.2	102	65 - 130	49.2	98		
2037-26-5	Toluene d8		49.8	100	50	49.8	100	71 - 132	49.5	99		
17060-07-0	1,2-Dichloroethane-d4		47.7	95	50	51.2	102	62 - 125	49.4	99		

Analytical Batch	525595	Client ID	MB525595	ug/Kg	Spike	Result	% R	Control	Result	% R	RPD	Limit
Prep Batch	N/A	GCAL ID	1283892	RD	Added			Limits				
		Sample Type	Method Blank					% R				
		Analytical Date	02/14/2014 20:26									
		Matrix	Solid									
EPA 8260B												
100-41-4	Ethylbenzene		9.15U	9.15	2500	2650	106	74 - 130	2510	100	5	30
1330-20-7	Xylene (total)		12.4U	12.4	7500	7690	103	71 - 129	7300	97	5	30
91-20-3	Naphthalene		19.4U	19.4	2500	2410	96	54 - 132	2440	98	1	35
71-43-2	Benzene		2.54U	2.54	2500	2630	105	73 - 128	2550	102	3	20
108-88-3	Toluene		5.35U	5.35	2500	2510	100	74 - 121	2400	96	4	20
Surrogate												
460-00-4	4-Bromofluorobenzene		2270	91	2500	2360	94	62 - 127	2420	97		
1868-53-7	Dibromofluoromethane		2530	101	2500	2570	103	65 - 130	2550	102		
2037-26-5	Toluene d8		2490	100	2500	2430	97	71 - 132	2400	96		
17060-07-0	1,2-Dichloroethane-d4		2620	105	2500	2610	104	62 - 125	2610	104		

GC/MS Volatiles Quality Control Summary

Analytical Batch Prep Batch	525096 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525096 1281333 Method Blank 02/07/2014 19:19 Water	ug/L RDL	Spike Added	Units Result	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8260B													
994-05-8	t-amyl methyl ether (TAME)		0.240U	0.240	50.0		53.1	106	50 - 150	53.6	107	1	50
75-65-0	t-Butanol (TBA)		0.290U	0.290	50.0		48.4	97	50 - 150	54.6	109	12	50
108-20-3	diisopropyl Ether (DIPE)		0.236U	0.236	50.0		54.6	109	50 - 150	54.5	109	0	50
637-92-3	Ethyl tert-butyl ether (ETBE)		0.234U	0.234	50.0		55.3	111	50 - 150	53.0	106	4	50
624-95-3	Ethyl tert-butanol (ETBA)		37.6U	37.6	2550		2150	84	50 - 150	2540	100	17	50
64-17-5	Ethanol		125U	125	25200		24600	98	50 - 150	28500	113	15	50
75-85-4	tert-amyl alcohol (TAA)		1.01U	1.01	200		173	87	50 - 150	204	102	16	50
762-75-4	tert-butyl formate (TBF)		0.487U	0.487	50.0		48.4	97	50 - 150	47.9	96	1	50
Surrogate													
460-00-4	4-Bromofluorobenzene		42.3	85	50		47.7	95	78 - 130	47.2	94		
1868-53-7	Dibromofluoromethane		50.5	101	50		50	100	77 - 127	49.8	100		
2037-26-5	Toluene d8		47.4	95	50		49.4	99	76 - 134	49.6	99		
17060-07-0	1,2-Dichloroethane-d4		48.4	97	50		50.2	100	71 - 127	50.1	100		

Analytical Batch Prep Batch	525129 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525129 1281536 Method Blank 02/08/2014 20:38 Water	ug/L RDL	Spike Added	Units Result	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8260B													
994-05-8	t-amyl methyl ether (TAME)		0.240U	0.240	50.0		52.4	105	50 - 150	55.1	110	5	50
75-65-0	t-Butanol (TBA)		0.290U	0.290	50.0		51.5	103	50 - 150	54.9	110	6	50
108-20-3	diisopropyl Ether (DIPE)		0.236U	0.236	50.0		53.6	107	50 - 150	55.4	111	3	50
637-92-3	Ethyl tert-butyl ether (ETBE)		0.234U	0.234	50.0		51.8	104	50 - 150	54.5	109	5	50
624-95-3	Ethyl tert-butanol (ETBA)		37.6U	37.6	2550		2300	90	50 - 150	2330	91	1	50
64-17-5	Ethanol		125U	125	25200		30400	121	50 - 150	29200	116	4	50
75-85-4	tert-amyl alcohol (TAA)		1.01U	1.01	200		193	97	50 - 150	193	97	0	50
762-75-4	tert-butyl formate (TBF)		0.487U	0.487	50.0		51.3	103	50 - 150	50.4	101	2	50
Surrogate													
460-00-4	4-Bromofluorobenzene		44.8	90	50		45.9	92	78 - 130	46.4	93		
1868-53-7	Dibromofluoromethane		49.5	99	50		50.2	100	77 - 127	50.4	101		

GC/MS Volatiles Quality Control Summary

Analytical Batch	525129	Client ID	MB525129		LCS525129		LCS525129		LCS525129	
Prep Batch	N/A	GCAL ID	1281536		1281537		1281538		1281538	
		Sample Type	Method Blank		LCS		LCS		LCS	
		Analytical Date	02/08/2014 20:38		02/08/2014 19:04		02/08/2014 19:04		02/08/2014 19:28	
		Matrix	Water		Water		Water		Water	
EPA 8260B										
		Units	ug/L	Spike	Result	% R	Control	Result	% R	RPD
		Result	RDL	Added			Limits % R			Limit
2037-26-5	Toluene d8	46.7	93	50	47.1	94	76 - 134	47.1	94	
17060-07-0	1,2-Dichloroethane-d4	48.4	97	50	47.6	95	71 - 127	51.2	102	

Analytical Batch	525153	Client ID	MB525153		LCS525153		LCS525153		LCS525153	
Prep Batch	N/A	GCAL ID	1281625		1281626		1281627		1281627	
		Sample Type	Method Blank		LCS		LCS		LCS	
		Analytical Date	02/10/2014 00:45		02/09/2014 23:12		02/09/2014 23:35		02/09/2014 23:35	
		Matrix	Water		Water		Water		Water	
EPA 8260B										
		Units	ug/L	Spike	Result	% R	Control	Result	% R	RPD
		Result	RDL	Added			Limits % R			Limit
994-05-8	t-amyl methyl ether (TAME)	0.240U	0.240	50.0	57.2	114	50 - 150	56.7	113	50
75-65-0	t-Butanol (TBA)	0.290U	0.290	50.0	57.0	114	50 - 150	58.6	117	50
108-20-3	diisopropyl Ether (DIPE)	0.236U	0.236	50.0	57.2	114	50 - 150	56.6	113	50
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	0.234	50.0	54.5	109	50 - 150	53.8	108	50
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	37.6	2550	2190	86	50 - 150	2410	95	50
64-17-5	Ethanol	125U	125	25200	26600	106	50 - 150	28800	114	50
75-85-4	tert-amyl alcohol (TAA)	1.01U	1.01	200	187	94	50 - 150	214	107	50
762-75-4	tert-butyl formate (TBF)	0.487U	0.487	50.0	49.8	100	50 - 150	52.5	105	50
Surrogate										
460-00-4	4-Bromofluorobenzene	46.7	93	50	46.6	93	78 - 130	47.2	94	
1868-53-7	Dibromofluoromethane	43.7	87	50	50.1	100	77 - 127	51.6	103	
2037-26-5	Toluene d8	45.4	91	50	46.1	92	76 - 134	46.2	92	
17060-07-0	1,2-Dichloroethane-d4	46.2	92	50	49.4	99	71 - 127	49.4	99	



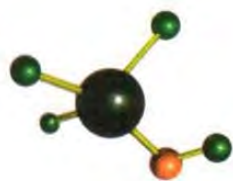
SAMPLE RECEIVING CHECKLIST



SAMPLE DELIVERY GROUP 214020715		CHECKLIST		
Client	Transport Method	YES	NO	NA
4565 - Access Analytical	FEDEX	☒	☐	☐
Profile Number 78454	Received By Brown, Aaron D.	☒	☐	☐
Line Item(s) 1 - Soils PAH/BTEX/Naphthalene 2 - Water BTEX//Naph/MTBE/1,2- DCA/PAH	Receive Date(s) 02/07/14	☒	☐	☐
Were all samples received using proper thermal preservation?		☒	☐	☐
When used, were all custody seals intact?		☒	☐	☐
Were all samples received in proper containers?		☒	☐	☐
Were all samples received using proper chemical preservation?		☒	☐	☐
Was preservative added to any container at the lab?		☐	☒	☐
Were all containers received in good condition?		☒	☐	☐
Were all VOA vials received with no head space?		☒	☐	☐
Do all sample labels match the Chain of Custody?		☒	☐	☐
Did the Chain of Custody list the sampling technician?		☒	☐	☐
Was the COC maintained i.e. all signatures, dates and time of receipt included?		☒	☐	☐

COOLERS		DISCREPANCIES		LAB PRESERVATIONS	
Airbill	Thermometer ID: E24	Temp(°C)			
5035 7503 9634		2.6			None

NOTES	



ACCESS
ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Terracon
521 Clemson Rd
Columbia, SC 29201

ATTENTION

Regan Norris

PROJECT ID

Pamplico Hwy RW Widening

LABORATORY REPORT NUMBER

214021509

DATE

02/28/2014

Primary Data Review By


Robyn Migués/Director, Data Del

Authorized Signature

Secondary Data Review By

Ashley B. Amick

Project Manager, Access Analytical, Inc.
aamick@accessanalyticalinc.com

PLEASE NOTE:

- Unless otherwise noted, all analysis on this report performed at Gulf Coast Analytical Labs (GCAL), 7979 Innovation Park Dr., Baton Rouge, LA 70820.
- GCAL is SCDHEC certified laboratory # 73006, NCDENR certified lab # 618, GA certified lab # LA-01955, NELAP certified laboratory # 01955
- Local support services for this project are provided by Access Analytical, Inc.. Access Analytical is a representative of GCAL serving clients in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll free at 888.315.4243.

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 Innovation Park Dr.

Baton Rouge, LA 70820

Report Date 02/28/2014

GCAL Report 214021509



Deliver To Terracon
521 Clemson Rd
Columbia, SC 29201

Attn Regan Norris

Project Pamplico Hwy RW Widening

CASE NARRATIVE

Client: Access Analytical **Report:** 214021509

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the EPA 8260B - Gas Additives analysis, sample 21402150904 (SITE 3 TW-1) had to be diluted due to the presence of non-target background. This dilution is reflected in elevated detection limits.

In the EPA 8260B analysis, samples 21402150904 (SITE 3 TW-1), 21402150906 (SITE 3 SB-2 (2-4)), and 21402150913 (SITE 1 SB-2 (6-8)) had to be diluted to bracket the concentration of target compounds within the calibration range of the instrument. The dilutions are reflected in elevated detection limits.

In the EPA 8260B analysis, sample 21402150909 (SITE 2 SB-1 (2-4)) had to be diluted to eliminate interference from non-target background. The dilution is reflected in elevated detection limits.

SEMI-VOLATILES MASS SPECTROMETRY

In the EPA 8270D analysis, the recoveries for all surrogates are below the lower control limits for sample 21402150904 (SITE 3 TW-1). No sample volume was available for re-extraction and re-analysis of this sample.

MISCELLANEOUS

The trip blank was not received by the laboratory. The client was contacted.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with [NELAC](#), this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.


Robyn Migues/Director Data Del

Authorized Signature

GCAL REPORT 214021509

THIS REPORT CONTAINS  PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150901	SITE 5 TW-1	Water	02/10/2014 09:15	02/15/2014 09:30
21402150902	SITE 5 TW-2	Water	02/10/2014 09:35	02/15/2014 09:30
21402150903	SITE 5 SB-2 (0-2)	Solid	02/10/2014 09:45	02/15/2014 09:30
21402150904	SITE 3 TW-1	Water	02/10/2014 10:30	02/15/2014 09:30
21402150905	SITE 3 TW-2	Water	02/10/2014 10:40	02/15/2014 09:30
21402150906	SITE 3 SB-2 (2-4)	Solid	02/10/2014 10:45	02/15/2014 09:30
21402150907	SITE 2 TW-1	Water	02/10/2014 13:00	02/15/2014 09:30
21402150908	SITE 2 TW-2	Water	02/10/2014 13:30	02/15/2014 09:30
21402150909	SITE 2 SB-1 (2-4)	Solid	02/10/2014 13:40	02/15/2014 09:30
21402150911	SITE 1 TW-1	Water	02/10/2014 13:50	02/15/2014 09:30
21402150912	SITE 1 TW-2	Water	02/10/2014 14:00	02/15/2014 09:30
21402150913	SITE 1 SB-2 (6-8)	Solid	02/10/2014 14:20	02/15/2014 09:30
21402181008	TRIP BLANK	Water	02/17/2014 00:00	02/18/2014 10:00

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150901	SITE 5 TW-1	Water	02/10/2014 09:15	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	4.04	1.00	0.111	ug/L
108-88-3	Toluene	7.71	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.907J	1.00	0.109	ug/L
1330-20-7	Xylene (total)	3.19	3.00	0.179	ug/L
91-20-3	Naphthalene	4.42J	5.00	0.176	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150904	SITE 3 TW-1	Water	02/10/2014 10:30	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-65-0	t-Butanol (TBA)	14.8J	20.0	0.580	ug/L
108-20-3	diisopropyl Ether (DIPE)	8.11J	10.0	0.472	ug/L
75-85-4	tert-amyl alcohol (TAA)	71.0	40.0	2.03	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	188	2.00	0.222	ug/L
108-88-3	Toluene	1.66J	2.00	0.244	ug/L
100-41-4	Ethylbenzene	8.11	2.00	0.218	ug/L
1330-20-7	Xylene (total)	2.71J	6.00	0.358	ug/L
91-20-3	Naphthalene	36.2	10.0	0.352	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	105	2.00	0.155	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150905	SITE 3 TW-2	Water	02/10/2014 10:40	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	4.27	1.00	0.111	ug/L
108-88-3	Toluene	1.85	1.00	0.122	ug/L
100-41-4	Ethylbenzene	47.4	1.00	0.109	ug/L
1330-20-7	Xylene (total)	29.1	3.00	0.179	ug/L
91-20-3	Naphthalene	4.61J	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.735J	1.00	0.078	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150906	SITE 3 SB-2 (2-4)	Solid	02/10/2014 10:45	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	9220	630	23.0	ug/Kg
1330-20-7	Xylene (total)	11100	1260	31.1	ug/Kg
91-20-3	Naphthalene	9080	630	48.8	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150907	SITE 2 TW-1	Water	02/10/2014 13:00	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1.48	1.00	0.111	ug/L
108-88-3	Toluene	0.815J	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.634J	1.00	0.109	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150908	SITE 2 TW-2	Water	02/10/2014 13:30	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.635J	1.00	0.111	ug/L
100-41-4	Ethylbenzene	0.570J	1.00	0.109	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150911	SITE 1 TW-1	Water	02/10/2014 13:50	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.508J	1.00	0.109	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150912	SITE 1 TW-2	Water	02/10/2014 14:00	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-85-4	tert-amyl alcohol (TAA)	28.5	20.0	1.01	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	40.3	1.00	0.111	ug/L
108-88-3	Toluene	44.5	1.00	0.122	ug/L
100-41-4	Ethylbenzene	69.2	1.00	0.109	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150912	SITE 1 TW-2	Water	02/10/2014 14:00	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
1330-20-7	Xylene (total)	291	3.00	0.179	ug/L
91-20-3	Naphthalene	50.8	5.00	0.176	ug/L
107-06-2	1,2-Dichloroethane	2.40	1.00	0.116	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150913	SITE 1 SB-2 (6-8)	Solid	02/10/2014 14:20	02/15/2014 09:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	48.0J	270	2.74	ug/Kg
108-88-3	Toluene	1490	270	5.77	ug/Kg
100-41-4	Ethylbenzene	1990	270	9.88	ug/Kg
1330-20-7	Xylene (total)	12600	540	13.3	ug/Kg
91-20-3	Naphthalene	1170	270	20.9	ug/Kg

SW-846 8270D Solid

CAS#	Parameter	Result	RDL	MDL	Units
91-20-3	Naphthalene	30.6J	391	12.2	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150901	SITE 5 TW-1	Water	02/10/2014 09:15	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 14:52	KRH	525700

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	4.04	1.00	0.111	ug/L
108-88-3	Toluene	7.71	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.907J	1.00	0.109	ug/L
1330-20-7	Xylene (total)	3.19	3.00	0.179	ug/L
91-20-3	Naphthalene	4.42J	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	50.1	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	50	48.3	ug/L	97	77 - 127
2037-26-5	Toluene d8	50	49.6	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.6	ug/L	97	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 14:52	KRH	525699

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	50.1	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	50	48.3	ug/L	97	77 - 127
2037-26-5	Toluene d8	50	49.6	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.6	ug/L	97	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150902	SITE 5 TW-2	Water	02/10/2014 09:35	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 15:16	KRH	525700

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	0.176U	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.7	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	49.1	ug/L	98	77 - 127
2037-26-5	Toluene d8	50	49.6	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	47	ug/L	94	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 15:16	KRH	525699

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.7	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	49.1	ug/L	98	77 - 127
2037-26-5	Toluene d8	50	49.6	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	47	ug/L	94	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150903	SITE 5 SB-2 (0-2)	Solid	02/10/2014 09:45	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/18/2014 15:36	JCK	525789

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.038U	3.73	0.038	ug/Kg
108-88-3	Toluene	0.080U	3.73	0.080	ug/Kg
100-41-4	Ethylbenzene	0.137U	3.73	0.137	ug/Kg
1330-20-7	Xylene (total)	0.184U	7.46	0.184	ug/Kg
91-20-3	Naphthalene	0.289U	3.73	0.289	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	32.9	34.9	ug/Kg	106	62 - 127
1868-53-7	Dibromofluoromethane	32.9	35.8	ug/Kg	109	65 - 130
2037-26-5	Toluene d8	32.9	34.8	ug/Kg	106	71 - 132
17060-07-0	1,2-Dichloroethane-d4	32.9	38.5	ug/Kg	117	62 - 125

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150904	SITE 3 TW-1	Water	02/10/2014 10:30	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	02/19/2014 18:36	CEK	525929

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	188	2.00	0.222	ug/L
108-88-3	Toluene	1.66J	2.00	0.244	ug/L
100-41-4	Ethylbenzene	8.11	2.00	0.218	ug/L
1330-20-7	Xylene (total)	2.71J	6.00	0.358	ug/L
91-20-3	Naphthalene	36.2	10.0	0.352	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	105	2.00	0.155	ug/L
107-06-2	1,2-Dichloroethane	0.232U	2.00	0.232	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	99	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	100	96.8	ug/L	97	77 - 127
2037-26-5	Toluene d8	100	102	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	100	93.5	ug/L	94	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			2	02/19/2014 18:36	CEK	525928

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.480U	10.0	0.480	ug/L
75-65-0	t-Butanol (TBA)	14.8J	20.0	0.580	ug/L
108-20-3	diisopropyl Ether (DIPE)	8.11J	10.0	0.472	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.468U	10.0	0.468	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	75.2U	200	75.2	ug/L
64-17-5	Ethanol	250U	2000	250	ug/L
75-85-4	tert-amyl alcohol (TAA)	71.0	40.0	2.03	ug/L
762-75-4	tert-butyl formate (TBF)	0.974U	100	0.974	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	99	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	100	96.8	ug/L	97	77 - 127
2037-26-5	Toluene d8	100	102	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	100	93.5	ug/L	94	71 - 127

EPA 8270D

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
02/15/2014 12:00	525609	EPA 3510C	1	02/17/2014 14:48	KCB	525676

CAS#	Parameter	Result	RDL	MDL	Units
83-32-9	Acenaphthene	0.456U	12.5	0.456	ug/L
208-96-8	Acenaphthylene	0.461U	12.5	0.461	ug/L
120-12-7	Anthracene	0.269U	12.5	0.269	ug/L
56-55-3	Benzo(a)anthracene	0.308U	12.5	0.308	ug/L
50-32-8	Benzo(a)pyrene	0.213U	12.5	0.213	ug/L
205-99-2	Benzo(b)fluoranthene	0.231U	12.5	0.231	ug/L
191-24-2	Benzo(g,h,i)perylene	0.248U	12.5	0.248	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150904	SITE 3 TW-1	Water	02/10/2014 10:30	02/15/2014 09:30

EPA 8270D

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
02/15/2014 12:00	525609	EPA 3510C	1	02/17/2014 14:48	KCB	525676

CAS#	Parameter	Result	RDL	MDL	Units
207-08-9	Benzo(k)fluoranthene	0.344U	12.5	0.344	ug/L
218-01-9	Chrysene	0.161U	12.5	0.161	ug/L
53-70-3	Dibenz(a,h)anthracene	0.268U	12.5	0.268	ug/L
206-44-0	Fluoranthene	0.294U	12.5	0.294	ug/L
86-73-7	Fluorene	0.448U	12.5	0.448	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	0.199U	12.5	0.199	ug/L
91-20-3	Naphthalene	0.583U	12.5	0.583	ug/L
85-01-8	Phenanthrene	0.236U	12.5	0.236	ug/L
129-00-0	Pyrene	0.508U	12.5	0.508	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	62.5	6.53	ug/L	10*	40 - 110
321-60-8	2-Fluorobiphenyl	62.5	7.25	ug/L	12*	50 - 110
1718-51-0	Terphenyl-d14	62.5	8.66	ug/L	14*	50 - 135

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150905	SITE 3 TW-2	Water	02/10/2014 10:40	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 16:03	KRH	525700

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	4.27	1.00	0.111	ug/L
108-88-3	Toluene	1.85	1.00	0.122	ug/L
100-41-4	Ethylbenzene	47.4	1.00	0.109	ug/L
1330-20-7	Xylene (total)	29.1	3.00	0.179	ug/L
91-20-3	Naphthalene	4.61J	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.735J	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	48	ug/L	96	78 - 130
1868-53-7	Dibromofluoromethane	50	49.2	ug/L	98	77 - 127
2037-26-5	Toluene d8	50	49.2	ug/L	98	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48	ug/L	96	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 16:03	KRH	525699

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	48	ug/L	96	78 - 130
1868-53-7	Dibromofluoromethane	50	49.2	ug/L	98	77 - 127
2037-26-5	Toluene d8	50	49.2	ug/L	98	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48	ug/L	96	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150906	SITE 3 SB-2 (2-4)	Solid	02/10/2014 10:45	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			200	02/17/2014 15:37	KRH	525712

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	6.38U	630	6.38	ug/Kg
108-88-3	Toluene	13.5U	630	13.5	ug/Kg
100-41-4	Ethylbenzene	9220	630	23.0	ug/Kg
1330-20-7	Xylene (total)	11100	1260	31.1	ug/Kg
91-20-3	Naphthalene	9080	630	48.8	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	5360	5270	ug/Kg	98	62 - 127
1868-53-7	Dibromofluoromethane	5360	5020	ug/Kg	94	65 - 130
2037-26-5	Toluene d8	5360	5210	ug/Kg	97	71 - 132
17060-07-0	1,2-Dichloroethane-d4	5360	6000	ug/Kg	112	62 - 125

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150907	SITE 2 TW-1	Water	02/10/2014 13:00	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 16:26	KRH	525700

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1.48	1.00	0.111	ug/L
108-88-3	Toluene	0.815J	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.634J	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	0.176U	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	50.1	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	50	48.1	ug/L	96	77 - 127
2037-26-5	Toluene d8	50	49.2	ug/L	98	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	46.4	ug/L	93	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 16:26	KRH	525699

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	50.1	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	50	48.1	ug/L	96	77 - 127
2037-26-5	Toluene d8	50	49.2	ug/L	98	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	46.4	ug/L	93	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150908	SITE 2 TW-2	Water	02/10/2014 13:30	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 16:50	KRH	525700

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.635J	1.00	0.111	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.570J	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	0.176U	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.3	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	48.5	ug/L	97	77 - 127
2037-26-5	Toluene d8	50	51	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.4	ug/L	97	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 16:50	KRH	525699

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.3	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	48.5	ug/L	97	77 - 127
2037-26-5	Toluene d8	50	51	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.4	ug/L	97	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150909	SITE 2 SB-1 (2-4)	Solid	02/10/2014 13:40	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			50	02/17/2014 14:17	KRH	525712

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1.57U	155	1.57	ug/Kg
108-88-3	Toluene	3.32U	155	3.32	ug/Kg
100-41-4	Ethylbenzene	5.68U	155	5.68	ug/Kg
1330-20-7	Xylene (total)	7.67U	310	7.67	ug/Kg
91-20-3	Naphthalene	12.0U	155	12.0	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1320	1250	ug/Kg	95	62 - 127
1868-53-7	Dibromofluoromethane	1320	1350	ug/Kg	102	65 - 130
2037-26-5	Toluene d8	1320	1330	ug/Kg	101	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1320	1380	ug/Kg	104	62 - 125

EPA 8270D

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
02/20/2014 09:30	525956	EPA 3550C	1	02/20/2014 14:03	KCB	525975

CAS#	Parameter	Result	RDL	MDL	Units
83-32-9	Acenaphthene	11.9U	388	11.9	ug/Kg
208-96-8	Acenaphthylene	7.93U	388	7.93	ug/Kg
120-12-7	Anthracene	7.98U	388	7.98	ug/Kg
56-55-3	Benzo(a)anthracene	7.24U	388	7.24	ug/Kg
50-32-8	Benzo(a)pyrene	4.86U	388	4.86	ug/Kg
205-99-2	Benzo(b)fluoranthene	7.66U	388	7.66	ug/Kg
191-24-2	Benzo(g,h,i)perylene	5.86U	388	5.86	ug/Kg
207-08-9	Benzo(k)fluoranthene	5.99U	388	5.99	ug/Kg
218-01-9	Chrysene	8.40U	388	8.40	ug/Kg
53-70-3	Dibenz(a,h)anthracene	5.57U	388	5.57	ug/Kg
206-44-0	Fluoranthene	6.31U	388	6.31	ug/Kg
86-73-7	Fluorene	6.99U	388	6.99	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	9.34U	388	9.34	ug/Kg
91-20-3	Naphthalene	12.1U	388	12.1	ug/Kg
85-01-8	Phenanthrene	8.91U	388	8.91	ug/Kg
129-00-0	Pyrene	5.44U	388	5.44	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	1670	1110	ug/Kg	67	35 - 100
321-60-8	2-Fluorobiphenyl	1670	1230	ug/Kg	74	45 - 105
1718-51-0	Terphenyl-d14	1670	1740	ug/Kg	104	30 - 125

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150911	SITE 1 TW-1	Water	02/10/2014 13:50	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 15:40	KRH	525700

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.508J	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	0.176U	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	0.116U	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.2	ug/L	98	78 - 130
1868-53-7	Dibromofluoromethane	50	49.3	ug/L	99	77 - 127
2037-26-5	Toluene d8	50	49.7	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.5	ug/L	97	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/17/2014 15:40	KRH	525699

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	1.01U	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.2	ug/L	98	78 - 130
1868-53-7	Dibromofluoromethane	50	49.3	ug/L	99	77 - 127
2037-26-5	Toluene d8	50	49.7	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.5	ug/L	97	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150912	SITE 1 TW-2	Water	02/10/2014 14:00	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/19/2014 20:10	CEK	525929

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	40.3	1.00	0.111	ug/L
108-88-3	Toluene	44.5	1.00	0.122	ug/L
100-41-4	Ethylbenzene	69.2	1.00	0.109	ug/L
1330-20-7	Xylene (total)	291	3.00	0.179	ug/L
91-20-3	Naphthalene	50.8	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L
107-06-2	1,2-Dichloroethane	2.40	1.00	0.116	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.7	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	47.9	ug/L	96	77 - 127
2037-26-5	Toluene d8	50	51	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.2	ug/L	96	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/19/2014 20:10	CEK	525928

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	0.240U	5.00	0.240	ug/L
75-65-0	t-Butanol (TBA)	0.290U	10.0	0.290	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.236U	5.00	0.236	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	0.234U	5.00	0.234	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	37.6U	100	37.6	ug/L
64-17-5	Ethanol	125U	1000	125	ug/L
75-85-4	tert-amyl alcohol (TAA)	28.5	20.0	1.01	ug/L
762-75-4	tert-butyl formate (TBF)	0.487U	50.0	0.487	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	49.7	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	50	47.9	ug/L	96	77 - 127
2037-26-5	Toluene d8	50	51	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	48.2	ug/L	96	71 - 127

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402150913	SITE 1 SB-2 (6-8)	Solid	02/10/2014 14:20	02/15/2014 09:30

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
02/19/2014 14:45	525956	EPA 3550C	1	02/20/2014 13:47	KCB	525975

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	48.0J	270	2.74	ug/Kg
108-88-3	Toluene	1490	270	5.77	ug/Kg
100-41-4	Ethylbenzene	1990	270	9.88	ug/Kg
1330-20-7	Xylene (total)	12600	540	13.3	ug/Kg
91-20-3	Naphthalene	1170	270	20.9	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2280	2280	ug/Kg	100	62 - 127
1868-53-7	Dibromofluoromethane	2280	2190	ug/Kg	96	65 - 130
2037-26-5	Toluene d8	2280	2280	ug/Kg	100	71 - 132
17060-07-0	1,2-Dichloroethane-d4	2280	2370	ug/Kg	104	62 - 125

SW-846 8270D Solid

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
02/19/2014 14:45	525956	EPA 3550C	1	02/20/2014 13:47	KCB	525975

CAS#	Parameter	Result	RDL	MDL	Units
83-32-9	Acenaphthene	12.0U	391	12.0	ug/Kg
208-96-8	Acenaphthylene	8.00U	391	8.00	ug/Kg
120-12-7	Anthracene	8.05U	391	8.05	ug/Kg
56-55-3	Benzo(a)anthracene	7.30U	391	7.30	ug/Kg
50-32-8	Benzo(a)pyrene	4.91U	391	4.91	ug/Kg
205-99-2	Benzo(b)fluoranthene	7.73U	391	7.73	ug/Kg
191-24-2	Benzo(g,h,i)perylene	5.91U	391	5.91	ug/Kg
207-08-9	Benzo(k)fluoranthene	6.04U	391	6.04	ug/Kg
218-01-9	Chrysene	8.47U	391	8.47	ug/Kg
53-70-3	Dibenz(a,h)anthracene	5.62U	391	5.62	ug/Kg
206-44-0	Fluoranthene	6.36U	391	6.36	ug/Kg
86-73-7	Fluorene	7.05U	391	7.05	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	9.42U	391	9.42	ug/Kg
91-20-3	Naphthalene	30.6J	391	12.2	ug/Kg
85-01-8	Phenanthrene	8.98U	391	8.98	ug/Kg
129-00-0	Pyrene	5.49U	391	5.49	ug/Kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
4165-60-0	Nitrobenzene-d5	1670	1090	ug/Kg	65	35 - 100
321-60-8	2-Fluorobiphenyl	1670	1140	ug/Kg	68	45 - 105
1718-51-0	Terphenyl-d14	1670	1550	ug/Kg	93	30 - 125

RESULTS REPORTED ON A DRY WEIGHT BASIS

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402181008	TRIP BLANK	Water	02/17/2014 00:00	02/18/2014 10:00

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	02/20/2014 17:27	LBH	525950

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.111U	1.00	0.111	ug/L
108-88-3	Toluene	0.122U	1.00	0.122	ug/L
100-41-4	Ethylbenzene	0.109U	1.00	0.109	ug/L
1330-20-7	Xylene (total)	0.179U	3.00	0.179	ug/L
91-20-3	Naphthalene	0.176U	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.078U	1.00	0.078	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	55.4	ug/L	111	78 - 130
1868-53-7	Dibromofluoromethane	50	50.7	ug/L	101	77 - 127
2037-26-5	Toluene d8	50	52.2	ug/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.5	ug/L	101	71 - 127

GC/MS Volatiles Quality Control Summary

Analytical Batch Prep Batch	525700 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525700 1284419 Method Blank 02/17/2014 14:08 Water	ug/L RDL	Spike Added	Result	% R	Control Limits % R	Result	% R	RPD	Limit
EPA 8260B												
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	50.8	102	71 - 129	51.8	104	2	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	55.2	110	74 - 126	55.5	111	1	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	50.0	100	71 - 125	49.4	99	1	30
1330-20-7	Xylene (total)		0.179U	0.179	150	158	105	74 - 127	162	108	3	30
91-20-3	Naphthalene		0.176U	0.176	50.0	50.1	100	57 - 138	49.1	98	2	35
71-43-2	Benzene		0.111U	0.111	50.0	52.8	106	70 - 129	52.6	105	0	20
108-88-3	Toluene		0.122U	0.122	50.0	51.3	103	72 - 120	54.2	108	5	20
Surrogate												
460-00-4	4-Bromofluorobenzene		50	100	50	50.8	102	78 - 130	52.4	105		
1868-53-7	Dibromofluoromethane		48.5	97	50	51.2	102	77 - 127	50.4	101		
2037-26-5	Toluene d8		49.6	99	50	49.3	99	76 - 134	49.4	99		
17060-07-0	1,2-Dichloroethane-d4		47.3	95	50	50.6	101	71 - 127	49.2	98		

Analytical Batch Prep Batch	525712 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525712 1284456 Method Blank 02/17/2014 13:26 Solid	ug/Kg RDL	Spike Added	Result	% R	Control Limits % R	Result	% R	RPD	Limit
EPA 8260B												
100-41-4	Ethylbenzene		9.15U	9.15	2500	2720	109	74 - 130	2530	101	7	30
1330-20-7	Xylene (total)		12.4U	12.4	7500	8000	107	71 - 129	7350	98	8	30
91-20-3	Naphthalene		19.4U	19.4	2500	2860	114	54 - 132	2720	109	5	35
71-43-2	Benzene		2.54U	2.54	2500	2660	106	73 - 128	2540	102	5	20
108-88-3	Toluene		5.35U	5.35	2500	2570	103	74 - 121	2400	96	7	20
Surrogate												
460-00-4	4-Bromofluorobenzene		2390	96	2500	2440	98	62 - 127	2430	97		
1868-53-7	Dibromofluoromethane		2470	99	2500	2560	102	65 - 130	2550	102		
2037-26-5	Toluene d8		2540	102	2500	2450	98	71 - 132	2420	97		
17060-07-0	1,2-Dichloroethane-d4		2460	98	2500	2510	100	62 - 125	2590	104		

GC/MS Volatiles Quality Control Summary

Analytical Batch	525789	Client ID	MB525789	ug/Kg	Spike	Result	% R	Control	Result	% R	RPD	Limit
Prep Batch	N/A	GCAL ID	1284799	RDL	Added			Limits				
		Sample Type	Method Blank					% R				
		Analytical Date	02/18/2014 13:32									
		Matrix	Solid									
EPA 8260B												
100-41-4	Ethylbenzene		0.183U	0.183	50.0	45.7	91	74 - 130	45.2	90	1	30
1330-20-7	Xylene (total)		0.247U	0.247	150	142	95	71 - 129	141	94	1	30
91-20-3	Naphthalene		0.388U	0.388	50.0	44.6	89	54 - 132	45.0	90	1	35
71-43-2	Benzene		0.051U	0.051	50.0	44.1	88	73 - 128	44.1	88	0	20
108-88-3	Toluene		0.107U	0.107	50.0	44.1	88	74 - 121	43.3	87	2	20
Surrogate												
460-00-4	4-Bromofluorobenzene		53.4	107	50	52.2	104	62 - 127	50.6	101		
1868-53-7	Dibromofluoromethane		51.9	104	50	50.9	102	65 - 130	51.4	103		
2037-26-5	Toluene d8		53.5	107	50	50.9	102	71 - 132	49.8	100		
17060-07-0	1,2-Dichloroethane-d4		51.8	104	50	51.8	104	62 - 125	51.2	102		

Analytical Batch	525929	Client ID	MB525929	ug/L	Spike	Result	% R	Control	Result	% R	RPD	Limit
Prep Batch	N/A	GCAL ID	1285438	RDL	Added			Limits				
		Sample Type	Method Blank					% R				
		Analytical Date	02/19/2014 18:13									
		Matrix	Water									
EPA 8260B												
107-06-2	1,2-Dichloroethane		0.116U	0.116	50.0	50.3	101	71 - 129	52.5	105	4	30
100-41-4	Ethylbenzene		0.109U	0.109	50.0	56.4	113	74 - 126	53.8	108	5	30
1634-04-4	tert-Butyl methyl ether (MTBE)		0.078U	0.078	50.0	49.0	98	71 - 125	52.0	104	6	30
1330-20-7	Xylene (total)		0.179U	0.179	150	162	108	74 - 127	157	105	3	30
91-20-3	Naphthalene		0.176U	0.176	50.0	52.6	105	57 - 138	48.9	98	7	35
71-43-2	Benzene		0.111U	0.111	50.0	50.5	101	70 - 129	52.4	105	4	20
108-88-3	Toluene		0.122U	0.122	50.0	53.3	107	72 - 120	52.1	104	2	20
Surrogate												
460-00-4	4-Bromofluorobenzene		48.6	97	50	48.7	97	78 - 130	48.8	98		
1868-53-7	Dibromofluoromethane		47.4	95	50	47.9	96	77 - 127	49.5	99		
2037-26-5	Toluene d8		48.8	98	50	49.2	98	76 - 134	49.2	98		
17060-07-0	1,2-Dichloroethane-d4		48.4	97	50	46.2	92	71 - 127	48.4	97		

GC/MS Volatiles Quality Control Summary

Analytical Batch Prep Batch	525699 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525699 1284416 Method Blank 02/17/2014 14:08 Water	ug/L RDL	Spike Added	Units Result	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8260B													
994-05-8	t-amyl methyl ether (TAME)		0.240U	0.240	50.0		55.9	112	50 - 150	53.8	108	4	50
75-65-0	t-Butanol (TBA)		0.290U	0.290	50.0		57.4	115	50 - 150	57.5	115	0	50
108-20-3	diisopropyl Ether (DIPE)		0.236U	0.236	50.0		53.1	106	50 - 150	54.8	110	3	50
637-92-3	Ethyl tert-butyl ether (ETBE)		0.234U	0.234	50.0		53.4	107	50 - 150	52.8	106	1	50
624-95-3	Ethyl tert-butanol (ETBA)		37.6U	37.6	2550		2220	87	50 - 150	2300	90	4	50
64-17-5	Ethanol		125U	125	25200		23600	94	50 - 150	24600	98	4	50
75-85-4	tert-amyl alcohol (TAA)		1.01U	1.01	200		207	104	50 - 150	211	106	2	50
762-75-4	tert-butyl formate (TBF)		0.487U	0.487	50.0		54.1	108	50 - 150	48.8	98	10	50
Surrogate													
460-00-4	4-Bromofluorobenzene		50	100	50		50.8	102	78 - 130	52.4	105		
1868-53-7	Dibromofluoromethane		48.5	97	50		51.2	102	77 - 127	50.4	101		
2037-26-5	Toluene d8		49.6	99	50		49.3	99	76 - 134	49.4	99		
17060-07-0	1,2-Dichloroethane-d4		47.3	95	50		50.6	101	71 - 127	49.2	98		

Analytical Batch Prep Batch	525928 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525928 1285426 Method Blank 02/19/2014 18:13 Water	ug/L RDL	Spike Added	Units Result	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8260B													
994-05-8	t-amyl methyl ether (TAME)		0.240U	0.240	50.0		48.9	98	50 - 150	51.0	102	4	50
75-65-0	t-Butanol (TBA)		0.290U	0.290	50.0		60.1	120	50 - 150	59.1	118	2	50
108-20-3	diisopropyl Ether (DIPE)		0.236U	0.236	50.0		49.8	100	50 - 150	50.4	101	1	50
637-92-3	Ethyl tert-butyl ether (ETBE)		0.234U	0.234	50.0		47.7	95	50 - 150	51.4	103	7	50
624-95-3	Ethyl tert-butanol (ETBA)		37.6U	37.6	2550		2760	108	50 - 150	2620	103	5	50
64-17-5	Ethanol		125U	125	25200		28300	112	50 - 150	26500	105	7	50
75-85-4	tert-amyl alcohol (TAA)		1.01U	1.01	200		225	113	50 - 150	223	112	1	50
762-75-4	tert-butyl formate (TBF)		0.487U	0.487	50.0		49.5	99	50 - 150	49.5	99	0	50
Surrogate													
460-00-4	4-Bromofluorobenzene		48.6	97	50		48.7	97	78 - 130	48.8	98		
1868-53-7	Dibromofluoromethane		47.4	95	50		47.9	96	77 - 127	49.5	99		

GC/MS Volatiles Quality Control Summary

Analytical Batch Prep Batch	525928 N/A	Client ID GCAL ID Sample Type Analytical Date Matrix	MB525928 1285426 Method Blank 02/19/2014 18:13 Water	ug/L RDL	Spike Added	LCS525928 1285427 LCS 02/19/2014 16:38 Water				LCSD525928 1285428 LCSD 02/19/2014 17:02 Water			
						Units Result	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
2037-26-5	Toluene d8	17060-07-0	1,2-Dichloroethane-d4	98	50	48.8	49.2	98	76 - 134	49.2	98		
17060-07-0	1,2-Dichloroethane-d4			97	50	48.4	46.2	92	71 - 127	48.4	97		

GC/MS Semi-Volatiles Quality Control Summary

Analytical Batch Prep Batch Prep Method	525676 525609 EPA 3510C	Client ID GCAL ID Sample Type Prep Date Analytical Date Matrix	MB525609 1284032 Method Blank 02/15/2014 12:00 02/17/2014 13:09 Water	ug/L RDL	Spike Added	Units Result	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8270D													
208-96-8	Acenaphthylene		0.369U	0.369	50.0		34.4	69	55 - 120	33.0	66	4	30
120-12-7	Anthracene		0.215U	0.215	50.0		39.4	79	58 - 120	38.6	77	2	30
56-55-3	Benzo(a)anthracene		0.246U	0.246	50.0		37.6	75	56 - 120	35.6	71	5	30
205-99-2	Benzo(b)fluoranthene		0.185U	0.185	50.0		39.1	78	55 - 120	38.5	77	2	30
207-08-9	Benzo(k)fluoranthene		0.275U	0.275	50.0		42.6	85	49 - 121	41.5	83	3	30
191-24-2	Benzo(g,h,i)perylene		0.198U	0.198	50.0		37.1	74	44 - 132	34.7	69	7	30
50-32-8	Benzo(a)pyrene		0.170U	0.170	50.0		38.0	76	56 - 120	36.6	73	4	30
218-01-9	Chrysene		0.129U	0.129	50.0		40.0	80	58 - 120	37.5	75	6	30
53-70-3	Dibenz(a,h)anthracene		0.214U	0.214	50.0		37.4	75	50 - 138	34.6	69	8	30
206-44-0	Fluoranthene		0.235U	0.235	50.0		41.3	83	55 - 120	39.7	79	4	30
86-73-7	Fluorene		0.358U	0.358	50.0		38.0	76	54 - 120	36.1	72	5	30
193-39-5	Indeno(1,2,3-cd)pyrene		0.159U	0.159	50.0		31.5	63	43 - 133	31.7	63	1	30
91-20-3	Naphthalene		0.466U	0.466	50.0		32.9	66	44 - 120	30.8	62	7	30
85-01-8	Phenanthrene		0.189U	0.189	50.0		37.4	75	58 - 120	38.2	76	2	30
83-32-9	Acenaphthene		0.365U	0.365	50.0		34.7	69	52 - 120	32.0	64	8	30
129-00-0	Pyrene		0.406U	0.406	50.0		40.3	81	54 - 120	36.7	73	9	30
Surrogate													
4165-60-0	Nitrobenzene-d5		34.9	70	50		41.2	82	40 - 110	38.9	78		
321-60-8	2-Fluorobiphenyl		30.7	61	50		40.4	81	50 - 110	38.7	77		
1718-51-0	Terphenyl-d14		41.1	82	50		44.9	90	50 - 135	42.3	85		

Analytical Batch Prep Batch Prep Method	525975 525956 EPA 3550C	Client ID GCAL ID Sample Type Prep Date Analytical Date Matrix	MB525956 1285584 Method Blank 02/19/2014 14:45 02/20/2014 12:57 Solid	ug/Kg RDL	Spike Added	Units Result	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
EPA 8270D													
208-96-8	Acenaphthylene		6.75U	6.75	1670		1160	70	53 - 120	1160	70	0	30
120-12-7	Anthracene		6.79U	6.79	1670		1180	71	52 - 120	1200	72	2	30

GC/MS Semi-Volatiles Quality Control Summary

Analytical Batch		525975	Client ID		ug/Kg RDL	Spike Added	Units Result	Result	% R	Control Limits % R	Result	% R	RPD	RPD Limit
Prep Batch	525956	GCAL ID	Sample Type											
Prep Method	EPA 3550C	Prep Date	Analytical Date											
EPA 8270D				Matrix										
56-55-3	Benzo(a)anthracene				6.16	1670	6.16U	1210	73	48 - 120	1220	73	1	30
205-99-2	Benzo(b)fluoranthene				6.52	1670	6.52U	1380	83	31 - 130	1400	84	1	30
207-08-9	Benzo(k)fluoranthene				5.10	1670	5.10U	1300	78	36 - 122	1370	82	5	30
191-24-2	Benzo(g,h,i)perylene				4.99	1670	4.99U	1190	71	29 - 134	1320	79	10	30
50-32-8	Benzo(a)pyrene				4.14	1670	4.14U	1200	72	44 - 120	1240	74	3	30
218-01-9	Chrysene				7.15	1670	7.15U	1240	74	51 - 120	1240	74	0	30
53-70-3	Dibenz(a,h)anthracene				4.74	1670	4.74U	1180	71	27 - 129	1290	77	9	30
206-44-0	Fluoranthene				5.37	1670	5.37U	1130	68	39 - 120	1160	70	3	30
86-73-7	Fluorene				5.95	1670	5.95U	1170	70	48 - 120	1180	71	1	30
193-39-5	Indeno(1,2,3-cd)pyrene				7.95	1670	7.95U	1180	71	43 - 132	1160	70	2	30
91-57-6	2-Methylnaphthalene				4.76	1670	4.76U	1220	73	43 - 120	1250	75	2	30
91-20-3	Naphthalene				10.3	1670	10.3U	1130	68	48 - 120	1160	70	3	30
85-01-8	Phenanthrene				7.58	1670	7.58U	1210	73	53 - 120	1240	74	2	30
90-12-0	1-Methylnaphthalene				6.10	1670	6.10U	1280	77	37 - 120	1310	79	2	30
106-46-7	1,4-Dichlorobenzene				8.82	1670	8.82U	1080	65	42 - 120	1200	72	11	30
621-64-7	n-Nitrosodi-n-propylamine				14.4	1670	14.4U	1170	70	46 - 120	1210	73	3	30
120-82-1	1,2,4-Trichlorobenzene				10.5	1670	10.5U	1180	71	46 - 120	1250	75	6	30
83-32-9	Acenaphthene				10.1	1670	10.1U	1160	70	50 - 120	1220	73	5	30
121-14-2	2,4-Dinitrotoluene				6.72	1670	6.72U	1240	74	45 - 120	1270	76	2	30
129-00-0	Pyrene				4.63	1670	4.63U	1470	88	38 - 136	1490	89	1	30
Surrogate														
4165-60-0	Nitrobenzene-d5				67	1670	1110	1180	71	35 - 100	1190	71		
321-60-8	2-Fluorobiphenyl				68	1670	1140	1260	76	45 - 105	1260	76		
1718-51-0	Terphenyl-d14				90	1670	1500	1620	97	30 - 125	1650	99		

Access Analytical - Chain of Custody Record

Project Work Order #
Laboratory ID: GCN

LAB USE ONLY
Sales Order #
Access Quote #

Company Name: ACCESS ANALYTICAL, INC.
Report To: ACCESS
Address: 7478 Carlisle Street
City: Irmo, SC 29063
State: SC Zip: 29063
Phone: (803) 781-4243 Fax: 781-4303
www.access-inc.com

Company Name: Tennison
Report To: Reagan Norris
Address: 521 - Clansman Rd
City: Columbia State: SC Zip: 29229
Phone: 803-741-9000 Fax: 803-741-9900
Email: reagan@tennison.com
Project ID: Paulsco Hwy / BW widening
Sampled By: Reagan Norris

Preservative Codes (place corresponding # in block above analysis field)
P = None, 1 = HCl, 2 = HNO₃, 3 = H₂SO₄, 4 = NaOH, 5 = Na₂SO₄, 6 = Method 5035 set w/ NaHSO₄, 7 = NaOH/ZnOAC, 8 = H₂O.
Matrix Codes (place corresponding code in matrix column)
GW = ground water, MW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)
Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)
Container Type: G = Glass, P = Plastic

Sample ID/Description: Site 9 TW-1 Date Collected: 2-10-14 Time Collected: 9:15 Type: GW Matrix: GW Program Area: SHW Total Samples: 2
Site 5 TW-2 9:35 GW GW 2
Site 5 SB-2 (0-2) 9:45 S S 4
Site 3 TW-1 10:30 GW GW 3
Site 3 TW-2 10:40 GW GW 2
Site 3 SB-2 (2-4) 10:45 S S 4
Site 2 TW-1 13:00 GW GW 2
Site 2 TW-2 13:30 GW GW 2
Site 2 SB-1 (2-4) 13:40 S S 4
Trip Blanks GW GW 2

Preservative Codes (place corresponding # in block above analysis field)
P = None, 1 = HCl, 2 = HNO₃, 3 = H₂SO₄, 4 = NaOH, 5 = Na₂SO₄, 6 = Method 5035 set w/ NaHSO₄, 7 = NaOH/ZnOAC, 8 = H₂O.
Matrix Codes (place corresponding code in matrix column)
GW = ground water, MW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)
Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)
Container Type: G = Glass, P = Plastic

Sample ID/Description	Date Collected	Time Collected	Type	Matrix	Program Area	Total Samples	Requested Lab Analysis	Preservative (see codes)	Container Type (see codes)	1	2	3	4	5	6	7	8	9	10
Site 9 TW-1	2-10-14	9:15	GW	GW	SHW	2	PAHS												
Site 5 TW-2		9:35	GW	GW	SHW	2	BTEX, PAHs, MTBE, 1,2-DCA, 6x4												
Site 5 SB-2 (0-2)		9:45	S	S		4													
Site 3 TW-1		10:30	GW	GW		3													
Site 3 TW-2		10:40	GW	GW		2													
Site 3 SB-2 (2-4)		10:45	S	S		4													
Site 2 TW-1		13:00	GW	GW		2													
Site 2 TW-2		13:30	GW	GW		2													
Site 2 SB-1 (2-4)		13:40	S	S		4													
Trip Blanks			GW	GW		2													

Client ID: 4565 - Access Analytical
SDG: 214021509
Due Date: 02/21/14

Turnaround Time:	Project Location:	Relinquished By:	Received By:	Date (mm/dd/yyyy)	Time (hh:mm)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C)
☒ Standard ☐ RUSH* *Date Required: (For rush work, results emailed/faxed by end of business day on date required)	☒ SC ☐ NC ☐ Other (specify) _____	<u>[Signature]</u>	<u>[Signature]</u>	2/11/14	1454	☒ Y ☐ N	(°C) (N/A)
		<u>[Signature]</u>	<u>[Signature]</u>	2/11/14	1700	☐ Y ☐ N	(°C) (N/A)
		<u>[Signature]</u>	<u>[Signature]</u>	2/11/14	930	☐ Y ☐ N	(°C) (N/A)
		<u>[Signature]</u>	<u>[Signature]</u>			☐ Y ☐ N	(°C) (N/A)



SAMPLE RECEIVING CHECKLIST



SAMPLE DELIVERY GROUP 214021509	
Client 4565 - Access Analytical	Transport Method FEDEX
Profile Number 78454	Received By Brown, Aaron D.
Line Item(s) 1 - Soils PAH/BTEX/Naphthalene 2 - Water BTEX/Naph/MTBE/1,2-DCA/PAH	Receive Date(s) 02/15/14
COOLERS	
Airbill 5035 7503 9690	Thermometer ID: E22 Temp(°C) 2.0
DISCREPANCIES	
None	
LAB PRESERVATIONS	
None	
NOTES	

CHECKLIST	YES	NO	NA
Were all samples received using proper thermal preservation?	☒	☐	☐
When used, were all custody seals intact?	☒	☐	☐
Were all samples received in proper containers?	☒	☐	☐
Were all samples received using proper chemical preservation?	☒	☐	☐
Was preservative added to any container at the lab?	☐	☒	☐
Were all containers received in good condition?	☒	☐	☐
Were all VOA vials received with no head space?	☒	☐	☐
Do all sample labels match the Chain of Custody?	☒	☐	☐
Did the Chain of Custody list the sampling technician?	☒	☐	☐
Was the COC maintained i.e. all signatures, dates and time of receipt included?	☒	☐	☐



ACCESS
ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Terracon
521 Clemson Rd
Columbia, SC 29201

ATTENTION

Regan Norris

PROJECT ID

Hwy 51 Pamplico - R/W Widening

LABORATORY REPORT NUMBER

214021278

DATE

03/11/2014

Primary Data Review By

Secondary Data Review By

Authorized Signature

Ashley B. Amick

Project Manager, Access Analytical, Inc.
aamick@accessanalyticalinc.com

PLEASE NOTE:

- Unless otherwise noted, all analysis on this report performed at Gulf Coast Analytical Labs (GCAL), 7979 Innovation Park Dr., Baton Rouge, LA 70820.
- GCAL is SCDHEC certified laboratory # 73006, NCDENR certified lab # 618, GA certified lab # LA-01955, NELAP certified laboratory # 01955
- Local support services for this project are provided by Access Analytical, Inc.. Access Analytical is a representative of GCAL serving clients in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll free at 888.315.4243.

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 Innovation Park Dr.

Baton Rouge, LA 70820

Report Date 03/11/2014

GCAL Report 214021278



Deliver To Terracon
521 Clemson Rd
Columbia, SC 29201

Attn Regan Norris

Project Hwy 51 Pamplico - R/W Widening

CASE NARRATIVE

Client: Access Analytical **Report:** 214021278

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the EPA 8260B - Gas Additives analysis, samples 21402127801 (SITE 13 TW-1), 21402127802 (SITE 13 TW-2), 21402127806 (SITE 12 TW-1), 21402127807 (SITE 12 TW-2), 21402127809 (SITE 8 TW-4), 21402127821 (SITE 9 TW-1), 21402127822 (SITE 9 TW-2), 21402127824 (SITE 22 TW-1), 21402127825 (SITE 22 TW-2), 21402127840 (SITE 7 TW-1), 21402127832 (SITE 10 TW-1), 21402127833 (SITE 10 TW-2), 21402127834 (SITE 10 TW-3), 21402127836 (SITE 8 TW-2), and 21402127841 (SITE 7 TW-2) had to be diluted due to the presence of non-target background. This dilutions are reflected in elevated detection limits.

In the EPA 8260B analysis, samples 21402127801 (SITE 13 TW-1), 21402127802 (SITE 13 TW-2), 21402127803 (SITE 13 SB-2 (0-2)), 21402127806 (SITE 12 TW-1), 21402127807 (SITE 12 TW-2), 21402127808 (SITE 12 SB-1 (2-4)), 21402127809 (SITE 8 TW-4), 21402127810 (SITE 8 SB-3 (2-4)), 21402127821 (SITE 9 TW-1), 21402127822 (SITE 9 TW-2), 21402127824 (SITE 22 TW-1), 21402127825 (SITE 22 TW-2), 21402127832 (SITE 10 TW-1), 21402127833 (SITE 10 TW-2), 21402127834 (SITE 10 TW-3), 21402127835 (SITE 10 SB-1 (0-2)), 21402127836 (SITE 8 TW-2), 21402127840 (SITE 7 TW-1), 21402127841 (SITE 7 TW-2), and 21402127842 (SITE 7 SB-1 (0-2)) had to be diluted to bracket the concentration of target compounds within the calibration range of the instrument. The dilutions are reflected in elevated detection limits.

In the EPA 8260B analysis, samples 21402127814 (SITE 18 SB-2 (6-8)) and 21402127823 (SITE 9 SB-1 (0-2)) had to be diluted due to the presence of non-target background. This dilution is reflected in the elevated detection limits.

SEMI-VOLATILES MASS SPECTROMETRY

In the EPA 8270D analysis, samples 21402127825 (SITE 22 TW-2) and 21402127840 (SITE 7 TW-1) had to be diluted to bracket the concentration of target compounds within the calibration range of the instrument. This is reflected in elevated detection limits.

In the EPA 8270D analysis, sample 21402127809 (SITE 8 TW-4) had one surrogate recovery outside control limits in the base-neutral fraction.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with [NELAC](#), this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature

GCAL REPORT 214021278

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127801	SITE 13 TW-1	Water	02/05/2014 13:45	02/12/2014 09:50
21402127802	SITE 13 TW-2	Water	02/05/2014 14:10	02/12/2014 09:50
21402127803	SITE 13 SB-2 (0-2)	Solid	02/05/2014 14:20	02/12/2014 09:50
21402127804	SITE 15 TW-1	Water	02/05/2014 14:30	02/12/2014 09:50
21402127805	SITE 15 SB-1 (6-8)	Solid	02/05/2014 14:45	02/12/2014 09:50
21402127806	SITE 12 TW-1	Water	02/05/2014 15:00	02/12/2014 09:50
21402127807	SITE 12 TW-2	Water	02/05/2014 15:20	02/12/2014 09:50
21402127808	SITE 12 SB-1 (2-4)	Solid	02/05/2014 15:36	02/12/2014 09:50
21402127809	SITE 8 TW-4	Water	02/07/2014 12:00	02/12/2014 09:50
21402127810	SITE 8 SB-3 (2-4)	Solid	02/07/2014 12:05	02/12/2014 09:50
21402127811	SITE 19 TW-1	Water	02/06/2014 09:00	02/12/2014 09:50
21402127812	SITE 19 TW-2	Water	02/06/2014 09:15	02/12/2014 09:50
21402127813	SITE 19 SB-2 (2-4)	Solid	02/06/2014 09:20	02/12/2014 09:50
21402127814	SITE 18 SB-2 (6-8)	Solid	02/06/2014 10:15	02/12/2014 09:50
21402127815	SITE 18 TW-1	Water	02/06/2014 09:40	02/12/2014 09:50
21402127816	SITE 18 TW-2	Water	02/06/2014 09:50	02/12/2014 09:50
21402127817	SITE 14 TW-1	Water	02/06/2014 11:15	02/12/2014 09:50
21402127818	SITE 14 TW-2	Water	02/06/2014 11:30	02/12/2014 09:50
21402127819	SITE 14 TW-3	Water	02/06/2014 11:45	02/12/2014 09:50
21402127820	SITE 14 SB-2 (2-4)	Solid	02/06/2014 12:30	02/12/2014 09:50
21402127821	SITE 9 TW-1	Water	02/07/2014 14:00	02/12/2014 09:50
21402127822	SITE 9 TW-2	Water	02/07/2014 14:15	02/12/2014 09:50
21402127823	SITE 9 SB-1 (0-2)	Solid	02/07/2014 14:35	02/12/2014 09:50
21402127824	SITE 22 TW-1	Water	02/05/2014 11:35	02/12/2014 09:50
21402127825	SITE 22 TW-2	Water	02/05/2014 12:15	02/12/2014 09:50
21402127826	SITE 20 TW-2	Water	02/05/2014 17:00	02/12/2014 09:50
21402127827	SITE 21 TW-4	Water	02/05/2014 16:00	02/12/2014 09:50
21402127828	SITE 23 TW-1	Water	02/05/2014 13:05	02/12/2014 09:50
21402127829	SITE 11 TW-1	Water	02/07/2014 09:00	02/12/2014 09:50
21402127830	SITE 11 TW-2	Water	02/07/2014 08:50	02/12/2014 09:50
21402127831	SITE 11 SB-1 (0-2)	Solid	02/07/2014 09:10	02/12/2014 09:50
21402127832	SITE 10 TW-1	Water	02/07/2014 10:20	02/12/2014 09:50
21402127833	SITE 10 TW-2	Water	02/07/2014 10:45	02/12/2014 09:50
21402127834	SITE 10 TW-3	Water	02/07/2014 11:00	02/12/2014 09:50
21402127835	SITE 10 SB-1 (0-2)	Solid	02/07/2014 11:05	02/12/2014 09:50
21402127836	SITE 8 TW-2	Water	02/07/2014 11:30	02/12/2014 09:50
21402127837	SITE 8 TW-1	Water	02/07/2014 11:45	02/12/2014 09:50
21402127838	SITE 8 TW-3	Water	02/07/2014 11:55	02/12/2014 09:50
21402127839	SITE 23 TW-2	Water	02/05/2014 13:20	02/12/2014 09:50
21402127840	SITE 7 TW-1	Water	02/07/2014 15:00	02/12/2014 09:50
21402127841	SITE 7 TW-2	Water	02/07/2014 15:20	02/12/2014 09:50
21402127842	SITE 7 SB-1 (0-2)	Solid	02/07/2014 15:30	02/12/2014 09:50
21402127843	SITE 6 TW-1	Water	02/07/2014 16:10	02/12/2014 09:50
21402127844	SITE 6 TW-2	Water	02/07/2014 16:20	02/12/2014 09:50
21402127845	SITE 6 SB-2 (0-2)	Solid	02/07/2014 17:00	02/12/2014 09:50
21402127847	TRIP BLANK	Water	02/07/2014 00:00	02/12/2014 09:50

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127801	SITE 13 TW-1	Water	02/05/2014 13:45	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1870	25.0	2.78	ug/L
108-88-3	Toluene	51.8	25.0	3.05	ug/L
100-41-4	Ethylbenzene	661	25.0	2.73	ug/L
1330-20-7	Xylene (total)	426	75.0	4.47	ug/L
91-20-3	Naphthalene	651	125	4.41	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	79.7	25.0	1.94	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	7.65J	125	6.00	ug/L
108-20-3	diisopropyl Ether (DIPE)	85.5J	125	5.90	ug/L
75-85-4	tert-amyl alcohol (TAA)	312J	500	25.3	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127802	SITE 13 TW-2	Water	02/05/2014 14:10	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	2050	50.0	5.55	ug/L
108-88-3	Toluene	1010	50.0	6.09	ug/L
100-41-4	Ethylbenzene	3340	50.0	5.45	ug/L
1330-20-7	Xylene (total)	7900	150	8.94	ug/L
91-20-3	Naphthalene	847	250	8.81	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	29.7J	50.0	3.89	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
108-20-3	diisopropyl Ether (DIPE)	180J	250	11.8	ug/L
75-85-4	tert-amyl alcohol (TAA)	919J	1000	50.7	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127803	SITE 13 SB-2 (0-2)	Solid	02/05/2014 14:20	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	25400	8690	88.1	ug/Kg
108-88-3	Toluene	6950J	8690	186	ug/Kg
100-41-4	Ethylbenzene	199000	8690	318	ug/Kg
1330-20-7	Xylene (total)	414000	17400	429	ug/Kg
91-20-3	Naphthalene	95700	8690	674	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127804	SITE 15 TW-1	Water	02/05/2014 14:30	02/12/2014 09:50

EPA 8270D

CAS#	Parameter	Result	RDL	MDL	Units
91-20-3	Naphthalene	32.5	11.1	0.518	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
108-20-3	diisopropyl Ether (DIPE)	3.14J	5.00	0.236	ug/L
75-85-4	tert-amyl alcohol (TAA)	42.7	20.0	1.01	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	39.0	1.00	0.111	ug/L
108-88-3	Toluene	17.9	1.00	0.122	ug/L
100-41-4	Ethylbenzene	35.8	1.00	0.109	ug/L
1330-20-7	Xylene (total)	43.4	3.00	0.179	ug/L
91-20-3	Naphthalene	21.4	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	0.845J	1.00	0.078	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127806	SITE 12 TW-1	Water	02/05/2014 15:00	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
108-20-3	diisopropyl Ether (DIPE)	1110J	1250	59.0	ug/L
75-85-4	tert-amyl alcohol (TAA)	12700	5000	253	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	24400	250	27.8	ug/L
108-88-3	Toluene	24900	250	30.5	ug/L
100-41-4	Ethylbenzene	2520	250	27.3	ug/L
1330-20-7	Xylene (total)	11400	750	44.7	ug/L
91-20-3	Naphthalene	1450	1250	44.1	ug/L
107-06-2	1,2-Dichloroethane	574	250	29.0	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127807	SITE 12 TW-2	Water	02/05/2014 15:20	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
108-20-3	diisopropyl Ether (DIPE)	1830	1250	59.0	ug/L
75-85-4	tert-amyl alcohol (TAA)	15700	5000	253	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	24100	250	27.8	ug/L
108-88-3	Toluene	26400	250	30.5	ug/L
100-41-4	Ethylbenzene	2450	250	27.3	ug/L
1330-20-7	Xylene (total)	10700	750	44.7	ug/L
91-20-3	Naphthalene	1160J	1250	44.1	ug/L
107-06-2	1,2-Dichloroethane	673	250	29.0	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127808	SITE 12 SB-1 (2-4)	Solid	02/05/2014 15:36	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1390	258	2.61	ug/Kg
108-88-3	Toluene	464	258	5.52	ug/Kg
100-41-4	Ethylbenzene	2260	258	9.43	ug/Kg
1330-20-7	Xylene (total)	5550	515	12.7	ug/Kg
91-20-3	Naphthalene	1410	258	20.0	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127809	SITE 8 TW-4	Water	02/07/2014 12:00	02/12/2014 09:50

EPA 8270D

CAS#	Parameter	Result	RDL	MDL	Units
86-73-7	Fluorene	1.30J	16.9	0.607	ug/L
91-20-3	Naphthalene	24.3	16.9	0.790	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	37.0	25.0	1.20	ug/L
75-65-0	t-Butanol (TBA)	38.2J	50.0	1.45	ug/L
108-20-3	diisopropyl Ether (DIPE)	6.61J	25.0	1.18	ug/L
75-85-4	tert-amyl alcohol (TAA)	68.1J	100	5.07	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127809	SITE 8 TW-4	Water	02/07/2014 12:00	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	49.4	5.00	0.555	ug/L
108-88-3	Toluene	3.62J	5.00	0.609	ug/L
100-41-4	Ethylbenzene	18.7	5.00	0.545	ug/L
1330-20-7	Xylene (total)	19.0	15.0	0.894	ug/L
91-20-3	Naphthalene	18.7J	25.0	0.881	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	477	5.00	0.389	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127810	SITE 8 SB-3 (2-4)	Solid	02/07/2014 12:05	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	941J	3160	32.1	ug/Kg
100-41-4	Ethylbenzene	40400	3160	116	ug/Kg
1330-20-7	Xylene (total)	58300	6330	156	ug/Kg
91-20-3	Naphthalene	17600	3160	245	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127814	SITE 18 SB-2 (6-8)	Solid	02/06/2014 10:15	02/12/2014 09:50

EPA 8270D

CAS#	Parameter	Result	RDL	MDL	Units
91-20-3	Naphthalene	134J	394	12.3	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	20.2J	162	1.64	ug/Kg
100-41-4	Ethylbenzene	76.6J	162	5.92	ug/Kg
1330-20-7	Xylene (total)	45.9J	323	7.99	ug/Kg
91-20-3	Naphthalene	299	162	12.5	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127815	SITE 18 TW-1	Water	02/06/2014 09:40	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.352J	1.00	0.109	ug/L
1330-20-7	Xylene (total)	1.28J	3.00	0.179	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127816	SITE 18 TW-2	Water	02/06/2014 09:50	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.414J	1.00	0.111	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127821	SITE 9 TW-1	Water	02/07/2014 14:00	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	420	5.00	0.555	ug/L
108-88-3	Toluene	5.78	5.00	0.609	ug/L
100-41-4	Ethylbenzene	67.8	5.00	0.545	ug/L
1330-20-7	Xylene (total)	35.4	15.0	0.894	ug/L
91-20-3	Naphthalene	299	25.0	0.881	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	257	5.00	0.389	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	6.88J	25.0	1.20	ug/L
75-85-4	tert-amyl alcohol (TAA)	47.4J	100	5.07	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127822	SITE 9 TW-2	Water	02/07/2014 14:15	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	9.44J	10.0	0.480	ug/L
75-65-0	t-Butanol (TBA)	41.1	20.0	0.580	ug/L
108-20-3	diisopropyl Ether (DIPE)	0.967J	10.0	0.472	ug/L
75-85-4	tert-amyl alcohol (TAA)	38.1J	40.0	2.03	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	6.83	2.00	0.222	ug/L
108-88-3	Toluene	3.38	2.00	0.244	ug/L
100-41-4	Ethylbenzene	4.90	2.00	0.218	ug/L
1330-20-7	Xylene (total)	4.90J	6.00	0.358	ug/L
91-20-3	Naphthalene	73.5	10.0	0.352	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	385	2.00	0.155	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127823	SITE 9 SB-1 (0-2)	Solid	02/07/2014 14:35	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	11.5J	159	1.61	ug/Kg
100-41-4	Ethylbenzene	189	159	5.83	ug/Kg
91-20-3	Naphthalene	464	159	12.3	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127824	SITE 22 TW-1	Water	02/05/2014 11:35	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	13.4J	20.0	2.22	ug/L
108-88-3	Toluene	1280	20.0	2.44	ug/L
100-41-4	Ethylbenzene	828	20.0	2.18	ug/L
1330-20-7	Xylene (total)	4260	60.0	3.58	ug/L
91-20-3	Naphthalene	152	100	3.52	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127825	SITE 22 TW-2	Water	02/05/2014 12:15	02/12/2014 09:50

EPA 8270D

CAS#	Parameter	Result	RDL	MDL	Units
91-20-3	Naphthalene	250	23.8	1.11	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
108-20-3	diisopropyl Ether (DIPE)	77.0J	500	23.6	ug/L
75-85-4	tert-amyl alcohol (TAA)	3130	2000	101	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	2840	100	11.1	ug/L
108-88-3	Toluene	9280	100	12.2	ug/L
100-41-4	Ethylbenzene	1150	100	10.9	ug/L
1330-20-7	Xylene (total)	4410	300	17.9	ug/L
91-20-3	Naphthalene	383J	500	17.6	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127826	SITE 20 TW-2	Water	02/05/2014 17:00	02/12/2014 09:50

EPA 8270D

CAS#	Parameter	Result	RDL	MDL	Units
86-73-7	Fluorene	0.526J	11.1	0.398	ug/L
91-20-3	Naphthalene	106	11.1	0.518	ug/L
85-01-8	Phenanthrene	0.345J	11.1	0.210	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127828	SITE 23 TW-1	Water	02/05/2014 13:05	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	4.12	1.00	0.111	ug/L
108-88-3	Toluene	11.3	1.00	0.122	ug/L
100-41-4	Ethylbenzene	1.57	1.00	0.109	ug/L
1330-20-7	Xylene (total)	5.29	3.00	0.179	ug/L
91-20-3	Naphthalene	3.57J	5.00	0.176	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127829	SITE 11 TW-1	Water	02/07/2014 09:00	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	11.3	1.00	0.111	ug/L
108-88-3	Toluene	17.1	1.00	0.122	ug/L
100-41-4	Ethylbenzene	5.28	1.00	0.109	ug/L
1330-20-7	Xylene (total)	18.3	3.00	0.179	ug/L
91-20-3	Naphthalene	4.71J	5.00	0.176	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127830	SITE 11 TW-2	Water	02/07/2014 08:50	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1.42	1.00	0.111	ug/L
108-88-3	Toluene	2.99	1.00	0.122	ug/L
1330-20-7	Xylene (total)	7.24	3.00	0.179	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127832	SITE 10 TW-1	Water	02/07/2014 10:20	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	213	5.00	0.555	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127832	SITE 10 TW-1	Water	02/07/2014 10:20	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
108-88-3	Toluene	44.0	5.00	0.609	ug/L
100-41-4	Ethylbenzene	659	5.00	0.545	ug/L
1330-20-7	Xylene (total)	777	15.0	0.894	ug/L
91-20-3	Naphthalene	109	25.0	0.881	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	118	5.00	0.389	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-85-4	tert-amyl alcohol (TAA)	62.0J	100	5.07	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127833	SITE 10 TW-2	Water	02/07/2014 10:45	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	37.7	10.0	1.11	ug/L
108-88-3	Toluene	20.8	10.0	1.22	ug/L
100-41-4	Ethylbenzene	1140	10.0	1.09	ug/L
1330-20-7	Xylene (total)	1880	30.0	1.79	ug/L
91-20-3	Naphthalene	560	50.0	1.76	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127834	SITE 10 TW-3	Water	02/07/2014 11:00	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	20.0	2.00	0.222	ug/L
108-88-3	Toluene	3.17	2.00	0.244	ug/L
100-41-4	Ethylbenzene	234	2.00	0.218	ug/L
1330-20-7	Xylene (total)	26.4	6.00	0.358	ug/L
91-20-3	Naphthalene	136	10.0	0.352	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	10.1	2.00	0.155	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127835	SITE 10 SB-1 (0-2)	Solid	02/07/2014 11:05	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	38.0J	196	1.99	ug/Kg
108-88-3	Toluene	25.8J	196	4.20	ug/Kg
100-41-4	Ethylbenzene	981	196	7.19	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127835	SITE 10 SB-1 (0-2)	Solid	02/07/2014 11:05	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
1330-20-7	Xylene (total)	414	393	9.70	ug/Kg
91-20-3	Naphthalene	1620	196	15.2	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127836	SITE 8 TW-2	Water	02/07/2014 11:30	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	43.5	2.00	0.222	ug/L
108-88-3	Toluene	19.3	2.00	0.244	ug/L
100-41-4	Ethylbenzene	71.9	2.00	0.218	ug/L
1330-20-7	Xylene (total)	87.0	6.00	0.358	ug/L
91-20-3	Naphthalene	44.8	10.0	0.352	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	2.75	2.00	0.155	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-65-0	t-Butanol (TBA)	198	20.0	0.580	ug/L
75-85-4	tert-amyl alcohol (TAA)	521	40.0	2.03	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127837	SITE 8 TW-1	Water	02/07/2014 11:45	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	41.7	1.00	0.111	ug/L
108-88-3	Toluene	2.23	1.00	0.122	ug/L
100-41-4	Ethylbenzene	13.4	1.00	0.109	ug/L
1330-20-7	Xylene (total)	17.8	3.00	0.179	ug/L
91-20-3	Naphthalene	5.10	5.00	0.176	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-85-4	tert-amyl alcohol (TAA)	81.8	20.0	1.01	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127838	SITE 8 TW-3	Water	02/07/2014 11:55	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-85-4	tert-amyl alcohol (TAA)	46.8	20.0	1.01	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	26.0	1.00	0.111	ug/L
108-88-3	Toluene	5.75	1.00	0.122	ug/L
100-41-4	Ethylbenzene	81.1	1.00	0.109	ug/L
1330-20-7	Xylene (total)	88.9	3.00	0.179	ug/L
91-20-3	Naphthalene	25.0	5.00	0.176	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	2.35	1.00	0.078	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127840	SITE 7 TW-1	Water	02/07/2014 15:00	02/12/2014 09:50

EPA 8270D

CAS#	Parameter	Result	RDL	MDL	Units
83-32-9	Acenaphthene	0.935J	10.0	0.365	ug/L
86-73-7	Fluorene	0.700J	10.0	0.358	ug/L

EPA 8270D

CAS#	Parameter	Result	RDL	MDL	Units
91-20-3	Naphthalene	596	50.0	2.33	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	12.9J	25.0	2.78	ug/L
108-88-3	Toluene	31.9	25.0	3.05	ug/L
100-41-4	Ethylbenzene	950	25.0	2.73	ug/L
1330-20-7	Xylene (total)	3740	75.0	4.47	ug/L
91-20-3	Naphthalene	639	125	4.41	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127841	SITE 7 TW-2	Water	02/07/2014 15:20	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	11.6	10.0	1.11	ug/L
108-88-3	Toluene	139	10.0	1.22	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127841	SITE 7 TW-2	Water	02/07/2014 15:20	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	1570	10.0	1.09	ug/L
1330-20-7	Xylene (total)	3150	30.0	1.79	ug/L
91-20-3	Naphthalene	533	50.0	1.76	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127842	SITE 7 SB-1 (0-2)	Solid	02/07/2014 15:30	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
108-88-3	Toluene	109000	14400	307	ug/Kg
100-41-4	Ethylbenzene	170000	14400	526	ug/Kg
1330-20-7	Xylene (total)	899000	28700	710	ug/Kg
91-20-3	Naphthalene	66500	14400	1110	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127843	SITE 6 TW-1	Water	02/07/2014 16:10	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.963J	1.00	0.111	ug/L
108-88-3	Toluene	0.631J	1.00	0.122	ug/L
100-41-4	Ethylbenzene	4.31	1.00	0.109	ug/L
1330-20-7	Xylene (total)	7.56	3.00	0.179	ug/L
91-20-3	Naphthalene	3.91J	5.00	0.176	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127844	SITE 6 TW-2	Water	02/07/2014 16:20	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	0.871J	1.00	0.111	ug/L
100-41-4	Ethylbenzene	6.61	1.00	0.109	ug/L
1330-20-7	Xylene (total)	20.9	3.00	0.179	ug/L
91-20-3	Naphthalene	5.76	5.00	0.176	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127845	SITE 6 SB-2 (0-2)	Solid	02/07/2014 17:00	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	2.91J	3.33	0.122	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127845	SITE 6 SB-2 (0-2)	Solid	02/07/2014 17:00	02/12/2014 09:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
1330-20-7	Xylene (total)	14.7	6.66	0.165	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21402127801	SITE 13 TW-1	Water	02/05/2014 13:45	02/12/2014 09:50

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			25	02/15/2014 19:50	LBH	525604

CAS#	Parameter	Result	RDL	MDL	Units
71-43-2	Benzene	1870	25.0	2.78	ug/L
108-88-3	Toluene	51.8	25.0	3.05	ug/L
100-41-4	Ethylbenzene	661	25.0	2.73	ug/L
1330-20-7	Xylene (total)	426	75.0	4.47	ug/L
91-20-3	Naphthalene	651	125	4.41	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	79.7	25.0	1.94	ug/L
107-06-2	1,2-Dichloroethane	2.90U	25.0	2.90	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1250	1260	ug/L	101	78 - 130
1868-53-7	Dibromofluoromethane	1250	1170	ug/L	94	77 - 127
2037-26-5	Toluene d8	1250	1240	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	1250	1210	ug/L	97	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			25	02/15/2014 19:50	LBH	525603

CAS#	Parameter	Result	RDL	MDL	Units
994-05-8	t-amyl methyl ether (TAME)	7.65J	125	6.00	ug/L
75-65-0	t-Butanol (TBA)	7.25U	250	7.25	ug/L
108-20-3	diisopropyl Ether (DIPE)	85.5J	125	5.90	ug/L
637-92-3	Ethyl tert-butyl ether (ETBE)	5.85U	125	5.85	ug/L
624-95-3	Ethyl tert-butanol (ETBA)	940U	2500	940	ug/L
64-17-5	Ethanol	3120U	25000	3120	ug/L
75-85-4	tert-amyl alcohol (TAA)	312J	500	25.3	ug/L
762-75-4	tert-butyl formate (TBF)	12.2U	1250	12.2	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1250	1260	ug/L	101	78 - 130
1868-53-7	Dibromofluoromethane	1250	1170	ug/L	94	77 - 127
2037-26-5	Toluene d8	1250	1240	ug/L	99	76 - 134
17060-07-0	1,2-Dichloroethane-d4	1250	1210	ug/L	97	71 - 127