

### QUALITY CONTROL DATA

Project: 378 TRUCK STOP  
Pace Project No.: 9293392

QC Batch: MSV/15281      Analysis Method: EPA 8260  
QC Batch Method: EPA 8260      Analysis Description: 8260 MSV Oxygenates SC  
Associated Lab Samples: 9293392001

METHOD BLANK: 606909      Matrix: Water

Associated Lab Samples: 9293392001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	05/16/11 12:42	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	05/16/11 12:42	
Benzene	ug/L	ND	5.0	05/16/11 12:42	
Diisopropyl ether	ug/L	ND	5.0	05/16/11 12:42	
Ethanol	ug/L	ND	200	05/16/11 12:42	
Ethyl-tert-butyl ether	ug/L	ND	10.0	05/16/11 12:42	
Ethylbenzene	ug/L	ND	5.0	05/16/11 12:42	
m&p-Xylene	ug/L	ND	10.0	05/16/11 12:42	
Methyl-tert-butyl ether	ug/L	ND	5.0	05/16/11 12:42	
Naphthalene	ug/L	ND	5.0	05/16/11 12:42	
o-Xylene	ug/L	ND	5.0	05/16/11 12:42	
tert-Amyl Alcohol	ug/L	ND	100	05/16/11 12:42	
tert-Amylmethyl ether	ug/L	ND	10.0	05/16/11 12:42	
tert-Butyl Alcohol	ug/L	ND	100	05/16/11 12:42	
tert-Butyl Formate	ug/L	ND	50.0	05/16/11 12:42	
Toluene	ug/L	ND	5.0	05/16/11 12:42	
1,2-Dichloroethane-d4 (S)	%	106	70-130	05/16/11 12:42	
4-Bromofluorobenzene (S)	%	100	70-130	05/16/11 12:42	
Dibromofluoromethane (S)	%	99	70-130	05/16/11 12:42	
Toluene-d8 (S)	%	100	70-130	05/16/11 12:42	

LABORATORY CONTROL SAMPLE: 606910

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	55.9	112	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	946	95	70-130	
Benzene	ug/L	50	49.8	100	70-130	
Diisopropyl ether	ug/L	50	54.0	108	70-130	
Ethanol	ug/L	2000	2370	119	70-130	
Ethyl-tert-butyl ether	ug/L	100	111	111	70-130	
Ethylbenzene	ug/L	50	44.9	90	70-130	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl-tert-butyl ether	ug/L	50	54.3	109	70-130	
Naphthalene	ug/L	50	39.6	79	70-130	
o-Xylene	ug/L	50	44.7	89	70-130	
tert-Amyl Alcohol	ug/L	1000	1100	110	70-130	
tert-Amylmethyl ether	ug/L	100	103	103	70-130	
tert-Butyl Alcohol	ug/L	500	642	128	70-130	
tert-Butyl Formate	ug/L	400	412	103	70-130	
Toluene	ug/L	50	50.9	102	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	

Date: 05/17/2011 02:38 PM

### REPORT OF LABORATORY ANALYSIS

Page 7 of 10

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without the written consent of Pace Analytical Services, Inc..



### QUALITY CONTROL DATA

Project: 378 TRUCK STOP  
Pace Project No.: 9293392

LABORATORY CONTROL SAMPLE: 606910

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			97	70-130	
Toluene-d8 (S)	%			105	70-130	

## QUALIFIERS

Project: 378 TRUCK STOP  
Pace Project No.: 9293392

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 378 TRUCK STOP  
Pace Project No.: 9293392

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
9293392001	WSW-3	EPA 8011	OEXT/13564	EPA 8011	GCSV/9756
9293392001	WSW-3	EPA 8260	MSV/15281		

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1410080

<b>Section A</b> Required Client Information: Company: <u>ECS</u> Address: <u>13504 S. Point Blvd</u> <u>Charlotte, NC</u> Email To: <u>CDupuis@essorsouth.com</u> Page: <u>014-583-2711</u> Fax: Requested Due Date/TAT: <u>Standard</u>	<b>Section B</b> Required Project Information: Report To: <u>Christine Dupuis</u> Copy To: Purchase Order No.: <u>14-214210</u> Project Name: <u>378 Truck Stop</u> Project Number: <u>14-214210</u>	<b>Section C</b> Invoice Information: Attention: <u>Sue Streifer</u> Company Name: <u>ECS</u> Address: <u>Agawam, MA</u> Page Quote Reference: Pace Project Manager: <u>Kevin Hering</u> Page Profile #:	<b>REGULATORY AGENCY</b> <input checked="" type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA Site Location STATE: <u>SC</u>
--	--	---	--

ITEM #	Section D Required Client Information <b>SAMPLE ID</b> (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS	
			DATE	TIME			DATE	TIME	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl				NaOH
1	WSW-3	WT 6	5/31/11	1100	6	X										
Analysis Test ↓ 8210 BTX, M, N 1,2-DCA 8 OXYGENATES 8011 EDB																
Pace Project No./Lab I.D. 09913392 001																

**ADDITIONAL COMMENTS**  
Please report 5 values

**REINQUISHED BY / AFFILIATION**  
A. W. Williamson / ECS

**DATE**  
5/31/11

**TIME**  
1420

**ACCEPTED BY / AFFILIATION**  
[Signature]

**DATE**  
5/31/11

**TIME**  
1355

**Temp in °C**  
15.20

**Received on Ice (Y/N)**  
Y

**Custody Sealed Cooler (Y/N)**  
Y

**Samples Intact (Y/N)**  
Y

ORIGINAL

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
F-ALL-Q-020rev.07, 15-May-2007

**Sample Condition Upon Receipt**



Client Name: ECS Project # 9293392

Where Received:  Huntersville  Asheville  Eden

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun : T1101 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Temp Correction Factor: Add / Subtract 0 °C

Corrected Cooler Temp.: 3.1 °C Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining
Contents: <u>MS/4</u>

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review: KLH Date: 5/4/11 SRF Review: KLH Date: 5/5/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

13504 South Point Boulevard, Unit F, Charlotte, NC 28273 tel 704.583.2711 fax 704.583.2744 www.ecsconsult.com

June 8, 2011  
ECS Project No. 14-214210  
UST Permit No. 07960



Ms. Cathleen Ridgley  
South Carolina Department of Health  
and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201-1708

Re: Disposal Manifest  
378 Truck Stop  
731 Highway 378  
Edgefield, South Carolina  
Edgefield County

Dear Ms. Ridgley:

Please find enclosed a copy of the Non-Hazardous Waste Disposal Manifest from the April 2011 groundwater sampling activities. We apologize for the delay in providing the manifest.

If you have any questions or require additional information, please contact the undersigned at (704) 583-2711, or at [cdupuis@ecsconsult.com](mailto:cdupuis@ecsconsult.com).

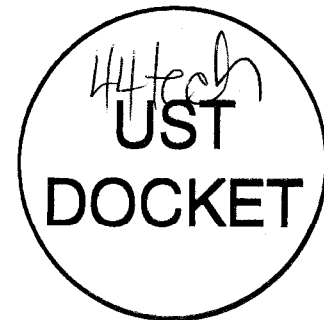
Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Christine E. Dupuis  
Project Manager

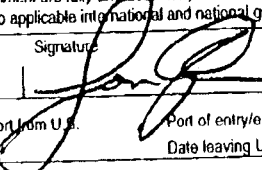
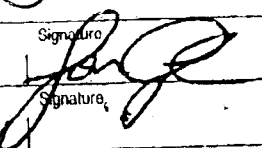
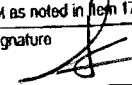
Attachment

cc: Wilkerson Fuel Company, Inc., PO Box 2835, Rock Hill, SC 29732

F:\Projects\14-214210 378 Truck Stop\March 2011 AFVR & GWS\Disposal Manifest Letter 6-8-11.doc



Printed on recycled, carbon neutral paper

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number C F S O G	2. Page 1 of 1	3. Emergency Response Phone 784-538-2711	4. Waste Tracking Number 1 0 0 0 3
5. Generator's Name and Mailing Address ECS- WILKERSON FUEL 731 HIGHWAY 378 EDGEFIELD, SC 29824 Generator's Phone: 784-583-2711					
Generator's Site Address (if different than mailing address)					
6. Transporter 1 Company Name Environmental Options Inc				U.S. EPA ID Number VA0000122994	
7. Transporter 2 Company Name				U.S. EPA ID Number	
8. Designated Facility Name and Site Address CHEG, INC. 917 INDUSTRIAL ROAD WALTERBORO, SC 29488 Facility's Phone: (843) 538-8131					
U.S. EPA ID Number S C R 0 0 0 0 3 4 4 2					
9. Waste Shipping Name and Description			10. Containers		11. Total Quantity
			No.	Type	12. Unit Wt./Vol.
1. WASTE WATER, #18975, 14-214210 NON HAZARDOUS/NON REGULATED			003	D	1400 P
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information A: 18975 B: C: D:					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offoror's Printed/Typed Name Jon Angle				Signature 	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.				Port of entry/exit: Date leaving U.S.:	
16. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Jon Angle				Signature 	
Transporter 2 Printed/Typed Name				Signature	
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator) U.S. EPA ID Number					
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)					
18. Designated Facility Owner or Operator. Certification of receipt of materials covered by the manifest except as noted in item 17a					
Printed/Typed Name Scott D Bridgeman				Signature 	
				Month Day Year 6 8 11	

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY

DESIGNATED FACILITY TO GENERATOR



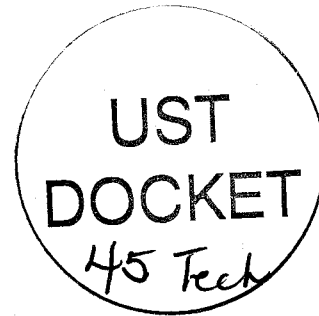


C. Earl Hunter, Commissioner

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

JUN 16 2011

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835



Re: AFVR and Groundwater Sampling Directive  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960, Cost Agreement # 41799  
Release reported October 3, 1974  
AFVR Report received May 20, 2011  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced report and determined that the next necessary scope of work is five Aggressive Fluid/Vapor Recovery (AFVR) events to reduce petroleum chemicals of concern (CoC) from monitoring wells MW-1, MW-3, -7, -12, -13, -16, and MW-22. No sooner than one month after completion of the last AFVR event, a comprehensive groundwater sampling event should be completed to obtain current data.

The AFVR events can be conducted simultaneously. One event should be conducted on monitoring wells MW-3 and MW-7, and another event should be conducted on monitoring wells MW-12 and MW-13. The remaining three AFVR events should be conducted on monitoring wells MW-1, MW-16, and MW-22.

Samples from all monitoring wells and water supply wells should be collected and analyzed for BTEX, naphthalene, MTBE, 1,2-DCA, and the 8-oxygenates by EPA method 8260B, and EDB by EPA Method 8011. 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 a non-detect analysis where the detection limit/reporting level exceeds the risk-based screening level (RBSL) is inconclusive. In this case, SUPERB payment may be denied since the analysis cannot be used as the basis for a decision.

The UST Division will not reimburse costs for oxygenate analysis for any laboratory that is not certified through the SCDHEC Office of Environmental Laboratory Certification. Detailed information regarding the oxygenate certification can be found on the UST Guidance Documents webpage. (<http://www.scdhec.gov/environment/envserv/docs/OxygenateCertification.pdf>). The document can also be accessed from the UST documents page at <http://www.scdhec.net/environment/lwm/forms/>. Any laboratory with questions regarding the certification requirements should contact the Office of Environmental Laboratory Certification at (803) 896-0970.

Cost Agreement # 41799 has been approved in the amount shown on the enclosed cost agreement form for the aforementioned scope of work. The AFVR and groundwater sampling activities may proceed immediately upon receipt of this letter. The AFVR/Groundwater Sampling Report submitted at the completion of these activities should include the following:

- A narrative portion documenting the AFVR event noting site conditions, the name of the AFVR contractor, field personnel, date, time the AFVR event started and ended, ambient air temperature, and general weather conditions during the AFVR event.
- A brief description of the completed work scope and any relevant descriptions pertaining to the data tables.
- A table summarizing the airflow (in CFM) and volatile air emissions concentrations collected from the stack of the truck every thirty minutes through the duration of the events. The table shall also document which well(s) were being recovered from during that time interval.
- A table summarizing the magnehelic gauge measurements from all applicable wells on a thirty-minute time interval.
- The total volume of water recovered (gallons).
- The total volume of free phase product recovered (typically measured with a product/water interface device inserted into the top of the tanker at the completion of the event and then converted to an approximate volume).
- The total weight of petroleum removed as vapor. This is calculated based on the airflow rate and the concentration of vapor.
- A table documenting the free product thickness in each well before and after the recovery events.
- Scaled base map depicting the location of the extraction wells and the surrounding wells equipped with magnehelic gauges.
- A narrative portion documenting current site conditions during the groundwater sampling event 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.
- Groundwater elevations, depth to groundwater, measurable free product thickness (where applicable), total well depth and screened interval for all monitoring wells associated with the site, unless otherwise directed by the Division, shall be presented in tabular form. Historical and current groundwater laboratory analytical data for all monitoring wells 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 location.
- Manifests for any contaminated soil and/or groundwater removed from the site for treatment and/or disposal.
- Signature and seal by a professional geologist or engineer registered in the State of South Carolina.

Environmental Compliance Services (ECS), Inc. can submit an invoice for direct billing from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Please note that all applicable South Carolina certification requirements apply to the laboratory services, well installation, and report preparation. All site rehabilitation activities must be performed and submitted by a South Carolina Certified Underground Storage Tank Site Rehabilitation Contractor.

**An AFVR/groundwater monitoring report and invoice are due within 90 days from the date of this letter. Interim invoices may be submitted for this scope of work. If the invoice is 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 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 Division is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Division 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 Department grants pre-approval for transportation of virgin petroleum impacted 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 or inquiries regarding this project, please reference UST Permit # 07960. If you have any questions, please feel free to contact me by phone at (803) 896-6633, by fax at (803) 896-6245, or email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Cost Agreement

cc: ECS, Inc., PO Box 3528, Fort Mill, SC 29708 (w/enc)  
~~Technical File (w/enc)~~

# Approved Cost Agreement 41799

Facility: 07960 378 TRUCK STOP

RIDGLECT

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	5.0000	575.00	2,875.00
		B PERSONNEL	8.0000	290.00	2,320.00
10 SAMPLE COLLECTION		A GROUND WATER	9.0000	55.00	495.00
		C WATER SUPPLY	17.0000	25.00	425.00
		D GROUNDWATER NO-PURGE	28.0000	35.00	980.00
11 ANALYSES	GW GROUNDWATER	A BTEX+NAPTH+MTBE	54.0000	100.00	5,400.00
		BB 1,2-DCA	54.0000	10.75	580.50
		F EDB	54.0000	55.00	2,970.00
		P 8 OXYGENATES	54.0000	85.00	4,590.00
17 DISPOSAL		A1 WASTEWATER - PURGING/SAMPLING	3.0000	90.00	270.00
		A2 WASTEWATER - PUMPING TEST	5,000.0000	0.60	3,000.00
19 RPT/PROJECT MNGT & COORDINATIO		PCT PERCENT	0.1500	40,305.50	6,045.83
23 EFR		A 8 HOUR EVENT	5.0000	3,000.00	15,000.00
		C OFF GAS TREATMENT	40.0000	35.00	1,400.00
<b>Total Amount</b>					<b>46,351.33</b>

**AFVR & GROUNDWATER SAMPLING REPORT**

378 Truck Stop  
731 Highway 378  
Edgefield, South Carolina  
Edgefield County

UST Permit No. 07960  
ECS Project No. 14-214210

Prepared for:  
Wilkerson Fuel Company, Inc.  
PO Box 2835  
Rock Hill, South Carolina 29732

Presented to:  
Ms. Cathleen Ridgley  
South Carolina Department of Health and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201-1708

Prepared by:  
Environmental Compliance Services, Inc.  
13504 South Point Blvd, Unit F  
Charlotte, North Carolina 28273  
SC Certification No. 358

September 21, 2011

  
Brett G. Schaefer, P.E.  
Project Manager



This report presents the results of Aggressive Fluid/Vapor Recovery (AFVR) and groundwater sampling activities conducted by Environmental Compliance Services, Inc. (ECS) in July through August 2011 at the 378 Truck Stop site (**Figure 1** and **Figure 2**). These activities were conducted in accordance with Cost Agreement No.41799 as approved by the South Carolina Department of Health and Environmental Control (SCDHEC) in correspondence dated June 16, 2011. The following Tables, Figures, and Appendices are attached:

- Table 1: Summary of Groundwater Elevation Data Aggressive Fluid/Vapor Recovery Events
- Table 2: Summary of Aggressive Fluid/Vapor Recovery Information
- Table 3: Summary of Adjacent Property Owners and Addresses
- Table 4: Summary of Groundwater Elevation Data
- Table 5: Summary of Groundwater Analytical Data – Chemicals of Concern
- Table 6: Summary of Groundwater Analytical Data – Eight Oxygenates
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### **Site Information**

The site was not in use at the time of our July through August 2011 field activities. An abandoned building was present onsite during our visits associated with the AFVR and groundwater sampling activities. A concrete slab was located directly to the east of, and abutting, the onsite building.

A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. Reportedly, one 550-gallon diesel, one 1,000-gallon gasoline, and one 2,000-gallon gasoline underground storage tanks (USTs) and their associated piping and dispensers were removed from the site on January 1, 1987. The site did not contain USTs at the time of our 2011 activities.

### **AFVR Events**

Three AFVR events were attempted at the site by A&D Environmental Services and ECS. The purpose of the events was to remove as much liquid as possible to reduce contaminants of concern from the aquifer. The cost agreement addendum requested that seven AFVR events be performed onsite, but due to insufficient volumes of water during the first three events the remaining 4 were cancelled.

The first AFVR attempt was performed on July 19, 2011. The AFVR stinger was installed in monitoring well MW-16 at a depth of 31 ft below top of casing (TOC). The stinger was then dropped to 35 ft below TOC due to lack of water recovery. According to the ECS technician's notes the stinger was dropped another two feet to 37 ft below TOC to attempt to increase water flow and vapor recovery. After approximately 2 hrs of AFVR operation the event was cancelled due to low water recovery. Monitoring wells MW-24, MW-25 and MW-26 were used as observation wells. Free product was not encountered during gauging of the aforementioned wells. The initial depth to water readings were 30.55 ft, 29.97 ft, 29.80 ft, and 26.84 ft below TOC for MW-16, MW-24, MW-25, and MW-26, respectively. Immediately following the end of the AFVR the depth to water in the wells were 37.76 ft (MW-16), 29.88 ft (MW-24), 29.67 ft (MW-25), and 26.74 ft (MW-26). Depth to water measurements collected 20 minutes after the AFVR event were 37.52 ft (MW-16), 29.89 ft (MW-24), 29.67 ft (MW-25), and 26.74 ft (MW-26). Approximately 1 gallon of liquid was recovered during the 2 hr AFVR event on MW-16.

The second AFVR attempt was performed on July 20, 2011. The AFVR stinger was installed in monitoring well MW-22 at a depth of 34.35 ft below TOC. Initial TLV readings were being recorded at 0 ppm so the stinger was dropped to 38 ft below TOC. For the first 30 seconds after dropping the stinger to 38 ft water was being recovered then tapered off to no flow. The seal at the top of the well was cracked open to allow for more flow, but according to the notes only a very thin misty flow was occurring. TLV readings at the deeper stinger depth started at 180 ppm, but gradually dropped to a low of 26 ppm at the end of the event. This event was subsequently cancelled due to lack of water recovery and low TLV readings. The AFVR on MW-22 was from 0815 to 1015 (2 hrs) and recovered approximately 10 gallons of liquid. The initial depth to water readings were 33.84 ft, 31.69 ft, 32.75 ft, and 32.13 ft below TOC for MW-22, MW-12, MW-14, and MW-15, respectively. Immediately following the end of the AFVR the depth to water in the wells were 37.66 ft (MW-22), 31.74 ft (MW-12), 32.79 ft (MW-14), and 31.99 ft (MW-15). Depth to water measurements collected 20 minutes after the AFVR event were 37.52 ft (MW-22), 31.75 ft (MW-12), 32.79 ft (MW-14), and 31.98 ft (MW-15).

The third AFVR attempt was performed on July 25, 2011. The AFVR stinger was installed in monitoring well MW-12 to a depth of 32.5 ft. From 0815 to 1000 the AFVR was operated on MW-12 and recovered minimal amounts of water and vapor with TLV readings with a maximum of 16 ppm. The AFVR on MW-12 was cancelled due to lack of water recovery and low TLV readings. The initial depth to water readings were 31.99 ft, 30.95 ft, 29.69 ft, and 34.25 ft below TOC for MW-12, MW-11, MW-13, and MW-22, respectively. Immediately following the end of the AFVR the depth to water in the wells were dry (MW-12), 29.70 ft (MW-13), 34.25 ft (MW-22), and 30.95 ft (MW-11). Depth to water measurements collected 20 minutes after the AFVR event were 34.65 ft (MW-12), 29.70 ft (MW-13), 34.25 ft (MW-22), and 30.95 ft (MW-11).

After the initial 1.75 hrs on MW-12 the AFVR stinger was moved to MW-13 at the request of the SCDHEC project manager. The AFVR stinger was installed in MW-13 to an initial depth of 32 ft below TOC, but was subsequently dropped to 35 ft and then 39.5 ft after lack of liquid recovery. From 1015 to 1230 the AFVR operated on MW-13, recovered a minimal amount of liquid and had vapors with TLV readings with a maximum of 4 ppm. The AFVR on MW-13 was cancelled due to lack of water recovery and low TLV readings. The initial depth to water readings were 29.70 ft, 30.95 ft, dry, and 34.24 ft below TOC for MW-13, MW-11, MW-12, and MW-22, respectively. Immediately following the end of the AFVR the depth to water in the wells were 39.91 ft (MW-13), 30.94 ft (MW-11), 34.02 ft (MW-12), and 34.24 ft (MW-22). Depth to water measurements collected 20 minutes after the AFVR event were 29.27 ft (MW-13), 30.94 ft (MW-11), 33.97 ft (MW-12), and 34.24 ft (MW-22).

A total of 58 gallons of liquids was recovered from the combined AFVR activities on MW-12 and MW-13.

A summary of groundwater elevation data collected during AFVR activities is presented in **Table 1**. A summary of free product and AFVR data collected from monitoring wells during AFVR activities is presented in **Table 2**.

Approximately 69 gallons of liquid were removed from monitoring wells MW-16, MW-22, MW-12 and MW-13 during the AFVR events from July 19, 2011, July 20, 2011 and July 25, 2011. Of the 69 gallons removed, there was no measurable free product detected. Field data sheets, emissions calculations and the disposal manifest for the July 19, 2011, July 20, 2011 and July 25, 2011 AFVR events are included in **Appendix A**, **Appendix B** and **Appendix C**, respectively.

### Well Gauging and Sampling

Shallow monitoring wells MW-1 through MW-28 and telescoping monitoring wells TW-1 through TW-9 were gauged for depths to groundwater on August 29, 2011. Depths to groundwater measured in the shallow monitoring wells ranged from 23.00 feet (MW-18) to 41.27 feet (MW-20). Groundwater elevations in the shallow monitoring wells, relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level, ranged from 57.96 (MW-27) to 73.89 (MW-7). Based on these data, shallow groundwater generally flowed towards the west away from the subject site. The horizontal hydraulic gradient measured throughout the site was approximately 0.039 feet per foot (ft/ft). A summary of groundwater elevation data is presented in **Table 4**. A Shallow Groundwater Elevation Map based on the August 2011 data has been included as **Figure 3**.

Depths to groundwater measured in the telescoping monitoring wells ranged from 27.78 feet (TW-3) to 41.54 feet (TW-8). Groundwater elevations in the telescoping monitoring wells, relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level, ranged from 59.49 (TW-8) to 70.53 (TW-3). Based on these data, deep groundwater generally flowed towards the east-southeast away from the subject site. The deep horizontal hydraulic gradient measured throughout the site was approximately 0.045 ft/ft. A summary of groundwater elevation data is presented in **Table 4**. A Deep Groundwater Elevation Map based on the August 2011 data has been included as **Figure 4**.

Shallow monitoring wells MW-3 through MW-28 were sampled without purging in August 2011, as the water table in these wells was bracketed by the screened interval of each well. Shallow monitoring wells MW-1, MW-2, and telescoping wells TW-1 through TW-9 were purged prior to sampling in August 2011, as the water table in these wells was not bracketed by the screened interval of each well or the screened interval was unknown. Water samples were collected in August 2011 from private water supply wells WSW-1 pre-GAC, WSW-1 post-GAC, WSW-3, WSW-4, WSW-6, WSW-7, WSW-8 pre-GAC, WSW-8 post-GAC, WSW-9 through WSW-11, and WSW-13 through WSW-15. Each water supply well was purged at the sample location for approximately 10 minutes prior to sample collection. Samples could not be collected from private water supply wells WSW-5 and WSW-12 as the power to the well pumps was disconnected but the pumps were still in place in the wells. Water supply well information has been included as **Table 3**.

Additional information pertaining to site conditions and field personnel on site during the sampling event can be found in the Groundwater Sampling Field Data Sheets provided as **Appendix D**. The groundwater samples collected from the monitoring wells and water supply wells were analyzed for BTEX constituents



(benzene, toluene, ethylbenzene, total xylenes), methyl-tert-butyl-ether (MTBE), 1,2 DCA, oxygenates, and naphthalene using EPA Method 8260B, and 1,2-Dibromoethane (EDB) using EPA Method 8011.

### **Chemicals of Concern**

Concentrations of benzene were reported above the SCDHEC May 2001 Risk Based Screening Level (RBSL) in the groundwater samples collected from monitoring wells MW-1, MW-3, MW-7, MW-11, MW-12, MW-13, and MW-22. A concentration of toluene was reported above the RBSL in the groundwater sample collected from monitoring well MW-22. Concentrations of ethylbenzene were reported above the RBSL in the groundwater samples collected from monitoring wells MW-1, MW-3, and MW-22. A concentration of total xylenes was reported above the RBSL in the groundwater sample collected from monitoring well MW-22. Concentrations of naphthalene were reported above the RBSL in the groundwater samples collected from monitoring wells MW-1, MW-3, MW-7, and MW-22. Concentrations of 1,2 DCA were reported above the RBSL in the groundwater samples collected from monitoring wells MW-1, MW-2, MW-3, MW-7, MW-12, MW-13, TW-1, and TW-6. Concentrations of EDB were reported above the RBSL in the groundwater samples collected from monitoring wells MW-1, MW-7, MW-12, and MW-22.

Concentrations of benzene were reported below the RBSL in the groundwater samples collected from monitoring wells MW-14. Concentrations of toluene were reported below the RBSL in the groundwater samples collected from monitoring wells MW-1, MW-3, and MW-13. Concentrations of ethylbenzene were reported below the RBSL in the groundwater samples collected from monitoring wells MW-7, MW-12, MW-13, and MW-14. Concentrations of total xylenes were reported below the RBSL in the groundwater samples collected from monitoring wells MW-1, MW-3, MW-7, MW-12, MW-13, and MW-14. A concentration of MTBE was reported below the RBSL in the groundwater sample collected from monitoring well TW-1. Concentrations of naphthalene were reported below the RBSL in the groundwater samples collected from monitoring wells MW-12, and MW-14. Concentrations of 1,2 DCA were reported below the RBSL in the groundwater samples collected from monitoring wells MW-11, MW-24, and water supply wells WSW-1 Pre GAC, WSW-6, WSW-8 Pre GAC, WSW-10, and WSW-11.

Concentrations of the requested method constituents were not reported above the laboratory reporting limits or method detection limits in the groundwater samples collected from monitoring wells MW-4, MW-5, MW-6, MW-8 through MW-10, MW-15 through MW-21, MW-23, MW-25 through MW-28, TW-2 through TW-5, and TW-7 through TW-9, and water supply wells WSW-1 post-GAC, WSW-3 through WSW-4, WSW-7, WSW-8 post-GAC, WSW-9, and WSW-13 through WSW-15.

### **Eight Oxygenates**

Concentrations of TAA were reported above the SCDHEC 2008 Action Level in the groundwater samples collected from monitoring wells MW-1, MW-3, MW-7, MW-12, MW-13, MW-21, TW-1, and TW-5.

A concentration of DIPE was reported below the Action Level in the groundwater sample collected from monitoring well MW-12. A concentration of TBA was reported below the Action Level in the groundwater sample collected from monitoring wells MW-2 and MW-7. A concentration of TAA was reported below the Action Level in the groundwater sample collected from monitoring well MW-2.

Concentrations of the requested method constituents were not reported above the laboratory reporting limits or method detection limits in the groundwater samples collected from monitoring wells MW-4

through MW-6, MW-8 through MW-11, MW-14, MW-15, MW-17 through MW-20, MW-22 through MW-28, TW-3 through TW-4, TW-6 through TW-9, and water supply wells WSW-1 pre-GAC, WSW-1 post-GAC, WSW-3, WSW-4, WSW-6 through WSW-11, and WSW-13 through WSW-15.

A summary of the Chemicals of Concern (CoC) data has been included as **Table 5**. A summary of the oxygenate data has been included as **Table 6**. A groundwater quality map showing the contaminants of concern based on the August 2011 data has been included as **Figure 5**. A groundwater quality map showing the eight oxygenates based on the August 2011 data has been included as **Figure 6**. Groundwater sampling field data sheets from the August 2011 sampling event have been included as **Appendix D**. Complete reports of laboratory analyses of groundwater samples collected during the August 2011 sampling event, along with chain-of-custody documentation, have been included in **Appendix E**.

### **Investigative Derived Waste**

Investigative derived waste (IDW) generated during the groundwater sampling activities was placed in 55-gallon drums for disposal by a licensed facility. The drums were left onsite and a request for pick-up and disposal of the drummed IDW was generated upon completion of the groundwater sampling activities. A copy of the disposal manifest for the drums of purged well water will be forwarded to the SCDHEC upon our receipt.

### **Conclusions and Recommendations**

The average organic vapor concentration recovered from monitoring wells MW-16, MW-22, MW-12 and MW-13 during the July 2011 AFVR events was 18.5 ppm. A total of 69 gallons of liquid was recovered during the July 2011 events. Due to the low amounts of recovered liquids, each AFVR event was cancelled prior to completing 8 hours of vacuum activity and the remaining scheduled AFVR events were postponed. In order to increase fluid recovery during subsequent AFVR events ECS recommends performing the activities during seasons with higher potential for precipitation (i.e. winter and spring).

Based on the results of the August 2011 groundwater sampling event, elevated dissolved concentrations exist in monitoring wells onsite and south of the site. AFVR events are recommended to help reduce these concentrations in wells MW-1, MW-3, MW-7, MW-12, MW-13, MW-16, and MW-22. A comprehensive groundwater sampling event is recommended following the AFVR events to determine current conditions and determine the efficacy of the remedial efforts.

If you have any questions or require additional information, please contact ECS at (704) 583-2711, or email [bschaefer@ecsconsult.com](mailto:bschaefer@ecsconsult.com).

## **TABLES**

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**TABLE 1**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**AGGRESSIVE FLUID/VAPOR RECOVERY EVENTS**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft.)	Depth to Groundwater (ft.)	Depth to Free Product (ft.)	Free Product Thickness (ft.)	Groundwater Elevation <sup>2</sup> (ft.)	Well Depth (ft.)	Screened Interval (ft.)
MW-13	7/25/11 (pre-AFVR)	101.48	29.70	--	--	71.78	40.19	25.19-40.19
	7/25/11 (immediately post-AFVR)		39.91	--	--	61.57		
	7/25/11 (20 minutes post-AFVR)		39.27	--	--	62.21		
MW-12	7/25/11 (pre-AFVR)	103.46	31.99	--	--	71.47	34.99	19.99-34.99
	7/25/11 (immediately post-AFVR)		dry	--	--	--		
	7/25/11 (20 minutes post-AFVR)		34.65	--	--	68.81		
MW-22	7/20/11 (pre-AFVR)	105.13	33.84	--	--	71.29	40.09	25.09-40.09
	7/20/11 (immediately post-AFVR)		37.66	--	--	67.47		
	7/20/11 (20 minutes post-AFVR)		37.52	--	--	67.61		
MW-16	7/19/11 (pre-AFVR)	101.32	30.55	--	--	70.77	40.11	25.11-40.11
	7/19/11 (immediately post-AFVR)		37.76	--	--	63.56		
	7/19/11 (20 minutes post-AFVR)		37.52	--	--	63.80		
MW-1	3/16/11 (pre-AFVR)	101.98	25.55	25.53	0.02	76.45	unknown	unknown
	3/16/11 (immediately post-AFVR)		28.58	--	--	73.40		
	3/16/11 (20 minutes post-AFVR)		28.58	--	--	73.40		
MW-3	3/16/11 (pre-AFVR)	101.54	25.86	--	--	75.68	40	10-40
	3/16/11 (immediately post-AFVR)		26.13	--	--	75.41		
	3/16/11 (20 minutes post-AFVR)		26.10	--	--	75.44		
MW-7	3/16/11 (pre-AFVR)	99.72	23.44	--	--	76.28	34.92	19.92-34.92
	3/16/11 (immediately post-AFVR)		22.81	--	--	76.91		
	3/16/11 (20 minutes post-AFVR)		22.89	--	--	76.83		
MW-21	3/16/11 (pre-AFVR)	101.70	24.30	--	--	77.40	40.16	25.16-40.16
	3/16/11 (immediately post-AFVR)		24.23	--	--	77.47		
	3/16/11 (20 minutes post-AFVR)		24.23	--	--	77.47		

Notes:

1. Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.
2. Groundwater elevation adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.

**TABLE 2**  
**SUMMARY OF AGGRESSIVE FLUID/VAPOR RECOVERY INFORMATION<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date	Time <sup>2</sup> (hours)	Average Effluent Velocity <sup>3</sup> (fpm)	Average Effluent Temperature (°F)	Average Effluent Concentration (ppm)	Total Free Product Volatized <sup>4</sup> (gallons)	Total Free Product as Fluid <sup>5</sup> (gallons)	Total Free Product Recovered <sup>6</sup> (gallons)	Total Fluid Volume removed( gallons)
MW-16	7/19/11	1.5	4,323	213	2	0	0	0	1
MW-22	7/20/11	2.5	4,256	224	57	0.02	0	0.02	10
MW-12	7/25/11	1.75	4,871	221.2	12	0.0016	0	0.0016	58
MW-13	7/25/11	2	4,640	227.3	3	0.01	0	0.01	
<b>Totals</b>		--	--	--	--	0.032	0	0.032	69

Notes:

1. Aggressive Fluid/Vapor Recovery (AFVR) events using vacuum trucks provided by A&D Environmental and Industrial Services, Inc.
2. Duration of the AFVR event at well location.
3. Cross-sectional area of exhaust stack is 0.19 sq. ft.
4. Total Volatized in gallons = Air emissions in pounds/(6.25 lbs./gal.)
5. Total Free Product as Fluid is obtained from disposal manifest and/or correspondence with subcontractors from each AFVR event.
6. Total Free Product Recovered = Total Free Product Volatized + Total Free Product as Fluid.

**TABLE 3**  
**SUMMARY OF ADJACENT PROPERTY OWNERS AND ADDRESSES<sup>1</sup>**  
**378 TRUCK STOP**

Parcel Identification	Property Owner Name	Property Owner Mailing Address	Property Address	Water Supply Wells on Property	Groundwater Monitoring Wells Currently Installed on Property	Notes
108-00-00-023-000	Gail A. & Barbara O. Whitmer	1226 Hwy 378 East, Edgefield, SC 29824	731 Hwy 378 East, Edgefield, SC 29824	Possible abandoned WSW	MW-1 through MW-6, MW-21, TW-1, TW-2	SITE
108-00-00-022-000	Gail A. & Barbara O. Whitmer	1226 Hwy 378 East, Edgefield, SC 29824	unknown	WSW-6 & Disconnected WSW	MW-7, MW-8, MW-20, MW-27, MW-28	Wooded Area around site; WSW-6 tag info: Date: 9/14/00, Depth: 400 ft.
108-00-00-034-000	Shirley J. Coates	328 Florence Street NW, Aiken, SC 29801	741 Hwy 378 East, Edgefield, SC 29824	no WSWs identified	-	-
108-00-00-035-000	Betty O. Doolittle	1184 Hwy 378 East, Edgefield, SC 29824	unknown	no WSWs identified	-	-
108-00-00-036-000	21st Mortgage Corporation	620 Market Street #100, Knoxville TN 37902	745 Hwy 378 East, Edgefield, SC 29824	WSW-5	-	WSW-5 tag info: Date: 6/16/07, Depth: 300 ft; well was disconnected from power during 12/8/10 visit
108-00-00-038-000	Northside Volunteer Fire Department	719 Hwy 378 East, Edgefield, SC 29824	719 Hwy 378 East, Edgefield, SC 29824	WSW-7	-	-
109-00-00-022-000	Andrew & Kathalene Stevens	752 Hwy 378 East, Edgefield, SC 29824	752 Hwy 378 East, Edgefield, SC 29824	WSW-4	-	-
109-00-00-024-000	Shirley J. Coates	328 Florence Street NW, Aiken, SC 29801	unknown	no WSWs identified	-	-
109-00-00-025-000	Johnnie Lee Gilliam	5890 Saratoga Drive Crestview, FL 32536	758 Hwy 378 East, Edgefield, SC 29824	Disconnected WSW	-	Abandoned trailer in the woods.
109-00-00-026-000	Hattie and Richard Dormeyer Coates	736 Hwy 378 East, Edgefield, SC 29824	736 Hwy 378 East, Edgefield, SC 29824	WSW-2 & Abandoned WSW	MW-18	-
109-00-00-028-000	Leroy Diggs	Post Office Box 25664, Los Angeles, CA 90025	744 Hwy 378 East, Edgefield, SC 29824	WSW-3 (Disconnected)	-	Not occupied
109-00-01-001-000	Hattie Scurry, etal	730 Hwy 378 East, Edgefield, SC 29824	730 Hwy 378 East, Edgefield, SC 29824	WSW-1 & Disconnected WSW	MW-11 through MW-15, MW-17, MW-22, MW-23, TW-5, TW-7	WSW-1 tag info: Date: 12/91, Depth: 280 ft
109-00-01-002-000	Henry Allen Harling	136 Casbel Ct, Hopkins, SC 29061	unknown	Abandoned WSW	MW-19 and TW-8	Wooded lot behind Scurry residence; resident indicated abandoned WSW is on the corner of the trailer.
109-00-01-003-000	Clifford T. Owdom	Post Office Box 606, Saluda, SC 29138	732 Hwy 378 East, Edgefield, SC 29824	Disconnected WSW	MW-16, MW-25, TW-6	-
109-00-01-004-000	JG and JP Owdom	1226 Hwy 378 East, Edgefield, SC 29824	unknown	no WSWs identified	MW-26 and TW-9	-
109-00-01-006-000	Ulyssess Padgett	62 Faulkner Mountain Rd, Edgefield, SC 29824	62 Faulkner Mountain Rd, Edgefield, SC 29824	no WSWs identified	-	-
109-00-01-007-000	Ida Bryant	54 Faulkner Mountain Rd, Edgefield, SC 29824	54 Faulkner Mountain Rd, Edgefield, SC 29824	WSW-14	-	-
109-00-01-009-000	Derrick Simpkins	64 Faulkner Mountain Rd, Edgefield, SC 29824	64 Faulkner Mountain Rd, Edgefield, SC 29824	WSW-12 and WSW-13	-	-
109-00-01-010-000	Luther Mitchell Life Estate	66 Faulkner Mountain Rd, Edgefield, SC 29824	66 Faulkner Mountain Rd, Edgefield, SC 29824	WSW-11	-	-
109-00-01-011-000	Bennie Culbreath	68 Faulkner Mountain Rd, Edgefield, SC 29824	68 Faulkner Mountain Rd, Edgefield, SC 29824	WSW-10	MW-10, MW-24, TW-4, abandoned TW-10	-
109-00-01-012-000	Sidney L. Gordon	724 Hwy 378 East, Edgefield, SC 29824	724 Hwy 378 East, Edgefield, SC 29824	WSW-8 & Disconnected WSW	MW-9 and TW-3	-
109-00-01-013-000	Johnnie James & Sophie J. Bowman Life Estate	71 Faulkner Mountain Rd, Edgefield, SC 29824	71 Faulkner Mountain Rd, Edgefield, SC 29824	WSW-9	-	-
109-00-01-014-000	Johnnie James, Jr. and Joan P. Bowman	57 Faulkner Mountain Rd, Edgefield, SC 29824	57 Faulkner Mountain Rd, Edgefield, SC 29824	WSW-15	-	-

Notes:  
1. Adjacent/adjoining properties are keyed into **Figure 2**.

**TABLE 4**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
MW-1	5/25/10 <sup>3</sup>	101.85	15.33	15.37	0.04	86.51	unknown	unknown
	10/18/10 <sup>4</sup>	101.98	26.50	26.54	0.04	75.47		
	4/19/11		--	21.70	--	80.28		
	8/29/11		--	31.17	--	70.81		
MW-2	5/25/10	101.02	--	16.82	--	84.20	41.72	unknown
	10/18/10	100.99	--	27.10	--	73.89		
	4/19/11		--	23.34	--	77.68		
	8/29/11		--	30.91	--	70.08		
MW-3	5/25/10	101.46	--	17.28	--	84.18	40	10-40
	10/18/10	101.54	--	27.58	--	73.96		
	4/19/11		--	23.78	--	77.76		
	8/29/11		--	31.38	--	70.16		
MW-4	5/25/10	100.50	--	16.35	--	84.15	40	10-40
	10/18/10	100.48	--	26.20	--	74.28		
	4/19/11		--	22.12	--	78.36		
	8/29/11		--	29.92	--	70.56		
MW-5	5/25/10	104.21	--	27.30	--	76.91	40	20-40
	10/18/10	104.18	--	30.24	--	73.94		
	4/19/11		--	27.63	--	76.55		
	8/29/11		--	34.18	--	70.00		
MW-6	10/18/10	102.25	--	28.01	--	74.24	35.05	20.05-35.05
	4/19/11		--	23.06	--	79.19		
	8/29/11		--	32.01	--	70.24		
MW-7	10/18/10	99.72	--	25.10	--	74.62	34.92	19.92-34.92
	4/19/11		--	21.04	--	78.68		
	8/29/11		--	25.83	--	73.89		
MW-8	10/18/10	99.92	--	25.45	--	74.47	35.08	20.08-35.08
	4/19/11		--	22.51	--	77.41		
	8/29/11		--	28.62	--	71.30		
MW-9	10/18/10	94.83	--	30.31	--	64.52	35.17	20.17-35.17
	4/19/11		--	24.13	--	70.70		
	8/29/11		--	28.08	--	66.75		
MW-10	10/18/10	99.12	--	29.73	--	69.39	40.16	25.16-40.16
	4/19/11		--	26.18	--	72.94		
	8/29/11		--	31.51	--	67.61		
MW-11	10/18/10	102.61	--	28.75	--	73.86	35.23	20.23-35.23
	4/19/11		--	25.59	--	77.02		
	8/29/11		--	32.42	--	70.19		
MW-12	10/18/10	103.46	--	29.63	--	73.83	34.99	19.99-34.99
	4/19/11		--	26.11	--	77.35		
	8/29/11		--	33.56	--	69.90		
MW-13	10/18/10	101.48	--	27.63	--	73.85	40.19	25.19-40.19
	4/19/11		--	23.50	--	77.98		
	8/29/11		--	31.34	--	70.14		
MW-14	10/18/10	103.48	--	29.99	--	73.49	39.74	24.74-39.74
	4/19/11		--	28.52	--	74.96		
	8/29/11		--	34.59	--	68.89		

**TABLE 4**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
MW-15	10/18/10	103.16	--	30.32	--	72.84	40.13	25.13-40.13
	4/19/11		--	25.18	--	77.98		
	8/29/11		--	33.50	--	69.66		
MW-16	10/18/10	101.32	--	30.79	--	70.53	40.11	25.11-40.11
	4/19/11		--	24.59	--	76.73		
	8/29/11		--	32.68	--	68.64		
MW-17	10/18/10	98.40	--	23.74	--	74.66	35.02	20.02-35.02
	4/19/11		--	18.20	--	80.20		
	8/29/11		--	28.55	--	69.85		
MW-18	10/18/10	95.05	--	22.02	--	73.03	35.67	20.67-35.67
	4/19/11		--	15.71	--	79.34		
	8/29/11		--	23.00	--	72.05		
MW-19	10/18/10	101.07	--	27.62	--	73.45	38.57	23.57-38.57
	4/19/11		--	21.63	--	79.44		
	8/29/11		--	30.56	--	70.51		
MW-20 <sup>5</sup>	12/6/10	110.52	--	41.77	--	68.75	45.05	30.05-45.05
	4/19/11		--	37.72	--	72.80		
	8/29/11		--	41.27	--	69.25		
MW-21	12/6/10	101.70	--	32.66	--	69.04	40.16	25.16-40.16
	4/19/11		--	24.19	--	77.51		
	8/29/11		--	38.77	--	62.93		
MW-22	12/6/10	105.13	--	34.95	--	70.18	40.09	25.09-40.09
	4/19/11		--	28.56	--	76.57		
	8/29/11		--	35.88	--	69.25		
MW-23	12/6/10	100.01	--	29.26	--	70.75	37.24	22.24-37.24
	4/19/11		--	19.69	--	80.32		
	8/29/11		--	29.01	--	71.00		
MW-24	12/6/10	99.08	--	32.25	--	66.83	40.13	25.13-40.13
	4/19/11		--	25.58	--	73.50		
	8/29/11		--	31.62	--	67.46		
MW-25	12/6/10	101.54	--	32.00	--	69.54	39.98	24.98-39.98
	4/19/11		--	23.44	--	78.10		
	8/29/11		--	32.18	--	69.36		
MW-26	12/6/10	97.25	--	29.08	--	68.17	38.74	23.74-38.74
	4/19/11		--	21.07	--	76.18		
	8/29/11		--	29.08	--	68.17		
MW-27	12/6/10	97.20	--	28.48	--	68.72	35.1	20.10-35.10
	4/19/11		--	24.42	--	72.78		
	8/29/11		--	29.24	--	67.96		
MW-28	12/6/10	101.29	--	33.39	--	67.90	40.03	25.03-40.03
	4/19/11		--	20.91	--	80.38		
	8/29/11		--	29.92	--	71.37		



**TABLE 4**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
TW-1	10/18/10	101.83	--	28.44	--	73.39	63.27	58.27-63.27
	4/19/11		--	25.53	--	76.30		
	8/29/11		--	32.26	--	69.57		
TW-2	10/18/10	101.97	--	29.57	--	72.40	80.23	75.23-80.23
	4/19/11		--	23.83	--	78.14		
	8/29/11		--	31.62	--	70.35		
TW-3	10/18/10	95.33	--	25.39	--	69.94	80.62	75.62-80.62
	4/19/11		--	23.83	--	71.50		
	8/29/11		--	27.78	--	67.55		
TW-4	10/18/10	99.23	--	43.13	--	56.10	68.56	63.56-68.56
	4/19/11		--	27.11	--	72.12		
	8/29/11		--	31.09	--	68.14		
TW-5	10/18/10	103.62	--	29.69	--	73.93	58.38	53.38-58.38
	4/19/11		--	25.96	--	77.66		
	8/29/11		--	33.09	--	70.53		
TW-6	10/18/10	101.29	--	31.22	--	70.07	58.55	53.55-58.55
	4/19/11		--	25.25	--	76.04		
	8/29/11		--	33.00	--	68.29		
TW-7	10/18/10	98.13	--	50.90	--	47.23	58.94	53.94-58.94
	4/19/11		--	16.83	--	81.30		
	8/29/11		--	36.98	--	61.15		
TW-8	10/18/10	101.03	--	28.18	--	72.85	58.53	53.53-58.53
	4/19/11		--	22.19	--	78.84		
	8/29/11		--	41.54	--	59.49		
TW-9	12/6/10	96.92	--	28.96	--	67.96	80.12	75.12-80.12
	4/19/11		--	21.14	--	75.78		
	8/29/11		--	28.94	--	67.98		

Notes:

1. Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.
2. Groundwater elevations adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.
3. May 2010 survey data collected by Environmental Compliance Services, Inc. during Tier I assessment activities.
4. Subsequent October and December 2010 survey data provided by Pittman Professional Land Surveying.
5. MW-20 installed with a 3 ft stickup riser.

**TABLE 5**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
MW-1	5/25/10	Free Product								
	10/18/10	Free Product								
	4/19/11	456	210	1,010	4,700	<50.0	277	<50.0	1.2	NR
	8/29/11	1,130	317	941	3,779	<50	225	82	1.3	NR
MW-2	5/25/10	109 <sup>2</sup>	<5.0 <sup>3</sup>	114	312	<5.0	50.6	NR <sup>4</sup>	0.035	NR
	10/19/10	1.7 J <sup>5</sup>	<5.0	<5.0	2.9 J	<5.0	<5.0	24.8	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	28.5	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	26.1	<0.019	NR
MW-3	5/25/10	239	139	815	4,800	<5.0	285	126	0.099	28.9
	10/18/10	6,820	343	981	6,260	3.4 J	449	561	0.31	NR
	4/19/11	7,300	253	921	5,060	<250	342	542	0.30	NR
	8/29/11	7,000	572	1,170	6,710	<250	371	438	0.033	NR
MW-4	5/25/10	2.9 J	<5.0	1.4 J	<15.0	<5.0	12.7	3.5 J	<0.020	62.8
	10/18/10	5.7	<5.0	<5.0	<15.0	3.0 J	3.7 J	4.8 J	<0.020	NR
	4/20/11	16.4	<5.0	6.0	14.0	<5.0	9.3	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-5	5/25/10	3.6 J	1.8 J	4.0 J	22.3	<5.0	<5.0	4.8 J	<0.020	11.8
	10/18/10	102	<5.0	4.1 J	135.9	3.2 J	43.5	6.6	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
MW-6	10/19/10	<5.0	<5.0	<5.0	<15.0	3.0 J	<5.0	3.5 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
MW-7	10/19/10	12.9	4.6 J	3.2 J	34.2 J	<5.0	<5.0	4.6 J	0.40	<5.0
	4/20/11	794	108	410	2,536	<5.0	116	66.6	6.9	NR
	8/29/11	275	<10.0	42.6	178.8	<10.0	30.7	26	0.58	NR
MW-8	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	4.0 J	<5.0	2.2 J	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
MW-9	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-10	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-11	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	1.3 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	7.9	<5.0	<5.0	<15.0	<5.0	<5.0	2.8 J	<0.019	NR
MW-12	10/19/10	387	1,210	120	2,650	<5.0	187	24.7	4.8	<5.0
	4/20/11	1,360	987	462	1,659	<50.0	91.3	75.7	6.0	NR
	8/29/11	429	26.9	8.3 J	18.3 J	<12.5	5.2 J	126	2.5	NR

**TABLE 5**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
MW-13	10/19/10	<b>333</b>	109	58.3	282	<10.0	10.1	<b>61.9</b>	0.022	<5.0
	4/20/11	<b>376</b>	46.8	31.2	394	<12.5	11.7 J	<b>57.0</b>	<b>0.074</b>	NR
	8/29/11	<b>65.5</b>	11.7	9.2	34.2	<5.0	<5.0	<b>41.7</b>	0.033	NR
MW-14	10/19/10	<5.0	<5.0	2.5 J	9.5 J	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	2.8 J	<5.0	3.4 J	5.8 J	<5.0	22	<5.0	<0.020	NR
MW-15	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.0 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
MW-16	10/19/10	<b>246</b>	26.1	14.3	229.2	<5.0	<5.0	2.5 J	<0.020	<5.0
	4/19/11	<b>158</b>	8.5	2.5 J	96.2	<5.0	5.8	<5.0	<0.020	NR
	8/29/11	NR	NR	NR	NR	NR	NR	NR	<0.019	NR
MW-17	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	4.3 J
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-18	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

**TABLE 5**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
MW-19	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-20	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-21	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-22	12/6/10	<b>11,900</b>	<b>29,500</b>	<b>1,800</b>	<b>11,400</b>	<100	<b>522</b>	<b>463</b>	<b>122</b>	<b>15.3</b>
	4/20/11	<b>8,690</b>	<b>20,600</b>	<b>1,870</b>	<b>11,070</b>	<1,250	<1,250	<1,250	<b>119</b>	NR
	8/29/11	<b>3,630</b>	<b>23,500</b>	<b>3,530</b>	<b>20,200</b>	<1,000	<b>859 J</b>	<1,000	<b>188</b>	NR
MW-23	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-24	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>6.7</b>	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	4.1 J	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.5 J	<0.019	NR
MW-25	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-26	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
MW-27	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>6.4</b>	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.6 J	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-28	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-1	10/18/10	<5.0	<5.0	<5.0	<15.0	5.7	<5.0	<b>64.2</b>	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	5.0	<5.0	<b>48.9</b>	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	6.4	<5.0	<b>48.4</b>	<0.019	NR

**TABLE 5**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
TW-2	10/19/10	<5.0	3.4 J	<5.0	2.8 J	<5.0	<5.0	4.2 J	<0.020	<5.0
	4/19/11	<5.0	1.6 J	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
TW-3	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-4	10/19/10	<5.0	<5.0	<5.0	<15.0	2.9 J	<5.0	<5.0	<0.019	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-5	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	1.7 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR

**TABLE 5**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
TW-6	10/19/10	1.5 J	<5.0	<5.0	<15.0	<5.0	<5.0	<b>5.1</b>	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.6 J	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>8.9</b>	<0.019	NR
TW-7	10/19/10	<5.0	1.9 J	<5.0	5.6 J	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
TW-8	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-9	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-10 <sup>6</sup>	12/2/10	<5.0	<5.0	<5.0	<15.0	<5.0	2.9 J	<5.0	<0.020	NR

**TABLE 5**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
WSW-1	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.1 J	<0.020	NR
WSW-1 pre GAC <sup>7</sup>	11/18/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.5 J	<0.019	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	2.4	<0.019	NR
WSW-1 post GAC	11/18/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-2	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	Not Sampled								
WSW-3	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	5/3/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-4	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
WSW-5	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	Well pump not operational, could not collect sample								
	8/29/11	Not Sampled								
WSW-6	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.88 J	<0.019	NR
WSW-7	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
WSW-8	10/19/10	<5.0	<5.0	<5.0	<15.0	3.6 J	<5.0	<b>9.2</b>	<0.020	NR
WSW-8 pre GAC <sup>8</sup>	11/12/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>7.5</b>	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.9 J	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	1.6	<0.019	NR

**TABLE 5**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
WSW-8 post GAC	11/12/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
WSW-9	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-10	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.45 J	<0.020	NR
WSW-11	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.45 J	<0.019	NR
WSW-12	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	Well pump not operational, could not collect sample								
	8/29/11	Not Sampled								
WSW-13	10/19/10	<5.0	<5.0	<5.0	<15.0	3.2 J	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-14	10/19/10	<5.0	<5.0	<5.0	<15.0	4.0 J	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	1.3	<1.0	<1.0	<0.020	NR
WSW-15	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>

Notes:

- Analyses for BTEX compounds, MTBE, naphthalene, and 1,2-DCA by EPA Method 8260B; analyses for EDB by EPA Method 8011; analyses for total lead by EPA Method 6010.
- Concentrations in bold face type exceeded the May 2001 Risk-Based Screening Level.
- Less than the reporting limit specified in the laboratory report.
- Analyses not requested.
- Estimated value below the laboratory reporting limit.
- TW-10 did not produce enough water and was subsequently abandoned following sample collection.
- WSW-1 GAC installed on 11/18/10.
- WSW-8 GAC installed on 11/12/10.
- May 2001 Risk-Based Screening Level.



**TABLE 6**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
MW-1	10/18/10	<b>Free Product</b>							
	4/19/11	<2,000	<100	<50.0	<1,000	<1,000	<100	<1,000	<500
	8/29/11	<2,000	<100	<50.0	<1,000	<1,000	<100	<b>2,160</b>	<500
MW-2	10/19/10	<200 <sup>2</sup>	<10.0	<5.0	<100	254	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	336	<10.0	96.2 J	<50.0
	8/29/11	<200	<10.0	<5.0	<100	386	<10.0	87.1 J	<50.0
MW-3	10/18/10	<200	<10.0	55.7	<100	773	<10.0	<b>12,900<sup>3</sup></b>	<50.0
	4/19/11	<10,000	<500	<250	<5,000	<5,000	<500	<b>13,800</b>	<2,500
	8/29/11	<10,000	<500	<250	<5,000	<5,000	<500	<b>10,300</b>	<2,500
MW-4	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	199	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-5	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	168	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-6	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	131	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-7	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>2,650</b>	<50.0
	8/29/11	<400	<20.0	<10.0	<200	225	<20.0	<b>672</b>	<100
MW-8	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>244</b>	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-9	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-10	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-11	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-12	10/19/10	<200	<10.0	<5.0	<100	83.0 J <sup>4</sup>	<10.0	<b>267</b>	<50.0
	4/20/11	<2,000	<100	<50.0	<1,000	<1,000	<100	<1,000	<500
	8/29/11	<500	<25.0	4.8 J	<250	<250	<25.0	<b>615</b>	<125
MW-13	10/19/10	<400	<20.0	<10.0	<200	<200	<20.0	<b>1,260</b>	<100
	4/20/11	<500	<25.0	<12.5	<250	<250	<25.0	<b>1,210</b>	<125
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>1,040</b>	<50.0

**TABLE 6**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
MW-14	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-15	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-16	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<b>360</b>	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>321</b>	<50.0
	8/29/11	Not Requested							
MW-17	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-18	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-19	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-20	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-21	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>368</b>	<50.0
MW-22	12/6/10	<4,000	<200	<100	<2,000	<2,000	<200	<b>9,730</b>	<1,000
	4/20/11	<50,000	<2,500	<1,250	<25,000	<25,000	<2,500	<25,000	<12,500
	8/29/11	<40,000	<2,000	<1,000	<20,000	<20,000	<2,000	<20,000	<10,000
MW-23	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-24	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-25	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-26	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 6**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
MW-27	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-28	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-1	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	<b>1,180</b>	<50.0
	4/19/11	<200	<10.0	1.8 J	<100	<100	<10.0	<b>1,000</b>	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>871</b>	<50.0
TW-2	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	95.4 J	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-3	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-4	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-5	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>368</b>	<50.0
TW-6	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-7	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-8	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-9	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-10 <sup>5</sup>	12/2/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-1 pre GAC <sup>6</sup>	11/18/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	8.3 J	<10.0	<100	<50.0

**TABLE 6**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
WSW-1 post GAC	11/18/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-2	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	Not Sampled							
WSW-3	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	5/3/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-4	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-5	12/8/10	Not sampled for oxygenates. Well pump electric disconnected.							
	4/21/11	Well pump not operational, could not collect sample							
	8/29/11	Not Sampled							
WSW-6	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-7	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-8 pre GAC <sup>7</sup>	11/12/10	<200	<10.0	<5.0	<100	<100	<10.0	<b>262</b>	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-8 post GAC	11/12/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-9	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-10	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-11	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 6**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
WSW-12	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	Well pump not operational, could not collect sample							
	8/29/11	Not Sampled							
WSW-13	12/8/10	Not sampled for oxygenates. Sampled by SCDHEC on 11/4/10.							
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-14	12/8/10	Not sampled for oxygenates. Sampled by SCDHEC on 11/4/10.							
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-15	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>

Notes:

1. Analyses for eight oxygenates by EPA Method 8260B.
2. Less than the reporting limit specified in the laboratory report.
3. Concentrations in bold face exceed the 2008 SCDHEC Action Level.
4. Estimated value below the laboratory reporting limit.
5. TW-10 did not produce enough water and was subsequently abandoned following sample collection.
6. WSW-1 GAC installed on 11/18/10.
7. WSW-8 GAC installed on 11/12/10.
8. Action Levels based on SCDHEC Revision 1 dated 8/22/08.

## FIGURES

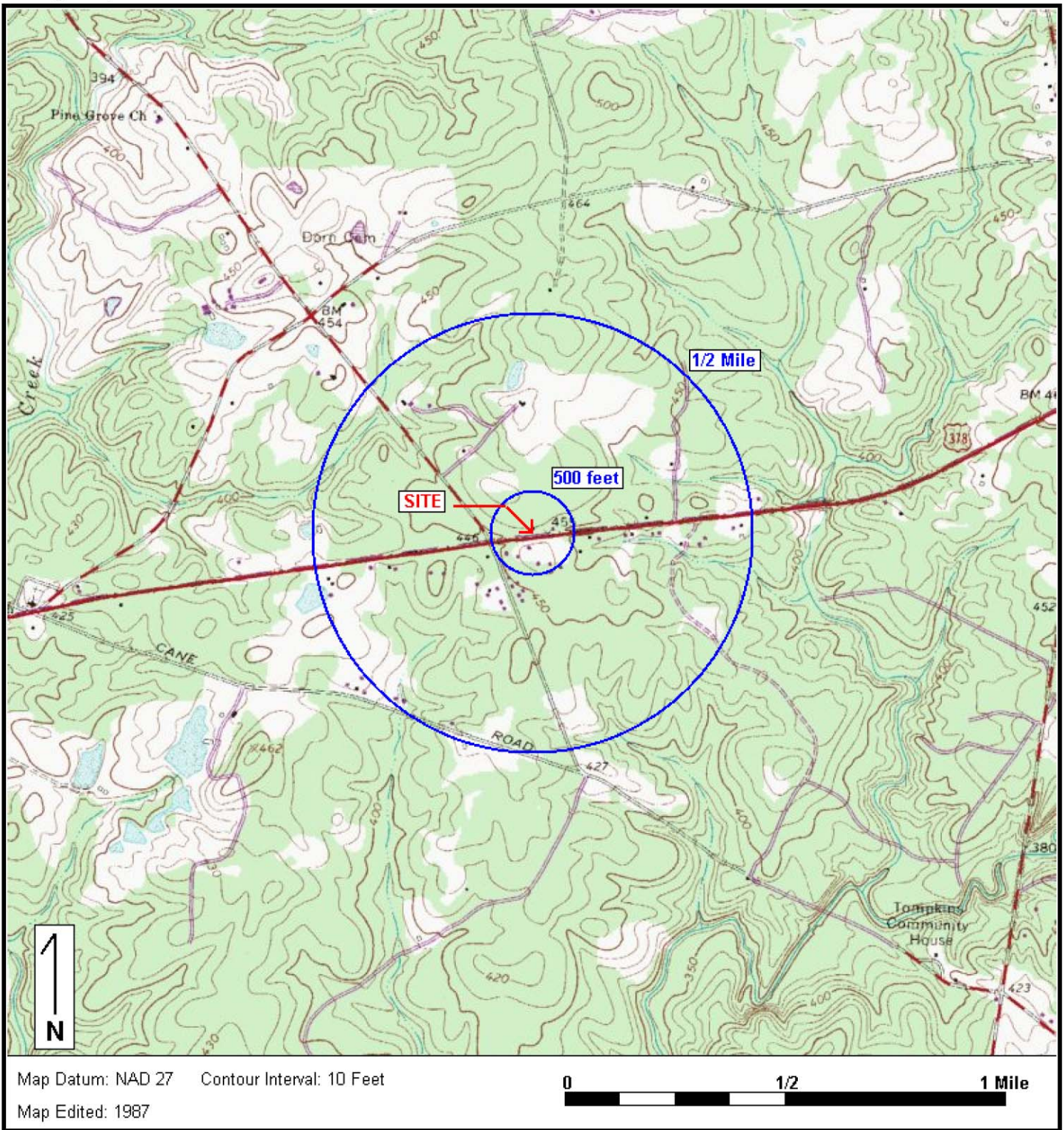
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Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

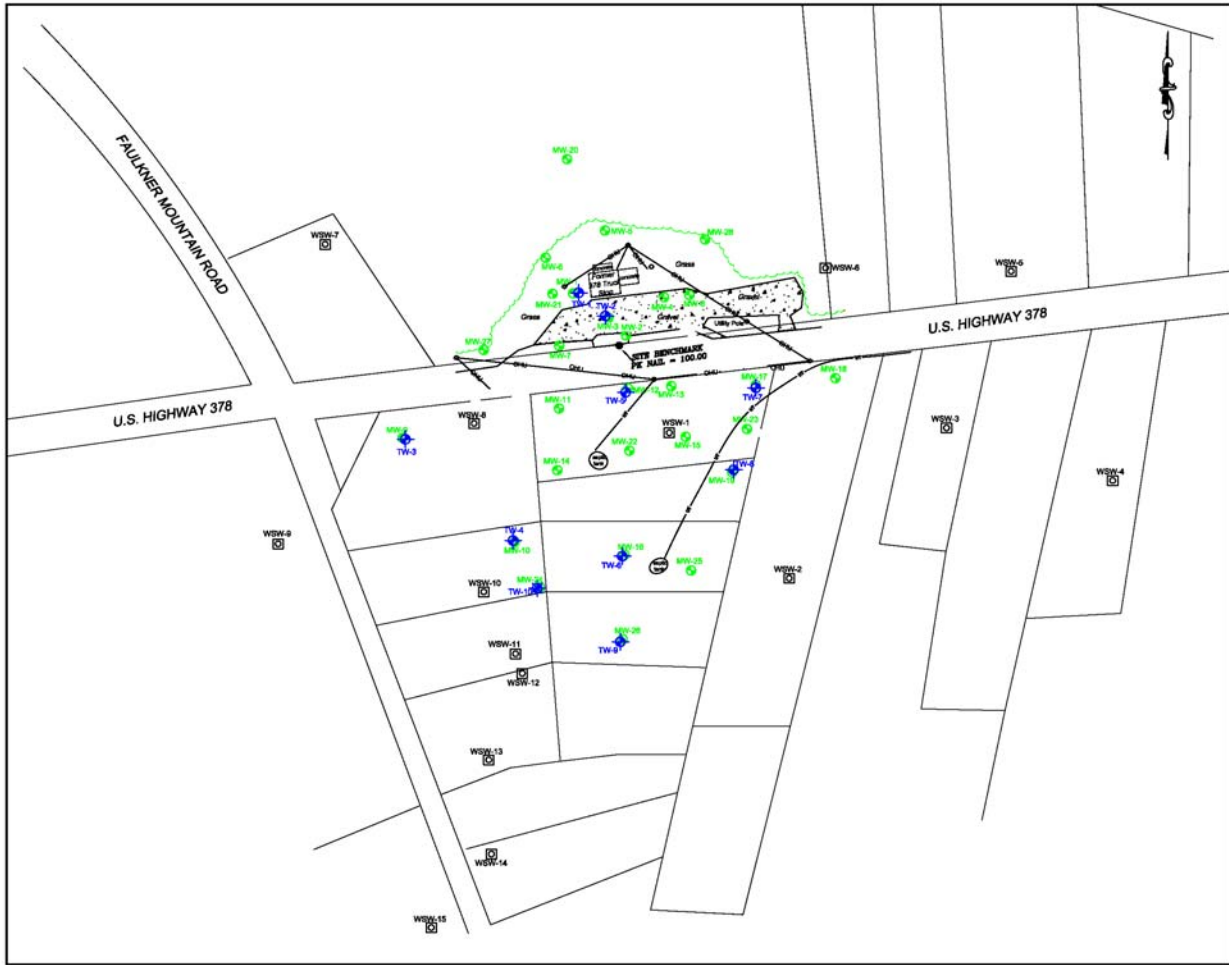
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas



- Legend**
- Approximate Property Line
  - Overhead Electric Line
  - Underground Telephone Line
  - Utility Pole
  - Shallow (Water Table) Monitoring Well
  - ◇ Telescoping Monitoring Well
  - ★ Abandoned Telescoping Monitoring Well
  - Water Supply Well
  - MW-1 Well I.D.

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13004 SOUTH POINT BLVD, UNIT #  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

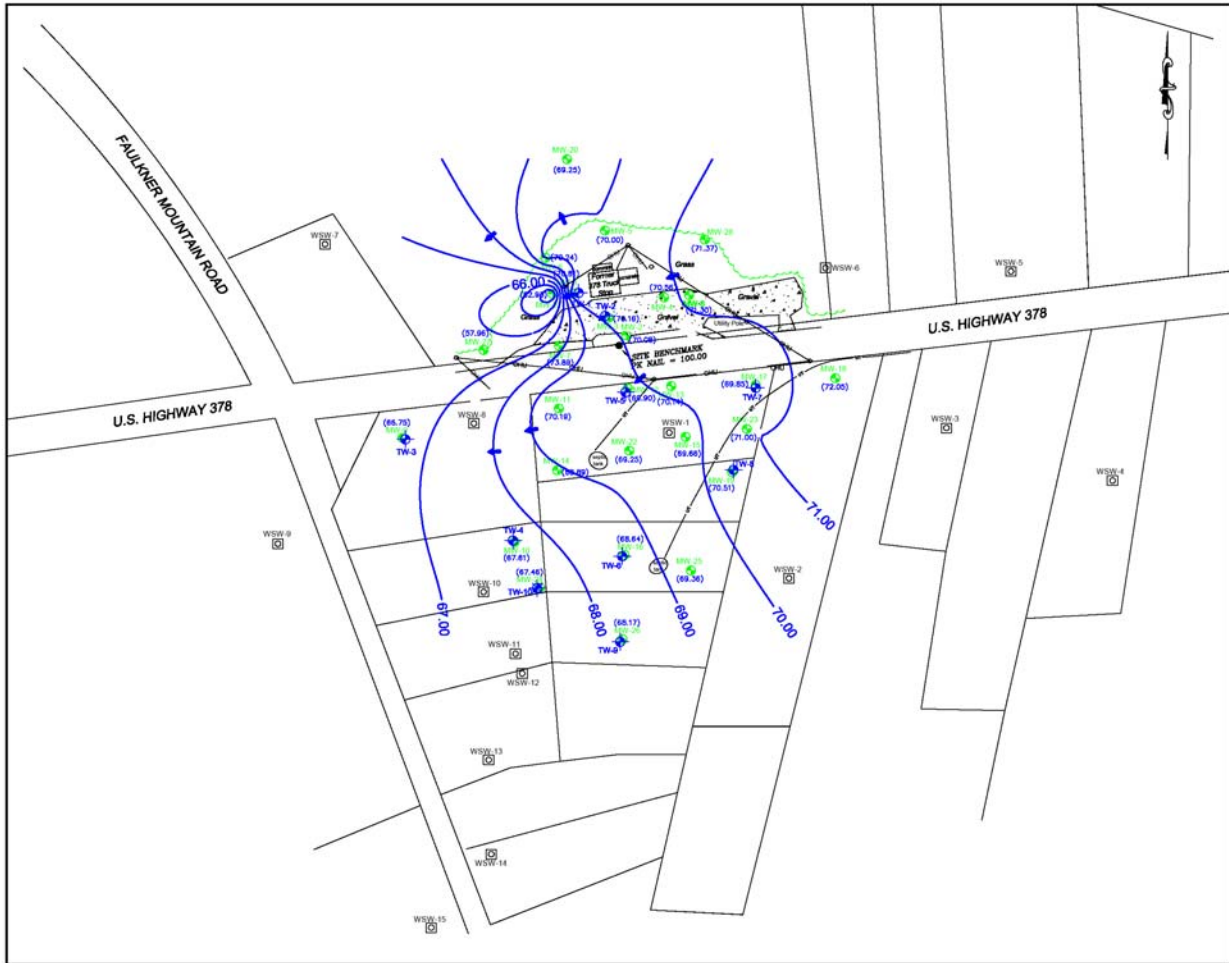
**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**TITLE:**  
 Site Plan

**CLIENT:**  
 Wilkerson Fuel Company, Inc.

CD	CD	CD	CD
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"=150'	10/10/11	14-214210	2





**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well
- MW-1 Well I.D.
- (73.71) Groundwater Elevation
- Water Table Contour (Dashed where Inferred)
- Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made in August 2011.

Water table contours and flow directions assume homogenous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

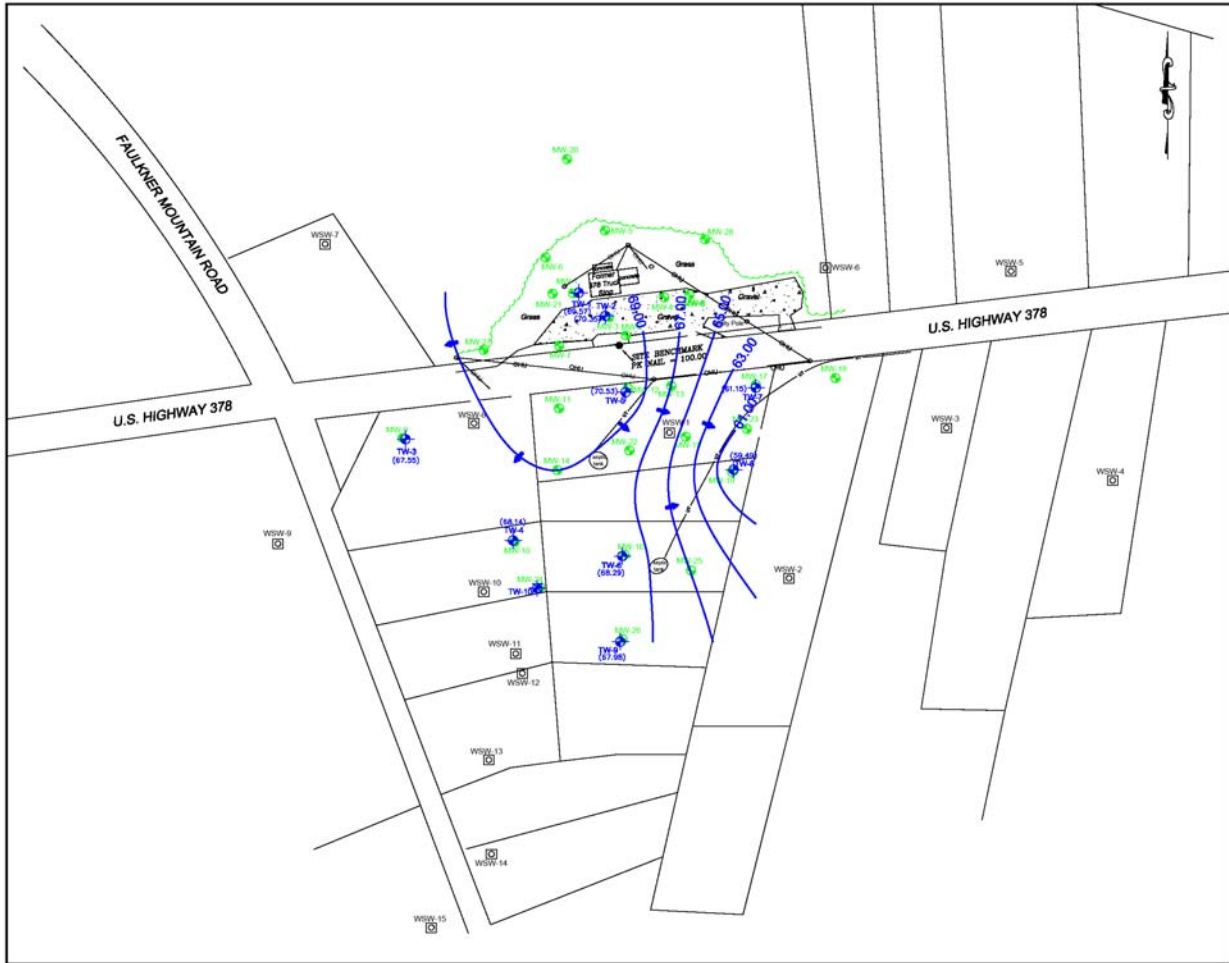
**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**DATE:**  
 Groundwater Elevation Map - Shallow

**CLIENT:** Wilkerson Fuel Company, Inc.

**GRAPHIC SCALE:** 0 10 20 30 40 50

COMPILED BY	CHECKED BY	DESIGNED BY	APPROVED BY
CD	CD	CD	CD
SCALE	DATE	JOB NO.	FIGURE NO.
1"=150'	10/10/11	14-214210	3



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well
- MW-1 Well I.D.
- (73.71) Groundwater Elevation
- Water Table Contour (Dashed where inferred)
- Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made in August 2011.

Water table contours and flow directions assume homogenous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704) 583-2711 FAX: (704) 583-2744

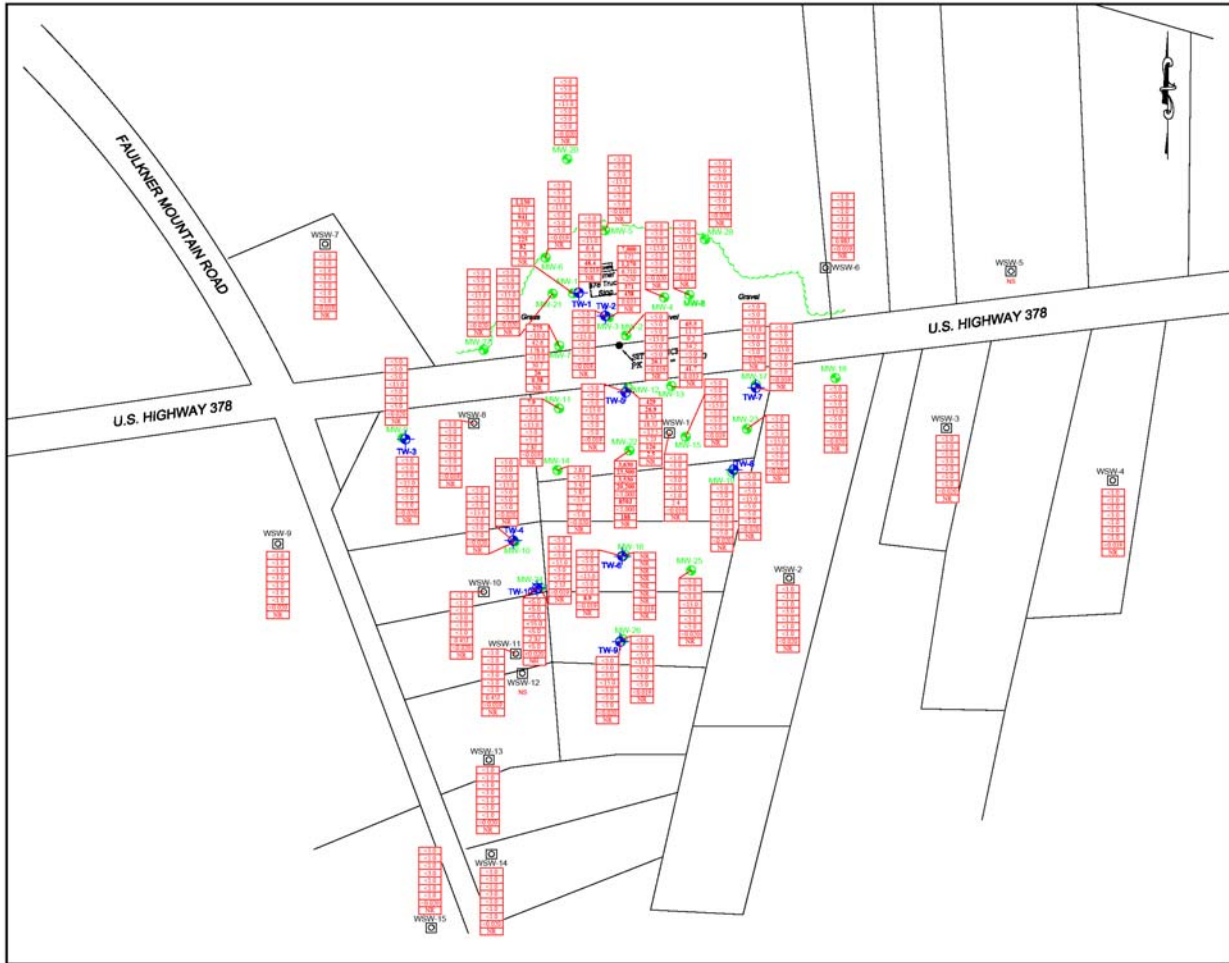
**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**TITLE:**  
 Groundwater Elevation Map - Deep

**CLIENT:**  
 Wilkerson Fuel Company, Inc.

**GRAPHIC SCALE:**  
 0 10 20 30 40 50 60 70 80 90 100

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
CD	CD	CD	CD
SCALE	DATE	JOB NO.	FIGURE NO.
1"=100'	6/2/11	14-714715	4



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊖ Abandoned Telescoping Monitoring Well
- ⊗ Water Supply Well
- MW-1 Well I.D.

5	Benzene
1,000	Toluene
700	Ethylbenzene
10,000	Xylenes
40	MIBC
25	Naphthalene
5	1,2-DCA
0.05	CDS
15	Lead

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

All concentrations are measured in micrograms per liter (ug/L).

Groundwater samples collected in August 2011.

Above concentrations represent May 2001 Risk-Based Screening Levels; Concentrations in bold face type exceeded the RBSL.

J - Estimated value between the method detection limit and the laboratory reporting limit.

<1.0 - Less than the reporting limit specified in the laboratory report.

NR - Not Requested.

NS - Not Sampled.

WSW-1 and WSW-8 data represent pre-treatment concentrations.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

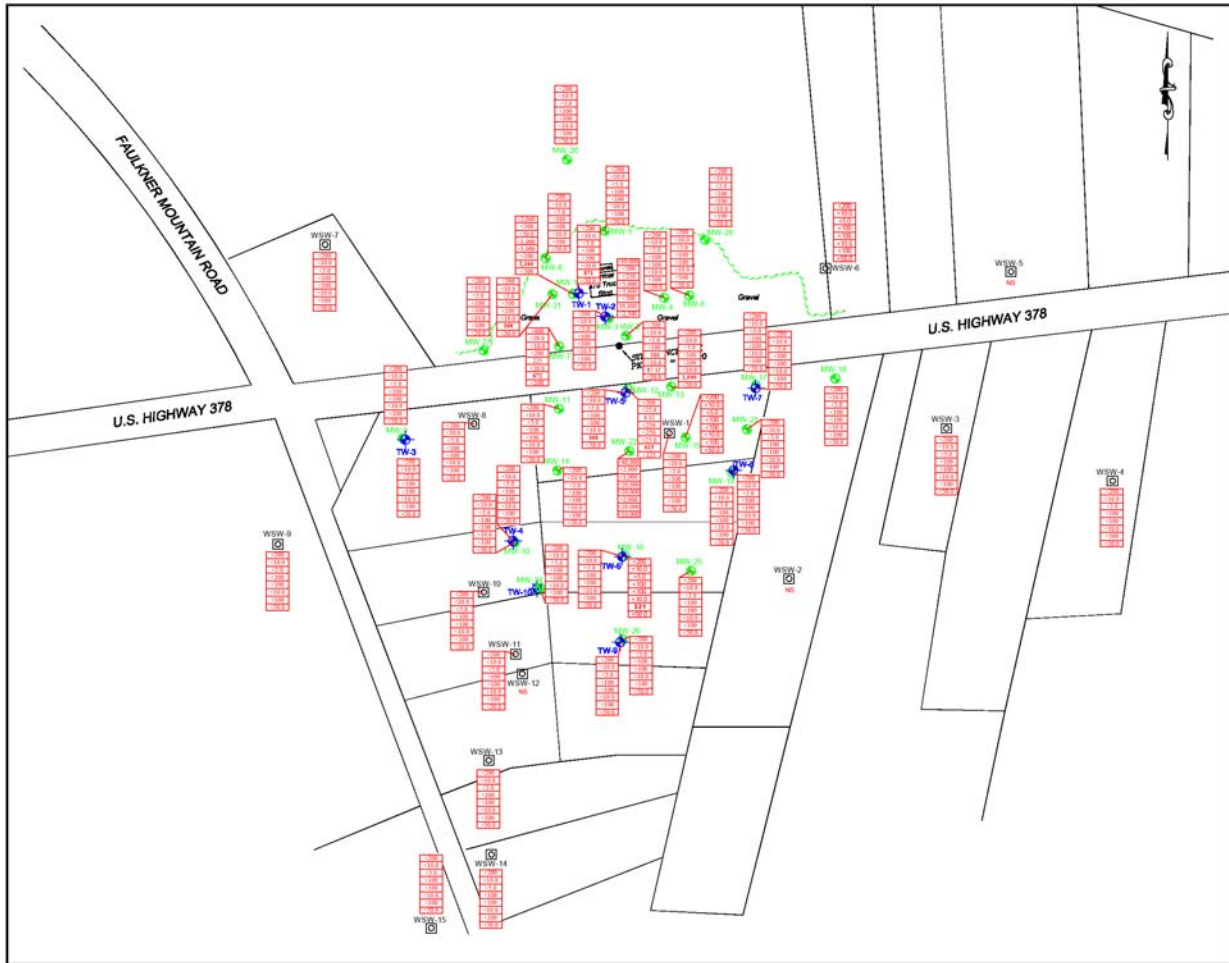
**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**TITLE:**  
 Groundwater Quality Map -CoC

**CLIENT:**  
 Wilkerson Fuel Company, Inc.

**DRAWN SCALE:**  
 1"=100'

DESIGNED BY	DESIGNED BY	CHECKED BY	APPROVED BY
CD	BS	BS	BS
SCALE	DATE	JOB NO.	FIGURE NO.
1"=100'	10/10/11	14-314710	K



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well
- MW-1 Well I.D.

10,000	Ethanol
47	Ethyl tert-Butyl Ether (ETBE)
150	Di-isopropyl Ether (DPE)
NA	3,3-Dimethyl-1-Butanol
1,400	Tertiary Butyl Alcohol (TBA)
128	tert-Amyl Methyl Ether (TAME)
240	tert-Amyl Alcohol (TAA)
NA	tert-Butyl Formate (TBF)

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

All concentrations are measured in micrograms per liter (ug/L).

Groundwater samples collected in August 2011.

Above concentrations represent 2008 SCDHEC Action Levels; Concentrations in bold face type exceeded the Action Level.

J - Estimated Value between the method detection limit and the reporting limit.

<L.D. - Less than the reporting limit specified in the laboratory report.

NS - Not Sampled

WSW-1 and WSW-8 data represent pre-treatment concentrations.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13504 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

**378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**Groundwater Quality Map - Oxygenates**  
 For: **Wilkerson Fuel Company, Inc.**

DESIGNED BY	CD	DESIGNED BY	CD	CHECKED BY	BS	CHECKED BY	BS
SCALE	1"=150'	DATE	10/11/11	JOB NO.	14-214210	FIGURE NO.	6

**APPENDIX A**

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AFVR Event Field Data Sheets, Emission Calculations & Disposal  
Manifest – July 19, 2011

**APPENDIX A  
AFVR EVENT FIELD DATA SHEETS**

AFVR Measurements Prior to and After Event

Project Name: Truck stop 378 UST Permit No: 7960  
 Project No: 14-214210 ECS Field Rep.: A. Williamson  
 Date: 7/19/2011

**Measurements Prior to AFVR Event**

Vac. Truck (VT) Co. A&D  
 VT No.: VT 18  
 VT Tank Capacity: 3,000 gallons  
 Inside Diameter of VT Outlet Stack 6 inches  
 Is Tank Empty & Clean (Y/N) yes

**Measurements After AFVR Event**

VT Tank Product volume 0 gallons  
 VT Tank Water volume 1 gallons

Well ID	Prior to AFVR -		Immediately After -		20-min After AFVR -		Depth of Stinger
	Depth to Product	Depth to Water	Depth to Product	Depth to Water	Depth to Product	Depth to Water	
MW-16	NP	30.55	NP	37.76	NP	37.52	31.00
MW-24	NP	29.97	NP	29.88	NP	29.89	
MW-25	NP	29.80	NP	29.67	NP	29.67	
MW-26	NP	26.84	NP	26.74	NP	26.74	

NP denotes no measurable free product.

NM denotes not measured.

**APPENDIX A  
AFVR EVENT FIELD DATA SHEETS**

Project Name: Truck stop 378  
 UST Permit No: 07960  
 Date: 7/19/2011

ECS Project No: 14-214210  
 Field Operative: A. Williamson  
 Subcontractor: A&D

**Measurements During AFVR Event**

Time	Stack Outlet				Vac Truck Vacuum (in. of Hg)	Non-AFVR Wells					
	Air Flow (ft/min)	Temperature (Fahrenheit)	R.H. (%)	TLV (ppm)		MW-24		MW-25		MW-26	
						DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)
9:15											
9:30	4,046	207.7	2.7	2	20		0.00		0.00		0.00
9:45	4,046	212.0	2.7	4	20		0.00		0.00		0.00
10:00	4,132	215.4	2.4	1	20		0.00		0.00		0.00
10:15	AFVR Truck Broke Down										
10:30	4,583	205.7	2.8	3	20		0.00		0.00		0.15
10:45	4,617	216.0	2.2	2	20		0.00		0.00		0.15
11:00	4,513	218.3	2.1	2	20		0.00		0.00		0.15
11:15	AFVR Shut Down										
11:45											
12:15											
12:45											
13:15											
13:45											
14:15											
14:45											
15:15											
15:45											
16:15											
16:45											
17:15											

**APPENDIX A  
EMISSIONS CALCULATIONS**

**AGGRESSIVE FLUID VAPOR RECOVERY EVENT**

SITE NAME: Truck stop 378  
 UST PERMIT NUMBER: 07960  
 AVERAGE DEPTH TO GROUNDWATER: 29.29  
 DESCRIBE SOIL IN THE SATURATED ZONE: silty SAND  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): 0.57 ft/day  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: MW-16  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM TRUCK (cfm @ in Hg): 492 cfm @ 24 in Hg

**DRY STANDARD CUBIC FEET PER MINUTE (DSCFM) AIR FLOW CALCULATIONS (Qstd)**

Date	Time	Vacuum (in. of Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>sw</sub> (Wt/Wt)	B <sub>ws</sub> (vol/vol)	Q <sub>std</sub> (flow)
Start	9:15	Connection to MW-16. Stinger set at 31 feet below top of casing.							
07/19/11	9:30	20	4,046	6	207.7	2.7	0.015818	0.025	613
07/19/11	9:45	20	4,046	6	212.0	2.7	0.017277	0.027	607
07/19/11	10:00	20	4,132	6	215.4	2.4	0.016399	0.026	618
07/19/11	10:15	Truck Broke Down							
07/19/11	10:30	20	4,583	6	205.7	2.8	0.015753	0.025	696
07/19/11	10:45	20	4,617	6	216.0	2.2	0.015181	0.024	691
07/19/11	11:00	20	4,513	6	218.3	2.1	0.015155	0.024	673
07/19/11	11:15	AFVR Shutdown							
07/19/11	11:45								
07/19/11	12:15								
07/19/11	12:45								
07/19/11	13:15								
07/19/11	13:45								
07/19/11	14:15								
07/19/11	14:45								
07/19/11	15:15								
07/19/11	15:45								
07/19/11	16:15								
07/19/11	16:45								
07/19/11	17:15								
<b>Averages</b>		20	4,323	6	213	2.5	0.015931	0.025	650

**NOTES**

Qstd = Flow at DSCFM  
 Vacuum = The level of vacuum being applied recorded from the vacuum truck tank (inches of Hg)  
 Velocity = The rate at which air flows is measured at the blower discharge piping (anemometer or pitot tube)  
 Pipe ID = The inside diameter of the blower discharge piping (from the vacuum truck)  
 Temperature = The temperature of the air stream exiting the blower discharge piping (dry bulb temp., in deg. °F)  
 Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping  
 B<sub>sw</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart  
 (temp Vs relative humidity)  
 B<sub>ws</sub> = water vapor % by volume

**EQUATIONS**

$$B_{ws} = (B_{sw}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{sw}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1 - \text{Water Vapor}) * \text{velocity} * (\text{PI} * (\text{diameter}/24)^2) * (528^\circ\text{R}/(\text{Temp} + 460))$$



**APPENDIX A  
EMISSIONS CALCULATIONS**

**EMISSION CALCULATIONS**

SITE NAME: Truck stop 378

AFVR EVENT DATE: 19-Jul-2011

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub>	PPM <sub>dry</sub>	RF	PPM <sub>conc</sub>	C <sub>c:m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
15	613	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
30	607	4	4	4	1.02	4	2	0.00000	0.00	0.01	0.00
45	618	1	1	1	1.02	1	1	0.00000	0.00	0.00	0.00
60	Truck Broke Down										
75	696	3	3	3	1.02	3	2	0.00000	0.00	0.00	0.00
90	691	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
105	673	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
120	AFVR Shut Down										
150											
180											
210											
240											
270											
300											
330											
360											
390											
420											
450											
480											
<b>Averages</b>	650	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00

**Total emissions in pounds: 0.00**  
**Total emissions in gallons: 0.00**

**NOTES**

PPM<sub>measured</sub> = Actual measurements (ppm) taken with TLV at the blower discharge piping

PPM<sub>wet</sub> = "wet" concentration

PPM<sub>dry</sub> = "dry" concentration

RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.

K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)

PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP

C<sub>c:m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon

M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon

K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP

C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP

PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon

PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of of VOC's as gasoline

PMR = lb, pollutant mass removal of VOC's as gasoline

**APPENDIX A**  
**EMISSIONS CALCULATIONS**

**EQUATIONS**

$$PPM_{wet} = PPM_{measured}$$

$$PPM_{dry} = (PPM_{wet}) / (1 - B_{ws})$$

$$PPM_c = (PPM_d)(K)$$

$$C_{c.m} = (PPM_c)(M_c / K_3)$$

$$C_c = (C_{c.m})(62.43 \times 10^{-9} \text{ lb-m}^3/\text{mg-ft}^3)$$

$$PMR_c = (C_c)(Q_{std})(60 \text{ min/hr})$$

$$PMR_g = (PMR_c)(M_g/M_{cg})$$

$$PMR = (PMR_g)(\#minutes/60)$$

Location Edgefield, SC Date 7/19/11

Project / Client 378 Truck Stop  
14-214210

Start 515 in 02 Ranger cdo 145 ~~845~~ <sup>844</sup> MW

On site 845, -1 hour NC.

A+D not on site, driver having trouble locating. Trying to direct over phone.

Same AFUR wells.

ID	<del>DTP</del>	DTW	Stringer
MW-16	NP	30.55	31.00
MW-24	NP	29.97	-
MW-25	NP	29.80	-
MW-26	NP	26.84	-

A+D on site 845.

Set up on MW-16 at 31', was not pulling water after initial burst. Lowered to 35',

did some thing. Pulled pipe + tagged well @ 34.50'. Reset stringer to 35'.

Called PM, said leave at 35 per now.

Called PM back after TLV reading, was told to lower stringer to 37'.

Not using off gas treatment due to low concentrations.

Same thing happens at 37', burst of water then dry / extremely light flow, P seal is cracked.

MP broke down @ 1015, belts came off of engine. Lloyd trying to replace the belts.

Location Edgefield, SC Date 7/19/11

Project / Client 378 Truck Stop  
14-214210

VT repaired + running again @ 1025.  
Got call from PM @ 1120 to shut down + end for the day.

End AFUR 1125 + reauge wells.  
Immediate + 20 mins

ID	DTP	DTW	DTP	DTW
MW-16	NP	37.76	NP	37.52
MW-24	NP	29.88	NP	29.89
MW-25	NP	29.67	NP	29.67
MW-26	NP	26.74	NP	26.74

Insufficient volume of water in tank to get accurate reading, called it 2 gal.

A+D off site 1145.

Finished gauging, packed up, closed wells  
Left site 1205.

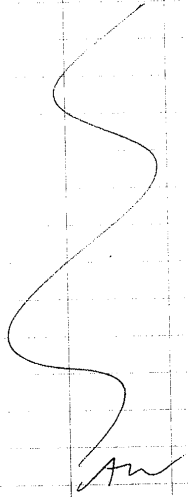
Lunch 1250 - 1305

Arrive ECS 1445, cdo: 146086

End 1500

Location Edgefield, SC Date 7/19/11  
Project / Client 378 Truck Stop  
14-214210

Time	Air Flow (ppm)	Temp (°F)	RH(%)	TLU (ppm)	UT Vac (in Hg)
915	-	-	-	-	-
930	4046	207.7	2.7	2	20
945	4046	212.0	2.7	4	20
1000	4132	215.4	2.4	1	20
1015	Truck broke down				
1030	4583	205.7	2.8	3	20
1045	4017	210.0	2.2	3	20
1100	4531	217.4	2.2	2	20
1115	4513	218.3	2.1	1.5	20
1145	End AFVR 1125				
1215					
1245					
1315					
1345					
1415					
1445					
1515					
1545					
1615					
1645					
1715					



Location Edgefield, SC Date 7/19/11  
Project / Client 378 Truck Stop  
14-214210

MW-24 Vac (in H <sub>2</sub> O)	MW-25 Vac (in H <sub>2</sub> O)	MW-26 Vac (in H <sub>2</sub> O)
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0.15
0	0	0.15
0	0	0.15

~~AW~~

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
 2. Page 1 of 1  
 3. Emergency Response Phone  
 803-957-9175  
 4. Waste Tracking Number  
 31380

5. Generator's Name and Mailing Address  
**Wilkerson Fuel Company, Inc**  
**731 Highway 378**  
**Edgefield, SC**  
 Generator's Site Address (if different than mailing address)  
**Wilkerson Fuel Company, Inc**  
**731 Highway 378**  
**Edgefield, SC**

Generator's Phone:  
 6. Transporter 1 Company Name  
**A&D Environmental Services (SC), LLC**  
 U.S. EPA ID Number  
**SCD987598331**

7. Transporter 2 Company Name  
 U.S. EPA ID Number

8. Designated Facility Name and Site Address  
**A&D Environmental Services (SC) LLC**  
**1741 Calks Ferry Road**  
**Lexington, SC 29073**  
 U.S. EPA ID Number  
**SCD987598331**

Facility's Phone: **803-957-9175**

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		

1.	<b>NON-HAZARDOUS NON-REGULATED MATERIAL</b> <b>Petroleum Contaminated Water</b>	1	TT	1 gal.
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information  
**A&D (SC) Job # 15700**  
**Project # 14-214210**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and governmental regulations.

Generator's/Offoror's Printed/Typed Name  
*Evs Agent for*  
**Aaron Williamson Wilkerson Fuel Co.**  
 Signature  
*Aaron Williamson*  
 Month Day Year  
 7 19 11

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit:  
 Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials  
 Transporter 1 Printed/Typed Name  
**Lloyd COLEMAN**  
 Signature  
*Lloyd Coleman*  
 Month Day Year  
 7 19 11  
 Transporter 2 Printed/Typed Name  
 Signature  
 Month Day Year

17. Discrepancy  
 17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator) U.S. EPA ID Number  
 Manifest Reference Number:

Facility's Phone:  
 17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17  
 Printed/Typed Name  
**John P. Row**  
 Signature  
*John P. Row*  
 Month Day Year  
 7 19 11

**APPENDIX B**

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AFVR Event Field Data Sheets, Emission Calculations & Disposal  
Manifest – July 20, 2011

**APPENDIX B  
AFVR EVENT FIELD DATA SHEETS**

AFVR Measurements Prior to and After Event

Project Name: Truck stop 378 UST Permit No: 7960  
 Project No: 14-214210 ECS Field Rep.: A. williamson  
 Date: 7/20/2011

**Measurements Prior to AFVR Event**

Vac. Truck (VT) Co. A&D  
 VT No.: VT 18  
 VT Tank Capacity: 3,000 gallons  
 Inside Diameter of VT Outlet Stack 6 inches  
 Is Tank Empty & Clean (Y/N) yes

**Measurements After AFVR Event**

VT Tank Product volume 0 gallons  
 VT Tank Water volume 10 gallons

Well ID	Prior to AFVR -		Immediately After -		20-min After AFVR -		Depth of Stinger
	Depth to Product	Depth to Water	Depth to Product	Depth to Water	Depth to Product	Depth to Water	
MW-22	NP	33.84	NP	37.66	NP	37.52	34.35
Mw-12	NP	31.69	NP	31.74	NP	31.75	
MW-14	NP	32.75	NP	32.79	NP	32.79	
MW-15	NP	32.13	NP	31.99	NP	31.98	

NP denotes no measurable free product.  
 NM denotes not measured.

**APPENDIX B  
AFVR EVENT FIELD DATA SHEETS**

Project Name: Truck stop 378  
 UST Permit No: 07960  
 Date: 7/20/2011

ECS Project No: 14-214210  
 Field Operative: A. williamson  
 Subcontractor: A&D

**Measurements During AFVR Event**

Time	Stack Outlet				Vac Truck Vacuum (in. of Hg)	Non-AFVR Wells					
	Air Flow (ft/min)	Temperature (Fahrenheit)	R.H. (%)	TLV (ppm)		MW-12		MW-14		MW-15	
						DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)
8:00											
8:15	4,357	218.1	2.3	0	20		0.00		0.00		0.00
8:30	4,236	218.8	2.2	180	20		0.00		0.10		0.00
8:45	4,202	219.7	2.2	52	20		0.00		0.10		0.00
9:00	4,167	220.1	2.2	44	20		0.00		0.10		0.00
9:15	4,317	225.5	1.7	36	20		0.00		0.10		0.00
9:30	4,398	232.7	1.7	36	20		0.00		0.10		0.00
9:45	4,115	232.9	1.8	54	20		0.00		0.10		0.00
10:00	4,184	236.1	1.6	26	20						
10:30	End of AFVR 1030										
11:00											
11:30											
12:00											
12:30											
13:00											
13:30											
14:00											
14:30											
15:00											
15:30											
16:00											



**APPENDIX B  
EMISSIONS CALCULATIONS**

**AGGRESSIVE FLUID VAPOR RECOVERY EVENT**

SITE NAME: Truck stop 378  
 UST PERMIT NUMBER: 07960  
 AVERAGE DEPTH TO GROUNDWATER: 32.60  
 DESCRIBE SOIL IN THE SATURATED ZONE: silty SAND  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): 0.57 ft/day  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: MW-22  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM TRUCK (cfm @ in Hg): 492 cfm @ 24 in Hg

**DRY STANDARD CUBIC FEET PER MINUTE (DSCFM) AIR FLOW CALCULATIONS (Qstd)**

Date	Time	Vacuum (in. of Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>WSW</sub> (Wt/Wt)	B <sub>WS</sub> (vol/vol)	Q <sub>std</sub> (flow)
Start	8:00	Connection to MW-22. Stinger set at 34.35 feet below top of casing.							
07/20/11	8:15	20	4,357	6	218.1	2.3	0.01657	0.026	649
07/20/11	8:30	20	4,236	6	218.8	2.2	0.016053	0.025	631
07/20/11	8:45	20	4,202	6	219.7	2.2	0.016343	0.026	625
07/20/11	9:00	20	4,167	6	220.1	2.2	0.016473	0.026	619
07/20/11	9:15	20	4,317	6	225.5	1.7	0.01406	0.022	639
07/20/11	9:30	20	4,398	6	232.7	1.7	0.016141	0.025	642
07/20/11	9:45	20	4,115	6	232.9	1.8	0.017182	0.027	599
07/20/11	10:00	AFVR Shutdown							
07/20/11	10:30								
07/20/11	11:00								
07/20/11	11:30								
07/20/11	12:00								
07/20/11	12:30								
07/20/11	13:00								
07/20/11	13:30								
07/20/11	14:00								
07/20/11	14:30								
07/20/11	15:00								
07/20/11	15:30								
07/20/11	16:00								
<b>Averages</b>		20	4,256	6	224	2.0	0.016118	0.025	629

**NOTES**

Qstd = Flow at DSCFM

Vacuum = The level of vacuum being applied recorded from the vacuum truck tank (inches of Hg)

Velocity = The rate at which air flows is measured at the blower discharge piping (anemometer or pitot tube)

Pipe ID = The inside diameter of the blower discharge piping (from the vacuum truck)

Temperature = The temperature of the air stream exiting the blower discharge piping (dry bulb temp., in deg. °F)

Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping

B<sub>WSW</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart (temp Vs relative humidity)

B<sub>WS</sub> = water vapor % by volume

**EQUATIONS**

$$B_{WS} = (B_{WSW}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{WSW}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1\text{-Water Vapor}) * \text{velocity} * (\text{PI} * (\text{diameter}/24)^2) * (528^\circ\text{R}/(\text{Temp} + 460))$$

**APPENDIX B  
EMISSIONS CALCULATIONS**

**EMISSION CALCULATIONS**

SITE NAME: Truck stop 378

AFVR EVENT DATE: 20-Jul-2011

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub>	PPM <sub>dry</sub>	RF	PPM <sub>conc</sub>	C <sub>c,m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
15	649	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
30	631	180	180	185	1.02	188	94	0.00001	0.22	0.26	0.06
45	625	52	52	53	1.02	54	27	0.00000	0.06	0.07	0.02
60	619	44	44	45	1.02	46	23	0.00000	0.05	0.06	0.02
75	639	36	36	37	1.02	38	19	0.00000	0.04	0.05	0.01
90	642	36	36	37	1.02	38	19	0.00000	0.05	0.05	0.01
105	599	54	54	55	1.02	57	28	0.00000	0.06	0.07	0.02
120	AFVR Shut Down										
150											
180											
210											
240											
270											
300											
330											
360											
390											
420											
450											
480											
<b>Averages</b>	629	57	57	59	1.02	60	30	0.00000	0.07	0.08	0.02

**Total emissions in pounds: 0.14  
Total emissions in gallons: 0.02**

**NOTES**

PPM<sub>measured</sub> = Actual measurements (ppm) taken with TLV at the blower discharge piping

PPM<sub>wet</sub> = "wet" concentration

PPM<sub>dry</sub> = "dry" concentration

RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.

K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)

PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP

C<sub>c,m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon

M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon

K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP

C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP

PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon

PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of of VOC's as gasoline

PMR = lb, pollutant mass removal of VOC's as gasoline

**APPENDIX B  
EMISSIONS CALCULATIONS**

**EQUATIONS**

$$PPM_{wet} = PPM_{measured}$$

$$PPM_{dry} = (PPM_{wet}) / (1 - B_{ws})$$

$$PPM_c = (PPM_d)(K)$$

$$C_{c,m} = (PPM_c)(M_c / K_3)$$

$$C_c = (C_{c,m})(62.43 \times 10^{-9} \text{ lb-m}^3/\text{mg-ft}^3)$$

$$PMR_c = (C_c)(Q_{std})(60 \text{ min/hr})$$

$$PMR_g = (PMR_c)(M_g/M_{cg})$$

$$PMR = (PMR_g)(\#minutes/60)$$

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Location Edgefield, SC Date 7/20/11Project / Client 378 Truck Stop  
14-214210Start 510 in @ Ranger 000: 146172  
On site 740 A+D already here (Lloyd, V118)

Gauge AFVR wells

ID	DTP	DTW	Stinger
MW-22	NP	33.84	34.35
MW-12	NP	31.69	-
MW-14	NP	32.75	-
MW-15	NP	32.13	-

Start AFVR 800

Magnetics installed according to WO.

Called PM after 815 reading, was authorized  
to lower stinger to 38'At 38' pulled heavy stream of water again  
for about 30 seconds and tapered off to  
nothing. Cracked seal open at top of well  
and obtained very thin misty flow.

Weather: Sunny, 90s, humid

Not using off gas treatment due to low  
concentrations.

Testo 400 SN: 001728793

Bacharach TLV Sniffer SN: HZ1008

Call from PM @ 1010 to shut down &  
gauge additional wells.

End AFVR 1015

139

Location Edgefield, SC Date 7/20/11Project / Client 378 Truck Stop  
14-214210

ID	Immediate		+20 mins	
	DTW	DTP	DTW	DTP
MW-22	37.66	NP	37.52	NP
MW-12	31.74	NP	31.75	NP
MW-14	32.79	NP	32.79	NP
MW-15	31.99	NP	31.98	NP

1" of water in VT tank = 10 gal.

according to A+D chart.

A+D off site 1030

Gauged additional wells.

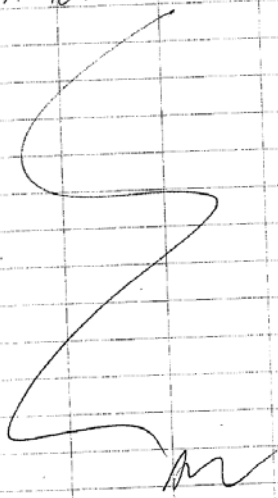
ID	DTW	<del>DTP</del>	MW
MW-1	28.73		
MW-3	29.81		
MW-7	23.90	24.04	
MW-13	29.78		

Done gauging 1115, called PM.

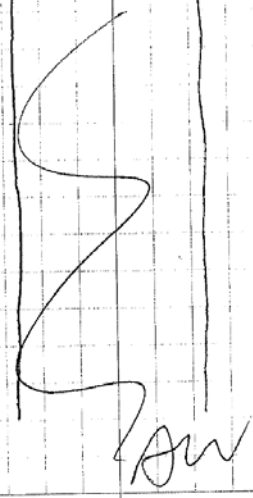
000: 146298

Left site 1120

140 Location Edgefield, SC Date 7/20/11  
 Project / Client 378 Truck Stop  
14-214210

Time	Air Flow (cfm)	Temp (°F)	RH(%)	TLV(ppm)	STVcc (1" H <sub>2</sub> O)
8:00					<del>20</del> 20
8:15	4357	218.1	2.3	0	20
8:30	4236	218.8	2.2	180	20
8:45	4202	219.7	2.2	52	20
9:00	4167	220.1	2.2	44	20
9:15	4317	225.5	2.0	32	20
9:30	4398	232.7	1.7	36	20
9:45	4115	232.9	1.8	54	20
10:00	4184	236.1	1.6	26	20
10:30	END AFVR 1015				
11:00					
11:30					
12:00					
12:30					
13:00					
13:30					
14:00					
14:30					
15:00					
15:30					
16:00					

Location Edgefield, SC Date 7/20/11 141  
 Project / Client 378 Truck Stop  
14-214210

Mon-12 Vel (1" H <sub>2</sub> O)	Mon-14 Vel (1" H <sub>2</sub> O)	Mon-15 Vel (1" H <sub>2</sub> O)
0	0	0
0	0.10	0
0	0.10	0
0	0.10	0
0	0.10	0
0	0.10	0
0	0.10	0
0	0.10	0
		

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: \_\_\_\_\_

2. Page 1 of **1**

3. Emergency Response Phone: **803-957-9175**

4. Waste Tracking Number: **31381**

5. Generator's Name and Mailing Address: **Wilkerson Fuel Company, Inc**  
**731 Highway 378**  
**Edgefield, SC**

Generator's Site Address (if different than mailing address): **Wilkerson Fuel Company, Inc**  
**731 Highway 378**  
**Edgefield, SC**

Generator's Phone: \_\_\_\_\_

6. Transporter 1 Company Name: **A&D Environmental Services (SC), LLC** U.S. EPA ID Number: **SCD987598331**

7. Transporter 2 Company Name: \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

8. Designated Facility Name and Site Address: **A&D Environmental Services (SC) LLC**  
**1741 Calks Ferry Road**  
**Lexington, SC 29073** U.S. EPA ID Number: **SCD987598331**

Facility's Phone: **803-957-9175**

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit WL/Vol.
	No.	Type		
1. <b>NON-HAZARDOUS NON-REGULATED MATERIAL Petroleum Contaminated Water</b>		<b>TT</b>	<b>10</b>	<b>gal</b>
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information:  
**A&D (SC) Job # 15700** **Project # 14-214210**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and governmental regulations.

Generator's/Offeror's Printed/Typed Name: **ECs Agent for Wilkerson Fuel Company** Signature: *Aaron Williamson* Month: **7** Day: **20** Year: **11**

15. International Shipments:  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_ Date leaving U.S.: \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: **Lloyd COLEMAN** Signature: *Lloyd Coleman* Month: **7** Day: **20** Year: **11**

Transporter 2 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

17. Discrepancy

17a. Discrepancy Indication Space:  Quantity  Type  Residue  Partial Rejection  Full Rejection

Manifest Reference Number: \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

17b. Alternate Facility (or Generator): \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

Facility's Phone: \_\_\_\_\_

17c. Signature of Alternate Facility (or Generator): \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: **John P. Pro** Signature: *John P. Pro* Month: **7** Day: **20** Year: **11**

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**APPENDIX C**

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AFVR Event Field Data Sheets, Emission Calculations & Disposal  
Manifest – July 25, 2011

**APPENDIX C**  
**AFVR EVENT FIELD DATA SHEETS**

AFVR Measurements Prior to and After Event

Project Name: Truck stop 378 UST Permit No: 7960  
 Project No: 14-214210 ECS Field Rep.: P.Pike  
 Date: 7/25/2011

**Measurements Prior to AFVR Event**

Vac. Truck (VT) Co. A&D  
 VT No.: VT 18  
 VT Tank Capacity: 3,000 gallons  
 Inside Diameter of VT Outlet Stack 6 inches  
 Is Tank Empty & Clean (Y/N) yes

**Measurements After AFVR Event**

VT Tank Product volume 0 gallons  
 VT Tank Water volume 58 gallons

Well ID	Prior to AFVR -		Immediately After -		20-min After AFVR -		Depth of Stinger
	Depth to Product	Depth to Water	Depth to Product	Depth to Water	Depth to Product	Depth to Water	
MW-12	NP	31.99	NP	dry	NP	34.65	32.50
MW-11	NP	30.95	NP	30.95	NP	30.95	
MW-13	NP	29.69	NP	29.70	NP	29.70	
MW-22	NP	34.25	NP	34.24	NP	34.25	
MW-13	NP	29.7	NP	39.91	NP	39.27	32.00
MW-11	NP	30.95	NP	30.94	NP	30.94	
MW-12	NP	Dry	NP	34.02	NP	33.97	
MW-22	NP	34.24	NP	34.24	NP	34.24	

NP denotes no measurable free product.  
 NM denotes not measured.



**APPENDIX C  
AFVR EVENT FIELD DATA SHEETS**

Project Name: Truck stop 378  
 UST Permit No: 07960  
 Date: 7/25/2011

ECS Project No: 14-214210  
 Field Operative: P.Pike  
 Subcontractor: A&D

**Measurements During AFVR Event**

Time	Stack Outlet				Vac Truck Vacuum (in. of Hg)	Non-AFVR Wells					
	Air Flow (ft/min)	Temperature (Fahrenheit)	R.H. (%)	TLV (ppm)		MW-11		MW-13		MW-22	
						DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)
8:15											
8:30	4,843	209.3	3.1	16	22						
8:45	4,877	214.5	2.8	16	22		0.00		0.00		0.00
9:00	4,964	219.0	2.5	14	22						
9:15	4,756	222.4	2.2	10	22		0.00		0.00		0.00
9:30	4,879	225.7	2.1	10	22						
9:45	4,861	228.1	1.9	10	22		0.00		0.00		0.00
10:00	4,919	229.4	1.8	10	22						
	End of AFVR at 1000 and switch to MW-13										
10:15											
10:30	4,704	219.9	2.3	4	22						
10:45	4,691	225.3	2.2	4	22		0.00		0.00		0.00
11:00	4,761	227.4	2.0	4	22						
11:15	4,531	227.3	1.9	3	22		0.00		0.00		0.00
11:30	4,669	228.4	1.8	2	22						
11:45	4,548	229.1	1.8	2	22		0.00		0.00		0.00
12:00	4,632	230.4	1.7	2	22						
12:30	4,583	230.6	1.8	2	22		0.00		0.00		0.00
13:00	End of AFVR at 1230										
13:30											
14:00											

**APPENDIX C  
EMISSIONS CALCULATIONS**

**AGGRESSIVE FLUID VAPOR RECOVERY EVENT**

SITE NAME: Truck stop 378  
 UST PERMIT NUMBER: 07960  
 AVERAGE DEPTH TO GROUNDWATER: #REF!  
 DESCRIBE SOIL IN THE SATURATED ZONE: silty SAND  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): 0.57 ft/day  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: MW-1  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM TRUCK (cfm @ in Hg): 492 cfm @ 24 in Hg

**DRY STANDARD CUBIC FEET PER MINUTE (DSCFM) AIR FLOW CALCULATIONS (Qstd)**

Date	Time	Vacuum (in. of Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>ws</sub> (Wt/Wt)	B <sub>ws</sub> (vol/vol)	Q <sub>std</sub> (flow)
Start	8:15	Connection to MW-12. Stinger set at 32.50 feet below top of casing.							
07/25/11	8:30	22	4,843	6	209.3	3.1	0.018843	0.029	728
07/25/11	8:45	22	4,877	6	214.5	2.8	0.018870	0.029	728
07/25/11	9:00	22	4,964	6	219.0	2.5	0.018380	0.029	736
07/25/11	9:15	22	4,756	6	222.4	2.2	0.017238	0.027	703
07/25/11	9:30	22	4,879	6	225.7	2.1	0.017529	0.027	718
07/25/11	9:45	22	4,861	6	228.1	1.9	0.016569	0.026	713
07/25/11	10:00	22	4,919	6	229.4	1.8	0.016072	0.025	721
07/25/11	0:00	AFVR Shutdown & switch to MW-13							
07/25/11	10:15	Connection to MW-13. Stinger set at 32.00 feet below top of casing.							
07/25/11	10:30	22	4,704	6	219.9	2.3	0.017174	0.027	698
07/25/11	10:45	22	4,691	6	225.3	2.2	0.018246	0.028	689
07/25/11	11:00	22	4,761	6	227.4	2.0	0.017231	0.027	699
07/25/11	11:15	22	4,531	6	227.3	1.9	0.016315	0.025	666
07/25/11	11:30	22	4,669	6	228.4	1.8	0.015766	0.025	686
07/25/11	11:45	22	4,548	6	229.1	1.8	0.015979	0.025	667
07/25/11	12:00	22	4,632	6	230.4	1.7	0.015450	0.024	679
07/25/11	12:30	22	4,583	6	230.6	1.8	0.016445	0.026	670
07/25/11	13:00	AFVR Shutdown							
07/25/11	13:30								
07/25/11	14:00								
<b>Averages</b>		22	4,748	6	224	2.1	0.017074	0.027	700

**NOTES**

Qstd = Flow at DSCFM  
 Vacuum = The level of vacuum being applied recorded from the vacuum truck tank (inches of Hg)  
 Velocity = The rate at which air flows is measured at the blower discharge piping (anemometer or pitot tube)  
 Pipe ID = The inside diameter of the blower discharge piping (from the vacuum truck)  
 Temperature = The temperature of the air stream exiting the blower discharge piping (dry bulb temp., in deg. °F)  
 Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping  
 B<sub>ws</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart (temp Vs relative humidity)  
 B<sub>ws</sub> = water vapor % by volume

**EQUATIONS**

$$B_{ws} = (B_{ws}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{ws}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1\text{-Water Vapor}) * \text{velocity} * (\text{PI} * (\text{diameter}/24)^2) * (528^\circ\text{R}/(\text{Temp} + 460))$$

**APPENDIX C  
EMISSIONS CALCULATIONS**

**EMISSION CALCULATIONS**

SITE NAME: Truck stop 378

AFVR EVENT DATE: 25-Jul-2011

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub>	PPM <sub>dry</sub>	RF	PPM <sub>conc</sub>	C <sub>c,m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
15	728	16	16	16	1.02	17	8	0.00000	0.02	0.03	0.01
30	728	16	16	16	1.02	17	8	0.00000	0.02	0.03	0.01
45	736	14	14	14	1.02	15	7	0.00000	0.02	0.02	0.01
60	703	10	10	10	1.02	10	5	0.00000	0.01	0.02	0.00
75	718	10	10	10	1.02	10	5	0.00000	0.01	0.02	0.00
90	713	10	10	10	1.02	10	5	0.00000	0.01	0.02	0.00
105	721	10	10	10	1.02	10	5	0.00000	0.01	0.02	0.00
120	AFVR Shut Down										
0	0	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
15	698	4	4	4	1.02	4	2	0.00000	0.01	0.01	0.00
30	689	4	4	4	1.02	4	2	0.00000	0.01	0.01	0.00
45	699	4	4	4	1.02	4	2	0.00000	0.01	0.01	0.00
60	666	3	3	3	1.02	3	2	0.00000	0.00	0.00	0.00
75	686	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
90	667	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
105	679	2	2	2	2.02	4	2	0.00000	0.01	0.01	0.00
120	670	2	2	2	3.02	6	3	0.00000	0.01	0.01	0.00
<b>Averages</b>	656	7	7	7	1.21	8	4	0.00000	0.01	0.01	0.00

**Total emissions in pounds: 0.05**  
**Total emissions in gallons: 0.01**

**NOTES**

PPM<sub>measured</sub> = Actual measurements (ppm) taken with TLV at the blower discharge piping

PPM<sub>wet</sub> = "wet" concentration

PPM<sub>dry</sub> = "dry" concentration

RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.

K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)

PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP

C<sub>c,m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon

M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon

K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP

C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP

PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon

PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of of VOC's as gasoline

PMR = lb, pollutant mass removal of VOC's as gasoline

**APPENDIX C  
EMISSIONS CALCULATIONS**

**EQUATIONS**

$$PPM_{wet} = PPM_{measured}$$

$$PPM_{dry} = (PPM_{wet}) / (1 - B_{ws})$$

$$PPM_c = (PPM_d)(K)$$

$$C_{c,m} = (PPM_c)(M_c / K_3)$$

$$C_c = (C_{c,m})(62.43 \times 10^{-9} \text{ lb-m}^3/\text{mg-ft}^3)$$

$$PMR_c = (C_c)(Q_{std})(60 \text{ min/hr})$$

$$PMR_g = (PMR_c)(M_g/M_{cg})$$

$$PMR = (PMR_g)(\#minutes/60)$$

Location Edgewater SC Date 7/25Project / Client Truck Stop 378  
14-214210

Mileage 148555 - 148792  
 Weather - Sunny 95  
 Ocean - open on MW-2

5:15 load truck  
 5:30 left for site  
 7:45 met w/ A&D

	DTP	DTW	STINGER
MW-12	NP	31.99	32.05
MW-11	NP	30.95	5.0 PSI
MW-13	NP	29.09	10.0 PSI
MW-22	NP	34.25	2.0 PSI

8:15 - started APUR well not producing water after initial slug went through  
 8:35 - lowered stinger to 34.5 still just getting a mist through site glass  
 9:25 called Christine w/ reading and no water being drawn said to continue until she heard back from D&E

Location \_\_\_\_\_ Date 7/25/11Project / Client \_\_\_\_\_  
14-214210

9:50 - Christine called and said to move to MW-13  
 10:05 - took 10:00 reading then moved to MW-15

	DTW	20 min
MW-12	DTW	34.65
MW-13	29.70	29.70
MW-22	34.24	34.25
MW-11	30.95	30.95

~~measured~~ measurable water in UAC truck  
~~stinger~~ was ~ 1" - 1.5"

10:15 - started VACUUM on MW-13

	DTW	DTP	STINGER
MW-13	29.70	NP	32.0
MW-11	30.95		
MW-12	DTW		
MW-22	34.24		

10:35 - dropped stinger to 35' because not vacuuming any water  
 10:50 - dropped stinger again to 39.5' because of no water  
 11:05 - no visible water moving through site glass



**APPENDIX D**

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Groundwater Sampling Field Data Sheets

# GAUGE REPORT

Environmental Compliance Services, Inc.  
13504 South Point Blvd., Unit F  
Charlotte, North Carolina 28273

Project Name 378 Truck Stop  
Project No. 14-214210  
Measured By A. Williamson, P. Pike

Location Edgefield, SC  
Date 08/29/11  
Weather Sunny, 90s

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
MW-1	----	31.17	----	----	48.80	2.87
MW-2	----	30.91	----	----	41.65	1.75
MW-3	----	31.38	----	----	40.04	0.00
MW-4	----	29.92	----	----	39.90	0.00
MW-5	----	34.18	----	----	39.75	0.00
MW-6	----	32.01	----	----	35.10	0.00
MW-7	----	25.83	----	----	34.97	0.00
MW-8	----	28.62	----	----	35.12	0.00
MW-9	----	28.08	----	----	35.22	0.00
MW-10	----	31.51	----	----	40.22	0.00
MW-11	----	32.42	----	----	35.30	0.00
MW-12	----	33.56	----	----	35.04	0.00
MW-13	----	31.34	----	----	40.23	0.00
MW-14	----	34.59	----	----	39.80	0.00
MW-15	----	33.50	----	----	40.18	0.00
MW-16	----	32.68	----	----	40.16	0.00
MW-17	----	28.55	----	----	35.05	0.00
MW-18	----	23.00	----	----	35.73	0.00
MW-19	----	30.56	----	----	38.65	0.00
MW-20	----	41.27	----	----	45.06	0.00
MW-21	----	38.77	----	----	40.20	0.00
MW-22	----	35.88	----	----	40.13	0.00
MW-23	----	29.01	----	----	37.26	0.00
MW-24	----	31.62	----	----	40.06	0.00
MW-25	----	32.18	----	----	40.02	0.00
MW-26	----	29.08	----	----	38.77	0.00
MW-27	----	29.24	----	----	35.09	0.00
MW-28	----	29.92	----	----	40.08	0.00
TW-1	----	32.26	----	----	63.32	15.19
TW-2	----	31.62	----	----	80.79	10.93
TW-3	----	27.78	----	----	80.70	17.26
TW-4	----	31.09	----	----	68.61	8.12
TW-5	----	33.09	----	----	58.44	8.26
TW-6	----	33.00	----	----	58.57	8.34
TW-7	----	36.98	----	----	59.01	7.20
TW-8	----	41.54	----	----	58.58	6.56
TW-9	----	28.94	----	----	80.15	25.05



# GAUGE REPORT

Environmental Compliance Services, Inc.  
13504 South Point Blvd., Unit F  
Charlotte, North Carolina 28273

Project Name 378 Truck Stop  
Project No. 14-214210  
Measured By A. Williamson, P. Pike

Location Edgefield, SC  
Date 08/29/11  
Weather Sunny, 90s

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
WSW-1 PRE	Water Supply Wells Not Gauged					
WSW-1 POST						
WSW-2						
WSW-3						
WSW-4						
WSW-5						
WSW-6						
WSW-7						
WSW-8 PRE						
WSW-8 POST						
WSW-9						
WSW-10						
WSW-11						
WSW-12						
WSW-13						
WSW-14						
WSW-15						

Remarks: MW-20 is a stickup well.

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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>MW-1</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 40px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 40px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>48.80</u> ft.</p> <p>Depth to GW(DGW) <u>31.17</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>17.63</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{17.63}{2.87} \times \frac{0.163}{8.62} = \frac{2.87}{8.62}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{2.87}{8.62} = \frac{8.62}{8.62}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>2.87</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
pH = 7.0 _____	Standard _____																
pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.87						0.00
Time (military)	15:43	15:48						17:20
pH (s.u.)	7.27	7.32						7.23
O.R.P. (mV)	47	38						29
Temperature (°C)	20.60	20.84						21.29
Specific Cond. (mS/cm)	0.282	0.276						0.320
Dissolved Oxygen (mg/L)	2.48	3.92						3.29
Turbidity (NTU)	700.0	>999						265.0

Remarks Purged and sampled using new clean disposable polyethylene bailer. Purged dry after one well volume.

Moderate petroleum odor.

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
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pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.93						0.00
Time (military)	15:31	15:36						17:10
pH (s.u.)	8.17	8.04						7.58
O.R.P. (mV)	9	11						17
Temperature (°C)	22.61	22.23						22.06
Specific Cond. (mS/cm)	0.569	0.538						0.563
Dissolved Oxygen (mg/L)	3.07	2.37						2.34
Turbidity (NTU)	120.0	>999						>999

Remarks Purged and sampled using new clean disposable polyethylene bailer. Purged dry after one well volume.

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								17:00
pH (s.u.)								7.58
O.R.P. (mV)								29
Temperature (°C)								23.12
Specific Cond. (mS/cm)								0.712
Dissolved Oxygen (mg/L)								3.37
Turbidity (NTU)								31.8

Remarks No-purge sample collected using new clean disposable polyethylene bailer.

Slight petroleum odor.

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								17:55
pH (s.u.)								6.18
O.R.P. (mV)								56
Temperature (°C)								21.90
Specific Cond. (mS/cm)								0.618
Dissolved Oxygen (mg/L)								1.67
Turbidity (NTU)								173.0
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								16.20
pH (s.u.)								6.74
O.R.P. (mV)								95
Temperature (°C)								20.70
Specific Cond. (mS/cm)								0.928
Dissolved Oxygen (mg/L)								2.92
Turbidity (NTU)								72.2
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
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pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								16:10
pH (s.u.)								6.24
O.R.P. (mV)								132
Temperature (°C)								20.57
Specific Cond. (mS/cm)								0.172
Dissolved Oxygen (mg/L)								3.99
Turbidity (NTU)								>999
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>MW-7</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>34.97</u> ft.</p> <p>Depth to GW(DGW) <u>25.83</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>9.14</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{9.14}{1.49} \times \frac{0.163}{4.47} = \frac{1.49}{4.47}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{1.49}{4.47} = \frac{4.47}{4.47}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>0.00</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
pH = 7.0 _____	Standard _____																
pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								18:05
pH (s.u.)								5.48
O.R.P. (mV)								19
Temperature (°C)								21.60
Specific Cond. (mS/cm)								0.205
Dissolved Oxygen (mg/L)								1.70
Turbidity (NTU)								10.8
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							



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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								14:45
pH (s.u.)								6.23
O.R.P. (mV)								178
Temperature (°C)								23.30
Specific Cond. (mS/cm)								0.900
Dissolved Oxygen (mg/L)								3.55
Turbidity (NTU)								38.2
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								8:15
pH (s.u.)								6.31
O.R.P. (mV)								165
Temperature (°C)								18.70
Specific Cond. (mS/cm)								0.999
Dissolved Oxygen (mg/L)								4.15
Turbidity (NTU)								>999
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								9:15
pH (s.u.)								7.32
O.R.P. (mV)								95
Temperature (°C)								18.50
Specific Cond. (mS/cm)								0.645
Dissolved Oxygen (mg/L)								4.22
Turbidity (NTU)								22.5
Remarks <u>No-purge sample collected using new clean disposable polyethylene bailer.</u>								

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								11:30
pH (s.u.)								6.60
O.R.P. (mV)								-40
Temperature (°C)								19.30
Specific Cond. (mS/cm)								0.790
Dissolved Oxygen (mg/L)								1.46
Turbidity (NTU)								>999
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								10:40
pH (s.u.)								
O.R.P. (mV)								
Temperature (°C)								
Specific Cond. (mS/cm)								
Dissolved Oxygen (mg/L)								
Turbidity (NTU)								
Remarks	<p><u>No-purge sample collected using new clean disposable polyethylene bailer.</u></p> <p><u>Not enough water for water quality readings.</u></p>							

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<p>Date(mm/dd/yy) <u>08/30/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td style="width: 50%;">pH Meter <u>Horiba U22</u></td> <td style="width: 50%;">Conductivity Meter <u>Horiba U22</u></td> </tr> <tr> <td>serial no. <u>T908009</u></td> <td>serial no. <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>	serial no. <u>T908009</u>	serial no. <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>MW-13</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>40.23</u> ft.</p> <p>Depth to GW(DGW) <u>31.34</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>8.89</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{8.89}{1.45} \times 0.163 = 1.45</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{1.45}{1.45} = 4.35</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>0.00</u> gal.</p>
pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								10:55
pH (s.u.)								6.89
O.R.P. (mV)								161
Temperature (°C)								19.90
Specific Cond. (mS/cm)								1.10
Dissolved Oxygen (mg/L)								5.31
Turbidity (NTU)								53.2
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								11:40
pH (s.u.)								6.60
O.R.P. (mV)								16
Temperature (°C)								18.47
Specific Cond. (mS/cm)								0.724
Dissolved Oxygen (mg/L)								1.71
Turbidity (NTU)								180.0
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								11:05
pH (s.u.)								6.38
O.R.P. (mV)								180
Temperature (°C)								18.70
Specific Cond. (mS/cm)								0.856
Dissolved Oxygen (mg/L)								2.32
Turbidity (NTU)								22.2
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							



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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								14:05
pH (s.u.)								6.93
O.R.P. (mV)								169
Temperature (°C)								20.00
Specific Cond. (mS/cm)								1.05
Dissolved Oxygen (mg/L)								4.58
Turbidity (NTU)								18.5
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								16:35
pH (s.u.)								7.94
O.R.P. (mV)								153
Temperature (°C)								20.40
Specific Cond. (mS/cm)								0.343
Dissolved Oxygen (mg/L)								5.23
Turbidity (NTU)								34.3
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								16:45
pH (s.u.)								6.35
O.R.P. (mV)								194
Temperature (°C)								21.60
Specific Cond. (mS/cm)								0.324
Dissolved Oxygen (mg/L)								6.50
Turbidity (NTU)								11.6
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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Bureau of Underground Storage Tank Management

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<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>MW-19</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>38.65</u> ft.</p> <p>Depth to GW(DGW) <u>30.56</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>8.09</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{8.09}{1.32} \times \frac{0.163}{3.96} = \frac{1.32}{3.96}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{1.32}{3.96} = \frac{3.96}{3.96}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>0.00</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
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pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								15:15
pH (s.u.)								6.52
O.R.P. (mV)								146
Temperature (°C)								21.50
Specific Cond. (mS/cm)								0.318
Dissolved Oxygen (mg/L)								2.29
Turbidity (NTU)								109.0
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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Bureau of Underground Storage Tank Management

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								16:30
pH (s.u.)								6.51
O.R.P. (mV)								118
Temperature (°C)								19.55
Specific Cond. (mS/cm)								0.589
Dissolved Oxygen (mg/L)								5.41
Turbidity (NTU)								104.0

Remarks No-purge sample collected using new clean disposable polyethylene bailer.

Approximately 3 foot stick up well.

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								16:00
pH (s.u.)								7.06
O.R.P. (mV)								69
Temperature (°C)								20.85
Specific Cond. (mS/cm)								0.740
Dissolved Oxygen (mg/L)								4.64
Turbidity (NTU)								131.0
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/30/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>MW-22</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>40.13</u> ft.</p> <p>Depth to GW(DGW) <u>35.88</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>4.25</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{4.25}{0.69} \times 0.163 = 0.69</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{0.69}{2.08} = 2.08</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>0.00</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
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pH = 10.0 _____	Standard _____																
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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								11:20
pH (s.u.)								6.45
O.R.P. (mV)								138
Temperature (°C)								18.70
Specific Cond. (mS/cm)								1.02
Dissolved Oxygen (mg/L)								1.37
Turbidity (NTU)								31.7

Remarks No-purge sample collected using new clean disposable polyethylene bailer.

Slight petroleum odor.

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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
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pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								15:25
pH (s.u.)								6.10
O.R.P. (mV)								192
Temperature (°C)								21.00
Specific Cond. (mS/cm)								0.270
Dissolved Oxygen (mg/L)								5.29
Turbidity (NTU)								32.1
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							



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pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								14:15
pH (s.u.)								6.80
O.R.P. (mV)								167
Temperature (°C)								20.70
Specific Cond. (mS/cm)								0.855
Dissolved Oxygen (mg/L)								2.31
Turbidity (NTU)								10.5
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter <u>Horiba U22</u></td> <td>Conductivity Meter <u>Horiba U22</u></td> </tr> <tr> <td>serial no. <u>T908009</u></td> <td>serial no. <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Pace _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>	serial no. <u>T908009</u>	serial no. <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____	Relinquished by _____	Date/Time _____	Pace _____	Received by _____	Date/Time _____	<p>Well # <u>MW-25</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p>for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>40.02</u> ft.</p> <p>Depth to GW(DGW) <u>32.18</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>7.84</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{7.84}{1.28} \times \frac{0.163}{3.83} = \frac{1.28}{3.83}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{1.28}{3.83} = \frac{3.83}{3.83}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>0.00</u> gal.</p>
pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>															
serial no. <u>T908009</u>	serial no. <u>T908009</u>															
pH = 4.0 _____	Standard _____															
pH = 7.0 _____	Standard _____															
pH = 10.0 _____	Standard _____															
Relinquished by _____	Date/Time _____	Pace _____	Received by _____	Date/Time _____												

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								14:45
pH (s.u.)								6.94
O.R.P. (mV)								169
Temperature (°C)								20.40
Specific Cond. (mS/cm)								0.539
Dissolved Oxygen (mg/L)								4.41
Turbidity (NTU)								34.7
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 08/29/11  
 Field Personnel A. Williamson, P. Pike  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960

Quality Assurance:

pH Meter Horiba U22 Conductivity Meter Horiba U22  
 serial no. T908009 serial no. T908009  
 pH = 4.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 7.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 10.0 \_\_\_\_\_ Standard \_\_\_\_\_

Chain of Custody

	Pace		
Relinquished by	Date/Time	Received by	Date/Time

Well # MW-26

Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$   
 for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652

Total Well Depth (TWD) 38.77 ft.  
 Depth to GW(DGW) 29.08 ft.

Length of Water Column (LWC=TWD-DGW) 9.69 ft.

1Csg. Vol. (LWC\*C)=  $\frac{9.69}{1.58} \times 0.163 = 1.58$  gal.  
 3Csg. Volume = 3x  $\frac{1.58}{4.74} = 1.58$  gals.(Std. Purge Vol)

Total Vol. of Water Purged Before Sampling 0.00 gal.

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								13:25
pH (s.u.)								6.62
O.R.P. (mV)								156
Temperature (°C)								19.70
Specific Cond. (mS/cm)								0.724
Dissolved Oxygen (mg/L)								4.58
Turbidity (NTU)								14.9

Remarks No-purge sample collected using new clean disposable polyethylene bailer.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 08/29/11  
 Field Personnel A. Williamson, P. Pike  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960

Quality Assurance:

pH Meter Horiba U22 Conductivity Meter Horiba U22  
 serial no. T908009 serial no. T908009  
 pH = 4.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 7.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 10.0 \_\_\_\_\_ Standard \_\_\_\_\_

Chain of Custody

	Pace		
Relinquished by	Date/Time	Received by	Date/Time

Well # MW-27

Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$   
 for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652

Total Well Depth (TWD) 35.09 ft.  
 Depth to GW(DGW) 29.24 ft.

Length of Water Column (LWC=TWD-DGW) 5.85 ft.

1Csg. Vol. (LWC\*C)=  $\frac{5.85}{0.95} \times 0.163 = 0.95$  gal.  
 3Csg. Volume = 3x  $\frac{0.95}{2.86} = 2.86$  gals.(Std. Purge Vol)

Total Vol. of Water Purged Before Sampling 0.00 gal.

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								18:20
pH (s.u.)								6.26
O.R.P. (mV)								55
Temperature (°C)								20.10
Specific Cond. (mS/cm)								0.435
Dissolved Oxygen (mg/L)								2.02
Turbidity (NTU)								16.5

Remarks No-purge sample collected using new clean disposable polyethylene bailer.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter <u>Horiba U22</u></td> <td>Conductivity Meter <u>Horiba U22</u></td> </tr> <tr> <td>serial no. <u>T908009</u></td> <td>serial no. <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>	serial no. <u>T908009</u>	serial no. <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>MW-28</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>40.08</u> ft.</p> <p>Depth to GW(DGW) <u>29.92</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>10.16</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{10.16}{1.66} \times 0.163 = 1.66</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{1.66}{1.66} = 4.97</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>0.00</u> gal.</p>
pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								16:40
pH (s.u.)								6.29
O.R.P. (mV)								144
Temperature (°C)								20.67
Specific Cond. (mS/cm)								0.375
Dissolved Oxygen (mg/L)								4.17
Turbidity (NTU)								35.8
Remarks	<u>No-purge sample collected using new clean disposable polyethylene bailer.</u>							

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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/30/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;"><u>Pace</u></td> <td style="width: 33%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> </tr> <tr> <td></td> <td>Date/Time _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>		Relinquished by _____	Date/Time _____	Received by _____		Date/Time _____	Date/Time _____	<p>Well # <u>TW-1</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>63.32</u> ft.</p> <p>Depth to GW(DGW) <u>32.26</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>31.06</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{31.06}{5.06} \times \frac{0.163}{0.652} = \frac{5.06}{15.19}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{5.06}{15.19} = \frac{15.19}{15.19}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>15.19</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																	
pH = 4.0 _____	Standard _____																	
pH = 7.0 _____	Standard _____																	
pH = 10.0 _____	Standard _____																	
	<u>Pace</u>																	
Relinquished by _____	Date/Time _____	Received by _____																
	Date/Time _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)		5.06	5.06	5.06				
Time (military)	12:50	13:00	13:10	13:20				13:25
pH (s.u.)	8.50	7.34	7.19	7.17				7.14
O.R.P. (mV)	57	-43	-52	-56				-60
Temperature (°C)	22.50	20.80	20.50	20.50				20.50
Specific Cond. (mS/cm)	0.772	0.900	0.999	0.999				0.999
Dissolved Oxygen (mg/L)	2.29	1.51	1.48	2.14				1.95
Turbidity (NTU)								
Remarks	<u>Purged and sampled.</u>							

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<p>Date(mm/dd/yy) <u>08/30/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter <u>Horiba U22</u></td> <td>Conductivity Meter <u>Horiba U22</u></td> </tr> <tr> <td>serial no. <u>T908009</u></td> <td>serial no. <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>	serial no. <u>T908009</u>	serial no. <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>TW-2</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>80.79</u> ft.</p> <p>Depth to GW(DGW) <u>31.62</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>49.17</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{49.17}{8.01} \times \frac{0.163}{24.04} = \frac{8.01}{24.04}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{8.01}{24.04} = \frac{24.04}{24.04}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>10.93</u> gal.</p>
pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)		8.01						
Time (military)	12:15	12:25						13:40
pH (s.u.)	12.34	12.36						12.27
O.R.P. (mV)	-100	-93						-118
Temperature (°C)	21.90	21.50						22.00
Specific Cond. (mS/cm)	2.93	2.98						2.86
Dissolved Oxygen (mg/L)	5.91	5.77						5.60
Turbidity (NTU)	21.1	70.1						101.0
Remarks	<u>Purged dry after one well volume plus 3 gallons.</u>							

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pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
pH = 7.0 _____	Standard _____																
pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)		8.63	8.63					
Time (military)	8:24	8:35	8:44					9:00
pH (s.u.)	7.94	7.95	8.01					7.85
O.R.P. (mV)	-314	-333	-46					-52
Temperature (°C)	18.80	18.80	19.10					18.90
Specific Cond. (mS/cm)	0.761	0.961	0.690					0.731
Dissolved Oxygen (mg/L)	1.81	1.24	2.63					1.62
Turbidity (NTU)	105.0	110.0	591.0					383.0

Remarks Purged dry after 2 well volumes.



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Date(mm/dd/yy) 08/30/11  
 Field Personnel A. Williamson, P. Pike  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960

Quality Assurance:

pH Meter Horiba U22 Conductivity Meter Horiba U22  
 serial no. T908009 serial no. T908009  
 pH = 4.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 7.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 10.0 \_\_\_\_\_ Standard \_\_\_\_\_

Chain of Custody

	Pace		
Relinquished by	Date/Time	Received by	Date/Time

Well # TW-4

Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$   
 for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652

Total Well Depth (TWD) 68.61 ft.  
 Depth to GW(DGW) 31.09 ft.

Length of Water Column (LWC=TWD-DGW) 37.52 ft.

1Csg. Vol. (LWC\*C)=  $\frac{37.52}{1} \times \frac{0.163}{1} = \frac{6.12}{1}$  gal.  
 3Csg. Volume =  $3 \times \frac{6.12}{1} = \frac{18.35}{1}$  gals.(Std. Purge Vol)

Total Vol. of Water Purged Before Sampling 8.12 gal.

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)		6.12						
Time (military)	9:25	9:43						10:15
pH (s.u.)	11.88	12.28						NM
O.R.P. (mV)	-69	-75						NM
Temperature (°C)	19.60	19.20						19.40
Specific Cond. (mS/cm)	1.33	2.58						NM
Dissolved Oxygen (mg/L)	6.09	6.08						NM
Turbidity (NTU)	17.5	64.3						NM

Remarks Purged dry after one well volume plus 2 gallons. Container used for water quality readings spilled before getting all measurements.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/30/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>TW-5</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>58.44</u> ft.</p> <p>Depth to GW(DGW) <u>33.09</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>25.35</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{25.35}{4.13} \times 0.163 = 4.13</math> gal.</p> <p>3Csg. Volume = 3x <u>4.13</u> = <u>12.40</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>8.26</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
pH = 7.0 _____	Standard _____																
pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)	10:20	10:26	10:35					11:50
pH (s.u.)	9.88	9.56	10.17					10.03
O.R.P. (mV)	13	39	53					-7
Temperature (°C)	20.60	20.00	21.10					19.70
Specific Cond. (mS/cm)	0.673	0.596	0.611					0.598
Dissolved Oxygen (mg/L)	6.83	6.12	6.01					6.07
Turbidity (NTU)	20.1	37.5	869.0					496.0
Remarks	<u>Purged dry after two well volume .</u>							

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>TW-6</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>58.57</u> ft.</p> <p>Depth to GW(DGW) <u>33.00</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>25.57</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{25.57}{4.17} \times 0.163 = 4.17</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{4.17}{12.50} = 12.50</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>8.34</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
pH = 7.0 _____	Standard _____																
pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)		4.17	4.17					
Time (military)	13:44	13:49	13:55					14:25
pH (s.u.)	7.71	7.74	7.76					NM
O.R.P. (mV)	152	147	147					NM
Temperature (°C)	22.20	20.10	20.20					19.90
Specific Cond. (mS/cm)	0.904	0.900	0.902					NM
Dissolved Oxygen (mg/L)	5.61	5.05	4.71					NM
Turbidity (NTU)	46.7	39.4	255.0					NM

Remarks Purged dry after two well volume . Equipment malfunction did not allow for water quality readings.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>TW-7</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>59.01</u> ft.</p> <p>Depth to GW(DGW) <u>36.98</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>22.03</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{22.03}{3.59} \times \frac{0.163}{10.77} = \frac{3.59}{10.77}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{3.59}{10.77} = \frac{10.77}{10.77}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>7.20</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
pH = 7.0 _____	Standard _____																
pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)		3.59	3.59					
Time (military)	16:15	16:20	16:25					16:55
pH (s.u.)	12.94	13.05	13.04					12.86
O.R.P. (mV)	-119	-115	-111					-102
Temperature (°C)	25.60	21.60	21.50					22.40
Specific Cond. (mS/cm)	21.80	22.00	22.10					21.50
Dissolved Oxygen (mg/L)	6.89	7.36	6.98					7.24
Turbidity (NTU)	243.0	40.1	42.5					24.3

Remarks Purged dry after two well volume.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>TW-8</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>58.58</u> ft.</p> <p>Depth to GW(DGW) <u>41.54</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>17.04</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{17.04}{2.78} \times \frac{0.163}{8.33} = \frac{2.78}{8.33}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{2.78}{8.33} = \frac{8.33}{8.33}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>6.56</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
pH = 7.0 _____	Standard _____																
pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)		2.78	2.78	1.00				
Time (military)	15:00	15:03	15:07					15:35
pH (s.u.)	12.46	12.67	12.82					12.71
O.R.P. (mV)	-3	7	-81					-101
Temperature (°C)	26.00	20.90	20.50					22.70
Specific Cond. (mS/cm)	6.08	6.29	8.38					8.16
Dissolved Oxygen (mg/L)	6.71	6.57	5.77					5.98
Turbidity (NTU)	34.0	67.9	66.6					18.1

Remarks Purged dry after two well volume plus 1 gallon.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>TW-9</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>80.15</u> ft.</p> <p>Depth to GW(DGW) <u>28.94</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>51.21</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{51.21}{8.35} \times 0.163 = 8.35</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{8.35}{25.04} = 25.04</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>25.05</u> gal.</p>
pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>																
pH = 4.0 _____	Standard _____																
pH = 7.0 _____	Standard _____																
pH = 10.0 _____	Standard _____																
	<u>Pace</u>																
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)		8.35	8.35	8.35				
Time (military)	12:42	12:50	12:57	13:05				13:15
pH (s.u.)	7.33	7.10	7.09	7.07				7.08
O.R.P. (mV)	208	72	80	93				95
Temperature (°C)	23.00	19.60	19.00	19.00				19.10
Specific Cond. (mS/cm)	0.990	0.900	0.900	0.900				0.999
Dissolved Oxygen (mg/L)	4.95	1.33	1.21	1.17				0.81
Turbidity (NTU)	25.3	38.6	29.6	22.3				15.1

Remarks Purged and sampled.

South Carolina Department of Health and Environmental Control  
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td style="width: 50%;">pH Meter <u>Horiba U22</u></td> <td style="width: 50%;">Conductivity Meter <u>Horiba U22</u></td> </tr> <tr> <td>serial no. <u>T908009</u></td> <td>serial no. <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>	serial no. <u>T908009</u>	serial no. <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>WSW-1 PRE</u></p> <p>Well Diameter (D) <u>    </u> inch <u>    </u> or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>    </u> ft.</p> <p>Depth to GW(DGW) <u>    </u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>    </u> gal.</p>
pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>																		
serial no. <u>T908009</u>	serial no. <u>T908009</u>																		
pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								15:00
pH (s.u.)								7.35
O.R.P. (mV)								161
Temperature (°C)								21.04
Specific Cond. (mS/cm)								0.667
Dissolved Oxygen (mg/L)								8.29
Turbidity (NTU)								58.3
Remarks	<u>Sample collected from influent port prior to GAC unit. Purged approximately 10 minutes.</u>							

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Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td style="width: 50%;">pH Meter <u>Horiba U22</u></td> <td style="width: 50%;">Conductivity Meter <u>Horiba U22</u></td> </tr> <tr> <td>serial no. <u>T908009</u></td> <td>serial no. <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>	serial no. <u>T908009</u>	serial no. <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>WSW-1 POST</u></p> <p>Well Diameter (D) <u>    </u> inch <u>    </u> or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 20px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 20px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>    </u> ft.</p> <p>Depth to GW(DGW) <u>    </u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times \frac{0.163}{0.00} = \frac{0.00}{0.00}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{0.00}{0.00} = \frac{0.00}{0.00}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>    </u> gal.</p>
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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								15:10
pH (s.u.)								7.59
O.R.P. (mV)								156
Temperature (°C)								23.45
Specific Cond. (mS/cm)								0.660
Dissolved Oxygen (mg/L)								7.10
Turbidity (NTU)								21.0

Remarks Sample collected from effluent port after GAC unit. Purged approximately 10 minutes.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 08/29/11  
 Field Personnel A. Williamson, P. Pike  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960

Quality Assurance:

pH Meter Horiba U22 Conductivity Meter Horiba U22  
 serial no. T908009 serial no. T908009  
 pH = 4.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 7.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 10.0 \_\_\_\_\_ Standard \_\_\_\_\_

Chain of Custody

Relinquished by \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Received by \_\_\_\_\_ Date/Time \_\_\_\_\_

Well # WSW-2

Well Diameter (D)      inch      or feet  
 conversion factor(C):  $3.143*(D/2)^2$   
 for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652

Total Well Depth (TWD)      ft.  
 Depth to GW(DGW)      ft.

Length of Water Column (LWC=TWD-DGW) 0.00 ft.

1Csg. Vol. (LWC\*C)=  $\frac{0.00}{0.00} \times \frac{0.163}{0.00} = \frac{0.00}{0.00}$  gal.  
 3Csg. Volume = 3x  $\frac{0.00}{0.00} = \frac{0.00}{0.00}$  gals.(Std. Purge Vol)

Total Vol. of Water Purged Before Sampling      gal.

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								
pH (s.u.)								
O.R.P. (mV)								
Temperature (°C)								
Specific Cond. (mS/cm)								
Dissolved Oxygen (mg/L)								
Turbidity (NTU)								

Remarks Pump not in operation at time of sampling event.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td style="width: 50%;">pH Meter <u>Horiba U22</u></td> <td style="width: 50%;">Conductivity Meter <u>Horiba U22</u></td> </tr> <tr> <td>serial no. <u>T908009</u></td> <td>serial no. <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter <u>Horiba U22</u>	Conductivity Meter <u>Horiba U22</u>	serial no. <u>T908009</u>	serial no. <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>WSW-3</u></p> <p>Well Diameter (D) <u>    </u> inch <u>    </u> or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math></p> <p style="padding-left: 40px;">for a 2 inch well C= <u>0.163</u></p> <p style="padding-left: 40px;">for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>    </u> ft.</p> <p>Depth to GW(DGW) <u>    </u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times \frac{0.163}{0.00} = \frac{0.00}{0.00}</math> gal.</p> <p>3Csg. Volume = 3x <math>\frac{0.00}{0.00} = \frac{0.00}{0.00}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>    </u> gal.</p>
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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								12:30
pH (s.u.)								6.25
O.R.P. (mV)								205
Temperature (°C)								21.09
Specific Cond. (mS/cm)								0.413
Dissolved Oxygen (mg/L)								6.51
Turbidity (NTU)								33.2

Remarks Well pump disconnected and removed; house is vacant. Sampled water from open well hole in well house.

Measured total well depth = 102.30 ft

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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								12:10
pH (s.u.)								6.55
O.R.P. (mV)								192
Temperature (°C)								22.18
Specific Cond. (mS/cm)								1.110
Dissolved Oxygen (mg/L)								5.16
Turbidity (NTU)								93.0
Remarks	<u>Sampled from spigot on side of house. Purged approximately 10 minutes.</u>							

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pH = 4.0 _____	Standard _____								
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<p>Relinquished by _____ Date/Time _____</p>	<p>Received by _____ Date/Time _____</p>								

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								
pH (s.u.)								
O.R.P. (mV)								
Temperature (°C)								
Specific Cond. (mS/cm)								
Dissolved Oxygen (mg/L)								
Turbidity (NTU)								
Remarks	<u>Not sampled. Well pump is inoperable and still in place. Residence is vacant.</u>							

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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								12:40
pH (s.u.)								7.05
O.R.P. (mV)								178
Temperature (°C)								22.18
Specific Cond. (mS/cm)								0.542
Dissolved Oxygen (mg/L)								3.83
Turbidity (NTU)								44.6
Remarks	<u>Sampled from spigot on well head. Purged approximately 10 minutes.</u>							

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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								12:55
pH (s.u.)								7.30
O.R.P. (mV)								170
Temperature (°C)								24.54
Specific Cond. (mS/cm)								0.423
Dissolved Oxygen (mg/L)								7.38
Turbidity (NTU)								28.3
Remarks	<u>Sampled from spigot on back side of building. Purged approximately 10 minutes.</u>							

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Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>08/29/11</u></p> <p>Field Personnel <u>A. Williamson, P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>90 F</u></p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p style="text-align: center;"><u>Quality Assurance:</u></p> <table style="width: 100%;"> <tr> <td>pH Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> <td>Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u></td> </tr> <tr> <td>pH = 4.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 7.0 _____</td> <td>Standard _____</td> </tr> <tr> <td>pH = 10.0 _____</td> <td>Standard _____</td> </tr> </table> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;"><u>Pace</u></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Relinquished by _____</td> <td>Date/Time _____</td> <td>Received by _____</td> <td>Date/Time _____</td> </tr> </table>	pH Meter serial no. <u>Horiba U22</u> <u>T908009</u>	Conductivity Meter serial no. <u>Horiba U22</u> <u>T908009</u>	pH = 4.0 _____	Standard _____	pH = 7.0 _____	Standard _____	pH = 10.0 _____	Standard _____		<u>Pace</u>			Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	<p>Well # <u>WSW-8 PRE</u></p> <p>Well Diameter (D) <u>    </u> inch <u>    </u> or feet conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u></p> <p>Total Well Depth (TWD) <u>    </u> ft. Depth to GW(DGW) <u>    </u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times \frac{0.163}{0.00} = \frac{0.00}{0.00}</math> gal. 3Csg. Volume = 3x <math>\frac{0.00}{0.00} = \frac{0.00}{0.00}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>    </u> gal.</p>
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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:30
pH (s.u.)								7.01
O.R.P. (mV)								179
Temperature (°C)								21.34
Specific Cond. (mS/cm)								0.691
Dissolved Oxygen (mg/L)								8.40
Turbidity (NTU)								54.0
Remarks	<u>Sample collected from influent port prior to GAC unit. Purged approximately 10 minutes.</u>							

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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:40
pH (s.u.)								7.70
O.R.P. (mV)								116
Temperature (°C)								22.35
Specific Cond. (mS/cm)								0.681
Dissolved Oxygen (mg/L)								7.63
Turbidity (NTU)								18.7
Remarks	<u>Sample collected from effluent port after GAC unit. Purged approximately 10 minutes.</u>							



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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								13:10
pH (s.u.)								8.14
O.R.P. (mV)								32
Temperature (°C)								22.30
Specific Cond. (mS/cm)								0.457
Dissolved Oxygen (mg/L)								4.90
Turbidity (NTU)								129.0

Remarks Sampled from spigot on side of shed next to well house. Purged approximately 10 minutes.

Was informed by resident this well is 58 feet deep.

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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:10
pH (s.u.)								6.87
O.R.P. (mV)								185
Temperature (°C)								22.72
Specific Cond. (mS/cm)								0.739
Dissolved Oxygen (mg/L)								6.80
Turbidity (NTU)								56.4
Remarks	<u>Sampled from spigot inside well house. Purged approximately 10 minutes.</u>							

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Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:10
pH (s.u.)								6.89
O.R.P. (mV)								175
Temperature (°C)								23.64
Specific Cond. (mS/cm)								0.832
Dissolved Oxygen (mg/L)								5.81
Turbidity (NTU)								60.1
Remarks	<u>Sampled from spigot on side of well house. Purged approximately 10 minutes.</u>							

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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								
pH (s.u.)								
O.R.P. (mV)								
Temperature (°C)								
Specific Cond. (mS/cm)								
Dissolved Oxygen (mg/L)								
Turbidity (NTU)								
Remarks	<u>Not sampled. Well pump is inoperable and in place, house is vacant.</u>							

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pH = 4.0 _____	Standard _____																		
pH = 7.0 _____	Standard _____																		
pH = 10.0 _____	Standard _____																		
	<u>Pace</u>																		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____																

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								13:50
pH (s.u.)								7.08
O.R.P. (mV)								150
Temperature (°C)								22.95
Specific Cond. (mS/cm)								0.863
Dissolved Oxygen (mg/L)								4.18
Turbidity (NTU)								59.6
Remarks	<u>Sampled from spigot on back side of house, spigot on well house is broken. Purged approximately 10 mins.</u>							

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 08/29/11  
 Field Personnel A. Williamson, P. Pike  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960

Quality Assurance:

pH Meter Horiba U22 Conductivity Meter Horiba U22  
 serial no. T908009 serial no. T908009  
 pH = 4.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 7.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 10.0 \_\_\_\_\_ Standard \_\_\_\_\_

Chain of Custody

	Pace		
Relinquished by	Date/Time	Received by	Date/Time

Well # WSW-14

Well Diameter (D)    inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$   
 for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652

Total Well Depth (TWD)    ft.  
 Depth to GW(DGW)    ft.

Length of Water Column (LWC=TWD-DGW) 0.00 ft.

1Csg. Vol. (LWC\*C)=  $\frac{0.00}{0.00} \times \frac{0.163}{0.00} = \frac{0.00}{0.00}$  gal.  
 3Csg. Volume = 3x  $\frac{0.00}{0.00} = \frac{0.00}{0.00}$  gals.(Std. Purge Vol)

Total Vol. of Water Purged Before Sampling    gal.

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								13:40
pH (s.u.)								7.04
O.R.P. (mV)								156
Temperature (°C)								23.30
Specific Cond. (mS/cm)								0.907
Dissolved Oxygen (mg/L)								8.23
Turbidity (NTU)								65.3

Remarks Sampled from spigot inside well house. Purged approximately 5 minutes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 08/29/11  
 Field Personnel A. Williamson, P. Pike  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960

Quality Assurance:

pH Meter Horiba U22 Conductivity Meter Horiba U22  
 serial no. T908009 serial no. T908009  
 pH = 4.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 7.0 \_\_\_\_\_ Standard \_\_\_\_\_  
 pH = 10.0 \_\_\_\_\_ Standard \_\_\_\_\_

Chain of Custody

	Pace		
Relinquished by	Date/Time	Received by	Date/Time

Well # WSW-15

Well Diameter (D)    inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$   
 for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652

Total Well Depth (TWD)    ft.  
 Depth to GW(DGW)    ft.

Length of Water Column (LWC=TWD-DGW) 0.00 ft.

1Csg. Vol. (LWC\*C)=  $\frac{0.00}{0.00} \times \frac{0.163}{0.00} = \frac{0.00}{0.00}$  gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)

Total Vol. of Water Purged Before Sampling    gal.

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								13:20
pH (s.u.)								7.01
O.R.P. (mV)								142
Temperature (°C)								21.87
Specific Cond. (mS/cm)								1.15
Dissolved Oxygen (mg/L)								3.95
Turbidity (NTU)								75.8

Remarks Sampled from spigot on side of well house. Purged approximately 10 minutes.  
Was informed by resident this well is 360 feet deep.

**APPENDIX E**

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Laboratory Analytical Reports-Groundwater Samples-August 2011



September 13, 2011

Randall Hutchins  
Environmental Compliance Services  
13504 South Point Blvd  
Charlotte, NC 28273

RE: Project: TRUCK STOP 378  
Pace Project No.: 92101489

Dear Randall Hutchins:

Enclosed are the analytical results for sample(s) received by the laboratory on August 31, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards, where applicable, unless otherwise narrated in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Bonnie McKee

bonnie.mckee@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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Asheville, NC 28804  
(828)254-7176

Pace Analytical Services, Inc.  
9800 Kinsey Ave. Suite 100  
Huntersville, NC 28078  
(704)875-9092

## CERTIFICATIONS

Project: TRUCK STOP 378

Pace Project No.: 92101489

### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001  
South Carolina Drinking Water Cert. #: 99006003  
Virginia Drinking Water Certification #: 00213

Connecticut Certification #: PH-0104  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Louisiana DHH Drinking Water # LA 100031  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460144

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## REPORT OF LABORATORY ANALYSIS

Page 2 of 59

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### SAMPLE SUMMARY

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92101489001	MW-1	Water	08/29/11 17:20	08/31/11 15:50
92101489002	MW-2	Water	08/29/11 17:10	08/31/11 15:50
92101489003	MW-3	Water	08/29/11 17:00	08/31/11 15:50
92101489004	MW-4	Water	08/29/11 17:55	08/31/11 15:50
92101489005	MW-5	Water	08/29/11 16:20	08/31/11 15:50
92101489006	MW-6	Water	08/29/11 16:10	08/31/11 15:50
92101489007	MW-7	Water	08/29/11 18:05	08/31/11 15:50
92101489008	MW-8	Water	08/29/11 17:45	08/31/11 15:50
92101489009	MW-9	Water	08/30/11 08:15	08/31/11 15:50
92101489010	MW-10	Water	08/30/11 09:15	08/31/11 15:50
92101489011	MW-11	Water	08/30/11 11:30	08/31/11 15:50
92101489012	MW-12	Water	08/30/11 10:40	08/31/11 15:50
92101489013	MW-13	Water	08/30/11 10:55	08/31/11 15:50
92101489014	MW-14	Water	08/30/11 11:40	08/31/11 15:50
92101489015	MW-15	Water	08/30/11 11:05	08/31/11 15:50
92101489016	MW-16	Water	08/29/11 14:05	08/31/11 15:50
92101489017	MW-17	Water	08/29/11 16:35	08/31/11 15:50
92101489018	MW-18	Water	08/29/11 16:45	08/31/11 15:50
92101489019	MW-19	Water	08/29/11 15:15	08/31/11 15:50
92101489020	MW-20	Water	08/29/11 16:30	08/31/11 15:50
92101489021	MW-21	Water	08/29/11 16:08	08/31/11 15:50
92101489022	MW-22	Water	08/30/11 11:20	08/31/11 15:50
92101489023	MW-23	Water	08/29/11 15:25	08/31/11 15:50
92101489024	MW-24	Water	08/29/11 14:15	08/31/11 15:50
92101489025	MW-25	Water	08/29/11 14:45	08/31/11 15:50
92101489026	MW-26	Water	08/29/11 13:25	08/31/11 15:50
92101489027	MW-27	Water	08/29/11 18:20	08/31/11 15:50
92101489028	MW-28	Water	08/29/11 16:40	08/31/11 15:50
92101489029	TW-1	Water	08/30/11 13:25	08/31/11 15:50
92101489030	TW-2	Water	08/30/11 13:40	08/31/11 15:50
92101489031	TW-3	Water	08/30/11 09:00	08/31/11 15:50
92101489032	TW-4	Water	08/30/11 10:15	08/31/11 15:50
92101489033	TW-5	Water	08/30/11 11:50	08/31/11 15:50
92101489034	TW-6	Water	08/29/11 14:25	08/31/11 15:50
92101489035	TW-7	Water	08/29/11 16:55	08/31/11 15:50
92101489036	TW-8	Water	08/29/11 15:35	08/31/11 15:50
92101489037	TW-9	Water	08/29/11 13:15	08/31/11 15:50

### REPORT OF LABORATORY ANALYSIS

## SAMPLE SUMMARY

Project: TRUCK STOP 378

Pace Project No.: 92101489

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92101489038	WSW-1 PRE	Water	08/29/11 15:00	08/31/11 15:50
92101489039	WSW-1 POST	Water	08/29/11 15:10	08/31/11 15:50
92101489040	WSW-3	Water	08/29/11 12:30	08/31/11 15:50
92101489041	WSW-4	Water	08/29/11 12:10	08/31/11 15:50
92101489042	WSW-6	Water	08/29/11 12:40	08/31/11 15:50
92101489043	WSW-7	Water	08/29/11 12:55	08/31/11 15:50
92101489044	WSW-8 PRE	Water	08/29/11 14:30	08/31/11 15:50
92101489045	WSW-8 POST	Water	08/29/11 14:40	08/31/11 15:50
92101489046	WSW-9	Water	08/29/11 13:10	08/31/11 15:50
92101489047	WSW-10	Water	08/29/11 14:20	08/31/11 15:50
92101489048	WSW-11	Water	08/29/11 14:10	08/31/11 15:50
92101489049	WSW-13	Water	08/29/11 13:50	08/31/11 15:50
92101489050	WSW-14	Water	08/29/11 13:40	08/31/11 15:50
92101489051	WSW-15	Water	08/29/11 13:20	08/31/11 15:50

## REPORT OF LABORATORY ANALYSIS



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 9800 Kincey Ave. Suite 100  
 Huntersville, NC 28078  
 (704)875-9092

### SAMPLE ANALYTE COUNT

Project: TRUCK STOP 378  
 Pace Project No.: 92101489

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92101489001	MW-1	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489002	MW-2	EPA 8011	RES	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489003	MW-3	EPA 8011	RES	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489004	MW-4	EPA 8011	RES	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489005	MW-5	EPA 8011	RES	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489006	MW-6	EPA 8011	RES	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489007	MW-7	EPA 8011	RES	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489008	MW-8	EPA 8011	RES	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489009	MW-9	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489010	MW-10	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489011	MW-11	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	21	PASI-C
92101489012	MW-12	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489013	MW-13	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489014	MW-14	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489015	MW-15	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489016	MW-16	EPA 8011	CAH	2	PASI-C
92101489017	MW-17	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489018	MW-18	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489019	MW-19	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92101489020	MW-20	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489021	MW-21	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489022	MW-22	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489023	MW-23	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489024	MW-24	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489025	MW-25	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489026	MW-26	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489027	MW-27	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489028	MW-28	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489029	TW-1	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489030	TW-2	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489031	TW-3	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489032	TW-4	EPA 8011	CAH	2	PASI-C
		EPA 8260	KJM	20	PASI-C
92101489033	TW-5	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489034	TW-6	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489035	TW-7	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489036	TW-8	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489037	TW-9	EPA 8011	CAH	2	PASI-C
		EPA 8260	TLS	20	PASI-C
92101489038	WSW-1 PRE	EPA 8011	CAH	2	PASI-C

### REPORT OF LABORATORY ANALYSIS

### SAMPLE ANALYTE COUNT

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92101489039	WSW-1 POST	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489040	WSW-3	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489041	WSW-4	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489042	WSW-6	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489043	WSW-7	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489044	WSW-8 PRE	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489045	WSW-8 POST	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489046	WSW-9	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489047	WSW-10	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489048	WSW-11	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489049	WSW-13	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489050	WSW-14	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C
92101489051	WSW-15	EPA 8260	MCK	20	PASI-C
		EPA 8011	CAH	2	PASI-C

### REPORT OF LABORATORY ANALYSIS

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-1      Lab ID: 92101489001      Collected: 08/29/11 17:20      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	1.3	ug/L	0.040	0.040	2	09/06/11 10:14	09/07/11 12:23	106-93-4	
1-Chloro-2-bromopropane (S)	110	%	60-140		2	09/06/11 10:14	09/07/11 12:23	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	2160	ug/L	1000	768	10		09/03/11 00:40	75-85-4	
tert-Amylmethyl ether	ND	ug/L	100	34.0	10		09/03/11 00:40	994-05-8	
Benzene	1130	ug/L	50.0	17.0	10		09/03/11 00:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		09/03/11 00:40	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		09/03/11 00:40	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73.0	10		09/03/11 00:40	762-75-4	
1,2-Dichloroethane	82.0	ug/L	50.0	18.0	10		09/03/11 00:40	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		09/03/11 00:40	108-20-3	
Ethanol	ND	ug/L	2000	1380	10		09/03/11 00:40	64-17-5	
Ethylbenzene	941	ug/L	50.0	16.0	10		09/03/11 00:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36.0	10		09/03/11 00:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	50.0	17.0	10		09/03/11 00:40	1634-04-4	
Naphthalene	225	ug/L	50.0	20.0	10		09/03/11 00:40	91-20-3	
Toluene	317	ug/L	50.0	16.0	10		09/03/11 00:40	108-88-3	
m&p-Xylene	2840	ug/L	100	31.0	10		09/03/11 00:40	179601-23-1	
o-Xylene	939	ug/L	50.0	16.0	10		09/03/11 00:40	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		10		09/03/11 00:40	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		10		09/03/11 00:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	93	%	70-130		10		09/03/11 00:40	17060-07-0	
Toluene-d8 (S)	97	%	70-130		10		09/03/11 00:40	2037-26-5	

Sample: MW-2      Lab ID: 92101489002      Collected: 08/29/11 17:10      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/01/11 15:17	09/01/11 23:33	106-93-4	
1-Chloro-2-bromopropane (S)	66	%	60-140		1	09/01/11 15:17	09/01/11 23:33	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	87.1J	ug/L	100	76.8	1		09/07/11 16:41	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/07/11 16:41	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/07/11 16:41	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/07/11 16:41	624-95-3	
tert-Butyl Alcohol	386	ug/L	100	57.7	1		09/07/11 16:41	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/07/11 16:41	762-75-4	
1,2-Dichloroethane	26.1	ug/L	5.0	1.8	1		09/07/11 16:41	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/07/11 16:41	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/07/11 16:41	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/07/11 16:41	100-41-4	

Date: 09/13/2011 12:53 PM

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-2      Lab ID: 92101489002      Collected: 08/29/11 17:10      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 16:41	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/07/11 16:41	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 16:41	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/07/11 16:41	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/07/11 16:41	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/07/11 16:41	95-47-6	
4-Bromofluorobenzene (S)	102	%	70-130		1		09/07/11 16:41	460-00-4	
Dibromofluoromethane (S)	89	%	70-130		1		09/07/11 16:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		09/07/11 16:41	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		09/07/11 16:41	2037-26-5	

Sample: MW-3      Lab ID: 92101489003      Collected: 08/29/11 17:00      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	0.033	ug/L	0.019	0.019	1	09/01/11 15:17	09/01/11 23:52	106-93-4	C2
1-Chloro-2-bromopropane (S)	111	%	60-140		1	09/01/11 15:17	09/01/11 23:52	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	10300	ug/L	5000	3840	50		09/03/11 01:16	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	170	50		09/03/11 01:16	994-05-8	
Benzene	7000	ug/L	250	85.0	50		09/03/11 01:16	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	1600	50		09/03/11 01:16	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	2880	50		09/03/11 01:16	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	365	50		09/03/11 01:16	762-75-4	
1,2-Dichloroethane	438	ug/L	250	90.0	50		09/03/11 01:16	107-06-2	
Diisopropyl ether	ND	ug/L	250	85.0	50		09/03/11 01:16	108-20-3	
Ethanol	ND	ug/L	10000	6890	50		09/03/11 01:16	64-17-5	
Ethylbenzene	1170	ug/L	250	80.0	50		09/03/11 01:16	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	180	50		09/03/11 01:16	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	85.0	50		09/03/11 01:16	1634-04-4	
Naphthalene	371	ug/L	250	100	50		09/03/11 01:16	91-20-3	
Toluene	572	ug/L	250	80.0	50		09/03/11 01:16	108-88-3	
m&p-Xylene	4910	ug/L	500	155	50		09/03/11 01:16	179601-23-1	
o-Xylene	1800	ug/L	250	80.0	50		09/03/11 01:16	95-47-6	
4-Bromofluorobenzene (S)	105	%	70-130		50		09/03/11 01:16	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		50		09/03/11 01:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	70-130		50		09/03/11 01:16	17060-07-0	
Toluene-d8 (S)	97	%	70-130		50		09/03/11 01:16	2037-26-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-4      Lab ID: 92101489004      Collected: 08/29/11 17:55      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/01/11 15:18	09/02/11 00:11	106-93-4	
1-Chloro-2-bromopropane (S)	76	%	60-140		1	09/01/11 15:18	09/02/11 00:11	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/02/11 23:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/02/11 23:45	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/02/11 23:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/02/11 23:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/02/11 23:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/02/11 23:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/02/11 23:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/02/11 23:45	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/02/11 23:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/02/11 23:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/02/11 23:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/02/11 23:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/02/11 23:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/02/11 23:45	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/02/11 23:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/02/11 23:45	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		09/02/11 23:45	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		1		09/02/11 23:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		09/02/11 23:45	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		09/02/11 23:45	2037-26-5	

Sample: MW-5      Lab ID: 92101489005      Collected: 08/29/11 16:20      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/01/11 15:18	09/02/11 00:29	106-93-4	
1-Chloro-2-bromopropane (S)	100	%	60-140		1	09/01/11 15:18	09/02/11 00:29	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/03/11 00:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/03/11 00:03	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/03/11 00:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/03/11 00:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/03/11 00:03	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/03/11 00:03	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/03/11 00:03	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/03/11 00:03	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/03/11 00:03	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/03/11 00:03	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-5      Lab ID: 92101489005      Collected: 08/29/11 16:20      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/03/11 00:03	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/03/11 00:03	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/03/11 00:03	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/03/11 00:03	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/03/11 00:03	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/03/11 00:03	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		09/03/11 00:03	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		09/03/11 00:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		09/03/11 00:03	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		09/03/11 00:03	2037-26-5	

Sample: MW-6      Lab ID: 92101489006      Collected: 08/29/11 16:10      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/01/11 15:18	09/02/11 00:48	106-93-4	
1-Chloro-2-bromopropane (S)	103	%	60-140		1	09/01/11 15:18	09/02/11 00:48	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/03/11 00:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/03/11 00:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/03/11 00:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/03/11 00:22	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/03/11 00:22	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/03/11 00:22	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/03/11 00:22	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/03/11 00:22	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/03/11 00:22	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/03/11 00:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/03/11 00:22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/03/11 00:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/03/11 00:22	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/03/11 00:22	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/03/11 00:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/03/11 00:22	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		09/03/11 00:22	460-00-4	
Dibromofluoromethane (S)	96	%	70-130		1		09/03/11 00:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		09/03/11 00:22	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		09/03/11 00:22	2037-26-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

**Sample: MW-7**      **Lab ID: 92101489007**      Collected: 08/29/11 18:05      Received: 08/31/11 15:50      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	0.58 ug/L		0.019	0.019	1	09/01/11 15:18	09/02/11 01:06	106-93-4	
1-Chloro-2-bromopropane (S)	110 %		60-140		1	09/01/11 15:18	09/02/11 01:06	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	672 ug/L		200	154	2		09/07/11 16:59	75-85-4	
tert-Amylmethyl ether	ND ug/L		20.0	6.8	2		09/07/11 16:59	994-05-8	
Benzene	275 ug/L		10.0	3.4	2		09/07/11 16:59	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		200	64.2	2		09/07/11 16:59	624-95-3	
tert-Butyl Alcohol	225 ug/L		200	115	2		09/07/11 16:59	75-65-0	
tert-Butyl Formate	ND ug/L		100	14.6	2		09/07/11 16:59	762-75-4	
1,2-Dichloroethane	26.0 ug/L		10.0	3.6	2		09/07/11 16:59	107-06-2	
Diisopropyl ether	ND ug/L		10.0	3.4	2		09/07/11 16:59	108-20-3	
Ethanol	ND ug/L		400	276	2		09/07/11 16:59	64-17-5	
Ethylbenzene	42.6 ug/L		10.0	3.2	2		09/07/11 16:59	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		20.0	7.2	2		09/07/11 16:59	637-92-3	
Methyl-tert-butyl ether	ND ug/L		10.0	3.4	2		09/07/11 16:59	1634-04-4	
Naphthalene	30.7 ug/L		10.0	4.0	2		09/07/11 16:59	91-20-3	
Toluene	ND ug/L		10.0	3.2	2		09/07/11 16:59	108-88-3	
m&p-Xylene	141 ug/L		20.0	6.2	2		09/07/11 16:59	179601-23-1	
o-Xylene	37.8 ug/L		10.0	3.2	2		09/07/11 16:59	95-47-6	
4-Bromofluorobenzene (S)	97 %		70-130		2		09/07/11 16:59	460-00-4	
Dibromofluoromethane (S)	103 %		70-130		2		09/07/11 16:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		70-130		2		09/07/11 16:59	17060-07-0	
Toluene-d8 (S)	99 %		70-130		2		09/07/11 16:59	2037-26-5	

**Sample: MW-8**      **Lab ID: 92101489008**      Collected: 08/29/11 17:45      Received: 08/31/11 15:50      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.019	0.019	1	09/01/11 15:19	09/02/11 01:25	106-93-4	
1-Chloro-2-bromopropane (S)	98 %		60-140		1	09/01/11 15:19	09/02/11 01:25	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		09/07/11 17:18	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		09/07/11 17:18	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		09/07/11 17:18	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		09/07/11 17:18	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		09/07/11 17:18	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		09/07/11 17:18	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		09/07/11 17:18	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		09/07/11 17:18	108-20-3	
Ethanol	ND ug/L		200	138	1		09/07/11 17:18	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		09/07/11 17:18	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-8									
Lab ID: 92101489008 Collected: 08/29/11 17:45 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 17:18	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/07/11 17:18	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 17:18	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/07/11 17:18	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/07/11 17:18	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/07/11 17:18	95-47-6	
4-Bromofluorobenzene (S)	95 %		70-130		1		09/07/11 17:18	460-00-4	
Dibromofluoromethane (S)	98 %		70-130		1		09/07/11 17:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	98 %		70-130		1		09/07/11 17:18	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		09/07/11 17:18	2037-26-5	

Sample: MW-9									
Lab ID: 92101489009 Collected: 08/30/11 08:15 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:14	09/04/11 18:23	106-93-4	
1-Chloro-2-bromopropane (S)	82 %		60-140		1	09/02/11 14:14	09/04/11 18:23	301-79-56	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/03/11 04:54	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/03/11 04:54	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/03/11 04:54	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/03/11 04:54	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/03/11 04:54	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/03/11 04:54	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/03/11 04:54	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/03/11 04:54	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/03/11 04:54	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/03/11 04:54	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/03/11 04:54	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/03/11 04:54	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/03/11 04:54	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/03/11 04:54	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/03/11 04:54	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/03/11 04:54	95-47-6	
4-Bromofluorobenzene (S)	102 %		70-130		1		09/03/11 04:54	460-00-4	
Dibromofluoromethane (S)	94 %		70-130		1		09/03/11 04:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	94 %		70-130		1		09/03/11 04:54	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		09/03/11 04:54	2037-26-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-10									
Lab ID: 92101489010 Collected: 08/30/11 09:15 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:15	09/04/11 19:24	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	09/02/11 14:15	09/04/11 19:24	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/03/11 05:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/03/11 05:12	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/03/11 05:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/03/11 05:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/03/11 05:12	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/03/11 05:12	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/03/11 05:12	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/03/11 05:12	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/03/11 05:12	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/03/11 05:12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/03/11 05:12	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/03/11 05:12	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/03/11 05:12	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/03/11 05:12	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/03/11 05:12	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/03/11 05:12	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		09/03/11 05:12	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		1		09/03/11 05:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		09/03/11 05:12	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		09/03/11 05:12	2037-26-5	

Sample: MW-11									
Lab ID: 92101489011 Collected: 08/30/11 11:30 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 14:15	09/04/11 20:04	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	09/02/11 14:15	09/04/11 20:04	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/03/11 05:30	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/03/11 05:30	994-05-8	
Benzene	7.9	ug/L	5.0	1.7	1		09/03/11 05:30	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/03/11 05:30	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/03/11 05:30	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/03/11 05:30	762-75-4	
1,2-Dichloroethane	2.8J	ug/L	5.0	1.8	1		09/03/11 05:30	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	4.4	1		09/03/11 05:30	540-59-0	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/03/11 05:30	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/03/11 05:30	64-17-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-11									
Lab ID: 92101489011 Collected: 08/30/11 11:30 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/03/11 05:30	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/03/11 05:30	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/03/11 05:30	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/03/11 05:30	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/03/11 05:30	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/03/11 05:30	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/03/11 05:30	95-47-6	
4-Bromofluorobenzene (S)	105 %		70-130		1		09/03/11 05:30	460-00-4	
Dibromofluoromethane (S)	94 %		70-130		1		09/03/11 05:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	88 %		70-130		1		09/03/11 05:30	17060-07-0	
Toluene-d8 (S)	97 %		70-130		1		09/03/11 05:30	2037-26-5	

Sample: MW-12									
Lab ID: 92101489012 Collected: 08/30/11 10:40 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	2.5	ug/L	0.096	0.096	5	09/02/11 14:15	09/06/11 15:49	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		5	09/02/11 14:15	09/06/11 15:49	301-79-56	S4
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	615	ug/L	250	192	2.5		09/07/11 17:36	75-85-4	
tert-Amylmethyl ether	ND	ug/L	25.0	8.5	2.5		09/07/11 17:36	994-05-8	
Benzene	429	ug/L	12.5	4.2	2.5		09/07/11 17:36	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	250	80.2	2.5		09/07/11 17:36	624-95-3	
tert-Butyl Alcohol	ND	ug/L	250	144	2.5		09/07/11 17:36	75-65-0	
tert-Butyl Formate	ND	ug/L	125	18.2	2.5		09/07/11 17:36	762-75-4	
1,2-Dichloroethane	126	ug/L	12.5	4.5	2.5		09/07/11 17:36	107-06-2	
Diisopropyl ether	4.8J	ug/L	12.5	4.2	2.5		09/07/11 17:36	108-20-3	
Ethanol	ND	ug/L	500	344	2.5		09/07/11 17:36	64-17-5	
Ethylbenzene	8.3J	ug/L	12.5	4.0	2.5		09/07/11 17:36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	25.0	9.0	2.5		09/07/11 17:36	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	12.5	4.2	2.5		09/07/11 17:36	1634-04-4	
Naphthalene	5.2J	ug/L	12.5	5.0	2.5		09/07/11 17:36	91-20-3	
Toluene	26.9	ug/L	12.5	4.0	2.5		09/07/11 17:36	108-88-3	
m&p-Xylene	10.5J	ug/L	25.0	7.8	2.5		09/07/11 17:36	179601-23-1	
o-Xylene	7.8J	ug/L	12.5	4.0	2.5		09/07/11 17:36	95-47-6	
4-Bromofluorobenzene (S)	97	%	70-130		2.5		09/07/11 17:36	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		2.5		09/07/11 17:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130		2.5		09/07/11 17:36	17060-07-0	
Toluene-d8 (S)	96	%	70-130		2.5		09/07/11 17:36	2037-26-5	

### ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-13									
Lab ID: 92101489013 Collected: 08/30/11 10:55 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	0.033	ug/L	0.019	0.019	1	09/02/11 14:16	09/04/11 20:45	106-93-4	
1-Chloro-2-bromopropane (S)	93	%	60-140		1	09/02/11 14:16	09/04/11 20:45	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	1040	ug/L	100	76.8	1		09/07/11 17:54	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/07/11 17:54	994-05-8	
Benzene	65.5	ug/L	5.0	1.7	1		09/07/11 17:54	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/07/11 17:54	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/07/11 17:54	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/07/11 17:54	762-75-4	
1,2-Dichloroethane	41.7	ug/L	5.0	1.8	1		09/07/11 17:54	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/07/11 17:54	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/07/11 17:54	64-17-5	
Ethylbenzene	9.2	ug/L	5.0	1.6	1		09/07/11 17:54	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 17:54	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/07/11 17:54	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 17:54	91-20-3	
Toluene	11.7	ug/L	5.0	1.6	1		09/07/11 17:54	108-88-3	
m&p-Xylene	22.2	ug/L	10.0	3.1	1		09/07/11 17:54	179601-23-1	
o-Xylene	12.0	ug/L	5.0	1.6	1		09/07/11 17:54	95-47-6	
4-Bromofluorobenzene (S)	101	%	70-130		1		09/07/11 17:54	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		09/07/11 17:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		09/07/11 17:54	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		09/07/11 17:54	2037-26-5	

Sample: MW-14									
Lab ID: 92101489014 Collected: 08/30/11 11:40 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:16	09/04/11 21:06	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	09/02/11 14:16	09/04/11 21:06	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/03/11 05:48	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/03/11 05:48	994-05-8	
Benzene	2.8J	ug/L	5.0	1.7	1		09/03/11 05:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/03/11 05:48	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/03/11 05:48	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/03/11 05:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/03/11 05:48	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/03/11 05:48	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/03/11 05:48	64-17-5	
Ethylbenzene	3.4J	ug/L	5.0	1.6	1		09/03/11 05:48	100-41-4	



## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-14									
Lab ID: 92101489014 Collected: 08/30/11 11:40 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/03/11 05:48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/03/11 05:48	1634-04-4	
Naphthalene	22.0	ug/L	5.0	2.0	1		09/03/11 05:48	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/03/11 05:48	108-88-3	
m&p-Xylene	3.9J	ug/L	10.0	3.1	1		09/03/11 05:48	179601-23-1	
o-Xylene	1.9J	ug/L	5.0	1.6	1		09/03/11 05:48	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		09/03/11 05:48	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		09/03/11 05:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		09/03/11 05:48	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		09/03/11 05:48	2037-26-5	

Sample: MW-15									
Lab ID: 92101489015 Collected: 08/30/11 11:05 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 14:16	09/04/11 21:26	106-93-4	
1-Chloro-2-bromopropane (S)	97	%	60-140		1	09/02/11 14:16	09/04/11 21:26	301-79-56	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 12:06	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 12:06	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 12:06	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 12:06	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 12:06	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 12:06	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 12:06	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 12:06	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 12:06	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 12:06	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 12:06	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 12:06	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 12:06	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 12:06	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 12:06	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 12:06	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		09/06/11 12:06	460-00-4	
Dibromofluoromethane (S)	96	%	70-130		1		09/06/11 12:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	85	%	70-130		1		09/06/11 12:06	17060-07-0	
Toluene-d8 (S)	92	%	70-130		1		09/06/11 12:06	2037-26-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-16		Lab ID: 92101489016		Collected: 08/29/11 14:05		Received: 08/31/11 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND ug/L		0.019	0.019	1	09/02/11 14:16	09/04/11 21:46	106-93-4	
1-Chloro-2-bromopropane (S)	106 %		60-140		1	09/02/11 14:16	09/04/11 21:46	301-79-56	

Sample: MW-17		Lab ID: 92101489017		Collected: 08/29/11 16:35		Received: 08/31/11 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	09/02/11 14:16	09/04/11 22:07	106-93-4	
1-Chloro-2-bromopropane (S)	90 %		60-140		1	09/02/11 14:16	09/04/11 22:07	301-79-56	

Sample: MW-18		Lab ID: 92101489018		Collected: 08/29/11 16:45		Received: 08/31/11 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND ug/L		100	76.8	1		09/06/11 12:24	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		09/06/11 12:24	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		09/06/11 12:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		09/06/11 12:24	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		09/06/11 12:24	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		09/06/11 12:24	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		09/06/11 12:24	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		09/06/11 12:24	108-20-3	
Ethanol	ND ug/L		200	138	1		09/06/11 12:24	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		09/06/11 12:24	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		09/06/11 12:24	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		09/06/11 12:24	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		09/06/11 12:24	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		09/06/11 12:24	108-88-3	
m&p-Xylene	ND ug/L		10.0	3.1	1		09/06/11 12:24	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		09/06/11 12:24	95-47-6	
4-Bromofluorobenzene (S)	101 %		70-130		1		09/06/11 12:24	460-00-4	
Dibromofluoromethane (S)	92 %		70-130		1		09/06/11 12:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	86 %		70-130		1		09/06/11 12:24	17060-07-0	
Toluene-d8 (S)	93 %		70-130		1		09/06/11 12:24	2037-26-5	

Sample: MW-18		Lab ID: 92101489018		Collected: 08/29/11 16:45		Received: 08/31/11 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	09/02/11 14:16	09/04/11 22:27	106-93-4	
1-Chloro-2-bromopropane (S)	87 %		60-140		1	09/02/11 14:16	09/04/11 22:27	301-79-56	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-18									
Lab ID: 92101489018 Collected: 08/29/11 16:45 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 12:42	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 12:42	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 12:42	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 12:42	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 12:42	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 12:42	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 12:42	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 12:42	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 12:42	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 12:42	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 12:42	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 12:42	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 12:42	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 12:42	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 12:42	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 12:42	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		09/06/11 12:42	460-00-4	
Dibromofluoromethane (S)	94	%	70-130		1		09/06/11 12:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	88	%	70-130		1		09/06/11 12:42	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		09/06/11 12:42	2037-26-5	

Sample: MW-19									
Lab ID: 92101489019 Collected: 08/29/11 15:15 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:18	09/04/11 22:48	106-93-4	
1-Chloro-2-bromopropane (S)	82	%	60-140		1	09/02/11 14:18	09/04/11 22:48	301-79-56	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 13:01	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 13:01	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 13:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 13:01	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 13:01	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 13:01	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 13:01	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 13:01	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 13:01	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 13:01	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 13:01	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 13:01	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 13:01	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 13:01	108-88-3	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-19									
Lab ID: 92101489019 Collected: 08/29/11 15:15 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 13:01	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 13:01	95-47-6	
4-Bromofluorobenzene (S)	101	%	70-130		1		09/06/11 13:01	460-00-4	
Dibromofluoromethane (S)	93	%	70-130		1		09/06/11 13:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	84	%	70-130		1		09/06/11 13:01	17060-07-0	
Toluene-d8 (S)	91	%	70-130		1		09/06/11 13:01	2037-26-5	

Sample: MW-20									
Lab ID: 92101489020 Collected: 08/29/11 16:30 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:18	09/04/11 23:08	106-93-4	
1-Chloro-2-bromopropane (S)	90	%	60-140		1	09/02/11 14:18	09/04/11 23:08	301-79-56	

8260 MSV									
Analytical Method: EPA 8260									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 13:19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 13:19	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 13:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 13:19	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 13:19	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 13:19	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 13:19	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 13:19	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 13:19	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 13:19	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 13:19	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 13:19	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 13:19	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 13:19	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 13:19	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 13:19	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		09/06/11 13:19	460-00-4	
Dibromofluoromethane (S)	96	%	70-130		1		09/06/11 13:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		09/06/11 13:19	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		09/06/11 13:19	2037-26-5	

### ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-21									
Lab ID: 92101489021 Collected: 08/29/11 16:08 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:18	09/04/11 23:28	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	09/02/11 14:18	09/04/11 23:28	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	368	ug/L	100	76.8	1		09/07/11 18:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/07/11 18:12	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/07/11 18:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/07/11 18:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/07/11 18:12	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/07/11 18:12	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/07/11 18:12	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/07/11 18:12	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/07/11 18:12	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/07/11 18:12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 18:12	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/07/11 18:12	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 18:12	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/07/11 18:12	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/07/11 18:12	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/07/11 18:12	95-47-6	
4-Bromofluorobenzene (S)	109	%	70-130		1		09/07/11 18:12	460-00-4	
Dibromofluoromethane (S)	93	%	70-130		1		09/07/11 18:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		09/07/11 18:12	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		09/07/11 18:12	2037-26-5	

Sample: MW-22									
Lab ID: 92101489022 Collected: 08/30/11 11:20 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	188	ug/L	7.7	7.7	400	09/02/11 14:18	09/07/11 12:03	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		400	09/02/11 14:18	09/07/11 12:03	301-79-56	S4
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	20000	15400	200		09/06/11 17:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	2000	680	200		09/06/11 17:34	994-05-8	
Benzene	3630	ug/L	1000	340	200		09/06/11 17:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	20000	6420	200		09/06/11 17:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	20000	11500	200		09/06/11 17:34	75-65-0	
tert-Butyl Formate	ND	ug/L	10000	1460	200		09/06/11 17:34	762-75-4	
1,2-Dichloroethane	ND	ug/L	1000	360	200		09/06/11 17:34	107-06-2	
Diisopropyl ether	ND	ug/L	1000	340	200		09/06/11 17:34	108-20-3	
Ethanol	ND	ug/L	40000	27600	200		09/06/11 17:34	64-17-5	
Ethylbenzene	3530	ug/L	1000	320	200		09/06/11 17:34	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-22									
Lab ID: 92101489022 Collected: 08/30/11 11:20 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	2000	720	200		09/06/11 17:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1000	340	200		09/06/11 17:34	1634-04-4	
Naphthalene	859J	ug/L	1000	400	200		09/06/11 17:34	91-20-3	
Toluene	23500	ug/L	1000	320	200		09/06/11 17:34	108-88-3	
m&p-Xylene	13700	ug/L	2000	620	200		09/06/11 17:34	179601-23-1	
o-Xylene	6500	ug/L	1000	320	200		09/06/11 17:34	95-47-6	
4-Bromofluorobenzene (S)	102	%	70-130		200		09/06/11 17:34	460-00-4	
Dibromofluoromethane (S)	96	%	70-130		200		09/06/11 17:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	93	%	70-130		200		09/06/11 17:34	17060-07-0	
Toluene-d8 (S)	95	%	70-130		200		09/06/11 17:34	2037-26-5	

Sample: MW-23									
Lab ID: 92101489023 Collected: 08/29/11 15:25 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:18	09/05/11 00:09	106-93-4	
1-Chloro-2-bromopropane (S)	87	%	60-140		1	09/02/11 14:18	09/05/11 00:09	301-79-56	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 13:37	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 13:37	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 13:37	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 13:37	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 13:37	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 13:37	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 13:37	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 13:37	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 13:37	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 13:37	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 13:37	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 13:37	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 13:37	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 13:37	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 13:37	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 13:37	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		09/06/11 13:37	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		1		09/06/11 13:37	1868-53-7	
1,2-Dichloroethane-d4 (S)	87	%	70-130		1		09/06/11 13:37	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		09/06/11 13:37	2037-26-5	

### ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-24									
Lab ID: 92101489024 Collected: 08/29/11 14:15 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 14:18	09/05/11 00:29	106-93-4	
1-Chloro-2-bromopropane (S)	90	%	60-140		1	09/02/11 14:18	09/05/11 00:29	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 13:55	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 13:55	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 13:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 13:55	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 13:55	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 13:55	762-75-4	
1,2-Dichloroethane	2.5J	ug/L	5.0	1.8	1		09/06/11 13:55	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 13:55	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 13:55	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 13:55	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 13:55	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 13:55	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 13:55	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 13:55	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 13:55	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 13:55	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		09/06/11 13:55	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		09/06/11 13:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	88	%	70-130		1		09/06/11 13:55	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		09/06/11 13:55	2037-26-5	

Sample: MW-25									
Lab ID: 92101489025 Collected: 08/29/11 14:45 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:19	09/05/11 00:50	106-93-4	
1-Chloro-2-bromopropane (S)	90	%	60-140		1	09/02/11 14:19	09/05/11 00:50	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 14:14	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 14:14	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 14:14	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 14:14	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 14:14	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 14:14	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 14:14	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 14:14	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 14:14	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 14:14	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-25									
Lab ID: 92101489025 Collected: 08/29/11 14:45 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 14:14	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 14:14	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 14:14	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 14:14	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 14:14	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 14:14	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		09/06/11 14:14	460-00-4	
Dibromofluoromethane (S)	94	%	70-130		1		09/06/11 14:14	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	70-130		1		09/06/11 14:14	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		09/06/11 14:14	2037-26-5	

Sample: MW-26									
Lab ID: 92101489026 Collected: 08/29/11 13:25 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 14:19	09/05/11 01:10	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	09/02/11 14:19	09/05/11 01:10	301-79-56	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 14:32	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 14:32	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 14:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 14:32	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 14:32	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 14:32	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 14:32	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 14:32	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 14:32	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 14:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 14:32	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 14:32	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 14:32	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 14:32	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 14:32	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 14:32	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		09/06/11 14:32	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		09/06/11 14:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		09/06/11 14:32	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		09/06/11 14:32	2037-26-5	



## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-27      Lab ID: 92101489027      Collected: 08/29/11 18:20      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:19	09/05/11 01:31	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	09/02/11 14:19	09/05/11 01:31	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 14:50	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 14:50	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 14:50	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 14:50	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 14:50	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 14:50	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 14:50	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 14:50	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 14:50	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 14:50	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 14:50	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 14:50	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 14:50	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 14:50	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 14:50	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 14:50	95-47-6	
4-Bromofluorobenzene (S)	105	%	70-130		1		09/06/11 14:50	460-00-4	
Dibromofluoromethane (S)	92	%	70-130		1		09/06/11 14:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	88	%	70-130		1		09/06/11 14:50	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		09/06/11 14:50	2037-26-5	

Sample: MW-28      Lab ID: 92101489028      Collected: 08/29/11 16:40      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 14:19	09/05/11 01:51	106-93-4	
1-Chloro-2-bromopropane (S)	95	%	60-140		1	09/02/11 14:19	09/05/11 01:51	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 15:08	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 15:08	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 15:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 15:08	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 15:08	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 15:08	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 15:08	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 15:08	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 15:08	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 15:08	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: MW-28      Lab ID: 92101489028      Collected: 08/29/11 16:40      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 15:08	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 15:08	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 15:08	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 15:08	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 15:08	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 15:08	95-47-6	
4-Bromofluorobenzene (S)	108	%	70-130		1		09/06/11 15:08	460-00-4	
Dibromofluoromethane (S)	92	%	70-130		1		09/06/11 15:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		09/06/11 15:08	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		09/06/11 15:08	2037-26-5	

Sample: TW-1      Lab ID: 92101489029      Collected: 08/30/11 13:25      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:43	09/05/11 03:33	106-93-4	
1-Chloro-2-bromopropane (S)	112	%	60-140		1	09/02/11 16:43	09/05/11 03:33	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	871	ug/L	100	76.8	1		09/07/11 18:30	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/07/11 18:30	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/07/11 18:30	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/07/11 18:30	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/07/11 18:30	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/07/11 18:30	762-75-4	
1,2-Dichloroethane	48.4	ug/L	5.0	1.8	1		09/07/11 18:30	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/07/11 18:30	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/07/11 18:30	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/07/11 18:30	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 18:30	637-92-3	
Methyl-tert-butyl ether	6.4	ug/L	5.0	1.7	1		09/07/11 18:30	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 18:30	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/07/11 18:30	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/07/11 18:30	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/07/11 18:30	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		1		09/07/11 18:30	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		09/07/11 18:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		09/07/11 18:30	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		09/07/11 18:30	2037-26-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: TW-2									
Lab ID: 92101489030 Collected: 08/30/11 13:40 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.019	0.019	1	09/02/11 16:43	09/05/11 04:34	106-93-4	
1-Chloro-2-bromopropane (S)	109 %		60-140		1	09/02/11 16:43	09/05/11 04:34	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		09/06/11 15:27	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		09/06/11 15:27	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		09/06/11 15:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		09/06/11 15:27	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		09/06/11 15:27	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		09/06/11 15:27	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		09/06/11 15:27	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		09/06/11 15:27	108-20-3	
Ethanol	ND ug/L		200	138	1		09/06/11 15:27	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		09/06/11 15:27	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		09/06/11 15:27	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		09/06/11 15:27	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		09/06/11 15:27	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		09/06/11 15:27	108-88-3	
m&p-Xylene	ND ug/L		10.0	3.1	1		09/06/11 15:27	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		09/06/11 15:27	95-47-6	
4-Bromofluorobenzene (S)	102 %		70-130		1		09/06/11 15:27	460-00-4	
Dibromofluoromethane (S)	96 %		70-130		1		09/06/11 15:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	89 %		70-130		1		09/06/11 15:27	17060-07-0	
Toluene-d8 (S)	94 %		70-130		1		09/06/11 15:27	2037-26-5	

Sample: TW-3									
Lab ID: 92101489031 Collected: 08/30/11 09:00 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	09/02/11 16:44	09/05/11 05:15	106-93-4	
1-Chloro-2-bromopropane (S)	107 %		60-140		1	09/02/11 16:44	09/05/11 05:15	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		09/06/11 15:45	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		09/06/11 15:45	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		09/06/11 15:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		09/06/11 15:45	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		09/06/11 15:45	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		09/06/11 15:45	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		09/06/11 15:45	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		09/06/11 15:45	108-20-3	
Ethanol	ND ug/L		200	138	1		09/06/11 15:45	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		09/06/11 15:45	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: TW-3									
Lab ID: 92101489031 Collected: 08/30/11 09:00 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 15:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 15:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 15:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 15:45	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 15:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 15:45	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		09/06/11 15:45	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		09/06/11 15:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		09/06/11 15:45	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		09/06/11 15:45	2037-26-5	

Sample: TW-4									
Lab ID: 92101489032 Collected: 08/30/11 10:15 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 16:44	09/05/11 05:36	106-93-4	
1-Chloro-2-bromopropane (S)	104	%	60-140		1	09/02/11 16:44	09/05/11 05:36	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/06/11 16:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/06/11 16:03	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/06/11 16:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/06/11 16:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/06/11 16:03	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/06/11 16:03	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/06/11 16:03	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/06/11 16:03	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/06/11 16:03	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/06/11 16:03	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/06/11 16:03	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/06/11 16:03	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/06/11 16:03	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/06/11 16:03	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/06/11 16:03	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/06/11 16:03	95-47-6	
4-Bromofluorobenzene (S)	102	%	70-130		1		09/06/11 16:03	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		09/06/11 16:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		09/06/11 16:03	17060-07-0	
Toluene-d8 (S)	92	%	70-130		1		09/06/11 16:03	2037-26-5	

### ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: TW-5									
Lab ID: 92101489033 Collected: 08/30/11 11:50 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:44	09/05/11 05:56	106-93-4	
1-Chloro-2-bromopropane (S)	105	%	60-140		1	09/02/11 16:44	09/05/11 05:56	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	368	ug/L	100	76.8	1		09/07/11 18:49	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/07/11 18:49	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/07/11 18:49	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/07/11 18:49	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/07/11 18:49	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/07/11 18:49	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/07/11 18:49	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/07/11 18:49	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/07/11 18:49	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/07/11 18:49	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 18:49	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/07/11 18:49	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 18:49	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/07/11 18:49	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/07/11 18:49	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/07/11 18:49	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130		1		09/07/11 18:49	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		09/07/11 18:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		09/07/11 18:49	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		09/07/11 18:49	2037-26-5	

Sample: TW-6									
Lab ID: 92101489034 Collected: 08/29/11 14:25 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 16:45	09/05/11 06:16	106-93-4	
1-Chloro-2-bromopropane (S)	105	%	60-140		1	09/02/11 16:45	09/05/11 06:16	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/07/11 19:07	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/07/11 19:07	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/07/11 19:07	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/07/11 19:07	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/07/11 19:07	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/07/11 19:07	762-75-4	
1,2-Dichloroethane	8.9	ug/L	5.0	1.8	1		09/07/11 19:07	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/07/11 19:07	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/07/11 19:07	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/07/11 19:07	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: TW-6									
Lab ID: 92101489034 Collected: 08/29/11 14:25 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 19:07	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/07/11 19:07	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 19:07	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/07/11 19:07	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/07/11 19:07	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/07/11 19:07	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		09/07/11 19:07	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		09/07/11 19:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		09/07/11 19:07	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		09/07/11 19:07	2037-26-5	

Sample: TW-7									
Lab ID: 92101489035 Collected: 08/29/11 16:55 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:45	09/05/11 06:37	106-93-4	
1-Chloro-2-bromopropane (S)	107	%	60-140		1	09/02/11 16:45	09/05/11 06:37	301-79-56	
8260 MSV Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		09/07/11 19:25	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		09/07/11 19:25	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		09/07/11 19:25	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		09/07/11 19:25	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		09/07/11 19:25	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		09/07/11 19:25	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		09/07/11 19:25	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		09/07/11 19:25	108-20-3	
Ethanol	ND	ug/L	200	138	1		09/07/11 19:25	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		09/07/11 19:25	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 19:25	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/07/11 19:25	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 19:25	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/07/11 19:25	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/07/11 19:25	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/07/11 19:25	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		09/07/11 19:25	460-00-4	
Dibromofluoromethane (S)	93	%	70-130		1		09/07/11 19:25	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		09/07/11 19:25	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		09/07/11 19:25	2037-26-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

**Sample: TW-8**      **Lab ID: 92101489036**      Collected: 08/29/11 15:35      Received: 08/31/11 15:50      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011      Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	09/02/11 16:45	09/05/11 06:57	106-93-4	
1-Chloro-2-bromopropane (S)	102 %		60-140		1	09/02/11 16:45	09/05/11 06:57	301-79-56	
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	76.8	1		09/07/11 19:44	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		09/07/11 19:44	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		09/07/11 19:44	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		09/07/11 19:44	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		09/07/11 19:44	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		09/07/11 19:44	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		09/07/11 19:44	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		09/07/11 19:44	108-20-3	
Ethanol	ND ug/L		200	138	1		09/07/11 19:44	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		09/07/11 19:44	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		09/07/11 19:44	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		09/07/11 19:44	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		09/07/11 19:44	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		09/07/11 19:44	108-88-3	
m&p-Xylene	ND ug/L		10.0	3.1	1		09/07/11 19:44	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		09/07/11 19:44	95-47-6	
4-Bromofluorobenzene (S)	100 %		70-130		1		09/07/11 19:44	460-00-4	
Dibromofluoromethane (S)	101 %		70-130		1		09/07/11 19:44	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		70-130		1		09/07/11 19:44	17060-07-0	
Toluene-d8 (S)	95 %		70-130		1		09/07/11 19:44	2037-26-5	

**Sample: TW-9**      **Lab ID: 92101489037**      Collected: 08/29/11 13:15      Received: 08/31/11 15:50      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011      Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	09/02/11 16:45	09/05/11 07:18	106-93-4	
1-Chloro-2-bromopropane (S)	107 %		60-140		1	09/02/11 16:45	09/05/11 07:18	301-79-56	
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	76.8	1		09/07/11 20:02	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		09/07/11 20:02	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		09/07/11 20:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		09/07/11 20:02	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		09/07/11 20:02	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		09/07/11 20:02	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		09/07/11 20:02	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		09/07/11 20:02	108-20-3	
Ethanol	ND ug/L		200	138	1		09/07/11 20:02	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		09/07/11 20:02	100-41-4	

### ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: TW-9									
Lab ID: 92101489037 Collected: 08/29/11 13:15 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		09/07/11 20:02	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		09/07/11 20:02	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		09/07/11 20:02	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		09/07/11 20:02	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		09/07/11 20:02	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		09/07/11 20:02	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		09/07/11 20:02	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		09/07/11 20:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		09/07/11 20:02	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		09/07/11 20:02	2037-26-5	

Sample: WSW-1 PRE									
Lab ID: 92101489038 Collected: 08/29/11 15:00 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:46	09/05/11 07:38	106-93-4	
1-Chloro-2-bromopropane (S)	109	%	60-140		1	09/02/11 16:46	09/05/11 07:38	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/02/11 19:19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/02/11 19:19	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/02/11 19:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/02/11 19:19	624-95-3	
tert-Butyl Alcohol	8.3J	ug/L	100	3.6	1		09/02/11 19:19	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/02/11 19:19	762-75-4	
1,2-Dichloroethane	2.4	ug/L	1.0	0.12	1		09/02/11 19:19	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/02/11 19:19	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/02/11 19:19	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/02/11 19:19	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 19:19	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 19:19	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 19:19	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 19:19	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 19:19	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 19:19	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		09/02/11 19:19	460-00-4	
Dibromofluoromethane (S)	124	%	70-130		1		09/02/11 19:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	123	%	70-130		1		09/02/11 19:19	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		09/02/11 19:19	2037-26-5	



## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-1 POST									
Lab ID: 92101489039 Collected: 08/29/11 15:10 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	09/02/11 16:46	09/05/11 07:59	106-93-4	
1-Chloro-2-bromopropane (S)	109 %		60-140		1	09/02/11 16:46	09/05/11 07:59	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	50.0	1		09/02/11 19:45	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	0.10	1		09/02/11 19:45	994-05-8	
Benzene	ND ug/L		1.0	0.25	1		09/02/11 19:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	50.0	1		09/02/11 19:45	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	3.6	1		09/02/11 19:45	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1.9	1		09/02/11 19:45	762-75-4	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		09/02/11 19:45	107-06-2	
Diisopropyl ether	ND ug/L		1.0	0.12	1		09/02/11 19:45	108-20-3	
Ethanol	ND ug/L		200	33.0	1		09/02/11 19:45	64-17-5	
Ethylbenzene	ND ug/L		1.0	0.30	1		09/02/11 19:45	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	0.070	1		09/02/11 19:45	637-92-3	
Methyl-tert-butyl ether	ND ug/L		1.0	0.21	1		09/02/11 19:45	1634-04-4	
Naphthalene	ND ug/L		1.0	0.24	1		09/02/11 19:45	91-20-3	
Toluene	ND ug/L		1.0	0.26	1		09/02/11 19:45	108-88-3	
m&p-Xylene	ND ug/L		2.0	0.66	1		09/02/11 19:45	179601-23-1	
o-Xylene	ND ug/L		1.0	0.23	1		09/02/11 19:45	95-47-6	
4-Bromofluorobenzene (S)	93 %		70-130		1		09/02/11 19:45	460-00-4	
Dibromofluoromethane (S)	126 %		70-130		1		09/02/11 19:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	125 %		70-130		1		09/02/11 19:45	17060-07-0	
Toluene-d8 (S)	102 %		70-130		1		09/02/11 19:45	2037-26-5	

Sample: WSW-3									
Lab ID: 92101489040 Collected: 08/29/11 12:30 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	09/02/11 16:46	09/05/11 08:19	106-93-4	
1-Chloro-2-bromopropane (S)	105 %		60-140		1	09/02/11 16:46	09/05/11 08:19	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	50.0	1		09/02/11 20:11	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	0.10	1		09/02/11 20:11	994-05-8	
Benzene	ND ug/L		1.0	0.25	1		09/02/11 20:11	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	50.0	1		09/02/11 20:11	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	3.6	1		09/02/11 20:11	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1.9	1		09/02/11 20:11	762-75-4	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		09/02/11 20:11	107-06-2	
Diisopropyl ether	ND ug/L		1.0	0.12	1		09/02/11 20:11	108-20-3	
Ethanol	ND ug/L		200	33.0	1		09/02/11 20:11	64-17-5	
Ethylbenzene	ND ug/L		1.0	0.30	1		09/02/11 20:11	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-3									
Lab ID: 92101489040 Collected: 08/29/11 12:30 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 20:11	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 20:11	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 20:11	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 20:11	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 20:11	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 20:11	95-47-6	
4-Bromofluorobenzene (S)	93	%	70-130		1		09/02/11 20:11	460-00-4	
Dibromofluoromethane (S)	126	%	70-130		1		09/02/11 20:11	1868-53-7	
1,2-Dichloroethane-d4 (S)	125	%	70-130		1		09/02/11 20:11	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		09/02/11 20:11	2037-26-5	

Sample: WSW-4									
Lab ID: 92101489041 Collected: 08/29/11 12:10 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:46	09/05/11 08:39	106-93-4	
1-Chloro-2-bromopropane (S)	112	%	60-140		1	09/02/11 16:46	09/05/11 08:39	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/02/11 20:36	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/02/11 20:36	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/02/11 20:36	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/02/11 20:36	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/02/11 20:36	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/02/11 20:36	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/02/11 20:36	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/02/11 20:36	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/02/11 20:36	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/02/11 20:36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 20:36	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 20:36	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 20:36	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 20:36	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 20:36	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 20:36	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		09/02/11 20:36	460-00-4	
Dibromofluoromethane (S)	125	%	70-130		1		09/02/11 20:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	124	%	70-130		1		09/02/11 20:36	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		09/02/11 20:36	2037-26-5	

### ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-6									
Lab ID: 92101489042 Collected: 08/29/11 12:40 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:46	09/05/11 09:00	106-93-4	
1-Chloro-2-bromopropane (S)	108	%	60-140		1	09/02/11 16:46	09/05/11 09:00	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/02/11 21:02	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/02/11 21:02	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/02/11 21:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/02/11 21:02	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/02/11 21:02	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/02/11 21:02	762-75-4	
1,2-Dichloroethane	0.88J	ug/L	1.0	0.12	1		09/02/11 21:02	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/02/11 21:02	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/02/11 21:02	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/02/11 21:02	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 21:02	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 21:02	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 21:02	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 21:02	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 21:02	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 21:02	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		09/02/11 21:02	460-00-4	
Dibromofluoromethane (S)	125	%	70-130		1		09/02/11 21:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	123	%	70-130		1		09/02/11 21:02	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		09/02/11 21:02	2037-26-5	

Sample: WSW-7									
Lab ID: 92101489043 Collected: 08/29/11 12:55 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:47	09/05/11 09:20	106-93-4	
1-Chloro-2-bromopropane (S)	111	%	60-140		1	09/02/11 16:47	09/05/11 09:20	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/02/11 21:27	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/02/11 21:27	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/02/11 21:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/02/11 21:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/02/11 21:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/02/11 21:27	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/02/11 21:27	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/02/11 21:27	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/02/11 21:27	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/02/11 21:27	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-7									
		Lab ID: 92101489043		Collected: 08/29/11 12:55		Received: 08/31/11 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 21:27	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 21:27	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 21:27	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 21:27	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 21:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 21:27	95-47-6	
4-Bromofluorobenzene (S)	93	%	70-130		1		09/02/11 21:27	460-00-4	
Dibromofluoromethane (S)	128	%	70-130		1		09/02/11 21:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	125	%	70-130		1		09/02/11 21:27	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		09/02/11 21:27	2037-26-5	

Sample: WSW-8 PRE									
		Lab ID: 92101489044		Collected: 08/29/11 14:30		Received: 08/31/11 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:47	09/05/11 09:40	106-93-4	
1-Chloro-2-bromopropane (S)	105	%	60-140		1	09/02/11 16:47	09/05/11 09:40	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/02/11 21:53	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/02/11 21:53	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/02/11 21:53	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/02/11 21:53	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/02/11 21:53	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/02/11 21:53	762-75-4	
1,2-Dichloroethane	1.6	ug/L	1.0	0.12	1		09/02/11 21:53	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/02/11 21:53	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/02/11 21:53	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/02/11 21:53	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 21:53	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 21:53	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 21:53	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 21:53	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 21:53	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 21:53	95-47-6	
4-Bromofluorobenzene (S)	93	%	70-130		1		09/02/11 21:53	460-00-4	
Dibromofluoromethane (S)	125	%	70-130		1		09/02/11 21:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	124	%	70-130		1		09/02/11 21:53	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		09/02/11 21:53	2037-26-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-8 POST									
		Lab ID: 92101489045		Collected: 08/29/11 14:40		Received: 08/31/11 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.019	0.019	1	09/02/11 16:47	09/05/11 10:01	106-93-4	
1-Chloro-2-bromopropane (S)	107 %		60-140		1	09/02/11 16:47	09/05/11 10:01	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	50.0	1		09/02/11 22:19	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	0.10	1		09/02/11 22:19	994-05-8	
Benzene	ND ug/L		1.0	0.25	1		09/02/11 22:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	50.0	1		09/02/11 22:19	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	3.6	1		09/02/11 22:19	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1.9	1		09/02/11 22:19	762-75-4	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		09/02/11 22:19	107-06-2	
Diisopropyl ether	ND ug/L		1.0	0.12	1		09/02/11 22:19	108-20-3	
Ethanol	ND ug/L		200	33.0	1		09/02/11 22:19	64-17-5	
Ethylbenzene	ND ug/L		1.0	0.30	1		09/02/11 22:19	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	0.070	1		09/02/11 22:19	637-92-3	
Methyl-tert-butyl ether	ND ug/L		1.0	0.21	1		09/02/11 22:19	1634-04-4	
Naphthalene	ND ug/L		1.0	0.24	1		09/02/11 22:19	91-20-3	
Toluene	ND ug/L		1.0	0.26	1		09/02/11 22:19	108-88-3	
m&p-Xylene	ND ug/L		2.0	0.66	1		09/02/11 22:19	179601-23-1	
o-Xylene	ND ug/L		1.0	0.23	1		09/02/11 22:19	95-47-6	
4-Bromofluorobenzene (S)	91 %		70-130		1		09/02/11 22:19	460-00-4	
Dibromofluoromethane (S)	124 %		70-130		1		09/02/11 22:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	124 %		70-130		1		09/02/11 22:19	17060-07-0	
Toluene-d8 (S)	102 %		70-130		1		09/02/11 22:19	2037-26-5	

Sample: WSW-9									
		Lab ID: 92101489046		Collected: 08/29/11 13:10		Received: 08/31/11 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	09/02/11 16:47	09/05/11 10:21	106-93-4	
1-Chloro-2-bromopropane (S)	107 %		60-140		1	09/02/11 16:47	09/05/11 10:21	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	50.0	1		09/02/11 22:44	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	0.10	1		09/02/11 22:44	994-05-8	
Benzene	ND ug/L		1.0	0.25	1		09/02/11 22:44	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	50.0	1		09/02/11 22:44	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	3.6	1		09/02/11 22:44	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1.9	1		09/02/11 22:44	762-75-4	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		09/02/11 22:44	107-06-2	
Diisopropyl ether	ND ug/L		1.0	0.12	1		09/02/11 22:44	108-20-3	
Ethanol	ND ug/L		200	33.0	1		09/02/11 22:44	64-17-5	
Ethylbenzene	ND ug/L		1.0	0.30	1		09/02/11 22:44	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-9									
Lab ID: 92101489046 Collected: 08/29/11 13:10 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 22:44	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 22:44	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 22:44	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 22:44	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 22:44	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 22:44	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		09/02/11 22:44	460-00-4	
Dibromofluoromethane (S)	126	%	70-130		1		09/02/11 22:44	1868-53-7	
1,2-Dichloroethane-d4 (S)	125	%	70-130		1		09/02/11 22:44	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		09/02/11 22:44	2037-26-5	

Sample: WSW-10									
Lab ID: 92101489047 Collected: 08/29/11 14:20 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/02/11 16:47	09/05/11 10:42	106-93-4	
1-Chloro-2-bromopropane (S)	110	%	60-140		1	09/02/11 16:47	09/05/11 10:42	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/02/11 23:10	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/02/11 23:10	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/02/11 23:10	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/02/11 23:10	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/02/11 23:10	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/02/11 23:10	762-75-4	
1,2-Dichloroethane	0.45J	ug/L	1.0	0.12	1		09/02/11 23:10	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/02/11 23:10	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/02/11 23:10	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/02/11 23:10	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 23:10	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 23:10	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 23:10	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 23:10	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 23:10	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 23:10	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130		1		09/02/11 23:10	460-00-4	
Dibromofluoromethane (S)	125	%	70-130		1		09/02/11 23:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	124	%	70-130		1		09/02/11 23:10	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		09/02/11 23:10	2037-26-5	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-11									
Lab ID: 92101489048 Collected: 08/29/11 14:10 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	09/02/11 16:47	09/05/11 11:02	106-93-4	
1-Chloro-2-bromopropane (S)	115	%	60-140		1	09/02/11 16:47	09/05/11 11:02	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/02/11 23:36	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/02/11 23:36	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/02/11 23:36	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/02/11 23:36	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/02/11 23:36	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/02/11 23:36	762-75-4	
1,2-Dichloroethane	0.45J	ug/L	1.0	0.12	1		09/02/11 23:36	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/02/11 23:36	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/02/11 23:36	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/02/11 23:36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/02/11 23:36	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/02/11 23:36	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/02/11 23:36	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/02/11 23:36	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/02/11 23:36	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/02/11 23:36	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130		1		09/02/11 23:36	460-00-4	
Dibromofluoromethane (S)	127	%	70-130		1		09/02/11 23:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	126	%	70-130		1		09/02/11 23:36	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		09/02/11 23:36	2037-26-5	

Sample: WSW-13									
Lab ID: 92101489049 Collected: 08/29/11 13:50 Received: 08/31/11 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/06/11 10:14	09/06/11 20:15	106-93-4	
1-Chloro-2-bromopropane (S)	105	%	60-140		1	09/06/11 10:14	09/06/11 20:15	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/03/11 00:01	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/03/11 00:01	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/03/11 00:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/03/11 00:01	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/03/11 00:01	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/03/11 00:01	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/03/11 00:01	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/03/11 00:01	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/03/11 00:01	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/03/11 00:01	100-41-4	

## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-13      Lab ID: 92101489049      Collected: 08/29/11 13:50      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/03/11 00:01	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/03/11 00:01	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/03/11 00:01	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/03/11 00:01	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/03/11 00:01	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/03/11 00:01	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130		1		09/03/11 00:01	460-00-4	
Dibromofluoromethane (S)	130	%	70-130		1		09/03/11 00:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	127	%	70-130		1		09/03/11 00:01	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		09/03/11 00:01	2037-26-5	

Sample: WSW-14      Lab ID: 92101489050      Collected: 08/29/11 13:40      Received: 08/31/11 15:50      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/06/11 10:14	09/06/11 20:36	106-93-4	
1-Chloro-2-bromopropane (S)	103	%	60-140		1	09/06/11 10:14	09/06/11 20:36	301-79-56	
<b>8260 MSV Low Level SC</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/03/11 00:27	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/03/11 00:27	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/03/11 00:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/03/11 00:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/03/11 00:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/03/11 00:27	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/03/11 00:27	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/03/11 00:27	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/03/11 00:27	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/03/11 00:27	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/03/11 00:27	637-92-3	
Methyl-tert-butyl ether	1.3	ug/L	1.0	0.21	1		09/03/11 00:27	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/03/11 00:27	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/03/11 00:27	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/03/11 00:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/03/11 00:27	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		09/03/11 00:27	460-00-4	
Dibromofluoromethane (S)	128	%	70-130		1		09/03/11 00:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	126	%	70-130		1		09/03/11 00:27	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		09/03/11 00:27	2037-26-5	



## ANALYTICAL RESULTS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Sample: WSW-15		Lab ID: 92101489051	Collected: 08/29/11 13:20	Received: 08/31/11 15:50	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	09/06/11 10:14	09/06/11 20:56	106-93-4	
1-Chloro-2-bromopropane (S)	106	%	60-140		1	09/06/11 10:14	09/06/11 20:56	301-79-56	
<b>8260 MSV Low Level SC</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		09/03/11 00:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		09/03/11 00:52	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		09/03/11 00:52	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		09/03/11 00:52	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		09/03/11 00:52	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		09/03/11 00:52	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		09/03/11 00:52	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		09/03/11 00:52	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		09/03/11 00:52	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		09/03/11 00:52	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		09/03/11 00:52	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		09/03/11 00:52	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		09/03/11 00:52	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		09/03/11 00:52	108-88-3	
m&p-Xylene	ND	ug/L	2.0	0.66	1		09/03/11 00:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		09/03/11 00:52	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		09/03/11 00:52	460-00-4	
Dibromofluoromethane (S)	127	%	70-130		1		09/03/11 00:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	125	%	70-130		1		09/03/11 00:52	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		09/03/11 00:52	2037-26-5	

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

QC Batch: OEXT/14733      Analysis Method: EPA 8011  
QC Batch Method: EPA 8011      Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92101489002, 92101489003, 92101489004, 92101489005, 92101489006, 92101489007, 92101489008

METHOD BLANK: 655066      Matrix: Water  
Associated Lab Samples: 92101489002, 92101489003, 92101489004, 92101489005, 92101489006, 92101489007, 92101489008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	09/01/11 19:31	
1-Chloro-2-bromopropane (S)	%	104	60-140	09/01/11 19:31	

LABORATORY CONTROL SAMPLE & LCSD: 655067      655068

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.29	0.26	100	90	60-140	8	20	
1-Chloro-2-bromopropane (S)	%				104	102	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 655069      655070

Parameter	Units	92100986004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.34	0.37	122	132	60-140	8	20	
1-Chloro-2-bromopropane (S)	%						129	138	60-140			

SAMPLE DUPLICATE: 655071

Parameter	Units	92100986006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	100	106	4		

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

QC Batch: OEXT/14739      Analysis Method: EPA 8011  
QC Batch Method: EPA 8011      Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92101489009, 92101489010, 92101489011, 92101489012, 92101489013, 92101489014, 92101489015, 92101489016, 92101489017, 92101489018, 92101489019, 92101489020, 92101489021, 92101489022, 92101489023, 92101489024, 92101489025, 92101489026, 92101489027, 92101489028

METHOD BLANK: 655616

Matrix: Water

Associated Lab Samples: 92101489009, 92101489010, 92101489011, 92101489012, 92101489013, 92101489014, 92101489015, 92101489016, 92101489017, 92101489018, 92101489019, 92101489020, 92101489021, 92101489022, 92101489023, 92101489024, 92101489025, 92101489026, 92101489027, 92101489028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	09/04/11 17:22	
1-Chloro-2-bromopropane (S)	%	107	60-140	09/04/11 17:22	

LABORATORY CONTROL SAMPLE & LCSD: 655617

655618

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.29	0.30	102	104	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				105	103	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 655619

655620

Parameter	Units	92101489009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.28	0.29	102	104	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						105	108	60-140			

SAMPLE DUPLICATE: 655621

Parameter	Units	92101489010 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	101	91	13		



**QUALITY CONTROL DATA**

Project: TRUCK STOP 378  
 Pace Project No.: 92101489

QC Batch: OEXT/14742 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92101489029, 92101489030, 92101489031, 92101489032, 92101489033, 92101489034, 92101489035,  
 92101489036, 92101489037, 92101489038, 92101489039, 92101489040, 92101489041, 92101489042,  
 92101489043, 92101489044, 92101489045, 92101489046, 92101489047, 92101489048

METHOD BLANK: 655844 Matrix: Water

Associated Lab Samples: 92101489029, 92101489030, 92101489031, 92101489032, 92101489033, 92101489034, 92101489035,  
 92101489036, 92101489037, 92101489038, 92101489039, 92101489040, 92101489041, 92101489042,  
 92101489043, 92101489044, 92101489045, 92101489046, 92101489047, 92101489048

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	09/05/11 02:32	
1-Chloro-2-bromopropane (S)	%	108	60-140	09/05/11 02:32	

LABORATORY CONTROL SAMPLE & LCSD: 655845 655846

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.31	0.32	108	112	60-140	4	20	
1-Chloro-2-bromopropane (S)	%				108	110	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 655847 655848

Parameter	Units	92101489029 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.27	.27	0.28	0.28	102	102	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						99	100	60-140			

SAMPLE DUPLICATE: 655849

Parameter	Units	92101489030 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	109	104	3		



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### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
 Pace Project No.: 92101489

QC Batch: OEXT/14750 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92101489001, 92101489049, 92101489050, 92101489051

METHOD BLANK: 656158 Matrix: Water  
 Associated Lab Samples: 92101489001, 92101489049, 92101489050, 92101489051

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	09/06/11 16:50	
1-Chloro-2-bromopropane (S)	%	97	60-140	09/06/11 16:50	

LABORATORY CONTROL SAMPLE & LCSD: 656159 656160

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.30	0.32	104	112	60-140	7	20	
1-Chloro-2-bromopropane (S)	%				95	125	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 656161 656162

Parameter	Units	92101612001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.28	0.29	102	104	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						98	119	60-140			

SAMPLE DUPLICATE: 656163

Parameter	Units	92101612002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	101	121	19		

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

QC Batch: MSV/16570 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC  
Associated Lab Samples: 92101489038, 92101489039, 92101489040, 92101489041, 92101489042, 92101489043, 92101489044, 92101489045, 92101489046, 92101489047, 92101489048, 92101489049, 92101489050, 92101489051

METHOD BLANK: 655823 Matrix: Water  
Associated Lab Samples: 92101489038, 92101489039, 92101489040, 92101489041, 92101489042, 92101489043, 92101489044, 92101489045, 92101489046, 92101489047, 92101489048, 92101489049, 92101489050, 92101489051

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	09/02/11 16:19	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	09/02/11 16:19	
Benzene	ug/L	ND	1.0	09/02/11 16:19	
Diisopropyl ether	ug/L	ND	1.0	09/02/11 16:19	
Ethanol	ug/L	ND	200	09/02/11 16:19	
Ethyl-tert-butyl ether	ug/L	ND	10.0	09/02/11 16:19	
Ethylbenzene	ug/L	ND	1.0	09/02/11 16:19	
m&p-Xylene	ug/L	ND	2.0	09/02/11 16:19	
Methyl-tert-butyl ether	ug/L	ND	1.0	09/02/11 16:19	
Naphthalene	ug/L	ND	1.0	09/02/11 16:19	
o-Xylene	ug/L	ND	1.0	09/02/11 16:19	
tert-Amyl Alcohol	ug/L	ND	100	09/02/11 16:19	
tert-Amylmethyl ether	ug/L	ND	10.0	09/02/11 16:19	
tert-Butyl Alcohol	ug/L	ND	100	09/02/11 16:19	
tert-Butyl Formate	ug/L	ND	50.0	09/02/11 16:19	
Toluene	ug/L	ND	1.0	09/02/11 16:19	
1,2-Dichloroethane-d4 (S)	%	117	70-130	09/02/11 16:19	
4-Bromofluorobenzene (S)	%	94	70-130	09/02/11 16:19	
Dibromofluoromethane (S)	%	116	70-130	09/02/11 16:19	
Toluene-d8 (S)	%	99	70-130	09/02/11 16:19	

LABORATORY CONTROL SAMPLE: 655824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	51.6	103	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	974	97	70-130	
Benzene	ug/L	50	47.5	95	70-130	
Diisopropyl ether	ug/L	50	51.1	102	70-130	
Ethanol	ug/L	2000	2630	131	70-130	F3,L3
Ethyl-tert-butyl ether	ug/L	100	104	104	70-130	
Ethylbenzene	ug/L	50	50.1	100	70-130	
m&p-Xylene	ug/L	100	103	103	70-130	
Methyl-tert-butyl ether	ug/L	50	51.6	103	70-130	
Naphthalene	ug/L	50	53.0	106	70-130	
o-Xylene	ug/L	50	54.0	108	70-130	
tert-Amyl Alcohol	ug/L	1000	984	98	70-130	
tert-Amylmethyl ether	ug/L	100	107	107	70-130	
tert-Butyl Alcohol	ug/L	500	544	109	70-130	
tert-Butyl Formate	ug/L	400	333	83	70-130	
Toluene	ug/L	50	48.3	97	70-130	

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

LABORATORY CONTROL SAMPLE: 655824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 655825 655826

Parameter	Units	92101489051		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	MS Result	MSD Result						
1,2-Dichloroethane	ug/L	ND	50	50	57.5	55.6	115	111	70-130	3	30		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	797	932	80	93	70-130	16	30		
Benzene	ug/L	ND	50	50	42.3	41.0	85	82	70-130	3	30		
Diisopropyl ether	ug/L	ND	50	50	54.0	54.4	108	109	70-130	1	30		
Ethanol	ug/L	ND	2000	2000	1650	2910	82	145	70-130	55	30	M0, R1	
Ethyl-tert-butyl ether	ug/L	ND	100	100	106	108	106	108	70-130	2	30		
Ethylbenzene	ug/L	ND	50	50	57.3	55.5	115	111	70-130	3	30		
m&p-Xylene	ug/L	ND	100	100	117	115	117	115	70-130	2	30		
Methyl-tert-butyl ether	ug/L	ND	50	50	51.3	52.9	103	106	70-130	3	30		
Naphthalene	ug/L	ND	50	50	51.0	53.7	102	107	70-130	5	30		
o-Xylene	ug/L	ND	50	50	60.1	58.4	120	117	70-130	3	30		
tert-Amyl Alcohol	ug/L	ND	1000	1000	713	886	71	89	70-130	22	30		
tert-Amylmethyl ether	ug/L	ND	100	100	103	105	103	105	70-130	2	30		
tert-Butyl Alcohol	ug/L	ND	500	500	396	493	79	99	70-130	22	30		
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130		30	P5	
Toluene	ug/L	ND	50	50	55.6	53.3	111	107	70-130	4	30		
1,2-Dichloroethane-d4 (S)	%						105	103	70-130				
4-Bromofluorobenzene (S)	%						98	100	70-130				
Dibromofluoromethane (S)	%						104	102	70-130				
Toluene-d8 (S)	%						100	99	70-130				

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

QC Batch: MSV/16545 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92101489001, 92101489003, 92101489004, 92101489005, 92101489006

METHOD BLANK: 655072 Matrix: Water  
Associated Lab Samples: 92101489001, 92101489003, 92101489004, 92101489005, 92101489006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	09/02/11 17:59	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	09/02/11 17:59	
Benzene	ug/L	ND	5.0	09/02/11 17:59	
Diisopropyl ether	ug/L	ND	5.0	09/02/11 17:59	
Ethanol	ug/L	ND	200	09/02/11 17:59	
Ethyl-tert-butyl ether	ug/L	ND	10.0	09/02/11 17:59	
Ethylbenzene	ug/L	ND	5.0	09/02/11 17:59	
m&p-Xylene	ug/L	ND	10.0	09/02/11 17:59	
Methyl-tert-butyl ether	ug/L	ND	5.0	09/02/11 17:59	
Naphthalene	ug/L	ND	5.0	09/02/11 17:59	
o-Xylene	ug/L	ND	5.0	09/02/11 17:59	
tert-Amyl Alcohol	ug/L	ND	100	09/02/11 17:59	
tert-Amylmethyl ether	ug/L	ND	10.0	09/02/11 17:59	
tert-Butyl Alcohol	ug/L	ND	100	09/02/11 17:59	
tert-Butyl Formate	ug/L	ND	50.0	09/02/11 17:59	
Toluene	ug/L	ND	5.0	09/02/11 17:59	
1,2-Dichloroethane-d4 (S)	%	101	70-130	09/02/11 17:59	
4-Bromofluorobenzene (S)	%	99	70-130	09/02/11 17:59	
Dibromofluoromethane (S)	%	99	70-130	09/02/11 17:59	
Toluene-d8 (S)	%	96	70-130	09/02/11 17:59	

LABORATORY CONTROL SAMPLE: 655073

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	44.8	90	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1020	102	70-130	
Benzene	ug/L	50	42.2	84	70-130	
Diisopropyl ether	ug/L	50	45.8	92	70-130	
Ethanol	ug/L	2000	2770	138	70-130	L3
Ethyl-tert-butyl ether	ug/L	100	103	103	70-130	
Ethylbenzene	ug/L	50	45.2	90	70-130	
m&p-Xylene	ug/L	100	93.4	93	70-130	
Methyl-tert-butyl ether	ug/L	50	52.4	105	70-130	
Naphthalene	ug/L	50	49.1	98	70-130	
o-Xylene	ug/L	50	46.6	93	70-130	
tert-Amyl Alcohol	ug/L	1000	1090	109	70-130	
tert-Amylmethyl ether	ug/L	100	99.8	100	70-130	
tert-Butyl Alcohol	ug/L	500	551	110	70-130	
tert-Butyl Formate	ug/L	400	402	101	70-130	
Toluene	ug/L	50	43.2	86	70-130	
1,2-Dichloroethane-d4 (S)	%			98	70-130	



### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

LABORATORY CONTROL SAMPLE: 655073

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 655074 655075

Parameter	92101262017		MS Spike	MSD Spike	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
	Units	Result	Conc.	Conc.								
1,2-Dichloroethane	ug/L	ND	50	50	44.6	44.1	89	88	70-130	1	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	605	777	60	78	70-130	25	30	M0
Benzene	ug/L	ND	50	50	44.4	46.2	89	92	70-130	4	30	
Diisopropyl ether	ug/L	ND	50	50	44.1	46.8	88	94	70-130	6	30	
Ethanol	ug/L	ND	2000	2000	805	2450	40	123	70-130	101	30	M0,R1
Ethyl-tert-butyl ether	ug/L	ND	100	100	96.6	105	97	105	70-130	8	30	
Ethylbenzene	ug/L	ND	50	50	47.9	49.8	96	100	70-130	4	30	
m&p-Xylene	ug/L	ND	100	100	95.0	99.4	95	99	70-130	4	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	50.9	52.7	102	105	70-130	3	30	
Naphthalene	ug/L	ND	50	50	40.3	46.5	81	93	70-130	14	30	
o-Xylene	ug/L	ND	50	50	44.8	47.2	90	94	70-130	5	30	
tert-Amyl Alcohol	ug/L	87.8J	1000	1000	859	1070	77	98	70-130	22	30	
tert-Amylmethyl ether	ug/L	ND	100	100	94.9	101	95	101	70-130	7	30	
tert-Butyl Alcohol	ug/L	ND	500	500	192	321	38	64	70-130	50	30	M0,R1
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130		30	P5
Toluene	ug/L	ND	50	50	44.0	46.7	88	93	70-130	6	30	
1,2-Dichloroethane-d4 (S)	%						93	96	70-130			
4-Bromofluorobenzene (S)	%						102	103	70-130			
Dibromofluoromethane (S)	%						101	102	70-130			
Toluene-d8 (S)	%						96	96	70-130			

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

QC Batch: MSV/16575 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92101489009, 92101489010, 92101489011, 92101489014

METHOD BLANK: 655883 Matrix: Water  
Associated Lab Samples: 92101489009, 92101489010, 92101489011, 92101489014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	09/03/11 03:59	
1,2-Dichloroethene (Total)	ug/L	ND	5.0	09/03/11 03:59	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	09/03/11 03:59	
Benzene	ug/L	ND	5.0	09/03/11 03:59	
Diisopropyl ether	ug/L	ND	5.0	09/03/11 03:59	
Ethanol	ug/L	ND	200	09/03/11 03:59	
Ethyl-tert-butyl ether	ug/L	ND	10.0	09/03/11 03:59	
Ethylbenzene	ug/L	ND	5.0	09/03/11 03:59	
m&p-Xylene	ug/L	ND	10.0	09/03/11 03:59	
Methyl-tert-butyl ether	ug/L	ND	5.0	09/03/11 03:59	
Naphthalene	ug/L	ND	5.0	09/03/11 03:59	
o-Xylene	ug/L	ND	5.0	09/03/11 03:59	
tert-Amyl Alcohol	ug/L	ND	100	09/03/11 03:59	
tert-Amylmethyl ether	ug/L	ND	10.0	09/03/11 03:59	
tert-Butyl Alcohol	ug/L	ND	100	09/03/11 03:59	
tert-Butyl Formate	ug/L	ND	50.0	09/03/11 03:59	
Toluene	ug/L	ND	5.0	09/03/11 03:59	
1,2-Dichloroethane-d4 (S)	%	94	70-130	09/03/11 03:59	
4-Bromofluorobenzene (S)	%	101	70-130	09/03/11 03:59	
Dibromofluoromethane (S)	%	96	70-130	09/03/11 03:59	
Toluene-d8 (S)	%	94	70-130	09/03/11 03:59	

LABORATORY CONTROL SAMPLE: 655884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	43.4	87	70-130	
1,2-Dichloroethene (Total)	ug/L	100	84.6	85	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	954	95	70-130	
Benzene	ug/L	50	40.3	81	70-130	
Diisopropyl ether	ug/L	50	45.4	91	70-130	
Ethanol	ug/L	2000	2950	147	70-130	L3
Ethyl-tert-butyl ether	ug/L	100	103	103	70-130	
Ethylbenzene	ug/L	50	44.4	89	70-130	
m&p-Xylene	ug/L	100	90.3	90	70-130	
Methyl-tert-butyl ether	ug/L	50	52.9	106	70-130	
Naphthalene	ug/L	50	47.6	95	70-130	
o-Xylene	ug/L	50	45.7	91	70-130	
tert-Amyl Alcohol	ug/L	1000	988	99	70-130	
tert-Amylmethyl ether	ug/L	100	97.2	97	70-130	
tert-Butyl Alcohol	ug/L	500	459	92	70-130	
tert-Butyl Formate	ug/L	400	390	97	70-130	

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

LABORATORY CONTROL SAMPLE: 655884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene	ug/L	50	41.5	83	70-130	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			105	70-130	
Dibromofluoromethane (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 655885 655886

Parameter	Units	92101489011		655885		655886		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
1,2-Dichloroethane	ug/L	2.8J	50	50	49.2	48.5	93	91	70-130	1	30			
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	824	1050	82	105	70-130	24	30			
Benzene	ug/L	7.9	50	50	55.7	54.7	96	94	70-130	2	30			
Diisopropyl ether	ug/L	ND	50	50	47.7	47.2	95	94	70-130	1	30			
Ethanol	ug/L	ND	2000	2000	1160	2380	58	119	70-130	69	30	M0, R1		
Ethyl-tert-butyl ether	ug/L	ND	100	100	103	105	103	105	70-130	2	30			
Ethylbenzene	ug/L	ND	50	50	49.2	48.6	97	96	70-130	1	30			
m&p-Xylene	ug/L	ND	100	100	98.7	98.8	97	97	70-130	0	30			
Methyl-tert-butyl ether	ug/L	ND	50	50	51.9	53.2	104	106	70-130	2	30			
Naphthalene	ug/L	ND	50	50	50.7	55.1	99	107	70-130	8	30			
o-Xylene	ug/L	ND	50	50	51.2	50.1	101	99	70-130	2	30			
tert-Amyl Alcohol	ug/L	ND	1000	1000	920	1210	87	116	70-130	27	30			
tert-Amylmethyl ether	ug/L	ND	100	100	101	102	101	102	70-130	1	30			
tert-Butyl Alcohol	ug/L	ND	500	500	158	308	32	62	70-130	64	30	M0, R1		
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130		30	P5		
Toluene	ug/L	ND	50	50	49.7	47.4	99	94	70-130	5	30			
1,2-Dichloroethane-d4 (S)	%						87	88	70-130					
4-Bromofluorobenzene (S)	%						104	104	70-130					
Dibromofluoromethane (S)	%						96	99	70-130					
Toluene-d8 (S)	%						97	100	70-130					

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

QC Batch: MSV/16576 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92101489015, 92101489017, 92101489018, 92101489019, 92101489020, 92101489022, 92101489023, 92101489024, 92101489025, 92101489026, 92101489027, 92101489028, 92101489030, 92101489031, 92101489032

METHOD BLANK: 655895 Matrix: Water

Associated Lab Samples: 92101489015, 92101489017, 92101489018, 92101489019, 92101489020, 92101489022, 92101489023, 92101489024, 92101489025, 92101489026, 92101489027, 92101489028, 92101489030, 92101489031, 92101489032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	09/06/11 11:11	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	09/06/11 11:11	
Benzene	ug/L	ND	5.0	09/06/11 11:11	
Diisopropyl ether	ug/L	ND	5.0	09/06/11 11:11	
Ethanol	ug/L	ND	200	09/06/11 11:11	
Ethyl-tert-butyl ether	ug/L	ND	10.0	09/06/11 11:11	
Ethylbenzene	ug/L	ND	5.0	09/06/11 11:11	
m&p-Xylene	ug/L	ND	10.0	09/06/11 11:11	
Methyl-tert-butyl ether	ug/L	ND	5.0	09/06/11 11:11	
Naphthalene	ug/L	ND	5.0	09/06/11 11:11	
o-Xylene	ug/L	ND	5.0	09/06/11 11:11	
tert-Amyl Alcohol	ug/L	ND	100	09/06/11 11:11	
tert-Amylmethyl ether	ug/L	ND	10.0	09/06/11 11:11	
tert-Butyl Alcohol	ug/L	ND	100	09/06/11 11:11	
tert-Butyl Formate	ug/L	ND	50.0	09/06/11 11:11	
Toluene	ug/L	ND	5.0	09/06/11 11:11	
1,2-Dichloroethane-d4 (S)	%	89	70-130	09/06/11 11:11	
4-Bromofluorobenzene (S)	%	97	70-130	09/06/11 11:11	
Dibromofluoromethane (S)	%	97	70-130	09/06/11 11:11	
Toluene-d8 (S)	%	91	70-130	09/06/11 11:11	

LABORATORY CONTROL SAMPLE: 655896

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	43.6	87	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1280	128	70-130	
Benzene	ug/L	50	43.5	87	70-130	
Diisopropyl ether	ug/L	50	47.1	94	70-130	
Ethanol	ug/L	2000	3040	152	70-130 L3	
Ethyl-tert-butyl ether	ug/L	100	105	105	70-130	
Ethylbenzene	ug/L	50	46.4	93	70-130	
m&p-Xylene	ug/L	100	94.4	94	70-130	
Methyl-tert-butyl ether	ug/L	50	52.2	104	70-130	
Naphthalene	ug/L	50	49.2	98	70-130	
o-Xylene	ug/L	50	46.5	93	70-130	
tert-Amyl Alcohol	ug/L	1000	1410	141	70-130 L3	
tert-Amylmethyl ether	ug/L	100	97.8	98	70-130	
tert-Butyl Alcohol	ug/L	500	575	115	70-130	

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

LABORATORY CONTROL SAMPLE: 655896

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	401	100	70-130	
Toluene	ug/L	50	45.5	91	70-130	
1,2-Dichloroethane-d4 (S)	%			87	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 655897 655898

Parameter	Units	92101489023		MSD		MSD		% Rec		Max		Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec	Limits	RPD	RPD	
1,2-Dichloroethane	ug/L	ND	50	50	46.8	55.4	94	111	70-130	17	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1050	1230	105	123	70-130	16	30	
Benzene	ug/L	ND	50	50	47.8	55.4	96	111	70-130	15	30	
Diisopropyl ether	ug/L	ND	50	50	51.1	58.8	102	118	70-130	14	30	
Ethanol	ug/L	ND	2000	2000	2840	3800	142	190	70-130	29	30	M0
Ethyl-tert-butyl ether	ug/L	ND	100	100	112	133	112	133	70-130	17	30	M0
Ethylbenzene	ug/L	ND	50	50	50.9	57.4	102	115	70-130	12	30	
m&p-Xylene	ug/L	ND	100	100	102	114	102	114	70-130	11	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	54.9	66.5	110	133	70-130	19	30	M0
Naphthalene	ug/L	ND	50	50	51.6	64.2	103	128	70-130	22	30	
o-Xylene	ug/L	ND	50	50	52.4	58.7	105	117	70-130	11	30	
tert-Amyl Alcohol	ug/L	ND	1000	1000	1050	1310	105	131	70-130	22	30	M0
tert-Amylmethyl ether	ug/L	ND	100	100	101	121	101	121	70-130	18	30	
tert-Butyl Alcohol	ug/L	ND	500	500	295	443	59	89	70-130	40	30	M0, R1
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130		30	P5
Toluene	ug/L	ND	50	50	48.4	57.3	97	115	70-130	17	30	
1,2-Dichloroethane-d4 (S)	%						90	91	70-130			
4-Bromofluorobenzene (S)	%						106	102	70-130			
Dibromofluoromethane (S)	%						101	97	70-130			
Toluene-d8 (S)	%						100	99	70-130			

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

QC Batch: MSV/16604 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92101489002, 92101489007, 92101489008, 92101489012, 92101489013, 92101489021, 92101489029, 92101489033, 92101489034, 92101489035, 92101489036, 92101489037

METHOD BLANK: 656752 Matrix: Water  
Associated Lab Samples: 92101489002, 92101489007, 92101489008, 92101489012, 92101489013, 92101489021, 92101489029, 92101489033, 92101489034, 92101489035, 92101489036, 92101489037

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	09/07/11 14:33	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	09/07/11 14:33	
Benzene	ug/L	ND	5.0	09/07/11 14:33	
Diisopropyl ether	ug/L	ND	5.0	09/07/11 14:33	
Ethanol	ug/L	ND	200	09/07/11 14:33	
Ethyl-tert-butyl ether	ug/L	ND	10.0	09/07/11 14:33	
Ethylbenzene	ug/L	ND	5.0	09/07/11 14:33	
m&p-Xylene	ug/L	ND	10.0	09/07/11 14:33	
Methyl-tert-butyl ether	ug/L	ND	5.0	09/07/11 14:33	
Naphthalene	ug/L	ND	5.0	09/07/11 14:33	
o-Xylene	ug/L	ND	5.0	09/07/11 14:33	
tert-Amyl Alcohol	ug/L	ND	100	09/07/11 14:33	
tert-Amylmethyl ether	ug/L	ND	10.0	09/07/11 14:33	
tert-Butyl Alcohol	ug/L	ND	100	09/07/11 14:33	
tert-Butyl Formate	ug/L	ND	50.0	09/07/11 14:33	
Toluene	ug/L	ND	5.0	09/07/11 14:33	
1,2-Dichloroethane-d4 (S)	%	99	70-130	09/07/11 14:33	
4-Bromofluorobenzene (S)	%	99	70-130	09/07/11 14:33	
Dibromofluoromethane (S)	%	97	70-130	09/07/11 14:33	
Toluene-d8 (S)	%	96	70-130	09/07/11 14:33	

LABORATORY CONTROL SAMPLE: 656753

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.8	100	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1130	113	70-130	
Benzene	ug/L	50	45.6	91	70-130	
Diisopropyl ether	ug/L	50	48.1	96	70-130	
Ethanol	ug/L	2000	2570	129	70-130	
Ethyl-tert-butyl ether	ug/L	100	99.6	100	70-130	
Ethylbenzene	ug/L	50	46.2	92	70-130	
m&p-Xylene	ug/L	100	104	104	70-130	
Methyl-tert-butyl ether	ug/L	50	51.2	102	70-130	
Naphthalene	ug/L	50	49.9	100	70-130	
o-Xylene	ug/L	50	49.1	98	70-130	
tert-Amyl Alcohol	ug/L	1000	1190	119	70-130	
tert-Amylmethyl ether	ug/L	100	103	103	70-130	
tert-Butyl Alcohol	ug/L	500	600	120	70-130	
tert-Butyl Formate	ug/L	400	410	103	70-130	
Toluene	ug/L	50	45.4	91	70-130	

### QUALITY CONTROL DATA

Project: TRUCK STOP 378  
Pace Project No.: 92101489

LABORATORY CONTROL SAMPLE: 656753

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 656754 656755

Parameter	92101489021		MS	MSD	MS		MSD		% Rec Limits	Max		Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec		RPD	RPD	
1,2-Dichloroethane	ug/L	ND	50	50	64.3	62.7	129	125	70-130	3	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1030	1750	103	175	70-130	52	30	M0,R1
Benzene	ug/L	ND	50	50	62.2	58.5	124	117	70-130	6	30	
Diisopropyl ether	ug/L	ND	50	50	67.6	63.5	135	127	70-130	6	30	M0
Ethanol	ug/L	ND	2000	2000	1480	2600	74	130	70-130	55	30	R1
Ethyl-tert-butyl ether	ug/L	ND	100	100	130	129	130	129	70-130	1	30	
Ethylbenzene	ug/L	ND	50	50	59.3	56.1	119	112	70-130	6	30	
m&p-Xylene	ug/L	ND	100	100	132	123	132	123	70-130	7	30	M0
Methyl-tert-butyl ether	ug/L	ND	50	50	66.6	64.8	133	130	70-130	3	30	M0
Naphthalene	ug/L	ND	50	50	61.2	60.2	122	120	70-130	2	30	
o-Xylene	ug/L	ND	50	50	62.5	62.4	125	125	70-130	0	30	
tert-Amyl Alcohol	ug/L	368	1000	1000	991	1860	62	149	70-130	61	30	M0,R1
tert-Amylmethyl ether	ug/L	ND	100	100	135	126	135	126	70-130	7	30	M0
tert-Butyl Alcohol	ug/L	ND	500	500	272	695	54	139	70-130	87	30	M0,R1
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130		30	P5
Toluene	ug/L	ND	50	50	58.7	57.0	117	114	70-130	3	30	
1,2-Dichloroethane-d4 (S)	%						102	98	70-130			
4-Bromofluorobenzene (S)	%						97	98	70-130			
Dibromofluoromethane (S)	%						98	98	70-130			
Toluene-d8 (S)	%						101	100	70-130			

## QUALIFIERS

Project: TRUCK STOP 378  
Pace Project No.: 92101489

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

- |    |   |
|----|---|
| C2 | Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.   |
| F3 | The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated. |
| L3 | Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.   |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.   |
| P5 | The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.                           |
| R1 | RPD value was outside control limits.   |
| S4 | Surrogate recovery not evaluated against control limits due to sample dilution.   |



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92101489001	MW-1	EPA 8011	OEXT/14750	EPA 8011	GCSV//10408
92101489002	MW-2	EPA 8011	OEXT/14733	EPA 8011	GCSV//10400
92101489003	MW-3	EPA 8011	OEXT/14733	EPA 8011	GCSV//10400
92101489004	MW-4	EPA 8011	OEXT/14733	EPA 8011	GCSV//10400
92101489005	MW-5	EPA 8011	OEXT/14733	EPA 8011	GCSV//10400
92101489006	MW-6	EPA 8011	OEXT/14733	EPA 8011	GCSV//10400
92101489007	MW-7	EPA 8011	OEXT/14733	EPA 8011	GCSV//10400
92101489008	MW-8	EPA 8011	OEXT/14733	EPA 8011	GCSV//10400
92101489009	MW-9	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489010	MW-10	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489011	MW-11	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489012	MW-12	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489013	MW-13	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489014	MW-14	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489015	MW-15	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489016	MW-16	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489017	MW-17	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489018	MW-18	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489019	MW-19	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489020	MW-20	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489021	MW-21	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489022	MW-22	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489023	MW-23	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489024	MW-24	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489025	MW-25	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489026	MW-26	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489027	MW-27	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489028	MW-28	EPA 8011	OEXT/14739	EPA 8011	GCSV//10404
92101489029	TW-1	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489030	TW-2	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489031	TW-3	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489032	TW-4	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489033	TW-5	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489034	TW-6	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489035	TW-7	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489036	TW-8	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489037	TW-9	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489038	WSW-1 PRE	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489039	WSW-1 POST	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489040	WSW-3	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489041	WSW-4	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489042	WSW-6	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489043	WSW-7	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489044	WSW-8 PRE	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489045	WSW-8 POST	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489046	WSW-9	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405
92101489047	WSW-10	EPA 8011	OEXT/14742	EPA 8011	GCSV//10405

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TRUCK STOP 378  
Pace Project No.: 92101489

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92101489048	WSW-11	EPA 8011	OEXT/14742	EPA 8011	GCSV/10405
92101489049	WSW-13	EPA 8011	OEXT/14750	EPA 8011	GCSV/10408
92101489050	WSW-14	EPA 8011	OEXT/14750	EPA 8011	GCSV/10408
92101489051	WSW-15	EPA 8011	OEXT/14750	EPA 8011	GCSV/10408
92101489038	WSW-1 PRE	EPA 8260	MSV/16570		
92101489039	WSW-1 POST	EPA 8260	MSV/16570		
92101489040	WSW-3	EPA 8260	MSV/16570		
92101489041	WSW-4	EPA 8260	MSV/16570		
92101489042	WSW-6	EPA 8260	MSV/16570		
92101489043	WSW-7	EPA 8260	MSV/16570		
92101489044	WSW-8 PRE	EPA 8260	MSV/16570		
92101489045	WSW-8 POST	EPA 8260	MSV/16570		
92101489046	WSW-9	EPA 8260	MSV/16570		
92101489047	WSW-10	EPA 8260	MSV/16570		
92101489048	WSW-11	EPA 8260	MSV/16570		
92101489049	WSW-13	EPA 8260	MSV/16570		
92101489050	WSW-14	EPA 8260	MSV/16570		
92101489051	WSW-15	EPA 8260	MSV/16570		
92101489001	MW-1	EPA 8260	MSV/16545		
92101489002	MW-2	EPA 8260	MSV/16604		
92101489003	MW-3	EPA 8260	MSV/16545		
92101489004	MW-4	EPA 8260	MSV/16545		
92101489005	MW-5	EPA 8260	MSV/16545		
92101489006	MW-6	EPA 8260	MSV/16545		
92101489007	MW-7	EPA 8260	MSV/16604		
92101489008	MW-8	EPA 8260	MSV/16604		
92101489009	MW-9	EPA 8260	MSV/16575		
92101489010	MW-10	EPA 8260	MSV/16575		
92101489011	MW-11	EPA 8260	MSV/16575		
92101489012	MW-12	EPA 8260	MSV/16604		
92101489013	MW-13	EPA 8260	MSV/16604		
92101489014	MW-14	EPA 8260	MSV/16575		
92101489015	MW-15	EPA 8260	MSV/16576		
92101489017	MW-17	EPA 8260	MSV/16576		
92101489018	MW-18	EPA 8260	MSV/16576		
92101489019	MW-19	EPA 8260	MSV/16576		
92101489020	MW-20	EPA 8260	MSV/16576		
92101489021	MW-21	EPA 8260	MSV/16604		
92101489022	MW-22	EPA 8260	MSV/16576		
92101489023	MW-23	EPA 8260	MSV/16576		
92101489024	MW-24	EPA 8260	MSV/16576		
92101489025	MW-25	EPA 8260	MSV/16576		
92101489026	MW-26	EPA 8260	MSV/16576		



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(704)875-9092

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TRUCK STOP 378

Pace Project No.: 92101489

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92101489027	MW-27	EPA 8260	MSV/16576		
92101489028	MW-28	EPA 8260	MSV/16576		
92101489029	TW-1	EPA 8260	MSV/16604		
92101489030	TW-2	EPA 8260	MSV/16576		
92101489031	TW-3	EPA 8260	MSV/16576		
92101489032	TW-4	EPA 8260	MSV/16576		
92101489033	TW-5	EPA 8260	MSV/16604		
92101489034	TW-6	EPA 8260	MSV/16604		
92101489035	TW-7	EPA 8260	MSV/16604		
92101489036	TW-8	EPA 8260	MSV/16604		
92101489037	TW-9	EPA 8260	MSV/16604		



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information: Company: <u>ECES</u> Address: <u>13504 S. Pant Blvd</u> <u>Charlotte NC</u> Email To: <u>charlotte@ecesconsult.com</u> Phone: <u>704-588-2714</u> Fax: Requested Due Date/TAT: <u>STARVANO</u>		<b>Section B</b> Required Project Information: Report To: <u>Randy Hutchins</u> Copy To: Purchase Order No.: <u>14-214210</u> Project Name: <u>Muck stop 378</u> Project Number: <u>14-214210</u>		<b>Section C</b> Invoice Information: Attention: <u>SUE STRATEN</u> Company Name: <u>ECES</u> Address: <u>ASPANUM MA</u> Pace Quote Reference: Pace Project Manager: <u>BONNIE MELCER</u> Pace Profile #: <u>207-1-B</u>	
Page: <u>1</u> of <u>5</u> 1502549		REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER		Site Location STATE: <u>SC</u>	

ITEM #	Section D Required Client Information  SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Preservatives Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Methanol Other	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB					
1	MW-1		WTB	G	DATE	TIME	DATE	TIME			02101489
2	MW-2				8/24	1720	8/24	1720			001
3	MW-3				8/24	1710	8/24	1710			002
4	MW-4				8/25	1700	8/25	1700			003
5	MW-5				8/25	1755	8/25	1755			004
6	MW-6				8/29	1620	8/29	1620			005
7	MW-7				8/29	1610	8/29	1610			006
8	MW-8				8/29	1505	8/29	1505			007
9	MW-9				8/30	1745	8/30	1745			008
10	MW-10				8/30	1715	8/30	1715			009
11	MW-11				8/30	1130	8/30	1130			010
12	MW-12				8/30	1040	8/30	1040			011

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<u>S. Hutchins / ECES</u>			<u>B. Melcer - Pace</u>	8-31-11	13:05	Received on Temp in °C Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)
	<u>B. Melcer</u>	8-31-11	15:50	<u>W. Melcer - Pace</u>	8-31-11	15:50	60.74

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Phil Pike / Aaron Williamson

SIGNATURE of SAMPLER: Phil Pike DATE Signed (MM/DD/YYYY): 8/30/11

ORIGINAL

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-Q-020rev.07, 15-May-2007





# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: <b>ECS</b>	Report To: <b>Reamilly Hutchins</b>	Attention: <b>Sue Streete</b>	Company Name: <b>ECS</b>	Page: <b>3</b> of <b>5</b>	REGULATORY AGENCY: <b>1502547</b>
Address: <b>1504 S PAINT BEVD</b>	Copy To:	Company Name: <b>AGPRAM MA</b>	Address: <b>AGPRAM MA</b>	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
City: <b>CHARLOTTE NC</b>	Purchase Order No.: <b>14-214210</b>	Face Quote Reference: <b>BONNIE MCKEE</b>	Face Project Manager: <b>BONNIE MCKEE</b>	<input checked="" type="checkbox"/> UST	<input type="checkbox"/> RCRA
Email To: <b>HUTCHINS@ECSCONSULT.COM</b>	Project Name: <b>TRUCK STOP 378</b>	Site Location: <b>SC</b>	State: <b>SC</b>	<input type="checkbox"/> DRINKING WATER	<input type="checkbox"/> OTHER
Phone: <b>704-583-2711</b>	Project Number: <b>14-214210</b>				
Requested Due Date/TAT: <b>STANDARD</b>					

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
				COMPOSITE START	COMPOSITE END/GRAB					DATE	TIME		
1	MW-25	DW WT WW P SL OL WP AR TS OT	WT G	8/29	1445		6	Unpreserved					0210489
2	MW-26			8/29	1325			H <sub>2</sub> SO <sub>4</sub>					0210489
3	MW-27			8/29	1820			HNO <sub>3</sub>					0210489
4	MW-28			8/29	1646			HCl					0210489
5	TW-1			8/20	1325			NaOH					0210489
6	TW-2			8/20	1340			Na <sub>2</sub> O <sub>3</sub>					0210489
7	TW-3			8/30	900			Methanol					0210489
8	TW-4			8/30	1015			Other					0210489
9	TW-5			8/30	1150								0210489
10	TW-6			8/29	1425								0210489
11	TW-7			8/29	1655								0210489
12	TW-8			8/29	1535								0210489

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		SAMPLE CONDITIONS	
	DATE	TIME	DATE	TIME	Temp in °C	Received on
<b>Phil Peck / ECS</b>	8-29-11	15:20	<b>Reamilly Pace</b>	8-31-11	17:07	
<b>Phil Peck / ECS</b>	8-29-11	15:20	<b>William Pace</b>	8-31-11	15:15	Ice (Y/N)
						Sealed Cooler (Y/N)
						Custody (Y/N)
						Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: **Phil Peck / Pace**  
 SIGNATURE OF SAMPLER: **Phil Peck**  
 DATE Signed (MM/DD/YY): **8/30**



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 4 of 4  
 1502546  
 REGULATORY AGENCY  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
 Site Location STATE: SC

Section A  
 Required Client Information:  
 Company: ECS  
 Address: 13504 S Point Blvd  
 Email To: Charlotte NC  
 Phone: 704589-2711 Fax:  
 Requested Due Date/TAT: 5/14/04

Section B  
 Required Project Information:  
 Report To: Randy Hutchins  
 Copy To:  
 Purchase Order No.: 14-214210  
 Project Name: TRUCK STOP 378  
 Project Number: 14-214210

Section C  
 Invoice Information:  
 Attention: SUE SPRETTEN  
 Company Name: ECS  
 Address: AGANAM MA  
 Pace Quote Reference: BONNIE McLEE  
 Pace Project Manager: BONNIE McLEE  
 Pace Profile #:

ITEM #	Section D Required Client Information	Matrix Codes MATRIX_CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB								
1	TH-9	DW	8/29	1315	G	WTG						0210489
2	WSW-1 PRE	Water		1500								0210489
3	WSW-1 POST	Waste Water		1510								0210489
4	WSW-3	Product		1230								0210489
5	WSW-4	Soil/Solid		1210								0210489
6	WSW-6	Oil		1240								0210489
7	WSW-7	Wipe		1255								0210489
8	WSW-8 PRE	Air		1430								0210489
9	WSW-8 POST	Other		1440								0210489
10	WSW-9			1310								0210489
11	WSW-10			1420								0210489
12	WSW-11			1410								0210489

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	R. Moody	8-31-11	15:30	R. Moody - Pace	8-31-11	13:05	
	R. Moody			Kim Franck	8/11/11	15:15	Ice (Y/N) <input type="checkbox"/> Sealed Cooler (Y/N) <input type="checkbox"/> Custody (Y/N) <input type="checkbox"/> Received on (Y/N) <input type="checkbox"/> Temp in °C

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: Phil Pike / Aaron Williamson  
 SIGNATURE of SAMPLER: [Signature] DATE Signed (MM/DD/YY): 8/30/11

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
**Required Client Information:**  
 Company: **ECS**  
 Address: **13504 S Point Blvd Charlotte NC**  
 Email To: **PHOTOMICS@ECSCONSULT.COM**  
 Phone: **704-583-2711** Fax:  
 Requested Due Date/TAT: **STANDARD**

**Section B**  
**Required Project Information:**  
 Report To: **Randy Hutchins**  
 Copy To:  
 Purchase Order No.: **14-214210**  
 Project Name: **Truck Stop 3B**  
 Project Number: **14-214210**

**Section C**  
**Invoice Information:**  
 Attention: **SUE SPRETTA**  
 Company Name: **ECS**  
 Address: **AGAWAM MA**  
 Pace Quote Reference:  
 Pace Project Manager: **Bonnie McIver**  
 Pace Profile #:

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
 Site Location: **SC** STATE:

Page: **5** of **5**  
**1502553**

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	SAMPLER TEMP AT COLLECTION		# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
			COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME				
1	WSU-13	DW	8/29	1350	G	WTG						
2	WSU-14	WT		1340	G							
3	WSU-15	WW		1320	G							
4		P										
5		SL										
6		OL										
7		WP										
8		AR										
9		TS										
10		OT										
11		Other										
12												

**ADDITIONAL COMMENTS**

**RELINQUISHED BY / AFFILIATION**  
 Date: 8-31-11 Time: 15:30  
 Signature: *Randy Hutchins*  
 Name: **Randy Hutchins**

**ACCEPTED BY / AFFILIATION**  
 Date: 8-31-11 Time: 17:05  
 Signature: *Paul Pike*  
 Name: **Paul Pike**

**SAMPLE CONDITIONS**  
 Received on Ice (Y/N)  
 Custody Sealed Cooler (Y/N)  
 Samples Intact (Y/N)

**DATE SIGNED (MM/DD/YY):** 8/30/11

**PRINT NAME OF SAMPLER:** **Paul Pike**  
**SIGNATURE OF SAMPLER:** *Paul Pike*

**SAMPLER NAME AND SIGNATURE**

ORIGINAL





Document Name:  
**Sample Condition Upon Receipt (SCUR)**  
 Document Number:  
**F-CHR-CS-03-rev.05**

Document Revised: July 29, 2011  
 Page 1 of 2  
 Issuing Authority:  
 Pace Huntersville Quality Office

Client Name: FEL Project # 92101489

Where Received:  Huntersville  Asheville  Eden

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used: IR Gun T1102 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Temp Correction Factor Add / Subtract 0 °C

Corrected Cooler Temp.: 6.0 C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: Umm - 8/31/11

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <u>0/5/11</u>	12. <u>3 ml for MW12 50g MW10 but date/time match MW12</u>
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review: BKM Date: 8/31/11 SRF Review: BKM Date: 9/1/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)



C. Earl Hunter, Commissioner

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



OCT 20 2011

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

Re: **Aggressive fluid and vapor recovery directive**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960, Cost Agreement # 42522  
Release reported October 3, 1974  
AFVR Report received October 14, 2011  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) recognizes your commitment to continue work at this site using Environmental Compliance Services, Inc. as your contractor. The next appropriate scope of work is to conduct aggressive fluid and vapor recovery (AFVR) events to remove residual free-phase product and reduce concentrations of chemicals of concern (CoC). Please have your contractor conduct two AFVR events on monitoring wells MW-1 and MW-22. The events should be spaced a minimum of one-month apart to allow equilibrium conditions to reestablish, and must be conducted in accordance with the UST Quality Assurance Program Plan (QAPP). A copy of the QAPP is available at <http://www.dhec.sc.gov/environment/lwm/html/ust.htm>.

Cost Agreement #42522 has been approved in the amount shown on the enclosed cost agreement form for the AFVR events. AFVR activities may proceed immediately upon receipt of this letter, and must be performed by a South Carolina-Certified Underground Storage Tank Site Rehabilitation Contractor. All applicable South Carolina certification requirements apply to preparation of an AFVR report.

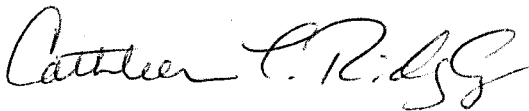
An AFVR report and invoice must be submitted to the Division within 90 days from the date of this letter. Your contractor may directly bill the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Interim invoices may not be submitted for this scope of work. If the invoice is not 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 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 SCDHEC 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. 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 Division grants pre-approval for transportation of up to 5,000 gallons of free-phase product and petroleum-contaminated groundwater from the referenced facility to a permitted treatment facility for disposal. The transport and disposal must be conducted in accordance with the QAPP.

On all correspondence concerning this facility, please reference UST Permit #07960. If there are any questions concerning this project, feel free to contact me by telephone at (803) 896-6633, by fax at (803) 896-6245, or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Approved cost agreement form

cc: ECS, Inc., PO Box 3528, Fort Mill, SC 29708 (w/enc)  
Technical File (w/enc)

# Approved Cost Agreement 42522

Facility: 07960 378 TRUCK STOP

RIDGLECT

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	2.0000	575.00	1,150.00
		B PERSONNEL	3.0000	290.00	870.00
17 DISPOSAL		B1 FREE PRODUCT	2,500.0000	0.85	2,125.00
19 RPT/PROJECT MNGT & COORDINATIO		PCT PERCENT	0.1500	10,705.00	1,605.75
23 EFR		A 8 HOUR EVENT	2.0000	3,000.00	6,000.00
		C OFF GAS TREATMENT	16.0000	35.00	560.00
<b>Total Amount</b>					<b>12,310.75</b>



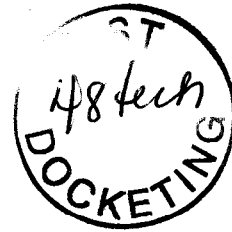
C. Earl Hunter, Commissioner

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

NOV 10 2011

**FRANK WILKERSON  
WILKERSON FUEL CO  
PO BOX 2835  
ROCK HILL SC 29732-4835**

Re: **GAC Carbon Change Directive**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit #07960, CA #42638  
Release Reported October 3, 1974  
Edgefield County



Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) recognizes your commitment to continue work at this site utilizing Environmental Compliance Services.

A carbon, gravel, and filter change is needed for water supply wells WSW-1 and WSW-8 as outlined in the UST Quality Assurance Program Plan (QAPP) is necessary. A copy of SCDHEC QAPP for the Underground Storage Tank Division is available at <http://www.dhec.sc.gov/environment/lwm/html/ust.htm>.

The carbon, gravel, and filter change should take place within seven days from the date of this correspondence and the final report submitted on or before December 9, 2011. Please note that all applicable South Carolina certification requirements apply to the services and report preparation. All site rehabilitation activities must be performed and submitted by a South Carolina Certified Underground Storage Tank Site Rehabilitation Contractor.

Cost Agreement #42638 has been approved in the amount shown on the enclosed cost agreement. Environmental Compliance Services can submit an invoice for direct billing from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. 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 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 is obtained from the UST Management Division. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be preapproved by the Division for the cost to be paid. The Division 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, the Division 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.

Page 2

On all correspondence concerning this site, please reference UST Permit #07960 and CA #42638. If you have any questions, please contact me at (803) 896-6584 or by e-mail at [minerrs@dhec.sc.gov](mailto:minerrs@dhec.sc.gov).

Sincerely,



Read S. Miner, P.G., Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Approved Cost Agreement

cc: Technical (with enclosure)  
Environmental Compliance Services, Inc., PO Box 3528, Fort Mill, SC 29708 (with enclosure)

# Approved Cost Agreement 42638

Facility: 07960 378 TRUCK STOP

RIDGLECT

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		B PERSONNEL	1.0000	290.00	290.00
19 RPT/PROJECT MNGT & COORDINATIO		PCT PERCENT	0.1500	1,190.00	178.50
24 GAC SYSTEM		C FILTER REPLACEMENT/REMOVAL	2.0000	450.00	900.00
<b>Total Amount</b>					<b>1,368.50</b>



C. Earl Hunter, Commissioner

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

KELLY MABERRY  
SHEALY ENVIRONMENTAL  
106 VANTAGE POINT DR  
WEST COLUMBIA SC 29172

NOV 15 2011



Re: Laboratory Analyses Approval  
Bid # IFB-5400003038-06/02/11-EMW; PO#4600107190

Dear Ms. Mayberry:

Under the terms and conditions of the referenced bid package, analytical sampling has been approved for the referenced facility. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order #4600107190 on the appropriate invoice submitted for payment against the facility.

UST Permit #	Facility	Analyses-Groundwater	CA #
07960	378 Truck Stop	4-BTEXMN, DCA, & Oxygenates	42645

If you have any questions or need further assistance, please contact me at (803) 896-6397 or [thomadl@dhec.sc.gov](mailto:thomadl@dhec.sc.gov).

Sincerely,

Debra L. Thoma, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land & Waste Management

Enc: Approved Cost Agreement

cc: Technical File (w/o enc.)



**Approved Cost Agreement 42645**

Facility: 07960 378 TRUCK STOP

RIDGLECT

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
11 ANALYSES					
	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	4.0000	35.00	140.00
		B RUSH BTEX+NAPTH+MTBE	4.0000	35.00	140.00
			<b>Total Amount</b>		<b>280.00</b>



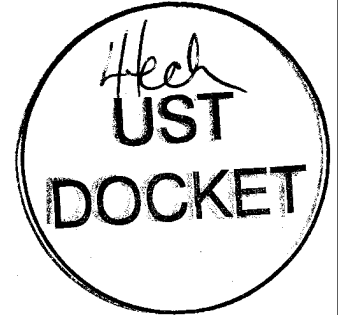
Pace Analytical Services, Inc.  
2225 Riverside Dr.  
Asheville, NC 28804  
(828)254-7176

*Callahan*  
Pace Analytical Services, Inc.  
9800 Kinney Ave. Suite 100  
Huntersville, NC 28078  
(704)875-9092

07960

June 18, 2010

Ms. Christine Dupuis  
Environmental Compliance Servi  
13504 South Point Blvd  
Charlotte, NC 28273



RE: Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Dear Ms. Dupuis:

Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

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

Sincerely,

Kevin Godwin for  
Kevin Herring  
kevin.herring@pacelabs.com  
Project Manager

Enclosures

**REPORT OF LABORATORY ANALYSIS**

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### CERTIFICATIONS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

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#### Charlotte Certification IDs

9800 Kinsey Ave. - Ste 100 Huntersville, NC 28078  
West Virginia Certification #: 357  
Connecticut Certification #: PH-0104  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Louisiana/LELAP Certification #: 04034  
New Jersey Certification #: NC012  
North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
Pennsylvania Certification #: 68-00784  
South Carolina Certification #: 99006001  
South Carolina Drinking Water Cert. #: 99006003  
Tennessee Certification #: 04010  
Virginia Certification #: 00213

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#### Asheville Certification IDs

2225 Riverside Dr. Asheville, NC 28804  
Connecticut Certification #: PH-0106  
Louisiana/LELAP Certification #: 03095  
Massachusetts Certification #: M-NC030  
New Jersey Certification #: NC011  
North Carolina Bioassay Certification #: 9  
North Carolina Drinking Water Certification #: 37712  
North Carolina Wastewater Certification #: 40

Pennsylvania Certification #: 68-03578  
South Carolina Bioassay Certification #: 9903002  
South Carolina Certification #: 9903001  
Tennessee Certification #: 2980  
Virginia Certification #: 00072  
West Virginia Certification #: 356  
Florida/NELAP Certification #: E87648

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### SAMPLE SUMMARY

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9270259001	MW-2	Water	05/25/10 19:00	05/26/10 16:45
9270259002	WSW-1	Water	05/24/10 10:55	05/26/10 16:45
9270259003	WSW-2	Water	05/24/10 11:25	05/26/10 16:45
9270259004	WSW-3	Water	05/24/10 11:45	05/26/10 16:45
9270259005	WSW-4	Water	05/24/10 12:00	05/26/10 16:45
9270259006	WSW-5	Water	05/24/10 13:05	05/26/10 16:45
9270259007	WSW-6	Water	05/24/10 13:45	05/26/10 16:45
9270259008	WSW-7	Water	05/24/10 14:00	05/26/10 16:45
9270259009	WSW-8	Water	05/24/10 15:25	05/26/10 16:45
9270259010	WSW-9	Water	05/24/10 15:45	05/26/10 16:45
9270259011	WSW-10	Water	05/24/10 16:10	05/26/10 16:45
9270259012	WSW-11	Water	05/24/10 16:35	05/26/10 16:45
9270259013	WSW-12	Water	05/24/10 16:59	05/26/10 16:45
9270259014	WSW-13	Water	05/25/10 11:15	05/26/10 16:45
9270259015	WSW-14	Water	05/25/10 11:30	05/26/10 16:45
9270259016	WSW-15	Water	05/25/10 11:55	05/26/10 16:45
9270259017	MW-3	Water	05/25/10 18:25	05/26/10 16:45
9270259018	MW-4	Water	05/25/10 19:25	05/26/10 16:45
9270259019	MW-5	Water	05/25/10 19:55	05/26/10 16:45
9270259020	MW-3 Soil	Solid	05/24/10 13:30	05/26/10 16:45

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 Asheville, NC 28804  
 (828)254-7176

Pace Analytical Services, Inc.  
 9800 Kinsey Ave. Suite 100  
 Huntersville, NC 28078  
 (704)875-9092

**SAMPLE ANALYTE COUNT**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 9270259

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9270259001	MW-2	EPA 8011	CAH	2	PASI-C
		EPA 8260	BLC	11	PASI-C
9270259002	WSW-1	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259003	WSW-2	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259004	WSW-3	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259005	WSW-4	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259006	WSW-5	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259007	WSW-6	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259008	WSW-7	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259009	WSW-8	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259010	WSW-9	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259011	WSW-10	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259012	WSW-11	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259013	WSW-12	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259014	WSW-13	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259015	WSW-14	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259016	WSW-15	EPA 8011	CAH	2	PASI-C
		EPA 8260	MCK	11	PASI-C
9270259017	MW-3	EPA 8011	CAH	2	PASI-C
		EPA 6010	JMW	1	PASI-A
		EPA 8270	PPM	21	PASI-C
		EPA 8260	KJM	12	PASI-C
		SM 3500-Fe D#4	SAJ	1	PASI-A

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**SAMPLE ANALYTE COUNT**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9270259018	MW-4	EPA 353.2	DMN	1	PASI-A
		SM 4500-CO2 D	SAJ	1	PASI-A
		EPA 8011	CAH	2	PASI-C
		EPA 6010	JMW	1	PASI-A
		EPA 8270	PPM	21	PASI-C
		EPA 8260	KJM	12	PASI-C
		SM 3500-Fe D#4	SAJ	1	PASI-A
9270259019	MW-5	EPA 353.2	DMN	1	PASI-A
		SM 4500-CO2 D	SAJ	1	PASI-A
		EPA 8011	CAH	2	PASI-C
		EPA 6010	JMW	1	PASI-A
		EPA 8270	PPM	21	PASI-C
		EPA 8260	KJM	12	PASI-C
		SM 3500-Fe D#4	SAJ	1	PASI-A
	EPA 353.2	DMN	1	PASI-A	
	SM 4500-CO2 D	SAJ	1	PASI-A	

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Sample: MW-2		Lab ID: 9270259001	Collected: 05/25/10 19:00	Received: 05/26/10 16:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	0.035 ug/L		0.021	0.021	1	06/02/10 08:48	06/02/10 15:59	106-93-4	
1-Chloro-2-bromopropane (S)	106 %		60-140		1	06/02/10 08:48	06/02/10 15:59	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	109 ug/L		5.0	1.2	1		06/03/10 12:40	71-43-2	
Ethylbenzene	114 ug/L		5.0	1.1	1		06/03/10 12:40	100-41-4	
Methyl-tert-butyl ether	ND ug/L		5.0	2.0	1		06/03/10 12:40	1634-04-4	
Naphthalene	50.6 ug/L		5.0	2.9	1		06/03/10 12:40	91-20-3	
Toluene	ND ug/L		5.0	1.8	1		06/03/10 12:40	108-88-3	
m&p-Xylene	312 ug/L		10.0	2.7	1		06/03/10 12:40	179601-23-1	
o-Xylene	ND ug/L		5.0	1.7	1		06/03/10 12:40	95-47-6	
4-Bromofluorobenzene (S)	96 %		70-130		1		06/03/10 12:40	460-00-4	
Dibromofluoromethane (S)	101 %		70-130		1		06/03/10 12:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		06/03/10 12:40	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		06/03/10 12:40	2037-26-5	

Sample: WSW-1		Lab ID: 9270259002	Collected: 05/24/10 10:55	Received: 05/26/10 16:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	05/28/10 04:00	05/29/10 13:35	106-93-4	
1-Chloro-2-bromopropane (S)	103 %		60-140		1	05/28/10 04:00	05/29/10 13:35	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	ND ug/L		5.0	1.2	1		06/02/10 15:48	71-43-2	
Ethylbenzene	ND ug/L		5.0	1.1	1		06/02/10 15:48	100-41-4	
Methyl-tert-butyl ether	ND ug/L		5.0	2.0	1		06/02/10 15:48	1634-04-4	
Naphthalene	ND ug/L		5.0	2.9	1		06/02/10 15:48	91-20-3	
Toluene	ND ug/L		5.0	1.8	1		06/02/10 15:48	108-88-3	
m&p-Xylene	ND ug/L		10.0	2.7	1		06/02/10 15:48	179601-23-1	
o-Xylene	ND ug/L		5.0	1.7	1		06/02/10 15:48	95-47-6	
4-Bromofluorobenzene (S)	92 %		70-130		1		06/02/10 15:48	460-00-4	
Dibromofluoromethane (S)	103 %		70-130		1		06/02/10 15:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	110 %		70-130		1		06/02/10 15:48	17060-07-0	
Toluene-d8 (S)	93 %		70-130		1		06/02/10 15:48	2037-26-5	

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 9270259

Sample: WSW-2		Lab ID: 9270259003		Collected: 05/24/10 11:25		Received: 05/26/10 16:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 14:36	106-93-4	
1-Chloro-2-bromopropane (S)	92 %		60-140		1	05/28/10 04:00	05/29/10 14:36	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 16:13	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 16:13	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 16:13	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 16:13	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 16:13	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 16:13	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 16:13	95-47-6	
4-Bromofluorobenzene (S)	93 %		70-130		1		06/02/10 16:13	460-00-4	
Dibromofluoromethane (S)	103 %		70-130		1		06/02/10 16:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	108 %		70-130		1		06/02/10 16:13	17060-07-0	
Toluene-d8 (S)	94 %		70-130		1		06/02/10 16:13	2037-26-5	

Sample: WSW-3		Lab ID: 9270259004		Collected: 05/24/10 11:45		Received: 05/26/10 16:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 15:16	106-93-4	
1-Chloro-2-bromopropane (S)	104 %		60-140		1	05/28/10 04:00	05/29/10 15:16	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 16:39	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 16:39	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 16:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 16:39	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 16:39	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 16:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 16:39	95-47-6	
4-Bromofluorobenzene (S)	97 %		70-130		1		06/02/10 16:39	460-00-4	
Dibromofluoromethane (S)	104 %		70-130		1		06/02/10 16:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	109 %		70-130		1		06/02/10 16:39	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		06/02/10 16:39	2037-26-5	



### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Sample: WSW-4		Lab ID: 9270259005		Collected: 05/24/10 12:00		Received: 05/26/10 16:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 15:36	106-93-4	
1-Chloro-2-bromopropane (S)	111	%	60-140		1	05/28/10 04:00	05/29/10 15:36	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 17:04	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 17:04	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 17:04	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 17:04	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 17:04	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 17:04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 17:04	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130		1		06/02/10 17:04	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		06/02/10 17:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		06/02/10 17:04	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		06/02/10 17:04	2037-26-5	

Sample: WSW-5		Lab ID: 9270259006		Collected: 05/24/10 13:05		Received: 05/26/10 16:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 15:56	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	05/28/10 04:00	05/29/10 15:56	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 17:30	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 17:30	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 17:30	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 17:30	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 17:30	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 17:30	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 17:30	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		06/02/10 17:30	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		06/02/10 17:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		06/02/10 17:30	17060-07-0	
Toluene-d8 (S)	89	%	70-130		1		06/02/10 17:30	2037-26-5	

**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

**Sample: WSW-6** Lab ID: 9270259007 Collected: 05/24/10 13:45 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	05/28/10 04:00	05/29/10 16:16	106-93-4	
1-Chloro-2-bromopropane (S)	103 %		60-140		1	05/28/10 04:00	05/29/10 16:16	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
Benzene	ND ug/L		5.0	1.2	1		06/02/10 17:56	71-43-2	
Ethylbenzene	ND ug/L		5.0	1.1	1		06/02/10 17:56	100-41-4	
Methyl-tert-butyl ether	ND ug/L		5.0	2.0	1		06/02/10 17:56	1634-04-4	
Naphthalene	ND ug/L		5.0	2.9	1		06/02/10 17:56	91-20-3	
Toluene	ND ug/L		5.0	1.8	1		06/02/10 17:56	108-88-3	
m&p-Xylene	ND ug/L		10.0	2.7	1		06/02/10 17:56	179601-23-1	
o-Xylene	ND ug/L		5.0	1.7	1		06/02/10 17:56	95-47-6	
4-Bromofluorobenzene (S)	90 %		70-130		1		06/02/10 17:56	460-00-4	
Dibromofluoromethane (S)	102 %		70-130		1		06/02/10 17:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	106 %		70-130		1		06/02/10 17:56	17060-07-0	
Toluene-d8 (S)	91 %		70-130		1		06/02/10 17:56	2037-26-5	

**Sample: WSW-7** Lab ID: 9270259008 Collected: 05/24/10 14:00 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	05/28/10 04:00	05/29/10 16:37	106-93-4	
1-Chloro-2-bromopropane (S)	108 %		60-140		1	05/28/10 04:00	05/29/10 16:37	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
Benzene	ND ug/L		5.0	1.2	1		06/02/10 18:21	71-43-2	
Ethylbenzene	ND ug/L		5.0	1.1	1		06/02/10 18:21	100-41-4	
Methyl-tert-butyl ether	ND ug/L		5.0	2.0	1		06/02/10 18:21	1634-04-4	
Naphthalene	ND ug/L		5.0	2.9	1		06/02/10 18:21	91-20-3	
Toluene	ND ug/L		5.0	1.8	1		06/02/10 18:21	108-88-3	
m&p-Xylene	ND ug/L		10.0	2.7	1		06/02/10 18:21	179601-23-1	
o-Xylene	ND ug/L		5.0	1.7	1		06/02/10 18:21	95-47-6	
4-Bromofluorobenzene (S)	96 %		70-130		1		06/02/10 18:21	460-00-4	
Dibromofluoromethane (S)	104 %		70-130		1		06/02/10 18:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	110 %		70-130		1		06/02/10 18:21	17060-07-0	
Toluene-d8 (S)	92 %		70-130		1		06/02/10 18:21	2037-26-5	

**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Sample: WSW-8		Lab ID: 9270259009		Collected: 05/24/10 15:25		Received: 05/26/10 16:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 16:57	106-93-4	
1-Chloro-2-bromopropane (S)	106	%	60-140		1	05/28/10 04:00	05/29/10 16:57	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 18:47	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 18:47	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 18:47	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 18:47	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 18:47	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 18:47	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 18:47	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		06/02/10 18:47	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		06/02/10 18:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		06/02/10 18:47	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		06/02/10 18:47	2037-26-5	

Sample: WSW-9		Lab ID: 9270259010		Collected: 05/24/10 15:45		Received: 05/26/10 16:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 17:17	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	05/28/10 04:00	05/29/10 17:17	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 19:12	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 19:12	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 19:12	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 19:12	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 19:12	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 19:12	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 19:12	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130		1		06/02/10 19:12	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		06/02/10 19:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		06/02/10 19:12	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		06/02/10 19:12	2037-26-5	

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Sample: **WSW-10** Lab ID: **9270259011** Collected: 05/24/10 16:10 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	05/28/10 04:00	05/29/10 17:38	106-93-4	
1-Chloro-2-bromopropane (S)	98 %		60-140		1	05/28/10 04:00	05/29/10 17:38	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
Benzene	ND ug/L		5.0	1.2	1		06/02/10 19:38	71-43-2	
Ethylbenzene	ND ug/L		5.0	1.1	1		06/02/10 19:38	100-41-4	
Methyl-tert-butyl ether	ND ug/L		5.0	2.0	1		06/02/10 19:38	1634-04-4	
Naphthalene	ND ug/L		5.0	2.9	1		06/02/10 19:38	91-20-3	
Toluene	ND ug/L		5.0	1.8	1		06/02/10 19:38	108-88-3	
m&p-Xylene	ND ug/L		10.0	2.7	1		06/02/10 19:38	179601-23-1	
o-Xylene	ND ug/L		5.0	1.7	1		06/02/10 19:38	95-47-6	
4-Bromofluorobenzene (S)	98 %		70-130		1		06/02/10 19:38	460-00-4	
Dibromofluoromethane (S)	105 %		70-130		1		06/02/10 19:38	1868-53-7	
1,2-Dichloroethane-d4 (S)	110 %		70-130		1		06/02/10 19:38	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		06/02/10 19:38	2037-26-5	

Sample: **WSW-11** Lab ID: **9270259012** Collected: 05/24/10 16:35 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	05/28/10 04:00	05/29/10 17:58	106-93-4	
1-Chloro-2-bromopropane (S)	103 %		60-140		1	05/28/10 04:00	05/29/10 17:58	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
Benzene	ND ug/L		5.0	1.2	1		06/02/10 20:03	71-43-2	
Ethylbenzene	ND ug/L		5.0	1.1	1		06/02/10 20:03	100-41-4	
Methyl-tert-butyl ether	ND ug/L		5.0	2.0	1		06/02/10 20:03	1634-04-4	
Naphthalene	ND ug/L		5.0	2.9	1		06/02/10 20:03	91-20-3	
Toluene	ND ug/L		5.0	1.8	1		06/02/10 20:03	108-88-3	
m&p-Xylene	ND ug/L		10.0	2.7	1		06/02/10 20:03	179601-23-1	
o-Xylene	ND ug/L		5.0	1.7	1		06/02/10 20:03	95-47-6	
4-Bromofluorobenzene (S)	95 %		70-130		1		06/02/10 20:03	460-00-4	
Dibromofluoromethane (S)	106 %		70-130		1		06/02/10 20:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	108 %		70-130		1		06/02/10 20:03	17060-07-0	
Toluene-d8 (S)	95 %		70-130		1		06/02/10 20:03	2037-26-5	



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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 9270259

Sample: WSW-12 Lab ID: 9270259013 Collected: 05/24/10 16:59 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 18:18	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	05/28/10 04:00	05/29/10 18:18	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 20:29	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 20:29	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 20:29	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 20:29	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 20:29	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 20:29	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 20:29	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		06/02/10 20:29	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		06/02/10 20:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		06/02/10 20:29	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		06/02/10 20:29	2037-26-5	

Sample: WSW-13 Lab ID: 9270259014 Collected: 05/25/10 11:15 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 18:38	106-93-4	
1-Chloro-2-bromopropane (S)	100	%	60-140		1	05/28/10 04:00	05/29/10 18:38	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 20:54	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 20:54	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 20:54	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 20:54	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 20:54	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 20:54	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 20:54	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130		1		06/02/10 20:54	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		06/02/10 20:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		06/02/10 20:54	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		06/02/10 20:54	2037-26-5	

Date: 06/18/2010 02:59 PM

**REPORT OF LABORATORY ANALYSIS**

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Sample: WSW-14 Lab ID: 9270259015 Collected: 05/25/10 11:30 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 18:58	106-93-4	
1-Chloro-2-bromopropane (S)	105	%	60-140		1	05/28/10 04:00	05/29/10 18:58	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 21:20	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 21:20	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 21:20	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 21:20	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 21:20	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 21:20	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 21:20	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130		1		06/02/10 21:20	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		06/02/10 21:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		06/02/10 21:20	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		06/02/10 21:20	2037-26-5	

Sample: WSW-15 Lab ID: 9270259016 Collected: 05/25/10 11:55 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	05/28/10 04:00	05/29/10 19:19	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	05/28/10 04:00	05/29/10 19:19	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Benzene	ND	ug/L	5.0	1.2	1		06/02/10 21:45	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		06/02/10 21:45	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/02/10 21:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/02/10 21:45	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		06/02/10 21:45	108-88-3	
m&p-Xylene	ND	ug/L	10.0	2.7	1		06/02/10 21:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		06/02/10 21:45	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		06/02/10 21:45	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		06/02/10 21:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		06/02/10 21:45	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		06/02/10 21:45	2037-26-5	

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

**Sample: MW-3**      **Lab ID: 9270259017**      Collected: 05/25/10 18:25      Received: 05/26/10 16:45      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	0.099	ug/L	0.020	0.020	1	06/02/10 08:50	06/02/10 22:47	106-93-4	
1-Chloro-2-bromopropane (S)	104	%	60-140		1	06/02/10 08:50	06/02/10 22:47	301-79-56	
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Lead	28.9	ug/L	5.0	4.0	1	06/01/10 17:30	06/04/10 01:39	7439-92-1	
<b>8270 MSSV PAH SC</b>									
Analytical Method: EPA 8270 Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	14.3	4.0	1	05/28/10 08:30	06/03/10 13:40	83-32-9	
Acenaphthylene	ND	ug/L	14.3	4.0	1	05/28/10 08:30	06/03/10 13:40	208-96-8	
Anthracene	ND	ug/L	14.3	4.1	1	05/28/10 08:30	06/03/10 13:40	120-12-7	
Benzo(a)anthracene	ND	ug/L	14.3	4.0	1	05/28/10 08:30	06/03/10 13:40	56-55-3	
Benzo(a)pyrene	ND	ug/L	14.3	4.4	1	05/28/10 08:30	06/03/10 13:40	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	14.3	5.1	1	05/28/10 08:30	06/03/10 13:40	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	14.3	4.4	1	05/28/10 08:30	06/03/10 13:40	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	14.3	4.3	1	05/28/10 08:30	06/03/10 13:40	207-08-9	
Chrysene	ND	ug/L	14.3	3.9	1	05/28/10 08:30	06/03/10 13:40	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	14.3	4.1	1	05/28/10 08:30	06/03/10 13:40	53-70-3	
Fluoranthene	ND	ug/L	14.3	4.1	1	05/28/10 08:30	06/03/10 13:40	206-44-0	
Fluorene	ND	ug/L	14.3	3.7	1	05/28/10 08:30	06/03/10 13:40	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	14.3	4.3	1	05/28/10 08:30	06/03/10 13:40	193-39-5	
1-Methylnaphthalene	25.5	ug/L	14.3	5.1	1	05/28/10 08:30	06/03/10 13:40	90-12-0	
2-Methylnaphthalene	57.8	ug/L	14.3	4.9	1	05/28/10 08:30	06/03/10 13:40	91-57-6	
Naphthalene	121	ug/L	14.3	5.4	1	05/28/10 08:30	06/03/10 13:40	91-20-3	
Phenanthrene	ND	ug/L	14.3	3.9	1	05/28/10 08:30	06/03/10 13:40	85-01-8	
Pyrene	ND	ug/L	14.3	4.1	1	05/28/10 08:30	06/03/10 13:40	129-00-0	
Nitrobenzene-d5 (S)	57	%	70-130		1	05/28/10 08:30	06/03/10 13:40	4165-60-0	S0
2-Fluorobiphenyl (S)	69	%	70-130		1	05/28/10 08:30	06/03/10 13:40	321-60-8	S0
Terphenyl-d14 (S)	62	%	70-130		1	05/28/10 08:30	06/03/10 13:40	1718-51-0	S0
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Benzene	239	ug/L	50.0	12.0	10		06/08/10 14:31	71-43-2	
1,2-Dichloroethane	126	ug/L	5.0	1.3	1		06/07/10 19:20	107-06-2	
Ethylbenzene	815	ug/L	50.0	11.0	10		06/08/10 14:31	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/07/10 19:20	1634-04-4	
Naphthalene	285	ug/L	50.0	29.0	10		06/08/10 14:31	91-20-3	
Toluene	139	ug/L	5.0	1.8	1		06/07/10 19:20	108-88-3	
m&p-Xylene	3600	ug/L	100	27.0	10		06/08/10 14:31	179601-23-1	
o-Xylene	1200	ug/L	50.0	17.0	10		06/08/10 14:31	95-47-6	
4-Bromofluorobenzene (S)	105	%	70-130		1		06/07/10 19:20	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		06/07/10 19:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		06/07/10 19:20	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		06/07/10 19:20	2037-26-5	
<b>Iron, Ferrous</b>									
Analytical Method: SM 3500-Fe D#4									
Iron, Ferrous	ND	mg/L	0.50	0.50	1		06/09/10 10:34		

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Sample: MW-3		Lab ID: 9270259017	Collected: 05/25/10 18:25	Received: 05/26/10 16:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		05/27/10 00:26		
<b>Carbon Dioxide Calculation</b>		Analytical Method: SM 4500-CO2 D							
Carbon dioxide	69.1	mg/L	5.0		1		06/09/10 10:42	124-38-9	

Sample: MW-4		Lab ID: 9270259018	Collected: 05/25/10 19:25	Received: 05/26/10 16:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	06/02/10 08:50	06/02/10 23:08	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	06/02/10 08:50	06/02/10 23:08	301-79-56	
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Lead	62.8	ug/L	5.0	4.0	1	06/01/10 17:30	06/04/10 01:43	7439-92-1	
<b>8270 MSSV PAH SC</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	13.3	3.7	1	05/28/10 08:30	06/03/10 14:08	83-32-9	
Acenaphthylene	ND	ug/L	13.3	3.7	1	05/28/10 08:30	06/03/10 14:08	208-96-8	
Anthracene	ND	ug/L	13.3	3.9	1	05/28/10 08:30	06/03/10 14:08	120-12-7	
Benzo(a)anthracene	ND	ug/L	13.3	3.7	1	05/28/10 08:30	06/03/10 14:08	56-55-3	
Benzo(a)pyrene	ND	ug/L	13.3	4.1	1	05/28/10 08:30	06/03/10 14:08	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	13.3	4.8	1	05/28/10 08:30	06/03/10 14:08	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	13.3	4.1	1	05/28/10 08:30	06/03/10 14:08	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	13.3	4.0	1	05/28/10 08:30	06/03/10 14:08	207-08-9	
Chrysene	ND	ug/L	13.3	3.6	1	05/28/10 08:30	06/03/10 14:08	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	13.3	3.9	1	05/28/10 08:30	06/03/10 14:08	53-70-3	
Fluoranthene	ND	ug/L	13.3	3.9	1	05/28/10 08:30	06/03/10 14:08	206-44-0	
Fluorene	ND	ug/L	13.3	3.5	1	05/28/10 08:30	06/03/10 14:08	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	13.3	4.0	1	05/28/10 08:30	06/03/10 14:08	193-39-5	
1-Methylnaphthalene	17.4	ug/L	13.3	4.8	1	05/28/10 08:30	06/03/10 14:08	90-12-0	
2-Methylnaphthalene	22.3	ug/L	13.3	4.5	1	05/28/10 08:30	06/03/10 14:08	91-57-6	
Naphthalene	8.6J	ug/L	13.3	5.1	1	05/28/10 08:30	06/03/10 14:08	91-20-3	
Phenanthrene	ND	ug/L	13.3	3.6	1	05/28/10 08:30	06/03/10 14:08	85-01-8	
Pyrene	ND	ug/L	13.3	3.9	1	05/28/10 08:30	06/03/10 14:08	129-00-0	
Nitrobenzene-d5 (S)	49	%	70-130		1	05/28/10 08:30	06/03/10 14:08	4165-60-0	S0
2-Fluorobiphenyl (S)	62	%	70-130		1	05/28/10 08:30	06/03/10 14:08	321-60-8	S0
Terphenyl-d14 (S)	61	%	70-130		1	05/28/10 08:30	06/03/10 14:08	1718-51-0	S0
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	2.9J	ug/L	5.0	1.2	1		06/07/10 19:02	71-43-2	
1,2-Dichloroethane	3.5J	ug/L	5.0	1.3	1		06/07/10 19:02	107-06-2	
Ethylbenzene	1.4J	ug/L	5.0	1.1	1		06/07/10 19:02	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/07/10 19:02	1634-04-4	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

**Sample: MW-4**      **Lab ID: 9270259018**      Collected: 05/25/10 19:25      Received: 05/26/10 16:45      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV</b> Analytical Method: EPA 8260									
Naphthalene	12.7 ug/L		5.0	2.9	1		06/07/10 19:02	91-20-3	
Toluene	ND ug/L		5.0	1.8	1		06/07/10 19:02	108-88-3	
m&p-Xylene	ND ug/L		10.0	2.7	1		06/07/10 19:02	179601-23-1	
o-Xylene	ND ug/L		5.0	1.7	1		06/07/10 19:02	95-47-6	
4-Bromofluorobenzene (S)	97 %		70-130		1		06/07/10 19:02	460-00-4	
Dibromofluoromethane (S)	106 %		70-130		1		06/07/10 19:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	107 %		70-130		1		06/07/10 19:02	17060-07-0	
Toluene-d8 (S)	102 %		70-130		1		06/07/10 19:02	2037-26-5	
<b>Iron, Ferrous</b> Analytical Method: SM 3500-Fe D#4									
Iron, Ferrous	ND mg/L		0.50	0.50	1		06/09/10 10:39		
<b>353.2 Nitrogen, NO2/NO3 unpres</b> Analytical Method: EPA 353.2									
Nitrogen, Nitrate	ND mg/L		0.10	0.10	1		05/27/10 00:27		
<b>Carbon Dioxide Calculation</b> Analytical Method: SM 4500-CO2 D									
Carbon dioxide	189 mg/L		5.0		1		06/09/10 10:42	124-38-9	

**Sample: MW-5**      **Lab ID: 9270259019**      Collected: 05/25/10 19:55      Received: 05/26/10 16:45      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	06/02/10 08:50	06/02/10 23:28	106-93-4	
1-Chloro-2-bromopropane (S)	100 %		60-140		1	06/02/10 08:50	06/02/10 23:28	301-79-56	
<b>6010 MET ICP</b> Analytical Method: EPA 6010      Preparation Method: EPA 3010									
Lead	11.8 ug/L		5.0	4.0	1	06/01/10 17:30	06/04/10 01:48	7439-92-1	
<b>8270 MSSV PAH SC</b> Analytical Method: EPA 8270      Preparation Method: EPA 3510									
Acenaphthene	ND ug/L		14.3	4.0	1	05/28/10 08:30	06/03/10 14:36	83-32-9	
Acenaphthylene	ND ug/L		14.3	4.0	1	05/28/10 08:30	06/03/10 14:36	208-96-8	
Anthracene	ND ug/L		14.3	4.1	1	05/28/10 08:30	06/03/10 14:36	120-12-7	
Benzo(a)anthracene	ND ug/L		14.3	4.0	1	05/28/10 08:30	06/03/10 14:36	56-55-3	
Benzo(a)pyrene	ND ug/L		14.3	4.4	1	05/28/10 08:30	06/03/10 14:36	50-32-8	
Benzo(b)fluoranthene	ND ug/L		14.3	5.1	1	05/28/10 08:30	06/03/10 14:36	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		14.3	4.4	1	05/28/10 08:30	06/03/10 14:36	191-24-2	
Benzo(k)fluoranthene	ND ug/L		14.3	4.3	1	05/28/10 08:30	06/03/10 14:36	207-08-9	
Chrysene	ND ug/L		14.3	3.9	1	05/28/10 08:30	06/03/10 14:36	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		14.3	4.1	1	05/28/10 08:30	06/03/10 14:36	53-70-3	
Fluoranthene	ND ug/L		14.3	4.1	1	05/28/10 08:30	06/03/10 14:36	206-44-0	
Fluorene	ND ug/L		14.3	3.7	1	05/28/10 08:30	06/03/10 14:36	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		14.3	4.3	1	05/28/10 08:30	06/03/10 14:36	193-39-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Sample: MW-5 Lab ID: 9270259019 Collected: 05/25/10 19:55 Received: 05/26/10 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH SC</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3510							
1-Methylnaphthalene	ND	ug/L	14.3	5.1	1	05/28/10 08:30	06/03/10 14:36	90-12-0	
2-Methylnaphthalene	ND	ug/L	14.3	4.9	1	05/28/10 08:30	06/03/10 14:36	91-57-6	
Naphthalene	ND	ug/L	14.3	5.4	1	05/28/10 08:30	06/03/10 14:36	91-20-3	
Phenanthrene	ND	ug/L	14.3	3.9	1	05/28/10 08:30	06/03/10 14:36	85-01-8	
Pyrene	ND	ug/L	14.3	4.1	1	05/28/10 08:30	06/03/10 14:36	129-00-0	
Nitrobenzene-d5 (S)	47	%	70-130		1	05/28/10 08:30	06/03/10 14:36	4165-60-0	SO
2-Fluorobiphenyl (S)	58	%	70-130		1	05/28/10 08:30	06/03/10 14:36	321-60-8	SO
Terphenyl-d14 (S)	67	%	70-130		1	05/28/10 08:30	06/03/10 14:36	1718-51-0	SO
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	3.6J	ug/L	5.0	1.2	1		06/07/10 17:30	71-43-2	pH
1,2-Dichloroethane	4.8J	ug/L	5.0	1.3	1		06/07/10 17:30	107-06-2	
Ethylbenzene	4.0J	ug/L	5.0	1.1	1		06/07/10 17:30	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		06/07/10 17:30	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		06/07/10 17:30	91-20-3	
Toluene	1.8J	ug/L	5.0	1.8	1		06/07/10 17:30	108-88-3	
m&p-Xylene	16.8	ug/L	10.0	2.7	1		06/07/10 17:30	179601-23-1	
o-Xylene	5.5	ug/L	5.0	1.7	1		06/07/10 17:30	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130		1		06/07/10 17:30	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		06/07/10 17:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		06/07/10 17:30	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		06/07/10 17:30	2037-26-5	
<b>Iron, Ferrous</b>		Analytical Method: SM 3500-Fe D#4							
Iron, Ferrous	ND	mg/L	0.50	0.50	1		06/09/10 10:39		
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.10	0.10	1		05/27/10 00:28		
<b>Carbon Dioxide Calculation</b>		Analytical Method: SM 4500-CO2 D							
Carbon dioxide	129	mg/L	5.0		1		06/09/10 10:42	124-38-9	

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: OEXT/10154 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 9270259002, 9270259003, 9270259004, 9270259005, 9270259006, 9270259007, 9270259008, 9270259009, 9270259010, 9270259011, 9270259012, 9270259013, 9270259014, 9270259015, 9270259016

METHOD BLANK: 449368 Matrix: Water  
Associated Lab Samples: 9270259002, 9270259003, 9270259004, 9270259005, 9270259006, 9270259007, 9270259008, 9270259009, 9270259010, 9270259011, 9270259012, 9270259013, 9270259014, 9270259015, 9270259016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	05/29/10 12:14	
1-Chloro-2-bromopropane (S)	%	107	60-140	05/29/10 12:14	

LABORATORY CONTROL SAMPLE & LCSD: 449369 449374

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.31	0.30	106	104	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				107	105	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 449370 449371

Parameter	Units	9270259002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.29	.29	0.30	0.30	106	106	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						102	100	60-140			

SAMPLE DUPLICATE: 449372

Parameter	Units	9270259003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	92	103	12		

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: OEXT/10169 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 9270259001, 9270259017, 9270259018, 9270259019

METHOD BLANK: 450269 Matrix: Water  
Associated Lab Samples: 9270259001, 9270259017, 9270259018, 9270259019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	06/02/10 14:59	
1-Chloro-2-bromopropane (S)	%	99	60-140	06/02/10 14:59	

LABORATORY CONTROL SAMPLE & LCSD: 450270

450271

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.26	0.27	92	98	60-140	4	20	
1-Chloro-2-bromopropane (S)	%				100	101	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 450272

450273

Parameter	Units	9270259001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	0.035	.29	.29	0.34	0.34	106	108	60-140	1	20
1-Chloro-2-bromopropane (S)	%						108	109	60-140		

SAMPLE DUPLICATE: 450274

Parameter	Units	9270498007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	100	102	7		

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: MPRP/6439 Analysis Method: EPA 6010  
QC Batch Method: EPA 3010 Analysis Description: 6010 MET  
Associated Lab Samples: 9270259017, 9270259018, 9270259019

METHOD BLANK: 450156 Matrix: Water

Associated Lab Samples: 9270259017, 9270259018, 9270259019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	06/04/10 00:26	

LABORATORY CONTROL SAMPLE: 450157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	491	98	80-120	

MATRIX SPIKE SAMPLE: 450158

Parameter	Units	9270258012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	491	98	75-125	

SAMPLE DUPLICATE: 450159

Parameter	Units	9270258013 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: OEXT/10152 Analysis Method: EPA 8270  
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH MSSV SC  
Associated Lab Samples: 9270259017, 9270259018, 9270259019

METHOD BLANK: 449258 Matrix: Water  
Associated Lab Samples: 9270259017, 9270259018, 9270259019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	ND	10.0	06/02/10 08:59	
2-Methylnaphthalene	ug/L	ND	10.0	06/02/10 08:59	
Acenaphthene	ug/L	ND	10.0	06/02/10 08:59	
Acenaphthylene	ug/L	ND	10.0	06/02/10 08:59	
Anthracene	ug/L	ND	10.0	06/02/10 08:59	
Benzo(a)anthracene	ug/L	ND	10.0	06/02/10 08:59	
Benzo(a)pyrene	ug/L	ND	10.0	06/02/10 08:59	
Benzo(b)fluoranthene	ug/L	ND	10.0	06/02/10 08:59	
Benzo(g,h,i)perylene	ug/L	ND	10.0	06/02/10 08:59	
Benzo(k)fluoranthene	ug/L	ND	10.0	06/02/10 08:59	
Chrysene	ug/L	ND	10.0	06/02/10 08:59	
Dibenz(a,h)anthracene	ug/L	ND	10.0	06/02/10 08:59	
Fluoranthene	ug/L	ND	10.0	06/02/10 08:59	
Fluorene	ug/L	ND	10.0	06/02/10 08:59	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	06/02/10 08:59	
Naphthalene	ug/L	ND	10.0	06/02/10 08:59	
Phenanthrene	ug/L	ND	10.0	06/02/10 08:59	
Pyrene	ug/L	ND	10.0	06/02/10 08:59	
2-Fluorobiphenyl (S)	%	52	70-130	06/02/10 08:59	SO
Nitrobenzene-d5 (S)	%	51	70-130	06/02/10 08:59	SO
Terphenyl-d14 (S)	%	59	70-130	06/02/10 08:59	SO

LABORATORY CONTROL SAMPLE: 449259

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	50	24.3	49	70-130	
2-Methylnaphthalene	ug/L	50	24.3	49	70-130	
Acenaphthene	ug/L	50	26.1	52	70-130	
Acenaphthylene	ug/L	50	25.6	51	70-130	
Anthracene	ug/L	50	29.6	59	70-130	
Benzo(a)anthracene	ug/L	50	29.0	58	70-130	
Benzo(a)pyrene	ug/L	50	27.6	55	70-130	
Benzo(b)fluoranthene	ug/L	50	28.7	57	70-130	
Benzo(g,h,i)perylene	ug/L	50	31.1	62	70-130	
Benzo(k)fluoranthene	ug/L	50	29.8	60	70-130	
Chrysene	ug/L	50	29.4	59	70-130	
Dibenz(a,h)anthracene	ug/L	50	32.1	64	70-130	
Fluoranthene	ug/L	50	35.1	70	70-130	
Fluorene	ug/L	50	29.3	59	70-130	
Indeno(1,2,3-cd)pyrene	ug/L	50	31.6	63	70-130	
Naphthalene	ug/L	50	23.0	46	70-130	1g,L2

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 9270259

LABORATORY CONTROL SAMPLE: 449259

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/L	50	29.3	59	70-130	
Pyrene	ug/L	50	26.4	53	70-130	
2-Fluorobiphenyl (S)	%			48	70-130	S0
Nitrobenzene-d5 (S)	%			44	70-130	S0
Terphenyl-d14 (S)	%			53	70-130	S0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 449260 449261

Parameter	Units	9270161006		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
1-Methylnaphthalene	ug/L	ND	125	125	78.1	92.2	63	74	70-130	17	30	
2-Methylnaphthalene	ug/L	ND	125	125	76.9	88.5	62	71	70-130	14	30	
Acenaphthene	ug/L	ND	125	125	84.1	96.6	67	77	70-130	14	30	
Acenaphthylene	ug/L	ND	125	125	80.7	93.6	65	75	70-130	15	30	
Anthracene	ug/L	ND	125	125	85.2	99.2	68	79	70-130	15	30	
Benzo(a)anthracene	ug/L	ND	125	125	77.1	92.1	62	74	70-130	18	30	
Benzo(a)pyrene	ug/L	ND	125	125	74.0	85.6	59	68	70-130	15	30	MO
Benzo(b)fluoranthene	ug/L	ND	125	125	73.3	87.8	59	70	70-130	18	30	
Benzo(g,h,i)perylene	ug/L	ND	125	125	84.4	96.6	67	77	70-130	13	30	
Benzo(k)fluoranthene	ug/L	ND	125	125	78.7	85.9	63	69	70-130	9	30	MO
Chrysene	ug/L	ND	125	125	78.3	91.6	63	73	70-130	16	30	
Dibenz(a,h)anthracene	ug/L	ND	125	125	85.7	100	69	80	70-130	16	30	
Fluoranthene	ug/L	ND	125	125	91.4	99.3	73	79	70-130	8	30	
Fluorene	ug/L	ND	125	125	83.6	97.4	67	78	70-130	15	30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	125	125	85.2	99.1	68	79	70-130	15	30	
Naphthalene	ug/L	ND	125	125	75.9	85.4	61	68	70-130	12	30	MO
Phenanthrene	ug/L	ND	125	125	81.0	95.4	65	76	70-130	16	30	
Pyrene	ug/L	ND	125	125	69.1	86.7	55	69	70-130	23	30	MO
2-Fluorobiphenyl (S)	%						64	71	70-130			S0
Nitrobenzene-d5 (S)	%						59	66	70-130			S0
Terphenyl-d14 (S)	%						47	57	70-130			S0



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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 9270259

QC Batch: MSV/11107 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 9270259002, 9270259003, 9270259004, 9270259005, 9270259006, 9270259007, 9270259008, 9270259009, 9270259010, 9270259011, 9270259012, 9270259013, 9270259014, 9270259015, 9270259016

METHOD BLANK: 450575 Matrix: Water  
 Associated Lab Samples: 9270259002, 9270259003, 9270259004, 9270259005, 9270259006, 9270259007, 9270259008, 9270259009, 9270259010, 9270259011, 9270259012, 9270259013, 9270259014, 9270259015, 9270259016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	06/02/10 15:22	
Ethylbenzene	ug/L	ND	5.0	06/02/10 15:22	
m&p-Xylene	ug/L	ND	10.0	06/02/10 15:22	
Methyl-tert-butyl ether	ug/L	ND	5.0	06/02/10 15:22	
Naphthalene	ug/L	ND	5.0	06/02/10 15:22	
o-Xylene	ug/L	ND	5.0	06/02/10 15:22	
Toluene	ug/L	ND	5.0	06/02/10 15:22	
1,2-Dichloroethane-d4 (S)	%	104	70-130	06/02/10 15:22	
4-Bromofluorobenzene (S)	%	95	70-130	06/02/10 15:22	
Dibromofluoromethane (S)	%	100	70-130	06/02/10 15:22	
Toluene-d8 (S)	%	93	70-130	06/02/10 15:22	

LABORATORY CONTROL SAMPLE: 450576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	49.4	99	70-130	
Ethylbenzene	ug/L	50	49.4	99	70-130	
m&p-Xylene	ug/L	100	99.1	99	70-130	
Methyl-tert-butyl ether	ug/L	50	43.4	87	70-130	
Naphthalene	ug/L	50	49.3	99	70-130	
o-Xylene	ug/L	50	49.1	98	70-130	
Toluene	ug/L	50	42.9	86	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Dibromofluoromethane (S)	%			92	70-130	
Toluene-d8 (S)	%			93	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 450577 450578

Parameter	Units	9270258032 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Benzene	ug/L	ND	50	51.4	50	49.7	103	99	70-130	3	30	
Ethylbenzene	ug/L	ND	50	52.6	50	53.5	105	107	70-130	2	30	
m&p-Xylene	ug/L	ND	100	104	100	106	104	106	70-130	2	30	
Methyl-tert-butyl ether	ug/L	ND	50	46.4	50	48.1	93	96	70-130	3	30	
Naphthalene	ug/L	ND	50	50.2	50	52.3	100	105	70-130	4	30	
o-Xylene	ug/L	ND	50	52.3	50	53.1	105	106	70-130	1	30	
Toluene	ug/L	ND	50	48.7	50	46.7	97	93	70-130	4	30	

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Parameter	Units	9270258032		450577		450578		% Rec	% Rec	% Rec	Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
1,2-Dichloroethane-d4 (S)	%							107	113	70-130			
4-Bromofluorobenzene (S)	%							101	100	70-130			
Dibromofluoromethane (S)	%							102	107	70-130			
Toluene-d8 (S)	%							100	97	70-130			

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: MSV/11112      Analysis Method: EPA 8260  
QC Batch Method: EPA 8260      Analysis Description: 8260 MSV SC  
Associated Lab Samples: 9270259001

METHOD BLANK: 451025      Matrix: Water  
Associated Lab Samples: 9270259001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	06/03/10 12:04	
Ethylbenzene	ug/L	ND	5.0	06/03/10 12:04	
m&p-Xylene	ug/L	ND	10.0	06/03/10 12:04	
Methyl-tert-butyl ether	ug/L	ND	5.0	06/03/10 12:04	
Naphthalene	ug/L	ND	5.0	06/03/10 12:04	
o-Xylene	ug/L	ND	5.0	06/03/10 12:04	
Toluene	ug/L	ND	5.0	06/03/10 12:04	
1,2-Dichloroethane-d4 (S)	%	102	70-130	06/03/10 12:04	
4-Bromofluorobenzene (S)	%	94	70-130	06/03/10 12:04	
Dibromofluoromethane (S)	%	96	70-130	06/03/10 12:04	
Toluene-d8 (S)	%	98	70-130	06/03/10 12:04	

METHOD BLANK: 452583      Matrix: Water  
Associated Lab Samples: 9270259001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	06/07/10 13:54	
Ethylbenzene	ug/L	ND	5.0	06/07/10 13:54	
m&p-Xylene	ug/L	ND	10.0	06/07/10 13:54	
Methyl-tert-butyl ether	ug/L	ND	5.0	06/07/10 13:54	
Naphthalene	ug/L	ND	5.0	06/07/10 13:54	
o-Xylene	ug/L	ND	5.0	06/07/10 13:54	
Toluene	ug/L	ND	5.0	06/07/10 13:54	
1,2-Dichloroethane-d4 (S)	%	101	70-130	06/07/10 13:54	
4-Bromofluorobenzene (S)	%	97	70-130	06/07/10 13:54	
Dibromofluoromethane (S)	%	91	70-130	06/07/10 13:54	
Toluene-d8 (S)	%	98	70-130	06/07/10 13:54	

LABORATORY CONTROL SAMPLE: 451026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	45.5	91	70-130	
Ethylbenzene	ug/L	50	45.7	91	70-130	
m&p-Xylene	ug/L	100	91.8	92	70-130	
Methyl-tert-butyl ether	ug/L	50	44.9	90	70-130	
Naphthalene	ug/L	50	48.8	98	70-130	
o-Xylene	ug/L	50	45.6	91	70-130	
Toluene	ug/L	50	46.2	92	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

LABORATORY CONTROL SAMPLE: 451026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			101	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 451027 451028

Parameter	Units	451027		451028		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
		9270259001 Result	MS Spike Conc.	MSD Spike Conc.	RPD						RPD		
Benzene	ug/L	109	50	50	165	149	113	79	70-130	11	30		
Ethylbenzene	ug/L	114	50	50	163	147	98	65	70-130	11	30		
m&p-Xylene	ug/L	312	100	100	409	366	97	54	70-130	11	30	E,MO	
Methyl-tert-butyl ether	ug/L	ND	50	50	55.8	48.4	112	97	70-130	14	30		
Naphthalene	ug/L	50.6	50	50	148	111	196	121	70-130	29	30	MO	
o-Xylene	ug/L	ND	50	50	58.3	50.3	116	100	70-130	15	30		
Toluene	ug/L	ND	50	50	58.3	52.7	115	104	70-130	10	30		
1,2-Dichloroethane-d4 (S)	%						103	103	70-130				
4-Bromofluorobenzene (S)	%						100	101	70-130				
Dibromofluoromethane (S)	%						99	98	70-130				
Toluene-d8 (S)	%						101	100	70-130				

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: MSV/11161 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 9270259017, 9270259018, 9270259019

METHOD BLANK: 452468 Matrix: Water  
Associated Lab Samples: 9270259017, 9270259018, 9270259019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	06/07/10 11:54	
Benzene	ug/L	ND	5.0	06/07/10 11:54	
Ethylbenzene	ug/L	ND	5.0	06/07/10 11:54	
m&p-Xylene	ug/L	ND	10.0	06/07/10 11:54	
Methyl-tert-butyl ether	ug/L	ND	5.0	06/07/10 11:54	
Naphthalene	ug/L	ND	5.0	06/07/10 11:54	
o-Xylene	ug/L	ND	5.0	06/07/10 11:54	
Toluene	ug/L	ND	5.0	06/07/10 11:54	
1,2-Dichloroethane-d4 (S)	%	102	70-130	06/07/10 11:54	
4-Bromofluorobenzene (S)	%	101	70-130	06/07/10 11:54	
Dibromofluoromethane (S)	%	99	70-130	06/07/10 11:54	
Toluene-d8 (S)	%	102	70-130	06/07/10 11:54	

METHOD BLANK: 453377 Matrix: Water  
Associated Lab Samples: 9270259017, 9270259018, 9270259019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	06/08/10 11:56	
Benzene	ug/L	ND	5.0	06/08/10 11:56	
Ethylbenzene	ug/L	ND	5.0	06/08/10 11:56	
m&p-Xylene	ug/L	ND	10.0	06/08/10 11:56	
Methyl-tert-butyl ether	ug/L	ND	5.0	06/08/10 11:56	
Naphthalene	ug/L	ND	5.0	06/08/10 11:56	
o-Xylene	ug/L	ND	5.0	06/08/10 11:56	
Toluene	ug/L	ND	5.0	06/08/10 11:56	
1,2-Dichloroethane-d4 (S)	%	101	70-130	06/08/10 11:56	
4-Bromofluorobenzene (S)	%	100	70-130	06/08/10 11:56	
Dibromofluoromethane (S)	%	102	70-130	06/08/10 11:56	
Toluene-d8 (S)	%	100	70-130	06/08/10 11:56	

LABORATORY CONTROL SAMPLE: 452469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.7	99	70-130	
Benzene	ug/L	50	47.1	94	70-130	
Ethylbenzene	ug/L	50	47.5	95	70-130	
m&p-Xylene	ug/L	100	94.6	95	70-130	
Methyl-tert-butyl ether	ug/L	50	45.0	90	70-130	
Naphthalene	ug/L	50	44.0	88	70-130	

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

LABORATORY CONTROL SAMPLE: 452469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
o-Xylene	ug/L	50	46.6	93	70-130	
Toluene	ug/L	50	47.5	95	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Dibromofluoromethane (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 452470 452471

Parameter	Units	9270797007		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
1,2-Dichloroethane	ug/L	ND	50	50	54.4	51.9	109	104	70-130	5	30	
Benzene	ug/L	ND	50	50	51.7	49.5	103	99	70-130	4	30	
Ethylbenzene	ug/L	ND	50	50	48.7	47.2	97	94	70-130	3	30	
m&p-Xylene	ug/L	ND	100	100	97.0	94.1	97	94	70-130	3	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	51.0	48.4	101	96	70-130	5	30	
Naphthalene	ug/L	ND	50	50	50.2	49.1	100	98	70-130	2	30	
o-Xylene	ug/L	ND	50	50	48.4	47.9	97	96	70-130	1	30	
Toluene	ug/L	ND	50	50	52.3	49.7	105	99	70-130	5	30	
1,2-Dichloroethane-d4 (S)	%						107	102	70-130			
4-Bromofluorobenzene (S)	%						100	100	70-130			
Dibromofluoromethane (S)	%						101	101	70-130			
Toluene-d8 (S)	%						104	100	70-130			

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: WET/12676 Analysis Method: SM 3500-Fe D#4  
QC Batch Method: SM 3500-Fe D#4 Analysis Description: Iron, Ferrous  
Associated Lab Samples: 9270259017

METHOD BLANK: 453370 Matrix: Water  
Associated Lab Samples: 9270259017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	06/09/10 10:03	

LABORATORY CONTROL SAMPLE: 453371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.5	98	90-110	

SAMPLE DUPLICATE: 453372

Parameter	Units	9269964001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND		20	

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: WET/12677      Analysis Method: SM 3500-Fe D#4  
QC Batch Method: SM 3500-Fe D#4      Analysis Description: Iron, Ferrous  
Associated Lab Samples: 9270259018, 9270259019

METHOD BLANK: 453373      Matrix: Water  
Associated Lab Samples: 9270259018, 9270259019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	06/09/10 10:36	

LABORATORY CONTROL SAMPLE: 453374

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.5	99	90-110	

SAMPLE DUPLICATE: 453375

Parameter	Units	9270579003 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND		20	

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

QC Batch: WETA/7438 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.  
Associated Lab Samples: 9270259017, 9270259018, 9270259019

METHOD BLANK: 448197 Matrix: Water

Associated Lab Samples: 9270259017, 9270259018, 9270259019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	05/27/10 00:03	

LABORATORY CONTROL SAMPLE: 448198

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE SAMPLE: 448199

Parameter	Units	9269964011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	5	4.9	98	90-110	

MATRIX SPIKE SAMPLE: 448201

Parameter	Units	9270132001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	5	5.2	103	90-110	

SAMPLE DUPLICATE: 448200

Parameter	Units	9269964011 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 448202

Parameter	Units	9270132001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		20	



## QUALIFIERS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

- 1g This comment applies to all compounds except Fluoranthene.
- E Analyte concentration exceeded the calibration range. The reported result is estimated.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- S0 Surrogate recovery outside laboratory control limits.
- pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
9270259001	MW-2	EPA 8011	OEXT/10169	EPA 8011	GCSV/7767
9270259002	WSW-1	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259003	WSW-2	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259004	WSW-3	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259005	WSW-4	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259006	WSW-5	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259007	WSW-6	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259008	WSW-7	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259009	WSW-8	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259010	WSW-9	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259011	WSW-10	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259012	WSW-11	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259013	WSW-12	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259014	WSW-13	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259015	WSW-14	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259016	WSW-15	EPA 8011	OEXT/10154	EPA 8011	GCSV/7755
9270259017	MW-3	EPA 8011	OEXT/10169	EPA 8011	GCSV/7767
9270259018	MW-4	EPA 8011	OEXT/10169	EPA 8011	GCSV/7767
9270259019	MW-5	EPA 8011	OEXT/10169	EPA 8011	GCSV/7767
9270259017	MW-3	EPA 3010	MPRP/6439	EPA 6010	ICP/5944
9270259018	MW-4	EPA 3010	MPRP/6439	EPA 6010	ICP/5944
9270259019	MW-5	EPA 3010	MPRP/6439	EPA 6010	ICP/5944
9270259017	MW-3	EPA 3510	OEXT/10152	EPA 8270	MSSV/3635
9270259018	MW-4	EPA 3510	OEXT/10152	EPA 8270	MSSV/3635
9270259019	MW-5	EPA 3510	OEXT/10152	EPA 8270	MSSV/3635
9270259001	MW-2	EPA 8260	MSV/11112		
9270259002	WSW-1	EPA 8260	MSV/11107		
9270259003	WSW-2	EPA 8260	MSV/11107		
9270259004	WSW-3	EPA 8260	MSV/11107		
9270259005	WSW-4	EPA 8260	MSV/11107		
9270259006	WSW-5	EPA 8260	MSV/11107		
9270259007	WSW-6	EPA 8260	MSV/11107		
9270259008	WSW-7	EPA 8260	MSV/11107		
9270259009	WSW-8	EPA 8260	MSV/11107		
9270259010	WSW-9	EPA 8260	MSV/11107		
9270259011	WSW-10	EPA 8260	MSV/11107		
9270259012	WSW-11	EPA 8260	MSV/11107		
9270259013	WSW-12	EPA 8260	MSV/11107		
9270259014	WSW-13	EPA 8260	MSV/11107		
9270259015	WSW-14	EPA 8260	MSV/11107		
9270259016	WSW-15	EPA 8260	MSV/11107		
9270259017	MW-3	EPA 8260	MSV/11161		
9270259018	MW-4	EPA 8260	MSV/11161		
9270259019	MW-5	EPA 8260	MSV/11161		
9270259017	MW-3	SM 3500-Fe D#4	WET/12676		

Date: 06/18/2010 02:59 PM

**REPORT OF LABORATORY ANALYSIS**

Page 33 of 34

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 378 Truck Stop 14-214210  
Pace Project No.: 9270259

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
9270259018	MW-4	SM 3500-Fe D#4	WET/12677		
9270259019	MW-5	SM 3500-Fe D#4	WET/12677		
9270259017	MW-3	EPA 353.2	WETA/7438		
9270259018	MW-4	EPA 353.2	WETA/7438		
9270259019	MW-5	EPA 353.2	WETA/7438		
9270259017	MW-3	SM 4500-CO2 D	WETA/7522		
9270259018	MW-4	SM 4500-CO2 D	WETA/7522		
9270259019	MW-5	SM 4500-CO2 D	WETA/7522		



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway, Norcross, GA 30092  
(770) 734-4200 FAX (770) 734-4201

## Laboratory Report

Prepared For:

Pace Analytical Services Inc. - Huntersville  
9800 Kincey Avenue  
Huntersville, NC 28078

Attention: Mr. Kevin Herring

Report Number: ATE0847

June 03, 2010

Project: 378 Truck Stop 14-214210

Project #:9270259

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:

Project Manager

This report may not be reproduced, except in full, without written approval from Analytical Services, Inc. Analytical Services, Inc. certifies that the following analytical results meet all requirements of the National Environmental Laboratory Accreditation Conference (NELAC).  
All test results relate only to the samples analyzed.



## ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway, Norcross, GA 30092  
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Pace Analytical Services Inc. - Huntersv  
9800 Kincey Avenue  
Huntersville NC, 28078  
Attention: Mr. Kevin Herring

June 03, 2010

### ANALYTICAL REPORT FOR SAMPLES

<u>Sample ID</u>	<u>Laboratory ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
MW-3/ 9270259017	ATE0847-01	Water	05/25/10 18:25	05/28/10 09:20
MW-4/ 9270259018	ATE0847-02	Water	05/25/10 19:25	05/28/10 09:20
MW-5/ 9270259019	ATE0847-03	Water	05/25/10 19:55	05/28/10 09:20



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Pace Analytical Services Inc. - Huntersv  
9800 Kinsey Avenue  
Huntersville NC, 28078  
Attention: Mr. Kevin Herring

June 03, 2010

Report No.: ATE0847

Project: 378 Truck Stop 14-214210

Client ID: MW-3/ 9270259017

Lab Number ID: ATE0847-01

Date/Time Sampled: 5/25/2010 6:25:00PM

Date/Time Received: 5/28/2010 9:20:00AM

Matrix: Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Inorganic Anions</b>										
Sulfate	5.8	1.0	mg/L	EPA 9056A		1	6/02/10 1:24	6/02/10 1:24	0060060	EMR
<b>Semivolatile Organics</b>										
Diesel Range Organics	2.3	0.2	mg/L	EPA 8015C	QM-01	1	6/01/10 11:30	6/01/10 17:43	0060009	JRS-8
Surrogate: <i>n</i> -Decane	122 %	10-112		EPA 8015C	S-04		6/01/10 11:30	6/1/10 17:43	0060009	
Surrogate: <i>n</i> -Octacosane	76 %	10-180		EPA 8015C			6/01/10 11:30	6/1/10 17:43	0060009	



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9800 Kinsey Avenue  
Huntersville NC, 28078  
Attention: Mr. Kevin Herring

June 03, 2010

Report No.: ATE0847

Project: 378 Truck Stop 14-214210

Client ID: MW-4/ 9270259018

Lab Number ID: ATE0847-02

Date/Time Sampled: 5/25/2010 7:25:00PM

Date/Time Received: 5/28/2010 9:20:00AM

Matrix: Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Inorganic Anions</b>										
Sulfate	2.8	1.0	mg/L	EPA 9056A		1	6/02/10 1:44	6/02/10 1:44	0060060	EMR
<b>Semivolatile Organics</b>										
Diesel Range Organics	2.0	0.2	mg/L	EPA 8015C		1	6/01/10 11:30	6/01/10 18:06	0060009	JRS-8
Surrogate: n-Decane	67 %	10-112		EPA 8015C			6/01/10 11:30	6/1/10 18:06	0060009	
Surrogate: n-Octacosane	82 %	10-180		EPA 8015C			6/01/10 11:30	6/1/10 18:06	0060009	



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9800 Kincey Avenue  
Huntersville NC, 28078  
Attention: Mr. Kevin Herring

June 03, 2010

Report No.: ATE0847

Project: 378 Truck Stop 14-214210

Client ID: MW-5/ 9270259019

Lab Number ID: ATE0847-03

Date/Time Sampled: 5/25/2010 7:55:00PM

Date/Time Received: 5/28/2010 9:20:00AM

Matrix: Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
<b>Inorganic Anions</b>										
Sulfate	3.3	1.0	mg/L	EPA 9056A		1	6/02/10 2:05	6/02/10 2:05	0060060	EMR
<b>Semivolatile Organics</b>										
Diesel Range Organics	0.4	0.2	mg/L	EPA 8015C		1	6/01/10 11:30	6/01/10 18:28	0060009	JRS-8
Surrogate: <i>n</i> -Decane	66 %	10-112		EPA 8015C			6/01/10 11:30	6/1/10 18:28	0060009	
Surrogate: <i>n</i> -Octacosane	91 %	10-180		EPA 8015C			6/01/10 11:30	6/1/10 18:28	0060009	





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Pace Analytical Services Inc. - Huntersv  
9800 Kinsey Avenue  
Huntersville NC, 28078  
Attention: Mr. Kevin Herring

June 03, 2010

Report No.: ATE0847

## Inorganic Anions - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
<b>Batch 0060060 - EPA 9056A</b>										
<b>Blank (0060060-BLK1)</b> Prepared & Analyzed: 06/01/10										
Sulfate	ND	1.0	mg/L							
<b>LCS (0060060-BS1)</b> Prepared & Analyzed: 06/01/10										
Sulfate	9.96	1.0	mg/L	10.000		100	90-110			
<b>Matrix Spike (0060060-MS1)</b> Source: ATF0017-07 Prepared & Analyzed: 06/01/10										
Sulfate	10.1	1.0	mg/L	10.000	0.26	99	90-110			
<b>Matrix Spike (0060060-MS2)</b> Source: ATE0813-08 Prepared & Analyzed: 06/02/10										
Sulfate	14.7	1.0	mg/L	10.000	5.25	95	90-110			
<b>Matrix Spike Dup (0060060-MSD1)</b> Source: ATF0017-07 Prepared & Analyzed: 06/01/10										
Sulfate	10.2	1.0	mg/L	10.000	0.26	99	90-110	0.3	15	



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Pace Analytical Services Inc. - Huntersv  
9800 Kincey Avenue  
Huntersville NC, 28078  
Attention: Mr. Kevin Herring

June 03, 2010

Report No.: ATE0847

## Semivolatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
<b>Batch 0060009 - EPA 3510C</b>										
<b>Blank (0060009-BLK1)</b> Prepared & Analyzed: 06/01/10										
Diesel Range Organics	ND	0.2	mg/L							
Surrogate: n-Decane	0.600		mg/L	1.0000		60	10-112			
Surrogate: n-Octacosane	0.875		mg/L	1.0000		87	10-180			
<b>LCS (0060009-BS1)</b> Prepared & Analyzed: 06/01/10										
Diesel Range Organics	1	0.2	mg/L	1.0000		104	31-132			
Surrogate: n-Decane	0.652		mg/L	1.0000		65	10-112			
Surrogate: n-Octacosane	0.889		mg/L	1.0000		89	10-180			
<b>Matrix Spike (0060009-MS1)</b> Source: ATE0847-01 Prepared & Analyzed: 06/01/10										
Diesel Range Organics	2	0.2	mg/L	1.0000	2	0	18-150			QM-01
Surrogate: n-Decane	0.726		mg/L	1.0000		73	10-112			
Surrogate: n-Octacosane	0.541		mg/L	1.0000		54	10-180			
<b>Matrix Spike Dup (0060009-MSD1)</b> Source: ATE0847-01 Prepared & Analyzed: 06/01/10										
Diesel Range Organics	3	0.2	mg/L	1.0000	2	106	18-150	69	38	QM-01
Surrogate: n-Decane	1.69		mg/L	1.0000		169	10-112			S-04
Surrogate: n-Octacosane	0.864		mg/L	1.0000		86	10-180			



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Attention: Mr. Kevin Herring

June 03, 2010

### Laboratory Certifications

Code	Description	Number	Expires
LA	Louisiana	02069	06/30/2010
NC	North Carolina	381	12/31/2010
NELAC	NELAC (Drinking Water, Non-Potable Water, Solids)	E87315	06/30/2010
SC	South Carolina	98011001	06/30/2010
TX	Texas	T104704397-08-TX	03/31/2011



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Pace Analytical Services Inc. - Huntersv  
9800 Kinsey Avenue  
Huntersville NC, 28078  
Attention: Mr. Kevin Herring

June 03, 2010

### Legend

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#### Definition of Laboratory Terms

- ND** - None Detected at the Reporting Limit
- TIC** - Tentatively Identified Compound
- CFU** - Colony Forming Units
- SOP** - Method run per ASI Standard Operating Procedure
- RL** - Reporting Limit
- DF** - Dilution Factor
- \* - Analyte not included in the NELAC list of certified analytes.

#### Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. ASI is not NELAC certified for diphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

#### Definition of Qualifiers

- S-04** The surrogate recovery for this sample is outside of established control limits due to a suspected sample matrix effect.
- QM-01** The spike recovery for this QC sample is outside of established control limits due to suspected sample matrix interference.

**Note: Unless otherwise noted, all results are reported on an as received basis.**



# ANALYTICAL SERVICES, INC.

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Pace Analytical Services Inc. - Huntersv  
9800 Kinsey Avenue  
Huntersville NC, 28078  
Attention: Mr. Kevin Herring

June 03, 2010



### Chain of Custody

Workorder: 9270259      Worker Name: 378 Truck Stop 14-214210      Results Requested: 6/3/2010

Report/Invoiced To: ASI      Subcontract To: P.O. CHS 08047

Requested Analysis: ATE0847  
Y I H  
LAB USE ONLY

Kevin Herring  
Pace Analytical Charlotte  
9800 Kinsey Ave. Suite 100  
Huntersville, NC 28078  
Phone: (704) 875-9392  
Email: kevin.herring@paceabls.com

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Comments
					1	2	
1	MW-3	5/25/2010 16:25	9270259017	Water	2	2	Y I H Sulfate
2	MW-4	5/25/2010 16:25	9270259018	Water	2	2	Y I H Sulfate
3	MW-5	5/25/2010 19:55	9270259019	Water	2	2	Y I H Sulfate
4							
5							

Transfers	Released By	Date/Time	Received By	Date/Time
1			<u>Charles Herring</u>	<u>5/25/10</u>
2				
3				
4				
5				

*Tic MK Used  
Lofersat*

Thursday, May 27, 2010 10:54:43 AM      Page 1 of 1      FIT-ALL-C002rev 03 24March2009



# ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis  
110 Technology Parkway, Norcross, GA 30092  
(770) 734-4200 FAX (770) 734-4201

## LOG-IN CHECKLIST

Printed: 6/3/2010 7:52:13AM

Attn: Mr. Kevin Herring

Client: Pace Analytical Services Inc. - Huntersville  
Project: 378 Truck Stop 14-214210  
Date Received: 05/28/10 09:20

Work Order: ATE0847  
Logged In By: Charles Hawks

### OBSERVATIONS

#Samples: 3                                  #Containers: 9  
Minimum Temp(C): 2.0                  Maximum Temp(C): 2.0                  Custody Seal(s) Used: No

### CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	NO
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

June 17, 2010



FL Cert #E87847/LA Cert #04140  
EPA Methods TO3, TO14A, TO15, 25C/3C  
RSK-175

TX Cert #T104704450-09-TX  
EPA Methods TO14A, TO15

Pace Analytical  
ATTN: Kevin Herring  
9800 Kincey Ave., Suite 100  
Huntersville, NC 28078

LABORATORY TEST RESULTS

Project Reference: 9270259; 378 Truck Stop 14-214210  
Lab Number: B060409-01/03

Enclosed are results for sample(s) received 6/04/10 by Air Technology Laboratories. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- All results are reported without qualifications.
- The enclosed results relate only to the sample(s).

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Johnson", is written over a horizontal line.

Mark Johnson  
Operations Manager  
MJohnson@AirTechLabs.com

Enclosures

Note: The cover letter is an integral part of this analytical report.

# Chain of Custody



Workorder: 9270259      Workorder Name: 378 Truck Stop 14-214210      Owner Received Date: 5/26/2010      Results Requested By: 6/3/2010

Report To		Subcontract To	
Kevin Herring Pace Analytical Services, Inc. 9800 Kinney Ave., Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Fax (704)875-9091		Pace Analytical Minnesota 1700 Elm Street SE Suite 200 Minneapolis, MN 55414 Phone (612)607-1700	

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
					Other	HLL	
1	MW-3	5/25/2010 18:25	9270259017	Water	1	3	B260Y09-01
2	MW-4	5/25/2010 19:25	9270259018	Water	1	3	-01
3	MW-5	5/25/2010 19:55	9270259019	Water	1	3	-03
4							
5							

Transfers		Released By	Date/Time	Received By	Date/Time	Comments
1		<i>[Signature]</i>	6/4/10 14:30	Michaelson Pace MN	5/28/10 09:55	
2		<i>[Signature]</i>	6/4/10 14:30	Any Man	6/4/10 14:30	
3						

Cooler Temperature on Receipt: 8 °C      Custody Seal: Y or N      Received on Ice: Y or N      Samples Intact: Y or N



Client: Pace Analytical  
Attn: Kevin Herring

Page 2 of 3  
B060409


Client's Project: 9270259  
Date Received: 6/4/2010  
Matrix: Water  
Units: ug/L

Dissolved Gases by EPA Procedure RSKSOP-175

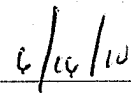
Lab No.:	B060409-01	B060409-02	B060409-03								
Client Sample I.D.:	MW-3 / 9270259017	MW-4 / 9270259018	MW-5 / 9270259019								
Date Sampled:	5/25/2010	5/25/2010	5/25/2010								
Date Analyzed:	6/7/2010	6/7/2010	6/7/2010								
Analyst Initials:	ZK	ZK	ZK								
Data File:	07jun013	07jun014	07jun015								
QC Batch:	100607GC8A1	100607GC8A1	100607GC8A1								
Dilution Factor:	1.0	1.0	1.0								
ANALYTE	PQL	RL	Results	RL	Results	RL	Results				
Methane	6.8	7.5	170	4.7	16	8.9	ND				

PQL = Practical Quantitation Limit  
ND = Not Detected (Below RL)  
RL = PQL X Dilution Factor

Reviewed/Approved By: \_\_\_\_\_

  
Mark J. Johnson  
Operations Manager

Date: \_\_\_\_\_



The cover letter is an integral part of this analytical report



AirTECHNOLOGY Laboratories, Inc.

18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832


QC Batch No.: 100607GC8A1  
 Matrix: Water  
 Units: ug/L

Page 3 of 3  
 B060409

QC for Dissolved Gases by EPA Procedure RSKSOP-175

<b>Lab No.:</b>	<b>Method Blank</b>		<b>LCS</b>		<b>LCSD</b>				
<b>Date Analyzed:</b>	06/07/10		06/07/10		06/07/10				
<b>Analyst Initials:</b>	ZK		ZK		ZK				
<b>Datafile:</b>	07jun003		07jun001		07jun002				
<b>Dilution Factor:</b>	1.0		1.0		1.0				
<b>ANALYTE</b>	<b>PQL</b>	<b>RL</b>	<b>Results</b>	<b>% Rec.</b>	<b>Criteria</b>	<b>% Rec.</b>	<b>Criteria</b>	<b>%RPD</b>	<b>Criteria</b>
Methane	1.0	1.0	ND	97	70-130%	91	70-130%	5.5	<30

PQL = Practical Quantitation Limit  
 ND = Not Detected (Below RL).  
 RL = PQL X Dilution Factor

Reviewed/Approved By:  Date: 6-17-10  
 Mark J. Johnson  
 Operations Manager

The cover letter is an integral part of this analytical report



June 2, 2010

Mr. Kevin Herring

Subject:       **Laboratory Test Results**  
                  **Pace Job Number 9270259**  
                  **Shield Job Number 1100026-01**  
                  **LRF # 10-087**

Dear Mr. Herring:

As requested Shield Engineering Inc., has completed the laboratory testing on the above referenced project. The test results for Grain Size Analysis are attached to this letter.

The laboratory tests were provided in accordance with the applicable ASTM Standards. The test samples were obtained by a representative of Shield Engineering, and then delivered to Shield's Charlotte, North Carolina laboratory for testing.

If you have any questions concerning our test results, please do not hesitate to call our office at (704) 394-6913.

Sincerely,

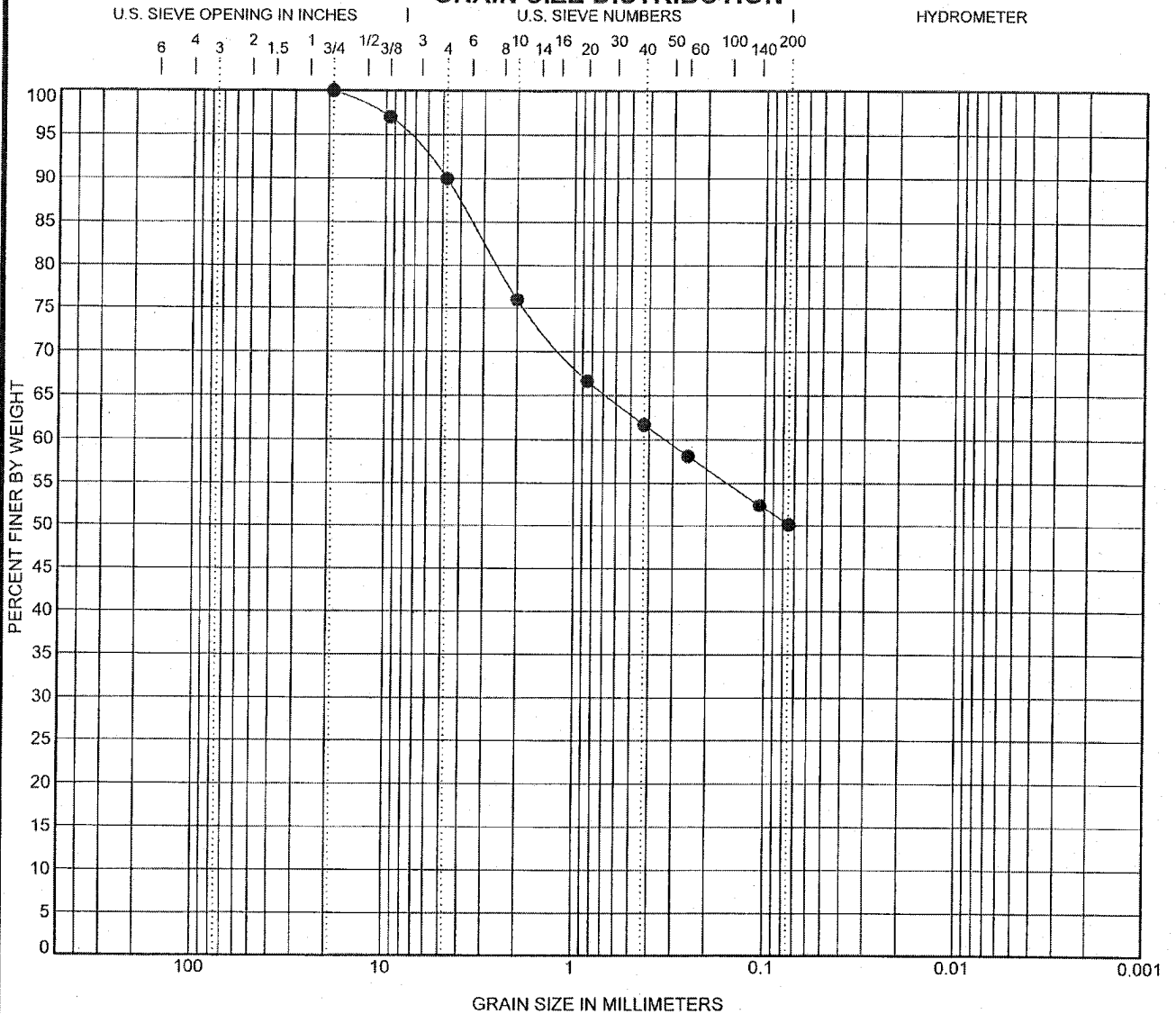
**Shield Engineering, Inc.**

A handwritten signature in black ink, appearing to read "Josh Slusarczyk".

Josh Slusarczyk  
Laboratory Manager



# GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● MW-3 SOIL						

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● MW-3 SOIL	19	0.33			10.0	39.8	50.1	



4301 Taggart Creek Road  
 Charlotte, NC 28208  
 Telephone: 704-394-6913  
 Toll Free: 800-395-5220  
 Fax: 704-394-6968

Pace Project No.: 9270259  
 Pace Lab ID: 9270259020  
 Pace Analytical  
 Shield Project No.: 1100026-01

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: **Environmental Compliance Services** Report To: **CHRISTINA DEPUIS** Attention: **CHRISTINA WHITE** Company Name: **ECIS** Address: **5885 River St Agawam MA 01027** Page: **1** of **2**  
Section B Required Project Information: Project Name: **378 Truck Stop** Project Number: **14-214210** Invoice Information: Reference: **KEVIN HERRING** Pace Project Manager: **KEVIN HERRING** Pace Profile #: **1380443**

Section C Regulatory Agency: **NPDES**  **GROUND WATER**  **DRINKING WATER**  **OTHER**   
Requested Analysis Filtered (Y/N): **SL** Site Location: **UST**  **RCA**

Section D Required Client Information: Matrix Codes: Drinking Water: **DIV** Waste Water: **WT** Product: **WW** Soil/Solid: **P** Oil: **SL** Wipe: **WP** Air: **AR** Tissue: **TS** Other: **OT**  
Sample IDs MUST BE UNIQUE  
Matrix Code: **WT**  
Sample Type: **(G=GRAB C=COMP)**  
Requested Analysis Filtered (Y/N): **SL**

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.
1	WW-2	WT			5/25	19:00		6	X	BTEXMNI EOB 1,2-DCA LEAD PAHS TPHORO Carbon Dioxide Ferrrous Iron Nitrate Sulfate Methane			001
2	WW-3	WT			5/25	18:35		17	X				017
3	WW-4	WT			5/25	19:25		17	X				018
4	WW-5	WT			5/25	19:55		15	X				019
5	WW-1	WT			5/24	10:58		6	X				002
6	WW-2	WT			5/25	11:25							003
7	WW-3	WT			5/25	11:45							004
8	WW-4	WT			5/25	12:00							005
9	WW-5	WT			5/25	13:05							006
10	WW-6	WT			5/25	13:45							007
11	WW-7	WT			5/25	14:00							008
12	WW-8	WT			5/25	15:25							009

ADDITIONAL COMMENTS: **Report Yields.**  
**Some Short Hauls.**  
RELINQUISHED BY / AFFILIATION: **RYAN BYRDELLS** DATE: **5/26/10** TIME: **9:10**  
ACCEPTED BY / AFFILIATION: **R. BYRDELLS** DATE: **5/26/10** TIME: **16:45**  
SAMPLER NAME AND SIGNATURE: **Ryan Byrdes**  
PRINT Name of SAMPLER: **Ryan Byrdes**  
SIGNATURE of SAMPLER: **Ryan Byrdes**  
DATE Signed (MM/DD/YY): **05/26/10**  
Temp in °C: **3.7**  
Received on Ice (Y/N): **Y**  
Custody Sealed Cooler (Y/N): **N**  
Samples Intact (Y/N): **Y**

ORIGINAL

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
F-ALL-Q-020rev.07, 15-May-2007

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Section B Required Project Information: Section C Invoice Information:

Company: **Environmental Compliance Services**  
 Address: **13515 Pine Bluff Lane**  
 City/State: **Charlotte, NC 28223**  
 Phone: **704 533 2711** Fax: **704 533 2711**  
 Email To: **LOA.Pace@paceanalytical.com**  
 Requested Due Date/FAT: **5/22**

Report To: **Christine Dorris**  
 Copy To: **ECS**  
 Purchase Order No.: **376746500**  
 Project Name: **376746500**  
 Project Number: **14-214219**

Attention: **Christine White**  
 Company Name: **ECS**  
 Address: **383 Silver Spring Avenue MD 20911**  
 Pace Quote Reference: **Kevin Herring**  
 Pace Project Manager: **Kevin Herring**  
 Pace Profile #:

REGULATORY AGENCY:  NPDES  GROUND WATER  DRINKING WATER  
 CUST  RCRA  OTHER

Site Location STATE: **SC**

Requested Analysis Filtered (Y/N)

Page: **2** of **2**  
**1380444**

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test ↓	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)						
					COMPOSITE START	COMPOSITE END/GRAB			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol				Other	Y	N			
1	W3W-3	WT	WT	G	5/24 16:45	5/24 16:45	6	X																
2	W3W-19	WT	WT	G	5/24 16:12	5/24 16:35	1																	
3	W3W-11	WT	WT	G	5/25 11:54	5/25 11:15	1																	
4	W3W-12	WT	WT	G	5/25 11:54	5/25 11:15	1																	
5	W3W-13	WT	WT	G	5/25 11:54	5/25 11:15	1																	
6	W3W-14	WT	WT	G	5/25 11:54	5/25 11:15	1																	
7	W3W-15	WT	WT	G	5/24 13:30	5/24 13:30	1	X																
8	MW-3-50A	WT	WT	G	5/24 13:30	5/24 13:30	1	X																
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS: **Report 1 valves**

RELINQUISHED BY / AFFILIATION: **Ryan Byas / ECS** DATE: **5/26/19** TIME: **9:10**

ACCEPTED BY / AFFILIATION: **Ryan Byas** DATE: **5/26/19** TIME: **16:45**

TEMPERATURE: **8.7**

RECEIVED ON ICE (Y/N): **Y**

CUSTODY SEALED COOLER (Y/N): **N**

SAMPLES INTACT (Y/N): **Y**

SAMPLER NAME AND SIGNATURE: **Ryan Byas**

PRINT NAME OF SAMPLER: **Ryan Byas**

SIGNATURE OF SAMPLER: **Ryan Byas**

DATE SIGNED (MM/DD/YY): **05/26/19**

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Pace Project No./Lab I.D.: **0270259**

**Sample Condition Upon Receipt**



Client Name: Environmental Compliance <sup>ser</sup> Project # 9270259

Where Received:  Huntersville  Asheville  Eden  
 Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_  
 Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no  
 Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_  
 Thermometer Used: IR Gun T904 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun  
 Temp Correction Factor: Add / Subtract \_\_\_\_\_ 0 C

<b>Optional</b>
Proj. Due Date:
Proj. Name:

Corrected Cooler Temp.: 3.7 C Biological Tissue is Frozen: Yes No  
 Temp should be above freezing to 6°C

Date and Initials of person examining contents: <u>5/29/10</u> <u>[Signature]</u>
---

		Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>5.50 5/26/10</u>
-Includes date/time/ID/Analysis Matrix: <u>WT</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

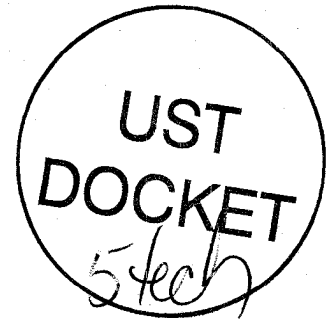
Project Manager Review: [Signature] Date: 5/27/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
 Pace SCUR revision 072308



C. Earl Hunter, Commissioner

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



MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

JUL 09 2010

Re: Tier II Plan Directive  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release reported October 3, 1974  
Tier I Assessment Report received June 24, 2010  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) reviewed the referenced report. The report indicates presence of chemicals of concern in the groundwater and soil.

To determine what risk the referenced release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of the scope of work as outlined in the Tier II Assessment Guidance Document is necessary. The assessment should be conducted in accordance with the Tier II Assessment guidance document and must be conducted in compliance with all applicable regulations. All shallow wells are to be installed with screen intervals that bracket the water table. The Tier II assessment document and appendices may be obtained from our website at [http://www.scdhec.gov/environment/lwm/html/ust\\_guidance\\_docs.htm](http://www.scdhec.gov/environment/lwm/html/ust_guidance_docs.htm). Forms may be obtained from the UST website at <http://www.scdhec.gov/eqc/lwm/forms/assess%7E1.pdf>.

**Please have your contractor complete and submit the Assessment Component Cost Agreement and Assessment Plan Forms within thirty days of the date of this letter.** Every component may not be necessary to complete the above scope of work. The State Underground Petroleum Environmental Response Bank (SUPERB) Account allowable cost for each component is included on the Assessment Component Cost Agreement Form. **Please note that approval from the Department must be issued before work begins.**

On all correspondence regarding this site, please reference UST Permit #07960. If you have questions or need additional information feel free to call me at (803) 896-6633.

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Assessment Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

cc: Environmental Compliance Services, P.O. Box 3528, Fort Mill, SC 29708  
Technical File





C. Earl Hunter, Commissioner

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

NOV 16 2011



**HATTIE SCURRY**  
**730 HWY 378 EAST**  
**EDGEFIELD SC 29824-4102**

Re: **Water Well Sampling Data**  
378 Truck Stop, 371 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release reported October 3, 1974  
Monitoring Report received November 14, 2011  
Edgefield County

Dear Ms. Scurry:

On November 10, 2011, two water samples of your well water were collected, one before treatment by the carbon filter (pre-GAC), and the second after treatment (post-GAC). A copy of the results is enclosed. The untreated water contained trace concentrations of 1,2-Dichloroethane, tert-amyl alcohol, and tert-butyl alcohol. The treated water did not contain any petroleum chemicals. This indicates that the carbon filter is working correctly and is removing the petroleum.

As the last carbon filter change took place in March 2011, a directive has been issued to the UST owner and their contractor to replace the carbon filter. This is being completed as a routine replacement to ensure that the carbon filter continues to function as designed.

On all correspondence concerning this site, please reference UST Permit #07960. If you have any questions, please contact me at (803) 896-6584 or by e-mail at [minerrs@dhec.sc.gov](mailto:minerrs@dhec.sc.gov).

Sincerely,

Read S. Miner, P.G., Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Analytical data

cc: Technical File (with enclosure)  
Wilkerson Fuel Co., PO Box 2835, Rock Hill, SC 29732-4835 (with enclosure)

Client: SC DHEC - UST Management

Laboratory ID: MK10025-004

Description: Pre Gac/Scurry

Matrix: Aqueous

Date Sampled: 11/10/2011 1305

Date Received: 11/10/2011

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	11/10/2011 2330	JJG		71512			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	2.3	J	5.0	0.30	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1		
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1		
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1		
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		104	70-130							
Bromofluorobenzene		101	70-130							
Toluene-d8		103	70-130							

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	11/10/2011 2330	JJG		71512			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1		
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1		
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1		
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1		
tert-Amyl alcohol (TAA)	75-85-4	8260B	19	J	100	6.7	ug/L	1		
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1		
tert-butyl alcohol (TBA)	75-65-0	8260B	15	J	100	6.7	ug/L	1		
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		101	70-130							
1,2-Dichloroethane-d4		104	70-130							
Toluene-d8		103	70-130							

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: Post Gac/Scurry

Matrix: Aqueous

Date Sampled: 11/10/2011 1300

Date Received: 11/10/2011

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2310	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		102	70-130

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2310	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4		103	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)



C. Earl Hunter, Commissioner

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



**NOV 16 2011**

**SIDNEY GORDON  
724 HWY 378 EAST  
EDGEFIELD SC 29824**

Re: **Water Well Sampling Data**  
378 Truck Stop, 371 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release reported October 3, 1974  
Monitoring Report received November 14, 2011  
Edgefield County

Dear Mr. Gordon:

On November 10, 2011, two water samples of your well water were collected, one before treatment by the carbon filter (pre-GAC), and the second after treatment (post-GAC). A copy of the results is enclosed. The untreated water contained trace concentrations of 1,2-Dichloroethane and tert-amyl alcohol. The treated water did not contain any petroleum chemicals. This indicates that the carbon filter is working correctly and is removing the petroleum.

As the last carbon filter change took place in March 2011, a directive has been issued to the UST owner and their contractor to replace the carbon filter. This is being completed as a routine replacement to ensure that the carbon filter continues to function as designed.

On all correspondence concerning this site, please reference UST Permit #07960. If you have any questions, please contact me at (803) 896-6584 or by e-mail at [miners@dhec.sc.gov](mailto:miners@dhec.sc.gov).

Sincerely,

Read S. Miner, P.G., Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Analytical data

cc: Technical File (with enclosure)  
Wilkerson Fuel Co., PO Box 2835, Rock Hill, SC 29732-4835 (with enclosure)

Description: Pre Gac/Gordon

Matrix: Aqueous

Date Sampled: 11/10/2011 1230

Date Received: 11/10/2011

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2249	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	1.2	J	5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		102	70-130

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2249	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	14	J	100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		98	70-130
1,2-Dichloroethane-d4		100	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: Post Gac/Gordon

Matrix: Aqueous

Date Sampled: 11/10/2011 1225

Date Received: 11/10/2011

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2228	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		100	70-130

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2228	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		94	70-130
1,2-Dichloroethane-d4		95	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Report of Analysis

### SC DHEC - UST Management

2600 Bull Street  
Columbia, SC 29201  
Attention: Debra Thoma



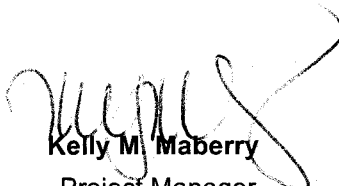
Project Name: 378 Truck Stop

Project Number: UST Permit #07960/CA #42645

Lot Number: MK10025

Date Completed: 11/11/2011



  
Kelly M. Maberry  
Project Manager



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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.



# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

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## Case Narrative

### SC DHEC - UST Management

#### Lot Number: MK10025

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

Shealy is not NELAC certified for Phosphorus by 365.1 but is certified in SC and NC.

Shealy is not NELAC certified for VPH, but is certified for VPH in NC.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.



# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary SC DHEC - UST Management Lot Number: MK10025

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Post Gac/Gordon	Aqueous	11/10/2011 1225	11/10/2011
002	Pre Gac/Gordon	Aqueous	11/10/2011 1230	11/10/2011
003	Post Gac/Scurry	Aqueous	11/10/2011 1300	11/10/2011
004	Pre Gac/Scurry	Aqueous	11/10/2011 1305	11/10/2011

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Executive Summary SC DHEC - UST Management Lot Number: MK10025

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	Pre Gac/Gordon	Aqueous	1,2-Dichloroethane	8260B	1.2	J	ug/L	6
002	Pre Gac/Gordon	Aqueous	tert-Amyl alcohol (TAA)	8260B	14	J	ug/L	6
004	Pre Gac/Scurry	Aqueous	1,2-Dichloroethane	8260B	2.3	J	ug/L	8
004	Pre Gac/Scurry	Aqueous	tert-Amyl alcohol (TAA)	8260B	19	J	ug/L	8
004	Pre Gac/Scurry	Aqueous	tert-butyl alcohol (TBA)	8260B	15	J	ug/L	8

(5 detections)

Description: Post Gac/Gordon

Matrix: Aqueous

Date Sampled: 11/10/2011 1225

Date Received: 11/10/2011

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2228	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		100	70-130

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2228	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		94	70-130
1,2-Dichloroethane-d4		95	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: Pre Gac/Gordon

Matrix: Aqueous

Date Sampled: 11/10/2011 1230

Date Received: 11/10/2011

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	11/10/2011 2249	JJG		71512		
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene		71-43-2	8260B	ND		5.0	0.20	ug/L	1
<b>1,2-Dichloroethane</b>		<b>107-06-2</b>	<b>8260B</b>	<b>1.2</b>	<b>J</b>	<b>5.0</b>	<b>0.30</b>	<b>ug/L</b>	<b>1</b>
Ethylbenzene		100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene		91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene		108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)		1330-20-7	8260B	ND		5.0	1.7	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		100	70-130						
Bromofluorobenzene		98	70-130						
Toluene-d8		102	70-130						

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	11/10/2011 2249	JJG		71512		
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)		108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol		64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol		624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)		637-92-3	8260B	ND		100	0.20	ug/L	1
<b>tert-Amyl alcohol (TAA)</b>		<b>75-85-4</b>	<b>8260B</b>	<b>14</b>	<b>J</b>	<b>100</b>	<b>6.7</b>	<b>ug/L</b>	<b>1</b>
tert-Amyl methyl ether (TAME)		994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)		75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)		762-75-4	8260B	ND		100	1.0	ug/L	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
Bromofluorobenzene		98	70-130						
1,2-Dichloroethane-d4		100	70-130						
Toluene-d8		102	70-130						

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: Post Gac/Scurry

Matrix: Aqueous

Date Sampled: 11/10/2011 1300

Date Received: 11/10/2011

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2310	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		102	70-130

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/10/2011 2310	JJG		71512

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		102	70-130
1,2-Dichloroethane-d4		103	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: Pre Gac/Scurry

Matrix: Aqueous

Date Sampled: 11/10/2011 1305

Date Received: 11/10/2011

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	11/10/2011 2330	JJG		71512			
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene		71-43-2	8260B	ND		5.0	0.20	ug/L	1	
1,2-Dichloroethane		107-06-2	8260B	2.3	J	5.0	0.30	ug/L	1	
Ethylbenzene		100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)		1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene		91-20-3	8260B	ND		5.0	1.7	ug/L	1	
Toluene		108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)		1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		104	70-130							
Bromofluorobenzene		101	70-130							
Toluene-d8		103	70-130							

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	11/10/2011 2330	JJG		71512			
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)		108-20-3	8260B	ND		10	0.40	ug/L	1	
Ethanol		64-17-5	8260B	ND		1000	33	ug/L	1	
3,3-Dimethyl-1-butanol		624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)		637-92-3	8260B	ND		100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)		75-85-4	8260B	19	J	100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)		994-05-8	8260B	ND		10	0.20	ug/L	1	
tert-butyl alcohol (TBA)		75-65-0	8260B	15	J	100	6.7	ug/L	1	
tert-Butyl formate (TBF)		762-75-4	8260B	ND		100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		101	70-130							
1,2-Dichloroethane-d4		104	70-130							
Toluene-d8		103	70-130							

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

## QC Summary

## Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ71512-001

Matrix: Aqueous

Batch: 71512

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	11/10/2011 2129
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	11/10/2011 2129
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	11/10/2011 2129
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	11/10/2011 2129
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	11/10/2011 2129
Ethanol	ND		1	1000	33	ug/L	11/10/2011 2129
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	11/10/2011 2129
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	11/10/2011 2129

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		95	70-130
1,2-Dichloroethane-d4		91	70-130
Toluene-d8		101	70-130

## Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ71512-002

Matrix: Aqueous

Batch: 71512

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	930		1	93	70-130	11/10/2011 2004
tert-Amyl methyl ether (TAME)	50	44		1	89	70-130	11/10/2011 2004
tert-Butyl formate (TBF)	250	230		1	92	70-130	11/10/2011 2004
Diisopropyl ether (IPE)	50	49		1	98	70-130	11/10/2011 2004
3,3-Dimethyl-1-butanol	1000	970		1	97	70-130	11/10/2011 2004
Ethanol	5000	4900		1	98	70-130	11/10/2011 2004
Ethyl-tert-butyl ether (ETBE)	50	45		1	89	70-130	11/10/2011 2004
tert-butyl alcohol (TBA)	1000	860		1	86	70-130	11/10/2011 2004

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		97	70-130
1,2-Dichloroethane-d4		86	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



## Volatile Organic Compounds by GC/MS - LCSD

Sample ID: MQ71512-003

Matrix: Aqueous

Batch: 71512

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	910		1	91	2.3	70-130	20	11/10/2011 2026
tert-Amyl methyl ether (TAME)	50	46		1	92	3.3	70-130	20	11/10/2011 2026
tert-Butyl formate (TBF)	250	230		1	94	1.3	70-130	20	11/10/2011 2026
Diisopropyl ether (IPE)	50	50		1	100	1.4	70-130	20	11/10/2011 2026
3,3-Dimethyl-1-butanol	1000	930		1	93	4.0	70-130	20	11/10/2011 2026
Ethanol	5000	4500		1	90	8.9	70-130	20	11/10/2011 2026
Ethyl-tert-butyl ether (ETBE)	50	46		1	91	2.4	70-130	20	11/10/2011 2026
tert-butyl alcohol (TBA)	1000	850		1	85	1.0	70-130	20	11/10/2011 2026

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		95	70-130
1,2-Dichloroethane-d4		84	70-130
Toluene-d8		101	70-130

## Volatile Organic Compounds by GC/MS - MB

Sample ID: MQ71512-001

Matrix: Aqueous

Batch: 71512

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	11/10/2011 2129
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	11/10/2011 2129
Ethylbenzene	ND		1	5.0	1.7	ug/L	11/10/2011 2129
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	11/10/2011 2129
Naphthalene	ND		1	5.0	1.7	ug/L	11/10/2011 2129
Toluene	ND		1	5.0	1.7	ug/L	11/10/2011 2129
Xylenes (total)	ND		1	5.0	1.7	ug/L	11/10/2011 2129

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		95	70-130
1,2-Dichloroethane-d4		91	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

Sample ID: MQ71512-002

Matrix: Aqueous

Batch: 71512

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	48		1	96	70-130	11/10/2011 2004
1,2-Dichloroethane	50	41		1	82	70-130	11/10/2011 2004
Ethylbenzene	50	49		1	98	70-130	11/10/2011 2004
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	11/10/2011 2004
Naphthalene	50	44		1	87	70-130	11/10/2011 2004
Toluene	50	43		1	87	70-130	11/10/2011 2004
Xylenes (total)	100	97		1	97	70-130	11/10/2011 2004
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	70-130				
1,2-Dichloroethane-d4		86	70-130				
Toluene-d8		102	70-130				

## Volatile Organic Compounds by GC/MS - LCSD

Sample ID: MQ71512-003

Matrix: Aqueous

Batch: 71512

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	49		1	98	2.2	70-130	20	11/10/2011 2026
1,2-Dichloroethane	50	41		1	82	0.96	70-130	20	11/10/2011 2026
Ethylbenzene	50	49		1	99	0.95	70-130	20	11/10/2011 2026
Methyl tertiary butyl ether (MTBE)	50	47		1	95	1.2	70-130	20	11/10/2011 2026
Naphthalene	50	44		1	88	0.25	70-130	20	11/10/2011 2026
Toluene	50	44		1	87	0.63	70-130	20	11/10/2011 2026
Xylenes (total)	100	98		1	98	0.64	70-130	20	11/10/2011 2026
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		95	70-130						
1,2-Dichloroethane-d4		84	70-130						
Toluene-d8		101	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 13452

Client: SC DHEC/UST Div. Report to Contact: D. THOMAS Sampler (Printed Name): Bob Fuller Quote No.
Address: 2600 Bull St. Telephone No. / Fax No. / Email: 803 696-6241 / 6245 Waybill No. Page 1 of 1
City: Columbia State: SC Zip Code: 29201 Preservative: 1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.
Project Name: 378 Truck STOP
Project Number: 07960/CA# 42845 P.O. Number:
Sample ID / Description (Containers for each sample may be combined on one line) Date Time G-Grab C-Composite Matrix Analysis
Bst GAC/Gordon 4/10/11 1225 G X
PRE GAC/Gordon 1230
Post GAC/Scurry 1300
Pre GAC/Scurry 1305
Turn Around Time Required (Prior lab approval required for expedited TAT) Sample Disposal QC Requirements (Specify) Possible Hazard Identification
1. Relinquished by / Sampler: Robert G. Fuller Date: 4/10/11 Time: 1530
2. Relinquished by
3. Relinquished by
4. Relinquished by
Note: All samples are retained for six weeks from receipt unless other arrangements are made.
LAB USE ONLY Received on Ice (Check) Yes No Ice Pack Receipt Temp. 12.3 °C Temp. Blank Y N

### Sample Receipt Checklist (SRC)

Client: SCDHEC Cooler Inspected by/date: GW 11/10/11 Lot # MK10025

Means of receipt: <input type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt <u>12-13</u> °C / °C / °C / °C			
Method: <input type="checkbox"/> Temperature Blank <input checked="" type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>SRC</u> , phone, note (circle one), other: _____ . (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		8. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H2SO4, HNO3, HCl, NaOH) with the SR # (number) _____			
Sample(s) _____ were received with bubbles >6 mm in diameter.			
Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/BNA/pest/PCB/herb.			

**Corrective Action taken, if necessary:**

Was client notified: Yes  No

Did client respond: Yes  No

SESI employee: \_\_\_\_\_

Date of response: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**AFVR REPORT**

378 Truck Stop  
731 Highway 378  
Edgefield, South Carolina  
Edgefield County

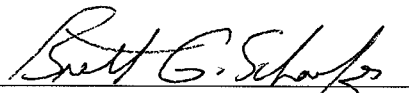
UST Permit No. 07960  
ECS Project No. 14-214210

Prepared for:  
Wilkerson Fuel Company, Inc.  
PO Box 2835  
Rock Hill, South Carolina 29732

Presented to:  
Ms. Cathleen Ridgley  
South Carolina Department of Health and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201-1708

Prepared by:  
Environmental Compliance Services, Inc.  
13504 South Point Blvd, Unit F  
Charlotte, North Carolina 28273  
SC Certification No. 358

January 9, 2012

  
Brett G. Schaefer, PE  
Project Manager



This report presents the results of Aggressive Fluid/Vapor Recovery (AFVR) activities conducted by Environmental Compliance Services, Inc. (ECS) in November through December 2011 at the 378 Truck Stop site (**Figure 1** and **Figure 2**). These activities were conducted in accordance with Cost Agreement No.42522 as approved by the South Carolina Department of Health and Environmental Control (SCDHEC) in correspondence dated October 20, 2011. The following Tables, Figures, and Appendices are attached:

- Table 1: Summary of Groundwater Elevation Data Aggressive Fluid/Vapor Recovery Events
- Table 2: Summary of Aggressive Fluid/Vapor Recovery Information
- Figure 1: Site Locus
- Figure 2: Site Plan
- Appendix A: AFVR Event Field Data Sheets, Emission Calculations and Disposal Manifest – November 14, 2011
- Appendix B: AFVR Event Field Data Sheets, Emission Calculations and Disposal Manifest – December 15, 2011

### **Site Information**

The site was not in use at the time of our November and December 2011 field activities. An abandoned building was present onsite during our visits associated with the AFVR and groundwater sampling activities. A concrete slab was located directly to the east of, and abutting, the onsite building.

A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. Reportedly, one 550-gallon diesel, one 1,000-gallon gasoline, and one 2,000-gallon gasoline underground storage tanks (USTs) and their associated piping and dispensers were removed from the site on January 1, 1987. The site did not contain USTs at the time of our 2011 activities.

### **AFVR Events**

Two AFVR events were performed at the site by A&D Environmental Services and ECS. The purpose of the events was to remove residual free phase product and to reduce concentrations of chemicals of concern from the aquifer. The cost agreement requested one AFVR event to be performed on MW-1 and the other to be performed on MW-22. Due to insufficient volume of water recovered from MW-22, the second AFVR event was divided between both MW-22 and MW-1.

The first AFVR event was performed on November 14, 2011. The AFVR stinger was installed in monitoring well MW-1 at a depth of 33.50 ft below top of casing (TOC). Monitoring wells MW-3, MW-6 and MW-21 were used as observation wells. Free product was not encountered during gauging of the aforementioned wells. The initial depth to water readings were 32.92 ft, 33.00 ft, 33.54 ft, and 32.12 ft below TOC for MW-1, MW-3, MW-6, and MW-21, respectively. Immediately following the end of the AFVR the depth to water in the wells were 34.92 ft (MW-1), 32.83 ft (MW-3), 33.53 ft (MW-6), and 32.18 ft (MW-21). Depth to water measurements collected 20 minutes after the AFVR event were 34.61 ft (MW-1), 32.83 ft (MW-3), 33.53 ft (MW-6), and 32.16 ft (MW-21). Approximately 50 gallons of liquid were recovered during the eight hour AFVR event on MW-1.

The second AFVR was performed on December 15, 2011. The AFVR stinger was originally installed in monitoring well MW-22 at an initial depth of 38.50 ft below TOC. TLV readings for the first hour were being recorded at very low concentrations along with very little to no flow being observed out of

monitoring well MW-22. The vacuum was removed and reapplied to monitoring well MW-22. For the first 10 to 15 seconds after reapplying vacuum, water was observed being recovered then tapered off to no flow. After one hour the AFVR on monitoring well MW-22 was postponed due to low flow and TLV readings. The first phase of the AFVR on MW-22 was from 0810 to 0910 (1 hr). Free product was initially detected in MW-22 only at a depth of 37.80 ft below TOC. The initial depth to water readings were 38.05 ft, 35.05 ft, 36.52 ft, and 35.99 ft below TOC for MW-22, MW-12, MW-14, and MW-15, respectively.

After the initial 1 hr on MW-22 the AFVR stinger was moved to MW-1 at the request of the SCDHEC project manager under the condition that MW-22 would be periodically gauged for free product and the AFVR would return to MW-22 in the event that free product had re-emerged. The AFVR stinger was installed in MW-1 to a depth of 34.00 ft below TOC. From 0925 to 1125 (2 hrs) the AFVR operated on MW-1 recovering a minimal amount of liquid and vapors with an initial maximum TLV reading of 340 ppm which gradually decreased. At 1055 the dilution valve on the vacuum truck was opened to  $\frac{1}{2}$ , resulting in a slight increase of vapor recovery from MW-1. Between 0925 and 1120 MW-22 was gauged at approximately 30 minute intervals. At 1120, 0.16 ft of free product had returned to MW-22 at a stable level resulting in the termination of the AFVR on MW-1 at 1125. The initial depth to water readings were 33.50 ft, 33.42 ft, 34.06 ft, and 32.79 ft below TOC for MW-1, MW-3, MW-6, and MW-21, respectively. Immediately following the end of the AFVR on MW-1 the depth to water in the wells were 34.07 ft (MW-1), 33.40 ft (MW-3), 33.06 ft (MW-6), and 32.80 ft (MW-21). Depth to water measurements collected 20 minutes after the AFVR event were 34.21 ft (MW-1), 33.41 ft (MW-3), 33.06 ft (MW-6), and 32.76 ft (MW-21). No free product was detected in the monitoring wells associated with the MW-1 AFVR.

After the two hours on MW-1 the AFVR returned to MW-22 for the remainder of the 8 hour time allotment (5 hrs). During the second phase of MW-22 the AFVR stinger was set at a depth of 39.50 ft below TOC. Throughout the remainder of the event the seal at the top of the well was occasionally cracked and re-seated, allowing a slug of water to be pulled each time before tapering off to no flow. The dilution valve on the vacuum truck was also opened to  $\frac{1}{2}$  for the majority of the event remainder to increase vapor recovery from MW-22. Immediately following the end of the AFVR on MW-22 the depth to water in the wells were 39.78 ft (MW-22), dry (MW-12), 36.43 ft (MW-14), and 35.67 ft (MW-15). Depth to water measurements collected 20 minutes after the AFVR event were 39.66 ft (MW-22), dry (MW-12), 36.42 ft (MW-14), and 35.67 ft (MW-15). Free product was measured in MW-22 20 minutes after the AFVR event at 39.60 ft below TOC.

On December 15, 2011 a total of 17 gallons of liquids was recovered from the combined AFVR activities on MW-22 and MW-1.

A summary of groundwater elevation data collected during AFVR activities is presented in **Table 1**. A summary of free product and AFVR data collected from monitoring wells during AFVR activities is presented in **Table 2**.

Approximately 67 gallons of liquid were removed from monitoring wells MW-1 and MW-22 during the AFVR events on November 14, 2011 and December 15, 2011. Of the 67 gallons removed, there was no measurable free product detected. Field data sheets, emissions calculations and the disposal manifest for the November 14, 2011 and December 15, 2011 AFVR events are included in **Appendix A** and **Appendix B**, respectively.

### **Conclusions and Recommendations**

The average organic vapor concentration recovered from monitoring wells MW-1 and MW-22 during the November and December, 2011 AFVR events was 104.5 ppm. A total of 67 gallons of liquid was recovered during the November and December 2011 events. In order to increase fluid recovery during subsequent AFVR events ECS recommends performing the activities during seasons with higher potential for precipitation (i.e. winter and spring).

Based on the results of the August 2011 groundwater sampling event, elevated dissolved concentrations exist in monitoring wells onsite and south of the site. AFVR events are recommended to help reduce these concentrations in wells MW-1, MW-3, MW-7, MW-12, MW-13, MW-16, and MW-22. A comprehensive groundwater sampling event is recommended following the AFVR events to determine current conditions and determine the efficacy of the remedial efforts.

If you have any questions or require additional information, please contact ECS at (704) 583-2711, or email [bschaefer@ecsconsult.com](mailto:bschaefer@ecsconsult.com).



## **TABLES**

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**TABLE 1**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**AGGRESSIVE FLUID/VAPOR RECOVERY EVENTS**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft.)	Depth to Groundwater (ft.)	Depth to Free Product (ft.)	Free Product Thickness (ft.)	Groundwater Elevation <sup>2</sup> (ft.)	Well Depth (ft.)	Screened Interval (ft.)
MW-22	12/15/11 (pre-AFVR)	105.13	38.05	37.80	0.25	67.27	40.09	25.09-40.09
	12/15/11 (immediately post-AFVR)		39.78	--	--	65.35		
	12/15/11 (20 minutes post-AFVR)		39.66	39.60	0.06	65.52		
MW-12	12/15/11 (pre-AFVR)	103.46	dry	--	--	--	34.99	19.99-34.99
	12/15/11 (immediately post-AFVR)		dry	--	--	--		
	12/15/11 (20 minutes post-AFVR)		dry	--	--	--		
MW-14	12/15/11 (pre-AFVR)	103.48	36.52	--	--	66.96	39.74	24.74-39.74
	12/15/11 (immediately post-AFVR)		36.43	--	--	67.05		
	12/15/11 (20 minutes post-AFVR)		36.42	--	--	67.06		
MW-15	12/15/11 (pre-AFVR)	103.16	35.99	--	--	67.17	40.13	25.13-40.13
	12/15/11 (immediately post-AFVR)		35.67	--	--	67.49		
	12/15/11 (20 minutes post-AFVR)		35.67	--	--	67.49		
MW-1	12/15/11 (pre-AFVR)	101.98	33.50	--	--	68.48	44.81	unknown
	12/15/11 (immediately post-AFVR)		34.07	--	--	67.91		
	12/15/11 (20 minutes post-AFVR)		34.21	--	--	67.77		
MW-3	12/15/11 (pre-AFVR)	101.54	33.42	--	--	68.12	40	10-40
	12/15/11 (immediately post-AFVR)		33.40	--	--	68.14		
	12/15/11 (20 minutes post-AFVR)		33.41	--	--	68.13		
MW-6	12/15/11 (pre-AFVR)	102.25	34.06	--	--	68.19	34.92	19.92-34.92
	12/15/11 (immediately post-AFVR)		33.06	--	--	69.19		
	12/15/11 (20 minutes post-AFVR)		33.06	--	--	69.19		
MW-21	12/15/11 (pre-AFVR)	101.70	32.79	--	--	68.91	40.16	25.16-40.16
	12/15/11 (immediately post-AFVR)		32.80	--	--	68.90		
	12/15/11 (20 minutes post-AFVR)		32.76	--	--	68.94		
MW-1	11/14/11 (pre-AFVR)	101.98	32.92	--	--	69.06	44.81	unknown
	11/14/11 (immediately post-AFVR)		34.92	--	--	67.06		
	11/14/11 (20 minutes post-AFVR)		34.61	--	--	67.37		
MW-3	11/14/11 (pre-AFVR)	101.54	33.00	--	--	68.54	40	10-40
	11/14/11 (immediately post-AFVR)		32.83	--	--	68.71		
	11/14/11 (20 minutes post-AFVR)		32.83	--	--	68.71		
MW-6	11/14/11 (pre-AFVR)	102.25	33.54	--	--	68.71	34.92	19.92-34.92
	11/14/11 (immediately post-AFVR)		33.53	--	--	68.72		
	11/14/11 (20 minutes post-AFVR)		33.53	--	--	68.72		
MW-21	11/14/11 (pre-AFVR)	101.70	32.12	--	--	69.58	40.16	25.16-40.16
	11/14/11 (immediately post-AFVR)		32.18	--	--	69.52		
	11/14/11 (20 minutes post-AFVR)		32.16	--	--	69.54		
MW-13	7/25/11 (pre-AFVR)	101.48	29.70	--	--	71.78	40.19	25.19-40.19
	7/25/11 (immediately post-AFVR)		39.91	--	--	61.57		
	7/25/11 (20 minutes post-AFVR)		39.27	--	--	62.21		
MW-12	7/25/11 (pre-AFVR)	103.46	31.99	--	--	71.47	34.99	19.99-34.99
	7/25/11 (immediately post-AFVR)		dry	--	--	--		
	7/25/11 (20 minutes post-AFVR)		34.65	--	--	68.81		

**TABLE 1**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**AGGRESSIVE FLUID/VAPOR RECOVERY EVENTS**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft.)	Depth to Groundwater (ft.)	Depth to Free Product (ft.)	Free Product Thickness (ft.)	Groundwater Elevation <sup>2</sup> (ft.)	Well Depth (ft.)	Screened Interval (ft.)
MW-22	7/20/11 (pre-AFVR)	105.13	33.84	--	--	71.29	40.09	25.09-40.09
	7/20/11 (immediately post-AFVR)		37.66	--	--	67.47		
	7/20/11 (20 minutes post-AFVR)		37.52	--	--	67.61		
MW-16	7/19/11 (pre-AFVR)	101.32	30.55	--	--	70.77	40.11	25.11-40.11
	7/19/11 (immediately post-AFVR)		37.76	--	--	63.56		
	7/19/11 (20 minutes post-AFVR)		37.52	--	--	63.80		
MW-1	3/16/11 (pre-AFVR)	101.98	25.55	25.53	0.02	76.45	unknown	unknown
	3/16/11 (immediately post-AFVR)		28.58	--	--	73.40		
	3/16/11 (20 minutes post-AFVR)		28.58	--	--	73.40		
MW-3	3/16/11 (pre-AFVR)	101.54	25.86	--	--	75.68	40	10-40
	3/16/11 (immediately post-AFVR)		26.13	--	--	75.41		
	3/16/11 (20 minutes post-AFVR)		26.10	--	--	75.44		
MW-7	3/16/11 (pre-AFVR)	99.72	23.44	--	--	76.28	34.92	19.92-34.92
	3/16/11 (immediately post-AFVR)		22.81	--	--	76.91		
	3/16/11 (20 minutes post-AFVR)		22.89	--	--	76.83		
MW-21	3/16/11 (pre-AFVR)	101.70	24.30	--	--	77.40	40.16	25.16-40.16
	3/16/11 (immediately post-AFVR)		24.23	--	--	77.47		
	3/16/11 (20 minutes post-AFVR)		24.23	--	--	77.47		

Notes:

1. Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.
2. Groundwater elevation adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.

**TABLE 2**  
**SUMMARY OF AGGRESSIVE FLUID/VAPOR RECOVERY INFORMATION<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date	Time <sup>2</sup> (hours)	Average Effluent Velocity <sup>3</sup> (fpm)	Average Effluent Temperature (°F)	Average Effluent Concentration (ppm)	Total Free Product Volatized <sup>4</sup> (gallons)	Total Free Product as Fluid <sup>5</sup> (gallons)	Total Free Product Recovered <sup>6</sup> (gallons)	Total Fluid Volume removed( gallons)
MW-22	12/15/2011	6	4,217	202.9	119	0.15	0	0.15	17
MW-1	12/15/2011	2							
MW-1	11/14/2011	8	4,756	212.3	90	0.18	0	0.18	50
<b>Totals</b>		--	--	--	--	0.330	0	0.330	67

Notes:

1. Aggressive Fluid/Vapor Recovery (AFVR) events using vacuum trucks provided by A&D Environmental and Industrial Services, Inc.
2. Duration of the AFVR event at well location.
3. Cross-sectional area of exhaust stack is 0.19 sq. ft.
4. Total Volatized in gallons = Air emissions in pounds/(6.25 lbs./gal.)
5. Total Free Product as Fluid is obtained from disposal manifest and/or correspondence with subcontractors from each AFVR event.
6. Total Free Product Recovered = Total Free Product Volatized + Total Free Product as Fluid.

## **FIGURES**

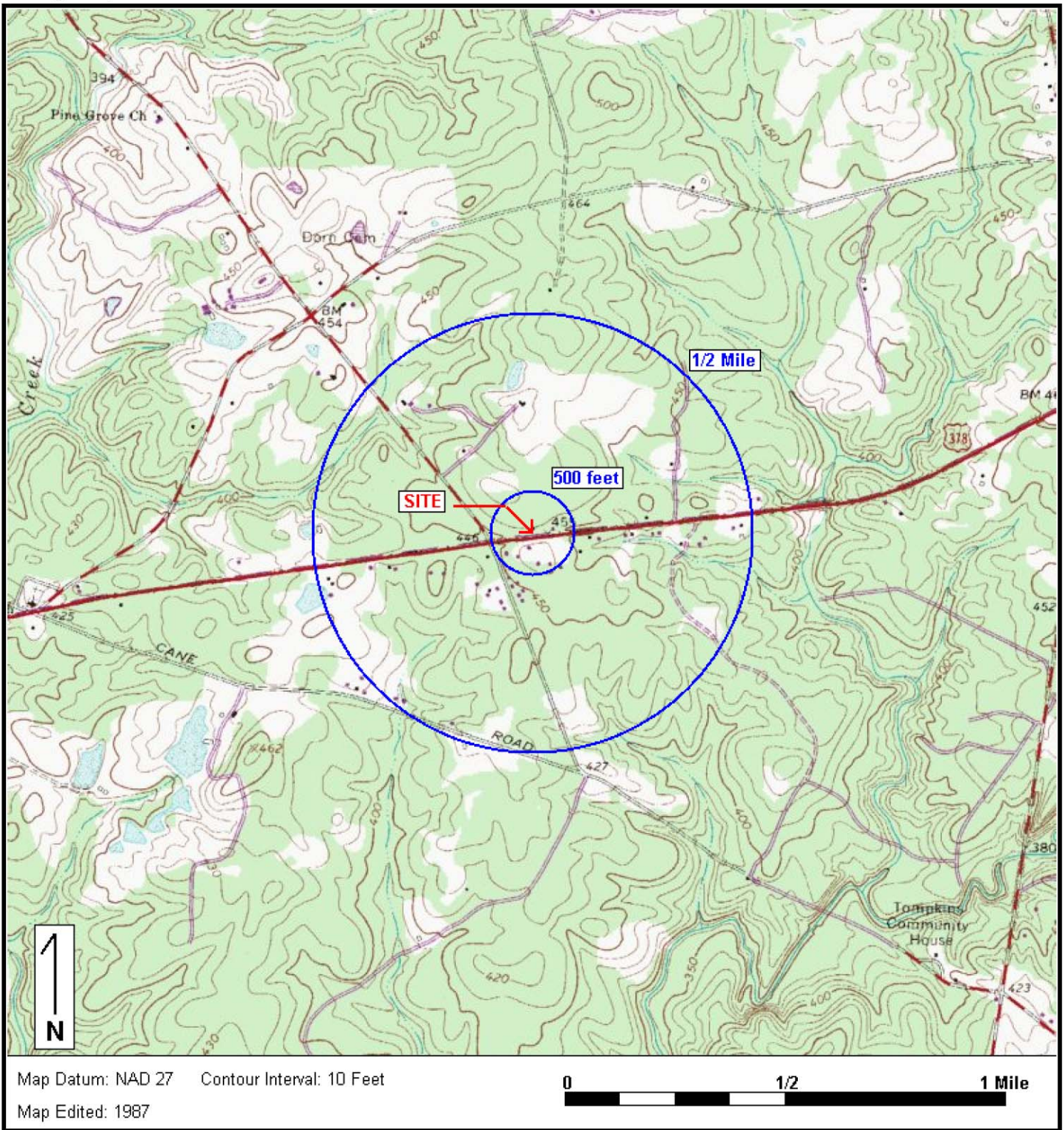
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Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

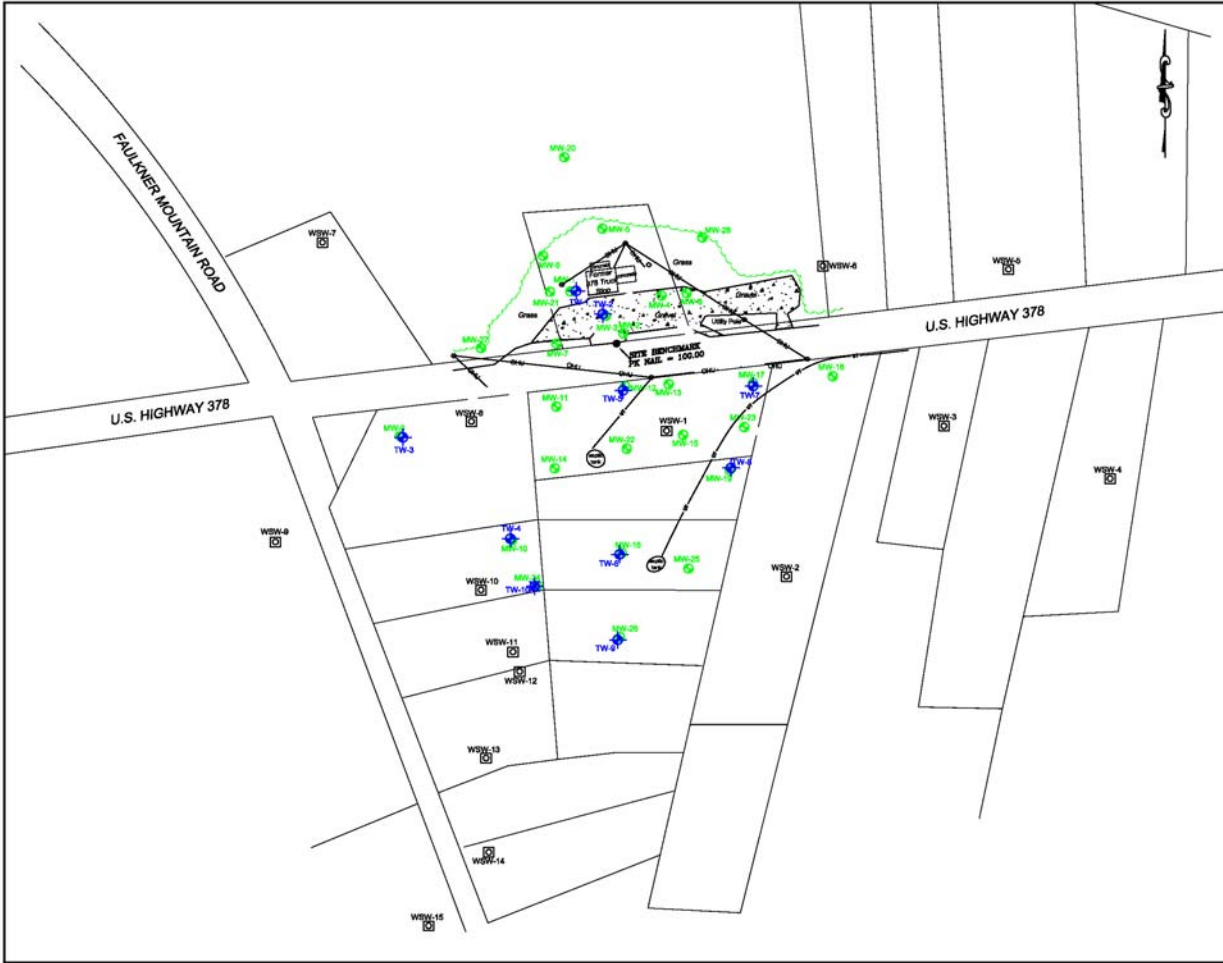
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas



- Legend**
- Approximate Property Line
  - Overhead Electric Line
  - Underground Telephone Line
  - Utility Pole
  - Shallow (Water Table) Monitoring Well
  - Telescoping Monitoring Well
  - Abandoned Telescoping Monitoring Well
  - Water Supply Well
  - MW-1 Well I.D.

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL. (704)583-2711 FAX (704)583-2744

PROJECT: **378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

TYPE: **Site Plan**

CLIENT: **Wilkerson Fuel Company, Inc.**

DATE	BY	DESCRIPTION

SCALE: 1"=150'

DATE: 5/2/11

JOB NO.: 14-214210

FIGURE NO.: 2

**APPENDIX A**

---

AFVR Event Field Data Sheets, Emission Calculations & Disposal  
Manifest – November 14, 2011



**APPENDIX A**  
**AFVR EVENT FIELD DATA SHEETS**

AFVR Measurements Prior to and After Event

Project Name: Truck stop 378 UST Permit No: 07690  
 Project No: 14-214210 ECS Field Rep.: P.Pike  
 Date: 11/14/11

**Measurements Prior to AFVR Event**

Vac. Truck (VT) Co. A&D  
 VT No.: VT 18  
 VT Tank Capacity: 3,000 gallons  
 Inside Diameter of VT Outlet Stack 6 inches  
 Is Tank Empty & Clean (Y/N) yes

**Measurements After AFVR Event**

VT Tank Product volume 0 gallons  
 VT Tank Water volume 50 gallons

Well ID	Prior to AFVR -		Immediately After -		20-min After AFVR -		Depth of Stinger
	Depth to Product	Depth to Water	Depth to Product	Depth to Water	Depth to Product	Depth to Water	
MW-1	NP	32.92	NP	34.92	NP	34.61	33.5'
MW-3	NP	33.00	NP	32.83	NP	32.83	
MW-6	NP	33.54	NP	33.53	NP	33.53	
MW-21	NP	32.12	NP	32.18	NP	32.16	

NP denotes no measurable free product.

NM denotes not measured.

**APPENDIX A  
AFVR EVENT FIELD DATA SHEETS**

Project Name: Truck stop 378  
 UST Permit No: 07690  
 Date: 11/14/11

ECS Project No: 14-214210  
 Field Operative: P.Pike  
 Subcontractor: A&D

**Measurements During AFVR Event**

Time	Stack Outlet				Vac Truck Vacuum (in. of Hg)	Non-AFVR Wells					
	Air Flow (ft/min)	Temperature (Fahrenheit)	R.H. (%)	TLV (ppm)		MW-3		MW-6		MW-21	
						DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)
9:00											
9:15	4,697	183.7	2.5	90	22						
9:30	4,750	194.0	1.2	90	22		0.00		0.00		1.00
9:45	4,791	199.7	1.0	92	22						
10:00	4,688	205.7	0.7	95	22		0.00		0.00		1.00
10:15	4,728	209.3	0.5	98	22						
10:30	4,907	212.4	0.4	96	22		0.00		0.00		1.00
10:45	4,869	212.9	0.3	96	22						
11:00	4,621	214.2	0.3	95	22		0.00		0.00		1.00
11:30	4,620	215.2	0.2	96	22		0.00		0.00		1.00
12:00	4,837	214.7	0.2	93	22		0.00		0.00		1.00
12:30	4,710	215.4	0.2	88	22		0.00		0.00		1.00
13:00	4,841	217.9	0.2	88	22		0.00		0.00		1.00
13:30	5,048	217.6	0.1	88	22		0.00		0.00		1.00
14:00	4,712	218.1	0.0	88	22		0.00		0.00		1.00
14:30	4,547	218.3	0.0	86	22		0.00		0.00		1.00
15:00	4,666	219.1	0.0	86	22		0.00		0.00		1.00
15:30	4,797	218.5	0.0	85	22		0.00		0.00		1.00
16:00	4,837	219.4	0.1	80	22		0.00		0.00		1.00
16:30	4,667	220.6	0.1	80	22		0.00		0.00		1.00
17:00	4,791	219.9	0.1	80	22		0.00		0.00		1.00

## APPENDIX A EMISSIONS CALCULATIONS

### AGGRESSIVE FLUID VAPOR RECOVERY EVENT

SITE NAME: Truck stop 378  
 UST PERMIT NUMBER: 07690  
 AVERAGE DEPTH TO GROUNDWATER: 32.90  
 DESCRIBE SOIL IN THE SATURATED ZONE: \_\_\_\_\_  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): \_\_\_\_\_  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: MW-1  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM TRUCK (cfm @ in Hg): 492 cfm @ 24 in Hg

### DRY STANDARD CUBIC FEET PER MINUTE (DSCFM) AIR FLOW CALCULATIONS (Qstd)

Date	Time	Vacuum (in. of Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>ws</sub> (Wt/Wt)	B <sub>ws</sub> (vol/vol)	Q <sub>std</sub> (flow)
Start	9:00	Connection to MW-1. Stinger set at 33.5 feet below top of casing.							
11/14/11	9:15	22	4,697	6	183.7	2.5	0.008904	0.014	746
11/14/11	9:30	22	4,750	6	194.0	1.2	0.005302	0.008	747
11/14/11	9:45	22	4,791	6	199.7	1.0	0.004975	0.008	747
11/14/11	10:00	22	4,688	6	205.7	0.7	0.003931	0.006	726
11/14/11	10:15	22	4,728	6	209.3	0.5	0.003015	0.005	729
11/14/11	10:30	22	4,907	6	212.4	0.4	0.002563	0.004	753
11/14/11	10:45	22	4,869	6	212.9	0.3	0.001940	0.003	748
11/14/11	11:00	22	4,621	6	214.2	0.3	0.001990	0.003	708
11/14/11	11:30	22	4,620	6	215.2	0.2	0.001352	0.002	708
11/14/11	12:00	22	4,837	6	214.7	0.2	0.001338	0.002	742
11/14/11	12:30	22	4,710	6	215.4	0.2	0.001357	0.002	721
11/14/11	13:00	22	4,841	6	217.9	0.2	0.001425	0.002	739
11/14/11	13:30	22	5,048	6	217.6	0.1	0.000708	0.001	771
11/14/11	14:00	22	4,712	6	218.1	0.0	0.000000	0.000	720
11/14/11	14:30	22	4,547	6	218.3	0.0	0.000000	0.000	695
11/14/11	15:00	22	4,666	6	219.1	0.0	0.000000	0.000	712
11/14/11	15:30	22	4,797	6	218.5	0.0	0.000000	0.000	733
11/14/11	16:00	22	4,837	6	219.4	0.1	0.000733	0.001	737
11/14/11	16:30	22	4,667	6	220.6	0.1	0.000750	0.001	710
11/14/11	17:00	22	4,791	6	219.9	0.1	0.000740	0.001	730
<b>Averages</b>		22	4756	6	212.3	0.4	0.002051	0.003	731

### NOTES

Qstd = Flow at DSCFM

Vacuum = The level of vacuum being applied recorded from the vacuum truck tank (inches of Hg)

Velocity = The rate at which air flows is measured at the blower discharge piping (anemometer or pitot tube)

Pipe ID = The inside diameter of the blower discharge piping (from the vacuum truck)

Temperature = The temperature of the air stream exiting the blower discharge piping (dry bulb temp., in deg.°F)

Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping

B<sub>ws</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart (temp Vs relative humidity)

B<sub>ws</sub> = water vapor % by volume

### EQUATIONS

$$B_{ws} = (B_{ws}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{ws}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1 - \text{Water Vapor}) * \text{velocity} * (\text{PI} * (\text{diameter}/24)^2) * (528^\circ\text{R}/(\text{Temp} + 460))$$

**APPENDIX A  
EMISSIONS CALCULATIONS**

**EMISSION CALCULATIONS**

SITE NAME: Truck stop 378

AFVR EVENT DATE: 14-Nov-2011

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub>	PPM <sub>dry</sub>	RF	PPM <sub>conc</sub>	C <sub>c:m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	
15	746	90	90	91	1.02	93	46	0.00000	0.13	0.15	0.04
30	747	90	90	91	1.02	93	46	0.00000	0.13	0.15	0.04
45	747	92	92	93	1.02	95	47	0.00000	0.13	0.15	0.04
60	726	95	95	96	1.02	98	49	0.00000	0.13	0.15	0.04
75	729	98	98	98	1.02	100	50	0.00000	0.14	0.16	0.04
90	753	96	96	96	1.02	98	49	0.00000	0.14	0.16	0.04
105	748	96	96	96	1.02	98	49	0.00000	0.14	0.16	0.04
120	708	95	95	95	1.02	97	49	0.00000	0.13	0.15	0.04
150	708	96	96	96	1.02	98	49	0.00000	0.13	0.15	0.08
180	742	93	93	93	1.02	95	47	0.00000	0.13	0.15	0.08
210	721	88	88	88	1.02	90	45	0.00000	0.12	0.14	0.07
240	739	88	88	88	1.02	90	45	0.00000	0.12	0.14	0.07
270	771	88	88	88	1.02	90	45	0.00000	0.13	0.15	0.07
300	720	88	88	88	1.02	90	45	0.00000	0.12	0.14	0.07
330	695	86	86	86	1.02	88	44	0.00000	0.11	0.13	0.07
360	712	86	86	86	1.02	88	44	0.00000	0.12	0.14	0.07
390	733	85	85	85	1.02	87	43	0.00000	0.12	0.14	0.07
420	737	80	80	80	1.02	82	41	0.00000	0.11	0.13	0.07
450	710	80	80	80	1.02	82	41	0.00000	0.11	0.13	0.06
480	730	80	80	80	1.02	82	41	0.00000	0.11	0.13	0.06
<b>Averages</b>	731	90	90	90	1.02	92	46	0.00000	0.13	0.14	0.06

**Total emissions in pounds: 1.14**  
**Total emissions in gallons: 0.18**

**NOTES**

PPM<sub>measured</sub> = Actual measurements (ppm) taken with TLV at the blower discharge piping

PPM<sub>wet</sub> = "wet" concentration

PPM<sub>dry</sub> = "dry" concentration

RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.

K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)

PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP

C<sub>c:m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon

M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon

K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP

C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP

PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon

PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of of VOC's as gasoline

PMR = lb, pollutant mass removal of VOC's as gasoline

## APPENDIX A EMISSIONS CALCULATIONS

### EQUATIONS

$$PPM_{\text{wet}} = PPM_{\text{measured}}$$

$$PPM_{\text{dry}} = (PPM_{\text{wet}})/(1-B_{\text{ws}})$$

$$PPM_c = (PPM_g)(K)$$

$$C_{c,m} = (PPM_c)(M_c / K_3)$$

$$C_c = (C_{c,m})(62.43 \times 10^{-9} \text{ lb-m}^3/\text{mg-ft}^3)$$

$$PMR_c = (C_c)(Q_{\text{std}})(60 \text{ min/hr})$$

$$PMR_g = (PMR_c)(M_g/M_{c,g})$$

$$PMR = (PMR_g)(\# \text{minutes}/60)$$

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

5. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Williams Fuel & Oil  
731 Highway 375  
Edgefield, SC

Environmental Compliance Services

Generator's Phone:

6. Transporter 1 Company Name

U.S. EPA ID Number

7. Transporter 2 Company Name

A&D Environmental Services (SC) LLC

U.S. EPA ID Number

GA-DNR7049331

8. Designated Facility Name and Site Address

U.S. EPA ID Number

A&D Environmental Services (SC) LLC  
1741 Culls Ferry Road  
Lexington, SC 29073

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

No.

Type

1.

NON-HAZARDOUS NON-REGULATED MATERIAL

Approx.

50

LAB.

0 Free Product (green)

2.

City Water

3.

4.

13. Special Handling Instructions and Additional Information

In Case of Emergency Call 703-967-9170

A&D (SC) Job #1020

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offero's Printed/Typed Name

Signature

Month Day Year

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**APPENDIX B**

---

AFVR Event Field Data Sheets, Emission Calculations & Disposal  
Manifest – December 15, 2011

**APPENDIX B  
AFVR EVENT FIELD DATA SHEETS**

AFVR Measurements Prior to and After Event

Project Name:	<u>Truck stop 378</u>	UST Permit No:	<u>07690</u>
Project No:	<u>14-214210</u>	ECS Field Rep.:	<u>A. Williamson</u>
Date:	<u>12/15/11</u>		

**Measurements Prior to AFVR Event**

Vac. Truck (VT) Co.	<u>A&amp;D</u>	
VT No.:	<u>VT 18</u>	
VT Tank Capacity:	<u>3,000</u>	gallons
Inside Diameter of VT Outlet Stack	<u>6</u>	inches
Is Tank Empty & Clean (Y/N)	<u>yes</u>	

**Measurements After AFVR Event**

VT Tank Product volume	<u>0</u> gallons
VT Tank Water volume	<u>17</u> gallons

Well ID	Prior to AFVR -		Immediately After -		20-min After AFVR -		Depth of Stinger
	Depth to Product	Depth to Water	Depth to Product	Depth to Water	Depth to Product	Depth to Water	
MW-22	37.80	38.05	NP	39.78	39.60	39.66	38.50
MW-12	NP	Dry	NP	Dry	NP	Dry	--
MW-14	NP	36.52	NP	36.43	NP	36.42	--
MW-15	NP	35.99	NP	35.67	NP	35.67	--
MW-1*	NP	33.50	NP	34.07	NP	34.21	34.00
MW-3*	NP	33.42	NP	33.40	NP	33.41	--
MW-6*	NP	34.06	NP	33.06	NP	33.06	--
MW-21*	NP	32.79	NP	32.80	NP	32.76	--

\* AFVR changed from MW-22 to MW-1 at 9:25, and changed from MW-1 to MW-22 at 11:25. MW-1, 3, 6 and 21 were gauged at 9:15 prior to commencement of AFVR on MW-1, and 11:25/11:45 immediately after and 20 minutes after AFVR, respectively.

NP denotes no measurable free product.



**APPENDIX B  
AFVR EVENT FIELD DATA SHEETS**

Project Name: Truck stop 378  
 UST Permit No: 07690  
 Date: 12/15/11

ECS Project No: 14-214210  
 Field Operative: A. Williamson  
 Subcontractor: A&D

**Measurements During AFVR Event**

Time	Stack Outlet				Vac Truck		Non-AFVR Wells					
	Air Flow (ft/min)	Temperature (Fahrenheit)	R.H. (%)	TLV (ppm)	Vacuum (in. of Hg)	Dilution Valve Position	MW-12/MW-3		MW-14/MW-6		MW-15/MW-21	
							DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)
8:10												
8:25	4,998	183.6	2.6	2	22	Closed	NM	NM	NM	NM	NM	NM
8:40	5,016	200.5	2.3	60	22	Closed	NM	0.00	NM	0.00	NM	0.00
8:55	4,877	202.1	2.2	220	22	Closed	NM	0.00	NM	0.00	NM	0.00
9:10	4,964	199.9	2.4	110	22	Closed	NM	0.00	NM	0.00	NM	0.00
	End AFVR on MW-22, moved to MW-1.											
9:25	Start AFVR on MW-1. Observation wells MW-3, MW-6, MW-21.											
9:40	3,820	197.4	2.4	340	20	Closed	NM	NM	NM	NM	NM	NM
9:55	4,028	203.7	2.2	76	20	Closed	NM	0.00	NM	0.00	NM	0.00
10:10	3,855	202.1	2.5	72	20	Closed	NM	0.00	NM	0.00	NM	0.00
10:25	3,924	202.3	2.6	70	20	Closed	NM	0.00	NM	0.00	NM	0.00
10:40	4,167	202.5	2.5	72	20	Closed	NM	0.00	NM	0.00	NM	0.00
10:55	3,907	206.4	2.6	100	21	½ Open	NM	0.00	NM	0.00	NM	0.00
11:10	4,098	208.4	2.2	140	21	½ Open	NM	0.00	NM	0.00	NM	0.00
11:25	3,820	207.9	2.4	130	21	½ Open	NM	0.00	NM	0.00	NM	0.00
	End AFVR on MW-1, moved back to MW-22.											
11:35	Re-start AFVR on MW-22. Observation wells MW-12, MW-14, MW-15.											
11:50	4,132	204.4	2.3	44	21	½ Open	NM	NM	NM	NM	NM	NM
12:05	4,098	201.0	2.5	54	21	½ Open	NM	0.00	NM	0.00	NM	0.00
12:20	4,063	205.3	2.3	54	21	½ Open	NM	0.00	NM	0.00	NM	0.00
12:35	4,011	208.9	2.2	160	21	½ Open	NM	0.00	NM	0.00	NM	0.00
13:05	4,236	208.2	2.3	100	21	½ Open	NM	0.00	NM	0.00	NM	0.00
13:35	3,890	207.1	2.6	340	21	½ Open	NM	0.00	NM	0.00	NM	0.00
14:05	4,046	209.1	2.0	74	20	½ Open	NM	0.00	NM	0.00	NM	0.00

**APPENDIX B  
AFVR EVENT FIELD DATA SHEETS**

Project Name: Truck stop 378  
 UST Permit No: 07690  
 Date: 12/15/11

ECS Project No: 14-214210  
 Field Operative: A. Williamson  
 Subcontractor: A&D

**Measurements During AFVR Event (continued)**

Time	Stack Outlet				Vac Truck		Non-AFVR Wells					
	Air Flow (ft/min)	Temperature (Fahrenheit)	R.H. (%)	TLV (ppm)	Vacuum (in. of Hg)	Dilution Valve Position	MW-12/MW-3		MW-14/MW-6		MW-15/MW-21	
							DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)
14:35	4,136	209.7	2.0	100	21	½ Open	NM	0.00	NM	0.00	NM	0.00
15:05	4,080	210.9	2.0	110	21	½ Open	NM	0.00	NM	0.00	NM	0.00
15:35	4,115	212.4	2.0	120	21	½ Open	NM	0.00	NM	0.00	NM	0.00
16:05	3,942	212.7	2.4	240	21	½ Open	NM	0.00	NM	0.00	NM	0.00
16:35	3,994	212.2	2.3	140	21	½ Open	NM	0.00	NM	0.00	NM	0.00

**APPENDIX B  
EMISSIONS CALCULATIONS**

**AGGRESSIVE FLUID VAPOR RECOVERY EVENT**

SITE NAME: Truck stop 378  
 UST PERMIT NUMBER: 07690  
 AVERAGE DEPTH TO GROUNDWATER: 34.90  
 DESCRIBE SOIL IN THE SATURATED ZONE: \_\_\_\_\_  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): \_\_\_\_\_  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: MW-22 & MW-1  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM TRUCK (cfm @ in Hg): 492 cfm @ 24 in Hg

**DRY STANDARD CUBIC FEET PER MINUTE (DSCFM) AIR FLOW CALCULATIONS (Qstd)**

Date	Time	Vacuum (in. of Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>sw</sub> (Wt/Wt)	B <sub>ws</sub> (vol/vol)	Q <sub>std</sub> (flow)
Start	8:10	Connection to MW-22. Stinger set at 38.50 feet below top of casing.							
12/15/11	8:25	22	4,998	6	183.6	2.6	0.009245	0.015	793
12/15/11	8:40	22	5,016	6	200.5	2.3	0.011759	0.018	773
12/15/11	8:55	22	4,877	6	202.1	2.2	0.011621	0.018	750
12/15/11	9:10	22	4,964	6	199.9	2.4	0.012126	0.019	765
12/15/11	9:25	Connection to MW-1. Stinger set at 34.00 feet below top of casing.							
12/15/11	9:40	20	3,820	6	197.4	2.4	0.011501	0.018	592
12/15/11	9:55	20	4,028	6	203.7	2.2	0.012015	0.019	617
12/15/11	10:10	20	3,855	6	202.1	2.5	0.013240	0.021	591
12/15/11	10:25	20	3,924	6	202.3	2.6	0.013839	0.022	601
12/15/11	10:40	20	4,167	6	202.5	2.5	0.013351	0.021	638
12/15/11	10:55	21	3,907	6	206.4	2.6	0.015073	0.024	593
12/15/11	11:10	21	4,098	6	208.4	2.2	0.013240	0.021	622
12/15/11	11:25	21	3,820	6	207.9	2.4	0.014324	0.022	580
12/15/11	11:35	Connection to MW-22. Stinger set at 38.50 feet below top of casing.							
12/15/11	11:50	21	4,132	6	204.4	2.3	0.012757	0.020	632
12/15/11	12:05	21	4,098	6	201.0	2.5	0.012938	0.020	630
12/15/11	12:20	21	4,063	6	205.3	2.3	0.012997	0.020	620
12/15/11	12:35	21	4,011	6	208.9	2.2	0.013376	0.021	609
12/15/11	13:05	21	4,236	6	208.2	2.3	0.013798	0.022	643
12/15/11	13:35	21	3,890	6	207.1	2.6	0.015292	0.024	590
12/15/11	14:05	20	4,046	6	209.1	2.0	0.012186	0.019	615
12/15/11	14:35	21	4,136	6	209.7	2.0	0.012336	0.019	628
12/15/11	15:05	21	4,080	6	210.9	2.0	0.012641	0.020	618
12/15/11	15:35	21	4,115	6	212.4	2.0	0.013031	0.020	621
12/15/11	16:05	21	3,942	6	212.7	2.4	0.015799	0.025	593
12/15/11	16:35	21	3,994	6	212.2	2.3	0.014972	0.023	602
<b>Averages</b>		21	4,217	6	202.9	2.4	0.012916	0.020	647

## APPENDIX B EMISSIONS CALCULATIONS

### NOTES

Q<sub>std</sub> = Flow at DSCFM

Vacuum = The level of vacuum being applied recorded from the vacuum truck tank (inches of Hg)

Velocity = The rate at which air flows is measured at the blower discharge piping (anemometer or pitot tube)

Pipe ID = The inside diameter of the blower discharge piping (from the vacuum truck)

Temperature = The temperature of the air stream exiting the blower discharge piping (dry bulb temp., in deg. °F)

Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping

B<sub>ws</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart  
(temp Vs relative humidity) at an altitude of 460 feet above sea level.

B<sub>w</sub> = water vapor % by volume

### EQUATIONS

$$B_w = (B_{ws}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{ws}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1 - \text{Water Vapor}) * \text{velocity} * (PI * (\text{diameter}/24)^2) * (528^\circ R / (\text{Temp} + 460))$$

**APPENDIX B  
EMISSIONS CALCULATIONS**

**EMISSION CALCULATIONS**

SITE NAME: Truck stop 378

AFVR EVENT DATE: 15-Dec-2011

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub>	PPM <sub>dry</sub>	RF	PPM <sub>conc</sub>	C <sub>c:m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
15	793	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
30	773	60	60	61	1.02	62	31	0.00000	0.09	0.10	0.03
45	750	220	220	224	1.02	229	114	0.00001	0.32	0.37	0.09
60	765	110	110	112	1.02	114	57	0.00000	0.16	0.19	0.05
75	592	340	340	346	1.02	353	176	0.00001	0.39	0.45	0.11
90	617	76	76	77	1.02	79	39	0.00000	0.09	0.11	0.03
105	591	72	72	74	1.02	75	37	0.00000	0.08	0.10	0.02
120	601	70	70	72	1.02	73	36	0.00000	0.08	0.09	0.02
135	638	72	72	74	1.02	75	37	0.00000	0.09	0.10	0.03
150	593	100	100	102	1.02	104	52	0.00000	0.12	0.13	0.03
165	622	140	140	143	1.02	146	73	0.00000	0.17	0.20	0.05
180	580	130	130	130	1.02	133	66	0.00000	0.14	0.17	0.04
195	632	44	44	45	1.02	46	23	0.00000	0.05	0.06	0.02
210	630	54	54	55	1.02	56	28	0.00000	0.07	0.08	0.02
225	620	54	54	55	1.02	56	28	0.00000	0.07	0.08	0.02
255	609	160	160	163	1.02	167	83	0.00001	0.19	0.22	0.11
270	643	100	100	102	1.02	104	52	0.00000	0.13	0.15	0.04
300	590	340	340	348	1.02	355	177	0.00001	0.39	0.45	0.23
330	615	74	74	75	1.02	77	38	0.00000	0.09	0.10	0.05
360	628	100	100	102	1.02	104	52	0.00000	0.12	0.14	0.07
390	618	110	110	112	1.02	114	57	0.00000	0.13	0.15	0.08
420	621	120	120	123	1.02	125	62	0.00000	0.15	0.17	0.08
450	593	240	240	246	1.02	251	125	0.00001	0.28	0.32	0.16
480	602	140	140	143	1.02	146	73	0.00000	0.16	0.19	0.10
<b>Averages</b>	647	119	119	121	1.02	124	62	0.00000	0.15	0.17	0.05

**Total emissions in pounds: 0.93**  
**Total emissions in gallons: 0.15**

## APPENDIX B EMISSIONS CALCULATIONS

### NOTES

$PPM_{\text{measured}}$  = Actual measurements (ppm) taken with TLV at the blower discharge piping

$PPM_{\text{wet}}$  = "wet" concentration

$PPM_{\text{dry}}$  = "dry" concentration

RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.

K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)

$PPM_c = PPM_v$ , Volumetric concentration of VOC emissions as carbon, dry basis at STP

$C_{c,m}$  = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon

$M_c$  = 12.01 mg/mg-mole, molecular weight of carbon

$K_3$  = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP

$C_c$  = lb/dcsf, mass concentration of VOC emissions as carbon, dry basis at STP

$PMR_c$  = lb/hr, pollutant mass removal rate of VOC's as carbon

$PMR_g$  = lb/hr, pollutant mass removal rate of of VOC's as gasoline

PMR = lb, pollutant mass removal of VOC's as gasoline

### EQUATIONS

$$PPM_{\text{wet}} = PPM_{\text{measured}}$$

$$PPM_{\text{dry}} = (PPM_{\text{wet}})/(1-B_{ws})$$

$$PPM_c = (PPM_d)(K)$$

$$C_{c,m} = (PPM_c)(M_c / K_3)$$

$$C_c = (C_{c,m})(62.43 \times 10^{-9} \text{ lb-m}^3/\text{mg-ft}^3)$$

$$PMR_c = (C_c)(Q_{std})(60 \text{ min/hr})$$

$$PMR_g = (PMR_c)(M_g/M_{cg})$$

$$PMR = (PMR_g)(\#minutes/60)$$





C. Earl Hunter, Commissioner

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

JAN 26 2012

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835



Re: QAPP Contractor Addendum Directive  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release reported October 3, 1974  
AFVR Report received January 17, 2012  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced report. The report indicates the presence of chemicals of concern in the groundwater.

To determine what risk the referenced release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of a groundwater sampling event as outlined in the UST Quality Assurance Program Plan (QAPP) is necessary. The groundwater sampling event should be conducted in accordance with the UST Quality Assurance Program Plan and must be conducted in compliance with all applicable regulations. A copy of SCDHEC QAPP for the Underground Storage Tank Division is available at <http://www.dhec.sc.gov/environment/lwm/html/ust.htm>.

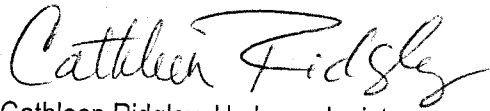
All monitoring wells and water supply wells on the site need to be sampled for BTEX, naphthalene, MtBE, the oxygenates, and 1,2-DCA.

**Please have your contractor complete and submit the QAPP Contractor Addendum and Cost Agreement within thirty days of the date of this letter.** Every component may not be necessary to complete the above scope of work. The State Underground Petroleum Environmental Response Bank (SUPERB) Account allowable cost for each component is included on the Assessment Component Cost Agreement Form. **Please note that technical and financial preapproval from the Department must be issued before work begins.**



On all correspondence regarding this site, please reference UST Permit #07960. If you have questions or need additional information, feel free to call me at (803) 896-6633.

Sincerely,

A handwritten signature in cursive script that reads "Cathleen Ridgley".

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

cc: ECS, Inc., PO Box 3528, Fort Mill, SC 29708  
Technical File

07960



Appendix B: Contractor Addendum

**Section A: Project Management**

**A1 Title and Approval Page**

Quality Assurance Project Plan  
Addendum to the SC DHEC UST Programmatic QAPP  
For  
378 Truck Stop; UST Permit #07960

---

731 Highway 378, Edgefield, SC

---

Prepared by:  
Brett G. Schaefer, PE  
Environmental Compliance Services, Inc.  
13504 South Point Blvd, Ste F  
Charlotte, NC 28273

---

Date: February 3, 2012  
Certified UST Site Rehabilitation Contractor #358  
Environmental Compliance Services, Inc.

---

**Approvals:**

Cathleen Ridgley  
SC DHEC Project Manager

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Brett G. Schaefer, PE  
Contractor Project Manager

Brett G. Schaefer  
Signature

Date 2/10/12

Kurt Blevins  
Site Rehabilitation Contractor

Kurt Blevins  
Signature

Date 2/10/2012

Craig L. Kennedy, PG  
Project Verifier/QA Manager

Craig L. Kennedy  
Signature

Date 2/8/2012

Jeff Graham  
Pace Laboratory Director

Cheryl Johnson  
Signature

Date 2/6/2012

*JG*

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**Table of Contents**

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Site Name: 378 Truck Stop  
 Permit #: 07960  
 Page: 4

ECS Project Number: 14-214210  
 Date: 2/3/12  
 QAPP Addendum Revision: 00

**A3 Distribution List**

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Cathleen Ridgley	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6633	803-896-6245	ridglect@dhec.sc.gov
Kurt Blevins	Site Rehabilitation Contractor	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	kblevins@ecsconsult.com
Brett G. Schaefer, PE	Contractor Project Manager	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	bschaefer@ecsconsult.com
Jeff Graham	Laboratory Director	Pace Analytical Services 9800 Kinsey Ave Suite 100 Huntersville, NC 28078	704-875-9092	704-875-9091	jeff.graham@pacelabs.com
Craig L. Kennedy, PG	Project Verifier/QA Manager	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	ckennedy@ecsconsult.com
Steve Taylor	Well Services/Driller	Geologic Exploration Inc. 176 Commerce Blvd Statesville, NC 28625	800-752-8853		staylor@gexnc.com

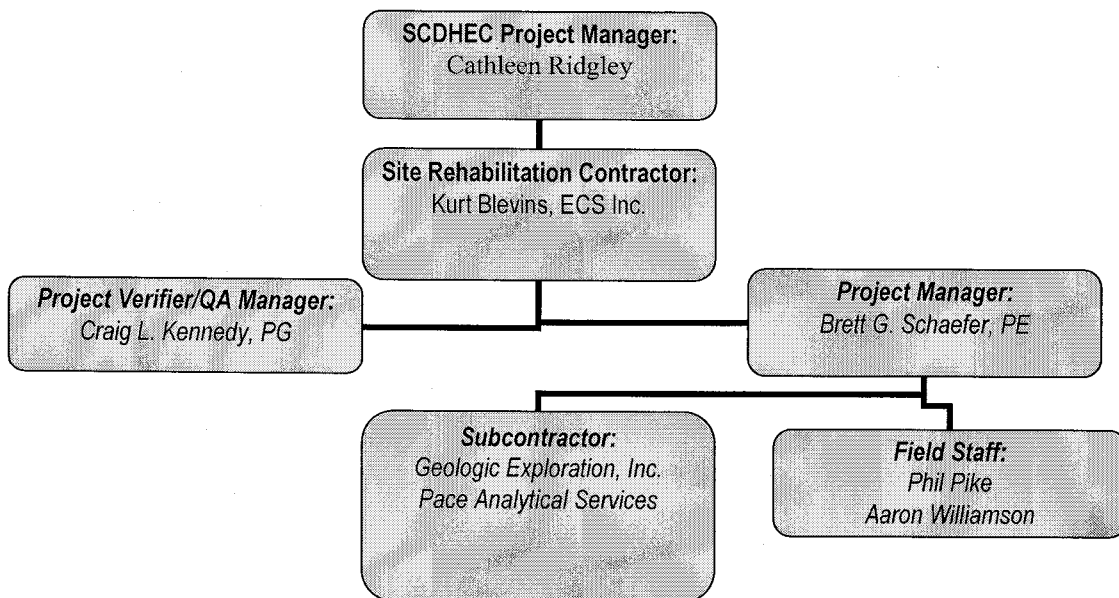
**Table 1A Addendum Distribution List**

**A4 Project Organization**

Role from the UST Master QAPP	Person in this Role for Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Cathleen Ridgley	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6633	803-896-6245	ridglect@dhec.sc.gov
Site Rehabilitation Contractor	Kurt Blevins	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	kblevins@ecsconsult.com
Contractor Project Manager	Brett G. Schaefer, PE	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	bschaefer@ecsconsult.com
Well Services/Driller	Steve Taylor	Geologic Exploration Inc. 176 Commerce Blvd Statesville, NC 28625	800-752-8853	800-752-8853	staylor@gexnc.com
Analytical Laboratory Director	Jeff Graham	Pace Analytical Services 9800 Kincey Ave Suite 100 Huntersville, NC 28078	704-875-9092	704-875-9091	jeff.graham@pacelabs.com
Project Verifier/QA Manager	Craig L. Kennedy, PG	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	ckennedy@ecsconsult.com

**Table 2A Addendum Role Identification and Contact Information**

**Figure 1A Organizational Chart:**



## **Definitions of Project Roles**

### Site Rehabilitation Contractor

Kurt Blevins is the local Branch Manager of ECS Inc and will be responsible for overseeing adherence to the site specific QAPP during all phases of work. The Site Rehabilitation Contractor is responsible for maintaining the original, approved QAPP.

### Project QA Officer

The project QA Officer (Craig L. Kennedy, PG) provides review of field work, documentation of calibration for field instruments, lab data, and technical review of reports produced utilizing this data. The QA Officer will independently review data generated from this project and determine if the data meets QA/QC criteria as set forth in the SCDHEC UST Programmatic QAPP.

### Project Manager

The Project Manager (Brett G. Schaefer, PE) will be responsible for work conducted during this scope of work and the primary point of contact. His duties will include development of the site specific QAPP, supervising field work when necessary, documenting and QA failures, determining corrective actions to QA failures, and preparing reports for submission to SCDHEC.

### Field Staff

The contractor field staff will perform sampling and field activities per the QAPP document under the direction of the Project Manager. Field staff will be responsible for collection and sampling of related data and calibration of field instruments. The Project Manager in certain situations may also be a member of the Field Staff.

## **A5 Problem Definition/Background**

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

According to SCDHEC records, Tier 2 was previously completed at this location in December 2010. Results from the Tier 2 indicated contamination above RBSLs for this site. USTs no longer exist on site. The purpose of the MW installation and GW sample event is to further delineate the existing plume and to determine aquifer contaminant conditions throughout the site.

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

Yes, UST Area.

## **A6 Project/Task Description**

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

To determine what risk the referenced release may pose to the environment and public health a comprehensive groundwater sampling event and monitoring well installation event is necessary. In addition to the referenced activities the inclusion of WSW-X in the groundwater sampling event shall occur. Three shallow monitoring wells shall be installed prior to the comprehensive groundwater sampling event. Six temporary borings shall be within the vicinity of MW-22. Six soil and groundwater samples shall be collected in these temporary borings and submitted for: Soil – BTEX, Naphthalene GW – BTEX, MTBE, Nap, 1,2 DCA, 8-Oxygenates & EDB.

- 2. The work will begin within Approximately One Month after cost approval and the MW install and comprehensive groundwater sampling events (including report) should be complete within approximately 60 to 90 days (depending on due date) after cost approval receipt by ECS, Inc.**
- 3. Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.**

Potential issues may arise from inclement weather, access issues, unpredicted site or equipment problems or schedule conflicts.



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

Detail the geographical area that is to be part of the project. Maps should be included to show not only the topography and the geographical area of the State, but also to show more detail of the site itself including property lines.

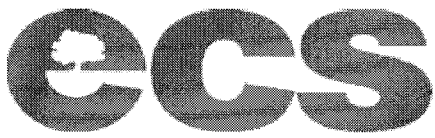
This report presents results of Tier II assessment activities conducted at the former 378 Truck Stop facility (UST permit number 07960) located at 731 Highway 378 in Edgefield, South Carolina (Figure 1). Activities were conducted in accordance with the South Carolina Department of Health and Environmental Control (SCDHEC) directive dated August 16, 2010, which included cost agreement number 39645.

The site was not in use at the time of Tier 2 assessment. An abandoned building was present onsite during ECS's visits associated with the Tier 2 assessment activities. A concrete slab was located directly to the east of, and abutting, the onsite building.

A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. Reportedly, one 550-gallon diesel, one 1,000-gallon gasoline, and one 2,000-gallon gasoline underground storage tanks (USTs) and their associated piping and dispensers were removed from the site on January 1, 1987. The site did not contain USTs at the time of the Tier 2 assessment.

The sedimentary formations of the Coastal Plain range in age from Late Cretaceous to Recent. They consist, for the most part, of unconsolidated sand, clay, gravel, marl, and limestone which have been deposited on a surface of granite, schist, and gneiss similar to, and a continuation of, the rocks underlying the adjoining Piedmont province. Some coquinas have been silicified to form so-called buhrstones and some clays hardened into siltstones. Considered en masse, the formations of the Coastal Plain may be classified as having a monoclinical or acclinal structure, and they rest on rocks of a much older crystalline complex. The unconsolidated rocks occur as wedges of sand, clay, marl, and limestone. Underlying the unconsolidated sediments are "crystalline" rocks consisting of granite, gneiss, schist, and a series of volcanics. Fault troughs or grabens were formed in these pre-Mesozoic rocks during Triassic time, into which were deposited ferruginous and carbonaceous sands and clays. These sediments were subsequently injected by diabase dikes and sills.

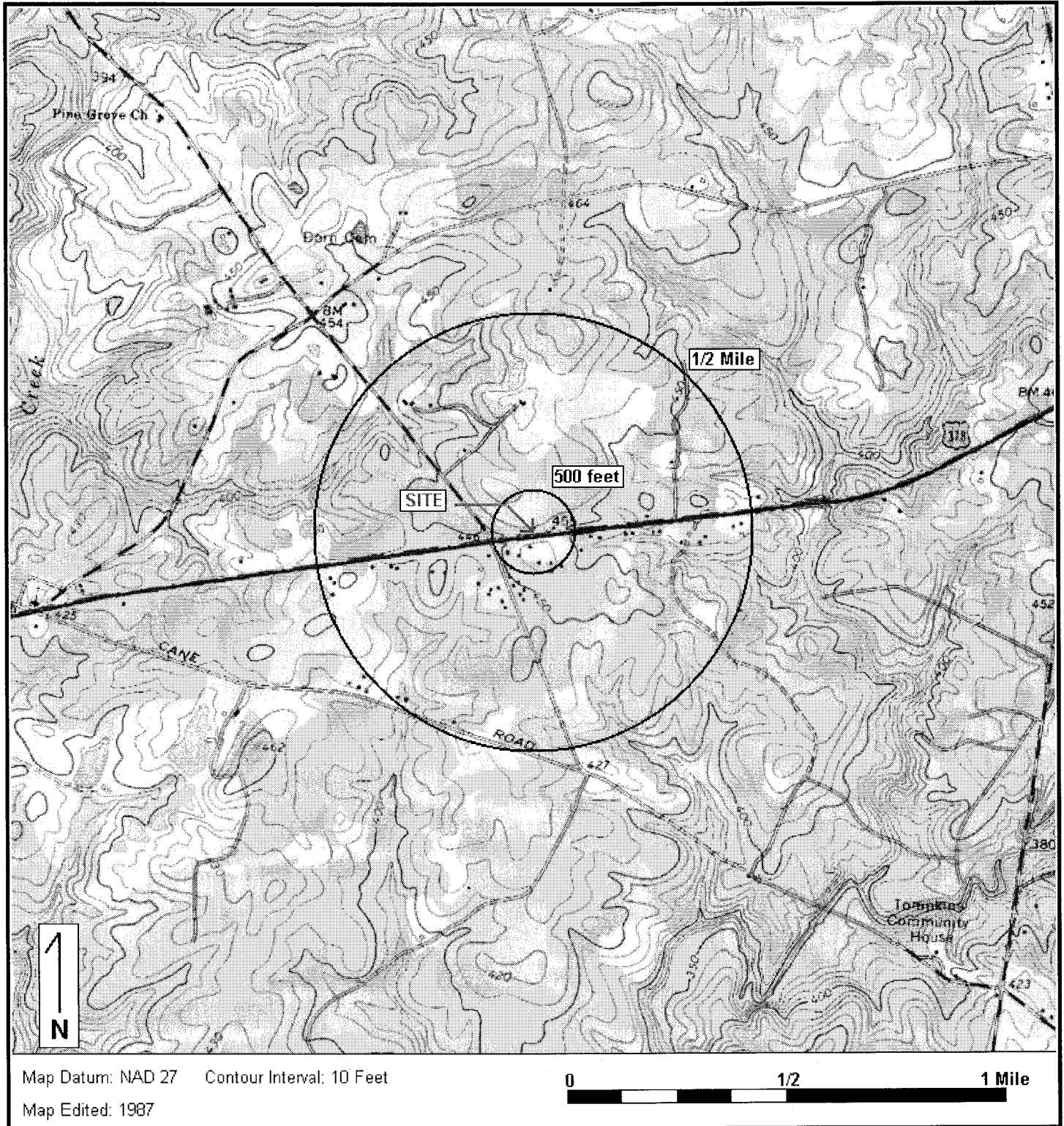
See attached **Figure 1** for topographic information and **Figure 2** for site features.



Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas



### A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Project Manager	Brett G. Schaefer, PE	40 Hr HAZWOPER & Refresher	40 Hr: 2003 Refresher: July 2011	PE	27700
Project Verifier/ QA Manager	Craig L. Kennedy, PG	40 Hr HAZWOPER & Refresher	40 Hr: 1995 Refresher: February 2011	PG	2425
Field Staff	Phil Pike	40 Hr HAZWOPER & Refresher	40 Hr: 1990 Refresher: July 2011	-	-
Field Staff	Aaron Williamson	40 Hr HAZWOPER & Refresher	40 Hr: 2009 Refresher: July 2011	-	-
Pace Lab Manager	Jeff Graham	BS Chemistry	May 1984	Lab Certification	SC 9900601

Table 3A Required Training and Licenses

**Kurt Blevins** of **ECS, Inc.** is responsible for ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: **588 Silver St, Agawam, MA.**

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Well Driller	Jonathan Burr	Continuing Ed.		Well Driller	1740
Well Driller	Vincent Federle	Continuing Ed.		Well Driller	1930
Well Driller	Mark Gettys	Continuing Ed.		Well Driller	1086
Well Driller	Nicholas Hayes	Continuing Ed.		Well Driller	1983
Well Driller	James Hess	Continuing Ed.		Well Driller	1929
Well Driller	Jason Mantak	Continuing Ed.		Well Driller	1494
Well Driller	Michael McConahey	Continuing Ed.		Well Driller	1276
Well Driller	Daniel Summers	Continuing Ed.		Well Driller	1430
Well Driller	Jerry Watkins	Continuing Ed.		Well Driller	1979

**Steve Taylor** of **Geologic Exploration Inc.** is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: **176 Commerce Blvd, Statesville, NC 28625.**

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

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

Site Name: 378 Truck Stop  
Permit #: 07960  
Page: 10

ECS Project Number: 14-214210  
Date: 2/3/12  
QAPP Addendum Revision: 00

**Commercial Lab(s)**

**Full Name of the Laboratory: Pace Analytical Services, Inc.-Huntersville**

**Name of Lab Director: Jeff Graham**

**SC DHEC Certification Number: 9900601**

**Parameters this Lab will analyze for this project:**

Groundwater: EPA Method 8260B: BTEX, Naphthalene, MTBE, 1,2-DCA, 8 Oxygenates;  
EPA 8011: EDB

Soil: EPA Method 8260B: BTEX, Naphthalene

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

### A9 Documents and Records

**Personnel will receive the most current version of the QAPP Addendum via:  
 (Check all that apply)**

US Mail     Courier     Hand delivered

Other (please specify): Email if accepted by SCDHEC Project Manager

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Laboratory Instrument Raw Data	Target software	Electronic	To Disc –offsite storage for 5 yrs	Yes
Laboratory Final Reports	LIMS	Electronic	Tape backup – offsite storage for 5 years	Yes
Field Measurements	ECS, Inc.	Hard Copy: Field Book Electronic: PDF File	Hard Copy & PDF File: ≥5yrs	Yes
Well Construction Records	Geologic Exploration, Inc.	Hard Copy	GEX Storage Facility: ≥5yrs	Yes
Well Abandonment Records	Geologic Exploration, Inc.	Hard Copy	GEX Storage Facility: ≥5yrs	Yes
Waste Manifests	Transporter/Disposal Facility	Hard Copy & Electronic Copy	Transporter/Disposal Facility: ≥5yrs	Yes
GW Sampling Report	ECS, Inc.	Hard Copy & Electronic	≥5yrs	Yes

**Table 4A Record Identification, Storage, and Disposal**

## Section B Measurement/Data Acquisition

### B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
IGWA	-	-	Not Applicable For This Project
Tier I Assessment & Report	-	-	Not Applicable For This Project
Tier II Assessment	-	-	Not Applicable For This Project
AFVR	-	-	Not Applicable For This Project
MW Installation	Within approx. 30 Days of CA receipt	Within approx. 60 Days after receipt of CA	End Date depends on Due Date provided by SCDHEC Project Manager
Monitoring Well Sampling Event	Approximately 7-10 days after MW Installation event	Within approx. 60 Days after receipt of CA	End Date depends on Due Date provided by SCDHEC Project Manager
GW Monitoring Report	Approximately 10 days after sampling event	Within approx. 60 to 90 Days after receipt of CA	End Date depends on Due Date provided by SCDHEC Project Manager

Table 5A Sampling Activities

### B2 Sampling Methods

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

**Estimate the number of samples of each matrix that are expected to be collected:**

Soil	_____	9 (1-Trip, 1-Field Blank, 1-Duplicate)
Ground Water from monitoring wells	_____	41 + 6 temp wells
From Drinking/Irrigation water wells	_____	18
From surface water features	_____	0
Total number of Water samples	_____	76 (5-Trip & 3-Field Blanks and 3-Duplicates)

Please refer to **A6 Section 1** and **Figure 2** for well locations to be sampled.

The samples will be (check as many as apply):    \_\_\_ Homogenized    \_\_\_ Split

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

Please see attached ECS SOP 4.00 General Sampling Procedures for Aqueous & Solid Matrices and ECS SOP 8.10 Groundwater Sample Collection Procedures Using Bailers or Pumps.

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

Groundwater samples will be collected using disposable bailers. Nitrile gloves will be worn by field staff and changed between tasks and locations. Sampling equipment and gloves will be disposed as solid waste at a municipal facility.

Soil samples shall be collected and jarred while wearing nitrile gloves. Sterile soil sampling jars shall be made of glass and provided by the subcontracted laboratory.

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

Groundwater water quality readings will be collected using a multi-parameter water quality meter (as discussed in Section B-6). The water quality meter and the Heron probe will be cleaned between sample points with a solution ofalconox and deionized water and rinsed with deionized water. Please see ECS SOP 10.00 Decontamination.

Decontamination water will be containerized with purge water in properly labeled; DOT approved 55-gallon drums and disposed as non-hazardous waste at an approved facility.

Investigative Derived Wastes shall be placed in a 55 gallon drum, labeled with the proper labeling (Non-hazardous or Hazardous) following RCRA regulations and left onsite to be picked up by A&D Environmental Services.

All monitoring wells will be installed using an auger rig. Augers will be decontaminated between well installations with a solution ofalconox and deionized water and rinsed with deionized water. Soil samples will be collected using a split spoon. Samples will be jarred and submitted for analysis.

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

The following drilling equipment shall be utilize and maintained by Geologic Exploration Inc. for field screening and monitoring well installation purposes: Geoprobe 7822DT, Geoprobe 7822DT, Geoprobe 6620DT, Diedrich D-120 (truck mounted), DrillMax 2400, Mobil B-58 (truck mounted), Diedrich D-120 (atv), Drilltech D25KW.

Investigative Derived Wastes (soil & water) shall be received by A&D Environmental Services.

Subsequent surveying activities shall be performed by ECS personnel.

The samples shall be delivered to the Paçe lab by the subcontracted laboratory's courier service. Subcontracted lab samples will be picked up by the subcontracted lab's courier service. ECS Inc, is not responsible for delivery of samples between contracted laboratories.



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

Failure	Response	Documentation	Individual Responsible
Property & well location access	Call property owner/acquire SCDOT right of way permit access	Document in report or contact SCDHEC PM for assistance	Bret Schaefer
Drilling Equipment failure	Contact Steve Taylor	Note problem schedule date to remobilize to site.	Phil Pike
Horiba Water Quality Meter Fails	Use Back up meter	Change serial number on sampling sheets	Phil Pike
Purge Pump Failure	Use Hand bailing Method	Sampling sheet & Report	Phil Pike
Water Level Meter Fails	Use Back up meter	Change serial number on sampling sheets	Phil Pike

Table 6A Field Corrective Action

### B3 Sample Handling and Custody

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

Samples shall be submitted to the lab in the following procedure:

- 1) Samples shall be brought back to the office and kept cold in a sample storage refrigerator until they are picked up the following day by the laboratory's courier service.

Chain of Custody procedures shall be properly followed for each delivery scenario.

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

Samples shall be stored in a secured sample storage refrigerator until released to the laboratory courier service. The refrigerator will ensure a 4°C temperature is maintained and will be packed in a manner to prevent damage to the sample containers.

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

The procedures in the most recent revision of SOP S-CAR-C-001, Sample Management are used. The laboratory personnel will open the cooler and verify the temperature of the samples by taking the temperature of the temperature blank. If there is no temperature blank in the cooler, measure the temperature of a representative sample bottles using the infrared (IR) thermometer gun.

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

The procedures in the most recent revision of SOP S-CAR-C-001, Sample Management are used. Once logged in and labeled, samples are place in the appropriate storage areas. Specific temperature requirements are outlined in the analytical methods, but general guidelines are outlined below.

Short hold samples are placed in the short hold storage area or delivered directly to the laboratory.

#### Volatile Analyses

Aqueous samples are stored by receiving date or by project number in a segregated volatiles cooler. Associated trip blanks are stored with the samples.

Soil and other solid samples received preserved in methanol are stored by receiving date or by project number in a segregated volatiles cooler. Associated trip blanks are stored with the samples.

Soil and other solid samples received preserved with a stir bar, or deionized water and a stir bar, are stored by receiving date or by project number in a segregated volatiles freezer. Associated trip blanks are stored with samples.

Soil and other solid samples received in 4oz containers or similar bottleware must be preserved within 48 hours. In order to preserve these samples, it is necessary to collect a 5g aliquot of the sample and transfer it to a 40mL vial. One of the following preservation options must be utilized:

The 5g aliquot is preserved with a stir bar, 5mL of deionized water and a stir bar, or 5mL of sodium bisulfate and a stir bar and stored in a freezer until analysis, or

Within 48 hours of collection in the field, the 5g aliquot must be immediately extracted with 5mL of methanol and stored in a segregated volatiles cooler until analysis, or

Within 48 hours of collection in the field, the 5g aliquot can be preserved with 10mL of deionized water and a stir bar, stored in a segregated volatiles cooler and analyzed within 48 hours of collection.

#### General Chemistry and Semi-volatile Analyses

Waters and other liquid samples are staged by receiving date or by project number on the shelves in the appropriate sample storage cooler.

Soils and other solid samples are staged by receiving date or by project number on the shelves in the appropriate sample storage cooler.

#### Metals

Solids and Liquids: These samples are staged by receiving date or by project number on designated shelving in the laboratory or appropriate designated area. These samples may be stored at ambient temperature unless Mercury or Hexavalent Chromium analysis is needed. If Mercury or Hexavalent Chromium analysis will be performed, the samples are staged by receiving date or by project number in the appropriate sample storage cooler. Samples requiring low level mercury analysis by Method 1631 are taken to the clean room for preservation and ambient storage.

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

Laboratory Chain of Custody procedures are outlined in the most recent revision of SOP S-CAR-C-001, Sample Management.

A Chain of Custody shall be completed according to the attached Instructions for Completing a CoC. Samples shall be disposed of using proper procedures by laboratory personnel. ECS, Inc. is not responsible for laboratory sample disposal.

See attached laboratory Chain of Custodies.

## B4 Analytical Methods

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

Parameter	SOP ID*	Method Referenced	Equipment	Comments
8260: BTEX, M, N, 1,2 DCA	S-CAR-0-023	8260B	Purge and Trap Mass Spectrometer System	
8011: EDB	S-CAR-0-020	8011	GC ECD	
8270	S-CAR-0-015	8270D	Direct Inject Mass Spectrometer System	Not Required for this SOW
8270 SIM PAH	S-CAR-0-052	8270D	Direct Inject Mass Spectrometer System	
Lead	S-ASV-I-043	EPA 6010C	ICP Varian ICP Thermo Elemental	
RCRA Metals	S-ASV-I-043 S-ASV-M-020	6010C 245.1 7470A 7471B	ICP, Mercury Analyzer	Not Required for this SOW
Nitrate	S-ASV-021	353.2	Flow Injection Analysis Lachat 8000	Not Required for this SOW
Sulfate	S-ASV-058	300.0	IC Compact Filtration Processor	Not Required for this SOW
Methane				Not Required for this SOW
TPH-DRO	sub			
TOC	sub			
Grain Size	S-5	ASTM D422	Sieves Oven Scale	
Hydrometer	S-6	ASTM D422	Sieves Oven Scale 1000mL Cylinder Hydrometer Thermometer	

Table 7A Analytical SOPs and Referenced Methods

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

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-CAR-O-023	S-CAR-O-023-rev.08	Determination of Volatile Organic Compounds by GC/MS
S-CAR-O-020	S-CAR-O-020-rev.05	Determination of EDB, DBCP and TCP in Water by Microextraction
S-CAR-O-015	S-CAR-O-015-rev.05	Determination of Semi-Volatile Organic Compounds in Aqueous, Solid or Waste Samples by GC/MS
S-CAR-O-052	S-CAR-O-052-rev.2	Determination of Semivolatile Organics by GC/MS-SIM, Selective Ion Monitoring
S-ASV-I-043	S-ASV-I-043-Rev.02	DETERMINATION OF METALS BY INDUCTIVELY COUPLED PLASMA (ICP) SPECTROSCOPY BY SW 846 6010C
S-ASV-I-58	S-ASV-I-58-Rev.00	Ion Chromatography
S-ASV-I-021	S-ASV-I-021-Rev.01	The Determination of Nitrate-Nitrite Nitrogen by Automated Colorimetry
S-ASV-M-020	S-ASV-M-020-Rev.03	Mercury by Cold Vapor for Waters and Solids
S-5	Grain Size	S-5 Grain Size ASTM D422
S-6	Hydrometer	S-5 Hydrometer ASTM D422

Table 8A SOP Abbreviation Key

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Quality Control	Failure	Response	Documented Where?	Individual Responsible
Equipment check	Equipment failure	Contact Steve Taylor	Note problem, schedule date to remobilize to site.	Drilling supervisor
Method Blank, one per batch of 20 samples	If hits in Method Blank	Samples with hits above reporting limit are reextracted or reanalyzed. Samples with hits less than reporting limit are reported and the method blank is qualified. Samples with hits more than 10x the hit in the MB maybe footnoted with a B-flag	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Method Blank, one per batch of 20 samples	If Surrogates outside of control limits	All samples reextracted or reanalyzed if surrogate recovery is below control limits. Samples are reported and MB is footnoted if surrogate recovery is above control limits	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Laboratory Control Sample, one per batch of 20 samples	For any analytes outside of control limits or if the number of analytes outside control limits is over allowable number of exceedances.	If LCS analyte recoveries are above control limits, samples with a hit for the failing analyte above the reporting limit are reextracted or analyzed. If LCS analyte recoveries are below control limits, all samples are reextracted or reanalyzed. If LCS analyte recoveries are above control limits, samples without a hit for the failing analyte above the reporting limit are footnoted and reported. Samples may be reported if there is an acceptable matrix spike (where allowable) or laboratory control sample duplicate associated and the LCS is footnoted	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Laboratory Control Sample Duplicate, when needed	If RPD outside control limits	Samples are reported and LCSD is footnoted	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Laboratory Control Sample Duplicate, when needed	For any analytes outside of control limits or if the number of analytes outside control limits is over allowable number of exceedance.	Corrective actions are the same as Laboratory Control Sample. Samples are reported if LCS is acceptable and LCSD is footnoted	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor

Quality Control	Failure	Response	Documented Where?	Individual Responsible
Matrix Spike, one per batch of 20 samples	For any analytes outside of control limits or if the number of analytes outside control limits is over allowable number of exceedance.	Matrix spike is footnoted and samples are reported	Batch data, LIMS Run logs.	Analyst, Peer Review, Supervisor
Matrix Spike Duplicate, when required	RPD outside control limits	Matrix spike duplicate is footnoted and samples are reported	Batch data, LIMS Run logs.	Analyst, Peer Review, Supervisor
Matrix Spike Duplicate, when required	For any analytes outside of control limits or if the number of analytes outside control limits is over allowable number of exceedance.	Matrix spike duplicate is footnoted and samples are reported	Batch data, LIMS Run logs.	Analyst, Peer Review, Supervisor
Surrogates, all samples	If Surrogates outside control limits	If surrogate recovery is high and samples are non-detected samples are reported with qualification. If surrogate recoveries are low samples are re-extracted or reanalyzed.	Batch data, LIMS Run logs.	Analyst, Peer Review, Supervisor
All Samples	Lost Samples	SCDHEC will be notified and samples will need to be collected again for each lost sample.	Tier I report	ECS Project Manager
All Samples	Samples out of Hold Time	SCDHEC will be notified and samples will need to be collected again.	Tier I report	ECS Project Manager
All Samples	Broken vials or air bubbles in vials	SCDHEC will be notified and samples will need to be collected again.	Tier I report	ECS Project Manager

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
-	Decon water	As generated	55 gal drum onsite	See B2 Discussion
-	Soil	As generated	55 gal drum onsite	See B2 Discussion
All	Soil and Water	Monthly	Veolia Technical Solutions	All laboratory samples are disposed according to S-CHR-S-002, Waste Handling and Management

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

Not Applicable

**B5 Quality Control Requirements:**

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

**B6 Field Instrument and Equipment Testing, Inspection and Maintenance**

1. Identify all fields and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
In-Field PID Instrument	MiniRae 2000 PGM 7600	As recommended in attached MiniRae O&M Manual Doc #011-4001-000 pp 4-5 through 4-10	Periodic	Manufacturer/Rental Equipment Supplier	Phil Pike Aaron Williamson
In-Field Groundwater Quality Instrument	Horiba Y2FAH6H3	As recommended in attached Horiba W-22XD.23XD Operation Manual pp 28-32	Periodic	Manufacturer/Rental Equipment Supplier	Phil Pike Aaron Williamson
Volatiles Mass Spec	ALL	Change traps, clean ion source, replace filaments	Periodic	Laboratory	MSV Analyst
Semivolatile Mass Specc	ALL	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
Groundwater Level Indicator	Heron WLI 11614	As recommended in attached Heron Instrument O&M Manual	Periodic	Manufacturer/Rental Equipment Supplier	Phil Pike Aaron Williamson
Interface Probe	1220056491	As recommended in attached Heron Interface O&M Manual	Periodic	Manufacturer/Rental Equipment Supplier	Phil Pike Aaron Williamson
ECD GC	ALL	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
MetrohmIC	ALL	Replace autosampler filter, tubing, line filter, sample Line and Waste Line, as needed. Clean Pump roller, Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst
ICP	ALL	Clean Sample introduction system , autosampler, torch,	Periodic	Laboratory	ICP Analyst



		Change spray chamber, torch tubing, tubing			
Cetac Mercury Analyzer	ALL	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst
Flow Injection Analysis – Lachat 8000	ALL	Clean Rods, Injection Valves, Manifolds, Replace tubing, lamps, other as needed	Periodic	Laboratory	Nitrate Analyst

**Table 11A Instrument and Equipment Maintenance**

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this.

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
In-Field PID Instrument MiniRae 2000 PGM 7600	Daily prior to use	Calibration as discussed in attached MiniRae O&M Manual Doc #011-4001-000 pp 4-5 through 4-10	Phil Pike Aaron Williams	Recalibrate or instrument maintenance
In-Field Groundwater Quality Instrument Horiba Y2FAH6H3	Daily prior to use	Calibration as discussed attached in Horiba W-22XD.23XD Operation Manual pp 28-32	Phil Pike Aaron Williams	Recalibrate or instrument maintenance
Groundwater Level Indicator Heron WLI 11614	Daily prior to use	Calibration as discussed in attached Heron Instrument O&M Manual	Phil Pike Aaron Williams	Recalibrate or instrument maintenance
Interface Probe Heron 1220056491	Daily prior to use	Calibration as discussed in attached Heron Interface O&M Manual	Phil Pike Aaron Williams	Recalibrate or instrument maintenance
Volatiles Mass Spec	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi volatiles Mass Spec	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument maintenance
Metrohm IC	Daily calibration check	Method Requirements	Nitrate Analyst	Recalibration or instrument maintenance
ICP	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument

				maintenance
Cetac Mercury Analyzer	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000	Daily calibration check Method Requirements	Method Requirements	IC Analyst	Recalibration or instrument maintenance

**Table 12A Instrument and Equipment Inspection**

### B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
In-Field PID/FID Instrument	Operator's Manual and/or Rental Equipment Supplier	Daily prior to use	Operator's Manual and/or Rental Equipment Supplier	Operator's Manual and/or Rental Equipment Supplier	Phil Pike Aaron Williamson	MiniRae O&M Manual Doc #011-4001-000 pp 4-5 through 4-10
In-Field Groundwater Quality Instrument	Operator's Manual and/or Rental Equipment Supplier	Daily prior to use	Operator's Manual and/or Rental Equipment Supplier	Operator's Manual and/or Rental Equipment Supplier	Phil Pike Aaron Williamson	Horiba W-22XD.23XD Operation Manual pp 28-32
Groundwater Level Indicator	Operator's Manual and/or Rental Equipment Supplier	Daily prior to use	Operator's Manual and/or Rental Equipment Supplier	Operator's Manual and/or Rental Equipment Supplier	Phil Pike Aaron Williamson	See attached Heron Instrument O&M Manual
Interface Probe	Operator's Manual and/or Rental Equipment Supplier	Daily prior to use	Operator's Manual and/or Rental Equipment Supplier	Operator's Manual and/or Rental Equipment Supplier	Phil Pike Aaron Williamson	See attached Heron Interface O&M Manual
Volatiles Mass Spec	5 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst	S-CAR-0-023
Semi volatile Mass Spec	5 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-CAR-0-015 S-CAR-0-052
GC ECD	5 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-CAR-0-020
Metrohm IC	3 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-ASV-058
ICP	3 calibration standards for all	When indicated by daily calibration	Method Criteria	Detailed in SOP	ICP Analyst	S-ASV-043

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
	compounds	verification standard				
Cetac Mercury Analyzer	3 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-ASV-M-020
Lacaht QuickChem 8000	3 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-ASV-I-021
Sieve	S-5	6 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Grain Size
Ovens	S-4	4 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Ovens
Scales	S-17	12 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Electronic Scales
Hydrometer	S-6	24 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Hydrometer
Hydrometer Solution	S-7	monthly	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Sodium Hexametaphosphate
Thermometer	S-21	12 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Digital Thermometers

**Table 13A Instrument Calibration Criteria and Corrective Action**

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

### B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Span gas for PID	Liquid Technology Corp.	Attached pressure gauge reads what sticker on span gas can details.	Cool dry cabinet	Phil Pike Aaron Williamson
Leather Gloves	Home Depot	New & Undamaged	Cool dry cabinet	Phil Pike Aaron Williamson
Nitrile Gloves	Enviro-Equipment	New & Undamaged	Sealed boxes	Phil Pike Aaron Williamson
Laboratory Chemicals	Fisher, VWR,	Certificates of analysis and laboratory testing	Laboratory storage	Receiving and laboratory personnel
Laboratory standards	O2Si, Restek, Fisher, VWR, Inorganic Ventures, CPI	Certificates of analysis and laboratory verifications	Vendor specific storage conditions	Laboratory Analysts
Sample Containers	Daniels Scientific, Fisher, O2Si	Certificates of analysis and laboratory testing	Bottle storage area	Sample receiving personnel
Disposable Bailers	GeoTech	New & Undamaged	Individually wrapped in sterile plastic	Phil Pike Aaron Williamson
Twine	Home Depot	Sealed in plastic	Sealed in plastic and isolated from contaminant sources	Phil Pike Aaron Williamson
Calibration Standards for field equipment	Hanna Instruments	Sealed in plastic bottles	Cool dry cabinet	Phil Pike Aaron Williamson

Table 14A List of Consumables and Acceptance Criteria

**B9 Data Acquisition Requirements (Non-Direct Measurements)**

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments
Previously Submitted UST Closure Report, Tax Map, Topographic Maps	Historic GW depth/GW Quality & values	Establishes the DTW; Establishes materials needed.	Documents provided by SCDHEC will be considered an acceptable data source.
-	-	-	-
-	-	-	-

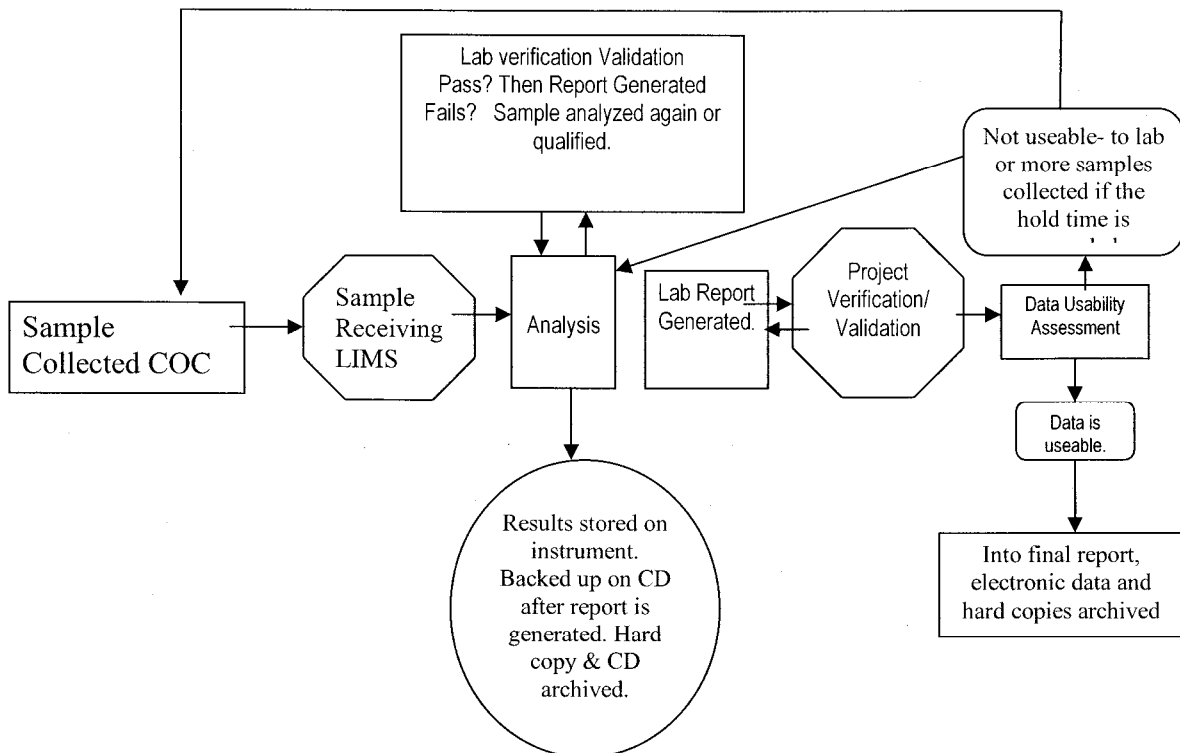
Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed.

Samples shall be picked up at ECS, Inc. and brought to the lab by the subcontracted laboratory's courier service. There are no other support facilities required for this scope of work.

**B10 Data Management**

1. Describe the data management scheme from field to final use and storage.



2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

Each laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Management Department oversees adherence to and review of these programs.

Field notes are recorded in bound, water resistant log books using indelible ink. Pages are dated at the start of the field day, and the name or initials of the field staff, weather, and required activities for the day are recorded. Chain-of-custody documentation information is recorded on field sheets which accompany samples to the lab. Data collected in the field is also entered into a limited access database.

Project related computer files are stored on a restricted access network server. Information is backed-up daily. Logbooks are scanned into the network server.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software included audit trails which are reviewed periodically under each Laboratory's Quality Systems Program. Laboratory data systems are backed up daily and able to be restored in the event of a system failure. These procedures are documented in laboratory SOPs S-ALL-IT-001, System Security and Integrity and S-ALL-IT-002, Server Backup. The IT System Manager is responsible for these systems and procedures.

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Hard copies will remain in the office for a minimum of 5 years. The electronic copies will be maintained for a minimum 5 years.

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Management Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager and the Corporate IT Department.

## **Section C Assessment and Oversight**

### **C2 Assessment and Response Actions**

- 1. The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?*

The contractor's project manager will supervise field personnel during sampling activities to ensure samples are collected according to the requirements of the QAPP. The contractor's project manager shall provide the oversight and will have the authority to stop work when necessary. The contractor's project manager will check to ensure compliance with the contractor's detailed in the QAPP Addendum.

- 2. The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

Contractor may request an Independent Audit based on document review or complaints.

The laboratories participate in annual Proficiency Testing through an approved vendor, Environmental Resources Associates. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification. Each laboratory will notify ECS Inc. of any problems and if the previous data is suspect.

The ECS, Inc. project manager will have the authority to stop work when necessary.

### **C2 Reports to Management**

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

## **Section D Data Validation and Usability**

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).



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Permit #: 07960  
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ECS Project Number: 14-214210  
Date: 2/3/12  
QAPP Addendum Revision: 00

## **QAPP APPENDIX B ATTACHMENTS**

Equipment O&M Manuals, ECS SOPs, Lab SOPs, Chains of Custodies, Cost Proposal



STANDARD OPERATING PROCEDURE

SAMPLE MANAGEMENT

Reference Methods: N/A

LOCAL SOP NUMBER:	S-CAR-C-001-rev.02
EFFECTIVE DATE:	Date of Final Signature
SUPERSEDES:	SOT-ALL-C-001-rev.01
SOP TEMPLATE NUMBER:	SOT-ALL-C-001-rev.01

APPROVALS

	_____	6/2/2010	_____
Laboratory General Manager		Date	
	_____	6/2/2010	6/4/2010
Laboratory Quality Manager		Date	
	_____	6/4/10	_____
Department Manager		Date	

PERIODIC REVIEW

SIGNATURES BELOW INDICATE NO CHANGES HAVE BEEN MADE SINCE PREVIOUS APPROVAL.

Signature	_____	Title	_____	Date	_____
Signature	_____	Title	_____	Date	_____
Signature	_____	Title	_____	Date	_____

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## **1. Purpose**

The purpose of this Standard Operating Procedure (SOP) is to outline the procedures involved with the receipt, login, staging and disposal of samples received by Pace Analytical Services, Inc, Carolina's.

## **2. Scope and Application**

2.1. The policies and procedures contained in this SOP apply to all personnel involved in the receipt, login, analysis, disposal and transfer of samples.

2.2. A sample acceptance policy is contained within the Procedure section that outlines guidelines for acceptable sample conditions. Any deviation from these guidelines requires detailed documentation within the report, usually as a footnote, or on the chain-of-custody, or SCURF and may require client contact.

## **3. Summary of Method**

3.1. Samples are delivered to the laboratory via several delivery mechanisms. Samples received are checked for adherence to the Sample Acceptance Policy with any discrepancies noted. Discrepancies are communicated to the client for their acknowledgement.

3.2. The Laboratory Information Management System (LIMS, EPIC PRO) assigns all samples with a unique sample number and manages the analyses assigned to each sample.

3.3. Samples are labeled with the appropriate information and staged in refrigerated sample storage coolers if temperature preservation is required or on open shelves for samples not requiring sub-ambient temperature preservation. Samples will remain under these conditions until prepared and / or analyzed.

3.4. Samples and associated sub-samples (digestates, extracts, etc.) are maintained for 30 days after the date received unless otherwise requested by the client or other regulatory agency.

3.5. Samples are disposed of in accordance with local laboratory regulatory requirements and the laboratory's waste handling procedures.

## **4. Interferences**

4.1. Samples may be prone to cross contamination from others within the same delivery group or from other client projects. The sample receiving personnel must make every effort to minimize cross-contamination.

4.2. Preservation checks are one of the most likely situations where cross-contamination may occur. Materials used in the process must be specific to each sample and may not be used for multiple samples.

4.3. Samples are stored under specific conditions and in specific locations, typically by container type. However, consideration must be given to samples that are uniquely different from others. Samples that are anticipated to be severely contaminated should be segregated from others in anticipation that the high levels of contaminants may cross-contaminate others in close proximity.

## 5. Safety

5.1. Hazards and Precautions - Use extreme caution in handling samples and wastes as they may be hazardous. Each reagent and chemical used in this method should be treated as a potential health hazard. Reduce exposure by the use of gloves, lab coats, safety glasses and ventilation hoods. Material Safety Data Sheets (MSDS) are on file and available to all personnel.

5.2. All personnel involved in sample management are responsible for complying with OSHA and DOT regulations. These regulations pertain to the safe handling and/or shipping of the chemicals specified in this procedure. A reference file of Material Safety Data Sheets (MSDS) is available to all personnel. Refer to the Sample Control Supervisor for any questions or concerns related to the safe handling and shipment of hazardous materials.

5.3. Other laboratory safety requirements are contained in the Chemical Hygiene Plan/ Safety Manual. Immediate questions can also be addressed with the local Safety Manager.

## 6. Definitions

6.1. Definitions of terms found in this SOP can also be found in the Pace Quality Manual. When definitions are not consistent with NELAC defined terms, an explanation is provided in this SOP or the Pace Analytical Services' Quality Manual Glossary.

6.2. **LIMS - Laboratory Information Management System:** a computer system used to manage the flow and traceability of environmental samples and associated data within the laboratory.

6.3. **NELAC - National Environmental Laboratory Accreditation Conference:** a national laboratory-accrediting agency.

6.4. **MSDS - Material Safety Data Sheet:** contains information on chemicals used in the laboratory.

6.5. **COC - Chain-of-Custody:** a form used to record the field identification of samples collected, analyses requested, date and time of collection, sample preservation used, and traceability of samples from time of collection until delivery to the laboratory. This is a legal document.

6.6. **SCURF - Sample Condition Upon Receipt Form:** a form used to record the condition of samples received in the laboratory.

6.7. **Matrix:** the bulk characteristics of a sample. See Table 6.1.

6.8. **SRF - Sample Receipt Form:** form generated by LIMS system after a project is logged in. Contains sample and project information.

6.9. **UN Number** - identification numbers preceded by the letters UN are associated with proper shipping names considered appropriate for international and domestic transportation. These shipping names along with the identification numbers are located in the Federal Register (49CFR 172.101).

6.10. **Sample Custody:** a sample is considered to be in someone's custody if:

6.10.1. It is in one's physical possession.

6.10.2. It is in someone's view, after being in someone's physical possession.

6.10.3. It is kept in a secured area, restricted to authorized personnel only.

**Table 6.1**

<b>NELAC defined matrix</b>	<b>Pace Analytical defined matrix</b>
Aqueous: any liquid sample not defined as drinking water or saline. Includes surface water, groundwater, effluents, TCLP and other extracts.	Waters: includes groundwater, wastewaters, drinking waters, effluents, and any free-flowing liquids.
Drinking water: any aqueous sample that has been designated as potable or potentially potable.	Not assigned as a separate matrix, but samples are assigned to drinking water methods.
Saline/Estuarine: any aqueous sample from an ocean, estuary or other salt water source	Not assigned as a separate matrix from waters.
Non-aqueous liquid: any organic liquid with <15% settleable solids.	Other: Not assigned as a separate matrix from waters.
Biological tissue: any sample from a biological origin such as fish tissue or plant material.	Tissue: would include tissue and plant samples.
Solids: includes soils, sediments, sludges and other matrices with >15% settleable solids	Soils: includes soils, sediments, sludges; other solid materials such as wood, metal, etc. may fall under another heading.
Chemical waste: a product or by product of an industrial process that results in a matrix not defined above.	Oil: includes any non-solid material not classified as waters.
Air: vapor samples including those contained within sorbent tubes, filters or other devices.	Air: vapor samples including those contained within sorbent tubes, filters, or other devices.
No corresponding matrix to wipe; wipes would be included in with solids.	Wipe: includes wipe samples or swabs taken to check for surface contamination.

## 7. Sample Collection, Preservation, and Handling

7.1. Acceptable sample preservation, containers, and hold times are located in Pace Analytical Services' Quality Manual, the laboratory's method SOP or in the applicable test method. Samples are stored separately from all standards and reagents and any known highly contaminated samples.

**NOTE:** To avoid contamination, no food or drink products can be located near the areas where samples are unpacked, labeled, or staged.

7.2. Sample Storage – See Section 12.3 for general storage guidelines.

## 8. Equipment and Supplies

**Table 8.1**

<b>Equipment/Supplies</b>	<b>Description/ Comments</b>
Sample Labels	
Thermometers	Infrared, digital, NIST traceable
Sample storage cooling units	Capable of holding required storage temperatures
Chain-of-Custody forms	
Sample Condition Upon Receipt Form (SCURF)	
pH Paper	
Label Printer	
LIMS computer system	EPIC Pro
Disposable pipettes	
Sample containers	C&G, SCI/SPEC, Daniels Scientific

## 9. Reagents and Standards

9.1. All reagents used in this procedure must be labeled with:

- Laboratory reagent identification number
- Unless otherwise noted, the name and concentration of the reagent
- Date the reagent was received, opened and, as needed, prepared
- Person preparing reagent
- Expiration date

### 9.2. Reagents

**Table 9.1 – Sample Preservation Reagents**

Reagent	Formula	Concentration
Sulfuric Acid	H <sub>2</sub> SO <sub>4</sub>	Concentrated
Nitric Acid	HNO <sub>3</sub>	Concentrated
Hydrochloric Acid	HCl	Concentrated
Sodium Hydroxide	NaOH	50% or Pellets
Sodium Thiosulfate	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ·5H <sub>2</sub> O	0.02% (0.2g / 1 liter DI water)
Zinc Acetate Solution (for sulfide)		
Methanol	MeOH	Purge and Trap Grade
Ascorbic Acid (for cyanide)		

9.3. For acids, bases and other reagents obtained from other laboratory departments, this information is located in the department reagent preparation log. In the event that these reagents are managed within the Sample Receiving group, the department must maintain its own reagent preparation log.

9.4. Some Pace labs use pre-preserved sample containers. In this case, documentation must be maintained for bottleware and preservation traceability.

## 10. Calibration

10.1. Thermometers, IR-Guns, and other equipment used for measuring temperatures must be calibrated according to the most current revision of the Support Equipment SOP S-ALL-Q-013.

## 11. Procedure

### 11.1. Sample Receipt

11.1.1. The laboratory receives client samples via three major methods: mail/commercial delivery service, Pace Analytical courier/field services and hand delivery.

11.1.2. Pace labs use courier services that pick up client samples on either a regular schedule or on an as-needed basis as communicated by Project Managers or by the client.

When the client is present during courier pick-up, the client signs the chain-of-custody (COC) relinquishing custody to the courier. The courier signs the COC as accepting the samples and provides the client with a copy of the COC. When the courier returns to the lab with the client samples, the courier signs the COC as relinquishing the samples to the lab.

If the client is not present during courier pick-up, the courier signs the COC as accepting the samples and leaves a copy of the COC for the client. If a client also has a sample log in use, the

courier must sign and date the log when the samples are picked up. When the courier returns to the lab with the client samples, the courier signs the COC as relinquishing the samples to the lab. The date/time of delivery to the lab by the courier is the official date/time received by the lab (analogous to the official date/time of receipt by an outside commercial carrier or courier).

To ensure the sample security, the Pace courier custody seals all the coolers being picked up and the courier vehicle is locked at each client pick-up location.

11.1.3. The chain of custody (COC) (see Attachment I) is signed immediately upon receipt of the samples from the client. If the client drops off the samples or they are picked up by the Pace courier, a copy of the signed COC is given to the client at that time. If samples are received via commercial carrier or mail delivery, the COC should be signed immediately when the cooler or package is opened and ultimately placed in the project file. The delivery date and time is considered the date/time received.

11.1.4. Sample receiving personnel should review the COC for any evidence of rush turnaround requests and analyses with short hold times. Projects that fall under these conditions should be given immediate attention. The project manager responsible for that client should be alerted in the event that they have not already alerted the laboratory to the project as it may be possible that the client did not pre-schedule the project. Once the sample(s) are received and logged into the LIMS, the sample technician and project manager will coordinate the notification and delivery of samples to the laboratory.

11.1.5. **Sample Acceptance Policy** - This section constitutes the laboratory's sample acceptance policy. Copies of this policy should be provided, in the form of a letter, fax or e-mail to each client or sampler, as necessary. Samples are considered acceptable if they meet the following criteria:

- There is proper, full, and complete documentation (i.e. chain-of-custody) including:
  - Unique client sample identification. Sample containers are labeled using unique client sample identifications (traceable to the chain-of-custody or other documentation) on durable, waterproof labels or equivalent.
  - Location of sampling (site), time and date of sample collection;
  - Sampler's name and signature;
  - Preservative used (if any);
  - Sample type (matrix);
  - Requested analyses;
  - Any special analysis requirements
- Appropriate sample containers have been used.
- Holding times have not been exceeded upon receipt (holding times are available in Attachment IV). If they have been exceeded, client permission to proceed is required.
- Adequate sample volume has been received for all tests requested (if not, client permission to proceed is required). For data packages requiring quality control samples to be analyzed on client specific samples, the client must include enough sample to complete the QC samples as well.
- When there is insufficient sample to complete the QC samples and the client does not wish to send more sample or more sample cannot be obtained because of sample volume



available or holding time issues, the lack of appropriate volume or weight is noted as a sample acceptance policy deviation on the final report. Batch quality control samples will be used in place of project-specific quality control samples.

- Samples that require sub-ambient thermal preservation are considered acceptable if they are within +/- 2.0 °C of the required temperature (for samples needing to be at 4.0 °C, the acceptable range is just above freezing to 6.0 °C, as defined by NELAC). The sample cooler (ice chest) temperature is recorded directly on the COC. Samples received outside of this criterion must have a notation on the COC and/or on the Sample Condition Upon Receipt Form (SCURF) indicating that the temperature was outside of criteria.
- Samples that are delivered to the lab immediately after collection are considered acceptable if there is evidence (i.e. samples arrive packed with ice) that the chilling process has begun. If samples arrive at temperatures that are outside these requirements, the client will be notified and analysis will NOT proceed unless otherwise directed by the client. Data will be appropriately qualified.

11.1.6. Open the cooler and verify the temperature of the samples by taking the temperature of the temperature blank. If there is no temperature blank in the cooler, measure the temperature of a representative sample bottle using the infrared (IR) thermometer gun. A representative sample will reflect an "average" condition of the samples in the cooler and, depending on the manner in which they are packed, may not necessarily be in direct contact with the cooling material.

NOTE: If an IR gun is used, the temperature should be taken from an opaque surface such as the bottle label. Measurements taken through a transparent surface (clear or amber glass) may not be reliable and should incorporate a specific temperature correction factor for that surface reading.

11.1.7. Record the temperature on the COC (example in Attachment I) and/or SCURF (example in Attachment II). In addition, record the type of "ice" used for packing the cooler (i.e. wet ice, "blue ice", gel packs, etc.).

11.1.8. If samples within a project are spread over multiple coolers and one or more of the coolers are outside of the temperature criteria, then the contents of the cooler must be itemized and the samples and sample containers affected by the out-of-control temperature must be listed on the SCURF for inclusion with the final report. This itemization must be retained in the project file for future reference.

11.1.9. Unpack the cooler and chain of custody (COC). Organize the samples, grouped by client sample ID, according to the order on the COC. Review COC against samples to make sure the bottles received match the analysis requested. All anomalies must be recorded on the SCURF.

- The items that must be checked at a minimum if the lab receives coolers late or will not unpack a cooler until the following day are; take the temperature of the samples in the cooler, sign the COC and check for short hold analyses.

11.1.10. Discard any ice or water that remains in the cooler and the packing material used to secure the samples. Water or ice should be discarded down a drain that connects to the local sewer. Packing materials should be placed in the garbage. If a sample container was broken, the contents remaining in the cooler MUST be discarded in a manner consistent with the hazardous waste handling standard operating procedure.

#### 11.1.11. pH Verification Instructions performed by Sample Control

- The pH of the sample must be verified on all preserved sample bottles requiring pH preservation (see exceptions below).

- Open each preserved bottle (except as noted below). Use a new disposable pipette, a stirring bar or another inert utensil to withdraw a small portion of the sample. Dispense the aliquot on a sample specific narrow-range pH strip and check the pH.

NOTE: Do not check the pH of samples for coliform, volatiles, TOC, WI-DRO, oil and grease, or hexane extractables (method 1664). These analyses will be checked by the analyst at the bench and should not be opened by sample management personnel

**Table 11.1 – General pH Preservation Requirements by Preservative**

Sample Preservatives	Sample pH Requirement
HCl	must be less than 2
HN03	must be less than 2
H2SO4	must be less than 2
NaOH	must be greater than 12
ZnAcetate & NaOH	must be greater than 9

- If the pH is not within the required range, indicate the anomaly on the SCURF form or on the COC. If all bottles are unpreserved for a sample, write N/A in the section of the SCURF.

**11.1.12. pH Preservation Adjustments – Insert if adjustments are performed by Sample Control**

- If a sample container does not meet the pH preservation required, the pH of the sample must be recorded on the COC or SCUR. Additional preservative is added so that the preservative content is <1% of the sample container volume. The sample is mixed and the pH is taken again. The new pH reading is also recorded on the COC or SCUR along with the amount, type and lot number of the preservative added. In addition, the sample container is marked with the preservative added, volume added, date, time and initials of the technician. If a metals sample must be acidified, it must be held for 24 hours before it can be processed.

**11.1.13. Total Residual Chlorine Verification Instructions -** Total residual chlorine must be verified at the time of receipt or at the bench as required by the method or individual state regulatory agency for certain analyses (see Table 11.2). Do not check the sample bottles for those analyses listed in 11.1.10.

- Open the appropriate sample container. Utilizing a new disposable pipette, stirring bar or other inert utensil; withdraw a small portion of the sample. Dispense the aliquot on a sample specific residual chlorine test strip.
- If any chlorine is detected, regardless of amount, note the information on the COC, SCURF or analytical bench sheet.

**Table 11.2 – Analyses requiring Residual Chlorine Verification**

Analyses
Ammonia (NH3)
Nitrate (NO3)
TKN
Cyanides

11.1.14. Note any discrepancies pertaining to samples as defined by the sample acceptance policy detailed above on the COC or SCURF. Any discrepancies involving temperature, preservation, hold time, collection dates and times, sample volume, sample containers, and unclear analysis, must be reported to project management as soon as possible.

11.1.15. For short hold samples, the laboratory is notified and the samples are staged per section 12.3.

**Table 11.3 – Analyses with Hold Times Less Than 72 Hours**

Short Hold Time	Analyses	Details
15 minutes	Field Parameters	pH, Dissolved Oxygen, Residual Chlorine, Ferrous Iron
6 Hours	Total / Fecal Coliform (MPN, MF)	
24 Hours	Hexavalent Chromium	Aqueous Samples Only
30 Hours	Total Coliform (Presence / Absence)	
48 Hours	Color	
48 Hours	MBAS	
48 Hours	Nitrate (unpreserved)	If Preserved, reported as NO3+NO2
48 Hours	Nitrite (unpreserved)	If Preserved, reported as NO3+NO2
48 Hours	Ortho -phosphate	
48 Hours	Settleable Solids	
48 Hours	Turbidity	
48 Hours	VOA - Soils by Unpreserved EPA5035	Jars, Encores, Sleeves
48 Hours	Gross Alpha (NJ 48hr method)-waters	EPA NJAC 7:18-6
72 Hours	3030C Metals	

**11.2. Sample Login**

11.2.1. Rush projects and/or projects with short holds should be logged in first. After these projects have been addressed, projects should be addressed on a first in, first out basis.

11.2.2. Clients and Project Profiles are created in EPIC Pro as per Training Document T-ALL-IT-002 *EPIC Pro 02: Client Setup*. Projects are logged as per Section 1 of Training Document T-ALL-IT-005 *EPIC Pro: Login*.

11.2.3. Tests are assigned as per as per Training Document T-ALL-IT-002 *EPIC Pro 02: Client Setup*, and as per Section 1 of Training Document T-ALL-IT-005 *EPIC Pro: Login*.

11.2.4. Generate sample labels and Sample Receipt Form (SRF) (see Attachment ID).

- Local SRF generation is as per Section 3 of Training Document T-ALL-IT-005 *EPIC Pro: Login*.
- Local sample label generation is as per Section 2 of Training Document T-ALL-IT-005 *EPIC Pro: Login*.

11.2.5. Attach the sample labels to the appropriate sample bottles.

- Sample Management must make sure all sample ID's match COC. Samples are staged on the counter in rows by Sample ID. All sample containers are recorded on COC.

- Sample labels are printed in Sample Management. One label is printed per sample container, except for VOA sample containers where two labels are printed for each container.
- The label is placed onto the side of the sample container. On VOC sample containers, one is placed onto the side and one is placed onto the cover.

11.2.6. The project manager must review and verify the following information by comparing the COC to SRF. Some of this information may not be provided by the client and those fields should be left blank.

- Report Recipient
- Invoice Recipient
- Additional Report Recipient
- PO#
- Project Name
- Project Number
- Requested Due Date
- Sample ID
- Matrix
- Collection Date & Time
- Received Date & Time
- Analysis: Double check compound lists
- Price
- Region Codes
- Work Region % Split (for Pace internal subcontracted work)
- Has Subbed Work been shipped

11.2.7. If any samples require analyses performed outside of the laboratory, prepare the samples for subcontracting according to the procedures listed in the SOP describing the subcontracting of analytical services SOT-ALL-C-003 most current revision.

### 11.3. Sample Storage

11.3.1. While awaiting login on the day received, samples may remain in the shipping cooler as received prior to login. Once unpacked, samples will be logged into the LIMS in a timely manner and returned to appropriate storage conditions as soon as possible. For the exceptional case where samples are not logged in the day they were received, they must be stored under appropriate temperature-controlled conditions until login takes place. In all cases, the same temperatures must be taken as soon after receipt as possible and the samples stored so as to maintain the required storage conditions while awaiting log-in.

11.3.2. Once logged into the LIMS and labeled, samples are placed in the appropriate storage areas. Specific temperature requirements are outlined in the analytical methods, but general guidelines are outlined below:

- Short hold samples are placed in the short hold storage area or delivered directly to the laboratory.

- Aqueous samples are stored by receiving date or by project number in a segregated volatiles cooler. Associated trip blanks are stored with the samples.
- Soil and other solid samples received preserved in methanol are stored by receiving date or by project number in a segregated volatiles cooler. Associated trip blanks are stored with the samples.
- Soil and other solid samples received preserved with deionized water and a stir bar, are stored by receiving date or by project number in a segregated volatiles freezer. Associated trip blanks are stored with samples.
- Soil and other solid samples received in 4oz containers or similar bottleware must be preserved within 48 hours. In order to preserve these samples, it is necessary to collect a 5g aliquot of the sample and transfer it to a 40mL vial. One of the following preservation options must be utilized:
  - The 5g aliquot is preserved with a stir bar, 10mL of deionized water and a stir bar, or 10mL of sodium bisulfate and a stir bar and stored in a freezer until analysis, or
  - Within 48 hours of collection in the field, the 5g aliquot can be immediately extracted with methanol and stored in a segregated volatiles cooler until analysis, or
  - Within 48 hours of collection in the field, the 5g aliquot can be preserved with 10mL of deionized water and a stir bar, stored in a segregated volatiles cooler and analyzed within 48 hours of collection.

#### General Chemistry and Semi-volatile Analyses

- Waters and other liquid samples are staged by receiving date or by project number on the shelves in the appropriate sample storage cooler.
- Soils and other solid samples are staged by receiving date or by project number on the shelves in the appropriate sample storage cooler.

#### Metals

- Solids and Liquids: These samples are staged by receiving date or by project number on designated shelving in the laboratory or appropriate designated area. These samples may be stored at ambient temperature unless Hexavalent Chromium analysis is needed or the matrix of the samples are solids. If Hexavalent Chromium analysis will be performed, the samples are staged by receiving date or by project number in the appropriate sample storage cooler.

#### 11.4. Disposal of Unconsumed Samples

Refer to the laboratory standard operating procedure for waste handling and disposal SOT-S-ALL-S-002, most current revision.

## 12. Quality Control

12.1. For any sample received at the laboratory that does not meet the sample acceptance, hold time or preservation criteria, the client must be contacted by project management and advised of the situation.

12.1.1. If the client instructs the laboratory to proceed with the analysis, all appropriate personnel/departments must be informed and the client approval must be documented on the SCURF or COC. Data will be appropriately qualified.

12.1.2. The client may also instruct the laboratory to preserve the samples at the laboratory prior to proceeding with analysis. This must be documented on the COC or the SCURF, and should be noted in the final laboratory report.

12.2. All supporting documentation related to sample custody must be retained by the laboratory. This includes; memorandums, fax transmissions, all paperwork received with the COC and copies of email transmissions.

### 12.3. Documenting Discrepancies during receipt of samples.

12.3.1. The following are examples of client discrepancies that need to be documented on the appropriate paperwork (i.e. SCURF).

- Lost samples/insufficient sample volume
- Broken or missing bottles
- Missing COC
- Mislabeled bottles
- Preservation error
- Missing sample related details (date, time, sample type)

12.3.2. Pace sample management discrepancies will be documented on the SCURF, COC or within the project files. Discrepancies attributable to errors and omissions on the part of the laboratory will be addressed and resolved through the formal corrective action process.

## 13. Method Performance

13.1. Not Applicable

## 14. Pollution Prevention and Waste Management

14.1. In order to minimize the amount of waste generated during this procedure, analyst should prepare reagents in an amount that may be used in a reasonable amount of time (i.e. before a reagent expires).

14.2. The Chemical Hygiene Plan/Health and Safety Plan contains additional information on pollution prevention.

## 15. References

15.1. Pace Quality Manual - Pace Analytical Services, Inc., current revision.

15.2. SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods, USEPA, current revision.

15.3. National Environmental Laboratory Accreditation Conference (NELAC), Quality Systems Chapter 5; current revision.

15.4. American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 1995, Standard Methods for the Examination of Water and Wastewater, A.E. Greenberg, L.W. Clesceri, A.D. Eaton and M.A.H. Franson, eds., 19th ed., American Public Health Association, Washington D. C.

15.5. U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.

15.6. U.S. Environmental Protection Agency, 1988, Methods for Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039, Environmental Monitoring Systems Laboratory, Cincinnati, Ohio.

15.7. Code of Federal Regulations, Title 40, 72FR11239; March 12, 2007

15.8. Code of Federal Regulations, Title 40, 72FR14220; March 26, 2007

**16. Tables, Diagrams, Flowcharts, Attachments, Appendices, etc.**

16.1. Attachment I – Chain of Custody, Form F-ALL-Q-020

16.2. Attachment II – Sample Condition Upon Receipt Form, Form F-ALL-C-003

16.3. Attachment III – Sample Receipt Form (SRF), example

16.4. Attachment IV – Method Hold Time, Container and Preservation Guide

**17. Revisions**

Document Number	Reason for Change	Date
ALL-C-001-rev.0	New	12 Jul 2004
ALL-C-001rev.1	Removed information on waste and disposal and referred to ALL-S-002, <i>Waste Handling</i> Removed information on subcontracting samples and referred to ALL-C-003, <i>Subcontracting Samples</i> Removed information on residual chlorine testing in sample management. Those laboratories that require or perform this test in sample management, will include the information in their local addenda Added a general reference to the type of containers purchased in 9.1.10 Added information on the re-use of returned empty sample containers in section 12.1.4 Added shelf life criteria for trip blanks in 12.1.13 Provided more detail on how to check pH preservation in 12.2.8 Added Attachment I, II, III	30 Mar 2005

SOT-ALL-C-001rev.00	<p>Converted to SOP Template          Removed bottle order preparation details for conversion to separate SOP Template          Updated COC form          Updated SCUR form          Included requirement to add Bottle Lot #s to the Bottle Order Form          Added Attachment IV –Method Hold Times</p>	28Dec2006
SOT-ALL-C-001-rev.01	<p>Section 1: removed reference to bottle preparation (material was previously moved to another SOP).          Section 4.1: reworded second sentence (SR personnel cannot ensure that there will not be cross-contamination).          Section 7: removed responsibility section. Responsibilities are listed throughout the SOP and are listed in the Quality Manual. Renumbered subsequent sections, tables and references in SOP.          Added section 9.4 regarding the use of pre-preserved containers.          Section 10.1: removed specific ALL SOP reference and added ability to add in lab-specific SOP reference.          Table 11.2: added cyanides per Client Services 3P meeting notes.          Section 15: updated references where applicable.          Section 11.1.3: specified that the delivery date and time is the date received.          Added new section 11.1.2 regarding courier service and indicated when the official date/time of receipt is. Renumbered rest of the items in this section.          Section 11.1.5: sixth bullet point. Added line where labs can add in lab-specific temperature ranges or language if different from that stated.          Section 11.1.6: revised the 'two to five sample average' wording with regards to taking sample temperature to 'a representative sample'. Added red lettered sentence about adding local procedure if different from that listed.          Section 11.1.7: removed repetitive sentence regarding taking average temperature.          Section 11.1.8: reworded for clarity.          Section 11.1.9: added editable bullet point for when coolers are not unpacked until the following day.          Section 11.1.12: added in possible template language regarding pH adjustments. Labs have the ability to use this language or add their own procedure.          Section 11.3.1: added language to state that samples should be kept in cold storage as much as physically possible.          Table 11.3: added gross alpha and residual chlorine to short hold table.          Section 15: added CFR references for Method Update Rule.          Attachments: replaced COC, SCUR and SRF with current versions.          Attachment IV: replaced existing chart with the revised chart from the Quality Manual.</p>	11Dec2008



Attachment I - Example Chain-of-Custody Form



CHAIN-OF-CUSTODY / Analytical Request Document  
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:			Section B Required Project Information:			Section C Invoice Information:			Page _____ of _____
Company:		Report To:		Attention:		Address:		Company Name:	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____
Address:		Copy To:		Address:		Phone:		Pace Quote Reference:	
Email To:		Purchase Order No.:		Pace Project Manager:		Requested Due Date/AT:		Pace Profile #:	
Phone:		Project Name:							
Fax:		Project Number:							

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes		COLLECTED		# OF CONTAINERS	Preservatives						Refrigeration (Y/N)	Pace Project No./ Lab I.D.
		Matrix Code	Code	Composite Start	Composite End/Grab		Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		
MATRIX CODE (see well codes in lab)	SAMPLE TYPE (0209AS, 0209AP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION								

PRINT Name of SAMPLER:	DATE Signed (MM/DD/YYYY):	Temp in °C	Refrigerated in Ice (Y/N)	Coolbox/ Cooler (Y/N)	Sample intact (Y/N)
SIGNATURE of SAMPLER:					

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-AU-Q-020rev.06, 12-Oct-2007

### Attachment II – Example Sample Condition Upon Request Form



#### Sample Condition Upon Receipt

Client Name: \_\_\_\_\_ Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals Intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used \_\_\_\_\_ Type of Ice: Wet Blue None  Samples on Ice, cooling process has begun

Cooler Temperature \_\_\_\_\_ Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and initials of person examining contents: \_\_\_\_\_

			Comments:
Chain of Custody Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.	
Sample Labels match COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes date/time/ID/Analysis Matrix:			
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, colform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No		Initial when completed      Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.	
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

**Attachment III – Example Sample Receipt Form**

**Sample Receipt Form**  
 Pace Analytical Services, Inc.  
 Indiana



Sample Acknowledgement Recipients:

Bill to:

Email:

Final Report Recipients:

Line Item Descriptions:

[4] Water Short VOC

Client P.O. No:  
 Phone: 1(317)875-5884  
 Project Manager: Phaedra Zuckworth  
 Client Project ID:

Lab Project No: 5018684  
 Project Deliverables Type: Standard Report  
 Project Report Due Date: 09/25/08  
 Profile: 907

Lab Smp ID: 5018684001      Client Smp ID: RW-3:G090908      Collected Date: 09/09/08 11:25  
 Proj Smp No: 1      Matrix: Water      Smp Type: PS      Line Item: 4      Received Date: 09/11/08 10:19  
 Location: OH BUSTR

Auxiliary Data:

Consultant Project Number:	NA	ENFOS Project (AAAAA-0000):	
Site ID/Facility Number:		Phase:	01
Gen Portfolio:	CENTRAL	SubPhase/Task:	03
State of Sample Collection:	OH	Cost Element:	05
Consultant Name:	URS	RCOP:	no
Rush Charges:	0		

PARAMETER	METHOD	UNIT PRICE	WR	SPL	%
8260 WUST - 8260 MSV UST	EPA 8260	\$27.00			
COMPOUND		PQL UNITS			
Benzene		5 ug/L			
Ethylbenzene		5 ug/L			
Methyl-tert-butyl ether		4 ug/L			
Toluene		5 ug/L			
Xylene (Total)		10 ug/L			
Sub Total - Sample 208364		\$27.00			

Lab Smp ID: 5018684002      Client Smp ID: RW-4:G090908      Collected Date: 09/09/08 11:00  
 Proj Smp No: 2      Matrix: Water      Smp Type: PS      Line Item: 4      Received Date: 09/11/08 10:19  
 Location: OH BUSTR

PARAMETER	METHOD	UNIT PRICE	WR	SPL	%
8260 WUST - 8260 MSV UST	EPA 8260	\$27.00			
COMPOUND		PQL UNITS			
Benzene		5 ug/L			
Ethylbenzene		5 ug/L			
Methyl-tert-butyl ether		4 ug/L			
Toluene		5 ug/L			
Xylene (Total)		10 ug/L			

**Attachment IV – METHOD HOLD TIME, CONTAINER AND PRESERVATION GUIDE**

Parameter	Method	Matrix	Container	Preservative	Max Hold Time
2, 3, 7, 8-TCDD	1613B	Soil	8oz Glass	None	90/40 Days
2, 3, 7, 8-TCDD	1613B	Water	1L Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	90/40 Days
2, 3, 7, 8-TCDD	8290	Water	1L Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	30/45 Days
Acidity	SM2310B	Water	Plastic/Glass	≤6°C	14 Days
Alkalinity	SM2320B/310.2	Water	Plastic/Glass	≤6°C	14 Days
Alpha Emitting Radium Isotopes	9315/903.0	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	180 days
Anions by IC, including Br, Cl, F, NO <sub>2</sub> , NO <sub>3</sub> , SO <sub>4</sub>	300.0/300.1/ SM4110B	Water	Plastic/Glass	≤6°C	Br, Cl, F, SO <sub>4</sub> (28 Days) NO <sub>2</sub> , NO <sub>3</sub> (48 Hours)
Aromatic and Halogenated Volatiles	8021	Soil	5035 vial kit	See 5035 note*	14 days
Aromatic and Halogenated Volatiles	601/602/8021	Water	40mL vials	pH<2 HCl; ≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	14 Days
Bacteria, Total Plate Count	SM9221D	Water	Plastic/WK	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	24 Hours
Base/Neutrals and Acids	8270	Soil	8oz Glass	≤6°C	14/40 Days
Base/Neutrals and Acids	625/8270	Water	1L Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	7/40 Days
Base/Neutrals, Acids & Pesticides	525.1/525.2	Water	1L Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	7/30 Days
BOD/cBOD	SM5210B	Water	Plastic/Glass	≤6°C	48 hours
BTEX/Total Hydrocarbons	TO-3	Air	Summa Canister	None	14 Days
BTEX/Total Hydrocarbons	TO-3	Air	Tedlar Bag	None	48 Hours
Chloride	SM4500Cl/9250/ 9251/9252	Water	Plastic/Glass	None	28 Days
Chlorinated Herbicides	8151	Soil	8oz Glass Jar	≤6°C	7/40 Days
Chlorinated Herbicides	8151	Water	1L Amber Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	7/40 Days
Chlorinated Herbicides	515.1	Water	1L Amber Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	14/28 Days
Chlorine, Residual	SM4500Cl	Water	Plastic/Glass	None	15 minutes
COD	SM5220C/ 410.3/410.4	Water	Plastic/Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> ; ≤6°C	28 Days
Color	SM2120B,C,E	Water	Plastic/Glass	≤6°C	48 Hours
Condensable Particulate Emissions	EPA 202	Air	Solutions	None	6 Months
Cyanide, Reactive	SW846 chap.7	Water	Plastic/Glass	None	28 Days
Cyanide, Total and Amenable	SM4500CN/9010/ 9012/335.4	Water		pH>12 NaOH; ≤6°C; ascorbic acid if Cl present	14 Days, 24 Hours if Sulfide present
Diesel Range Organics	8015	Soil	8oz Glass Jar	≤6°C	14/40 Days
Diesel Range Organics	8015	Water	1L Glass	≤6°C	7/40 Days
Dioxins & Furans	TO-9	Air	PUF	None	30/45 Days
EDB & DBCP	504.1/8011	Water	40mL vials	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	14 Days
Explosives	8330/8332	Water	1L Glass	≤6°C	7/40 Days
Explosives	8330/8332	Soil	8oz Glass Jar	≤6°C	14/40 Days
Ferrous Iron	SN3500Fe-D	Water	Glass	None	Immediate
Flashpoint/Ignitability	1010/1030	Water	Plastic/Glass	None	28 Days
Fluoride	SM4500Fl-C,D	Water	Plastic	None	28 Days
Gamma Emitting Radionuclides	901.1	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	180 days
Gas Range Organics	8015	Water	40mL vials	pH<2 HCl	14 Days
Gasoline Range Organics	8015	Soil	5035 vial kit	See 5035 note*	14 days
Gross Alpha (NJ 48Hr Method)	NJAC 7-18-6	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	48 Hrs
Gross Alpha and Gross Beta	9310/900.0	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	180 days

Parameter	Method	Matrix	Container	Preservative	Max Hold Time
Haloacetic Acids	552.1/552.2	Water	40mL Amber vials	NH <sub>4</sub> Cl; ≤6°C	14/7 Days
Hardness, Total (CaCO <sub>3</sub> )	SM2340B,C/130.1	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	6 Months
Hexavalent Chromium	7196/218.6/ SM3500Cr	Water	Plastic/Glass	≤6°C	24 Hours
Hydrogen Halide & Halogen Emissions	EPA 26	Air	Solutions	None	6 Months
Lead Emissions	EPA 12	Air	Filter/Solutions	None	6 Months
Low Level Mercury	1631	Water	Glass	BrCl	90 days (if preserved and oxidized)
Mercury	7471	Soil	8oz Glass Jar	≤6°C	28 days
Mercury	7470/245.1/245.2	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	28 Days
Metals	7300/7303	Air	Filters	None	6 Months
Metals (and other ICP elements)	6010	Soil	8oz Glass Jar	None	6 months
Metals (and other ICP elements)	6010/6020/200.7/ 200.8	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	6 Months
Methane, Ethane, Ethene	RSK-175	Water	40mL vials	HCl	14 Days
Methane, Ethane, Ethene	EPA 3C	Air	Summa Canister	None	14 Days
Methane, Ethane, Ethene	EPA 3C	Air	Tedlar Bag	None	48 Hours
Nitrogen, Ammonia	SM4500NH3/350.1	Water	Plastic/Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> ; ≤6°C	28 Days
Nitrogen, Kjeldahl	SM4500-Norg; 351.1/351.2	Water	Plastic/Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> ; ≤6°C	28 Days
Nitrogen, Nitrate	SM4500-NO3/ 352.1	Water	Plastic/Glass	≤6°C	48 Hours
Nitrogen, Nitrate & Nitrite	SM4500-NO3/ 353.2	Water	Plastic/Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> ; ≤6°C	28 Days
Nitrogen, Nitrite	SM4500-NO2/ 353.2	Water	Plastic/Glass	≤6°C	48 Hours
Nitrogen, Organic	SM4500-Norg/ 351.2	Water	Plastic/Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> ; ≤6°C	28 Days
Non-Methane Organics	EPA 25C	Air	Summa Canister	None	14 Days
Non-Methane Organics	EPA 25C	Air	Tedlar Bag	None	48 Hours
Odor	SM2150B	Water	Glass	≤6°C	24 Hours
Oil and Grease/HEM	1664A/SM5520B/ 9070	Water	Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> ; ≤6°C	28 Days
Organochlorine Pesticides & PCBs	TO-4	Air	PUF	None	7/40 Days
Organochlorine Pesticides & PCBs	8081/8082/608	Water	1L Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	7/40 Days
Organochlorine Pesticides & PCBs	8081/8082	Soil	8oz Glass Jar	≤6°C	14/40 Days
Organophosphorous Pesticides	8141	Soil	8oz Glass Jar	≤6°C	14/40 Days
Organophosphorous Pesticides	8141	Water	1L Amber Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	7/40 Days
Oxygen, Dissolved (Probe)	SM4500-O	Water	Glass	None	15 minutes
Paint Filter Liquid Test	9095	Water	Plastic/Glass	None	N/A
Particulates	PM-10	Air	Filters	None	6 Months
Permanent Gases	EPA 3C	Air	Summa Canister	None	14 Days
Permanent Gases	EPA 3C	Air	Tedlar Bag	None	48 Hours
pH	SM4500H+B/9040/ 9041/150.2	Water	Plastic/Glass	None	15 minutes
Phenol, Total	420.1/420.4/9065/ 9066	Water	Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> ; ≤6°C	28 Days
Phosphorus, Orthophosphate	SM4500P/365.1/365.3	Water	Plastic	Filter; ≤6°C	Filter within 15 minutes, Analyze within 48 Hours
Phosphorus, Total	SM4500P/ 365.1/365.3/365.4	Water	Plastic/Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> ; ≤6°C	28 Days
Polynuclear Aromatic Hydrocarbons	TO-13	Air	PUF	None	7/40 Days
Polynuclear Aromatic Hydrocarbons	8270 SIM	Soil	8oz Glass Jar	≤6°C	14/40 Days
Polynuclear Aromatic Hydrocarbons	8270 SIM	Water	1L Glass	≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	7/40 Days

Parameter	Method	Matrix	Container	Preservative	Max Hold Time
Radioactive Strontium	905.0	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	180 days
Radium-226 Radon Emanation Technique	903.1	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	180 days
Radium-228	9320/904.0	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	180 days
Silica, Dissolved	SM4500Si-D	Water	Plastic	≤6°C	28 Days
Solids, Settleable	SM2540F	Water	Glass	≤6°C	48 Hours
Solids, Total	SM2540B	Water	Plastic/Glass	≤6°C	7 Days
Solids, Total Dissolved	SM2540C	Water	Plastic/Glass	≤6°C	7 Days
Solids, Total Suspended	SM2540D	Water	Plastic/Glass	≤6°C	7 Days
Solids, Total Volatile	SM2540E	Water	Plastic/Glass	≤6°C	7 Days
Specific Conductance	SM2510B/9050/120.1	Water	Plastic/Glass	≤6°C	28 Days
Stationary Source Dioxins & Furans	EPA 23	Air	XAD Trap	None	30/45 Days
Stationary Source Mercury	EPA 101	Air	Filters	None	6 Months, 28 Days for Hg
Stationary Source Metals	EPA 29	Air	Filters	None	6 Months, 28 Days for Hg
Stationary Source PM10	EPA 201A	Air	Filters	None	6 Months
Stationary Source Particulates	EPA 5	Air	Filter/Solutions	None	6 Months
Sulfate	SM4500SO4/9036/9038/375.2/ASTMD516	Water	Plastic/Glass	≤6°C	28 Days
Sulfide, Reactive	SW-846 Chap.7	Water	Plastic/Glass	None	28 Days
Sulfide, Total	SM4500S/9030	Water	Plastic/Glass	pH>9 NaOH; ZnOAc; ≤6°C	7 Days
Sulfite	SM4500SO3	Water	Plastic/Glass	None	15 minutes
Surfactants	SM5540C	Water	Plastic/Glass	≤6°C	48 Hours
Total Organic Carbon (TOC)	SM5310B,C,D/ 9060	Water	Glass	pH<2 H <sub>2</sub> SO <sub>4</sub> or HCl; ≤6°C	28 Days
Total Organic Halogen (TOX)	SM5320/9020/ 9021	Water	Glass; no headspace	≤6°C	14 Days
Tritium	906.0	Water	Glass	pH<2 HNO <sub>3</sub>	180 days
Turbidity	SM2130B/180.1	Water	Plastic/Glass	≤6°C	48 Hours
Uranium Radiochemical Method	908.0/ASTM D5174-97	Water	Plastic/Glass	pH<2 HNO <sub>3</sub>	180 days
Volatiles	TO-14	Air	Summa Canister	None	30 Days
Volatiles	TO-14	Air	Tedlar Bag	None	48 Hours
Volatiles	TO-15	Air	Summa Canister	None	30 Days
Volatiles	8260	Soil	5035 vial kit	See 5035 note*	14 days
Volatiles	8260	Water	40mL vials	pH<2 HCl; ≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	14 Days
Volatiles	624	Water	40mL vials	pH<2 HCl; ≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	14 Days (7 unpreserved)
Volatiles	524.1/524.2	Water	40mL vials	pH<2 HCl; ≤6°C; Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if Cl present	14 Days
Alaska DRO	AK102	Soil	8oz Glass	≤6°C	14/40 Days
Alaska DRO	AK102	Water	1L Glass	pH<2 HCl; ≤6°C	14/40 Days
Alaska RRO	AK103	Soil	8oz Glass	≤6°C	14/40 Days
Alaska GRO	AK101	Soil	5035 vial kit	See 5035 note*	14 Days
Alaska GRO	AK101	Water	40mL vials	pH<2 HCl; ≤6°C	14 Days

**5035 Note:** 5035 vial kit typically contains 2 vials water, preserved by freezing or, 2 vials aqueous sodium bisulfate preserved at 4°C, and one vial methanol preserved at ≤6°C and one container of unpreserved sample stored at ≤6°C.

**Attachment IV – HOLD TIMES AND CHLORINE CHECKS**

**Analyses with Hold Times < 72 Hours**

<b>Short Hold Time</b>	<b>Analyses</b>	<b>Details</b>
15 minutes	Field Parameters	pH, Dissolved Oxygen, Residual Chlorine, Ferrous Iron
6 Hours	Total / Fecal Coliform (MPN, MF)	
24 Hours	Hexavalent Chromium	Aqueous Samples Only
30 Hours	Total Coliform (Presence / Absence)	
48 Hours	Color	
48 Hours	MBAS	
48 Hours	Nitrate (unpreserved)	
48 Hours	Nitrite (unpreserved)	
48 Hours	Ortho -phosphate	
48 Hours	Settleable Solids	
48 Hours	Turbidity	
48 Hours	VOA - Soils by Unpreserved EPA5035	Jars, Encores, Sleeves
48 Hours	Gross Alpha (NJ 48hr method)-waters	EPA NJAC 7:18-6
72 Hours	3030C Metals	

**Analyses Requiring Residual Chlorine Verification**

<b>Analyses</b>	<b>Details</b>
Ammonia (NH <sub>3</sub> )	Nutrient Bottle
Nitrate (NO <sub>3</sub> )	Nutrient Bottle
Total Kjeldahl Nitrogen (TKN)	Nutrient Bottle
Total Phosphorus (TP)	Nutrient Bottle
Nitrate (unpreserved)	Unpreserved Bottle
Cyanide	



# STANDARD OPERATING PROCEDURE

## Waste Handling and Management

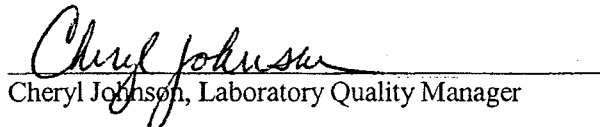
Reference Methods: N/A

LOCAL SOP NUMBER:	S-CHR-S-002-rev.02
EFFECTIVE DATE:	Date of Final Signature
SUPERSEDES:	S-CHR-S-002-rev.01
SOP TEMPLATE NUMBER:	SOT-ALL-S-002-rev.02

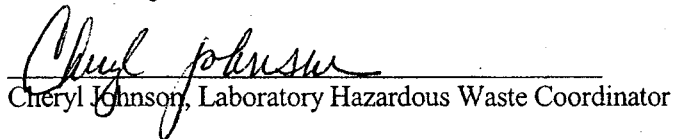
### APPROVALS

  
 Jeff Graham, Laboratory General Manager

9/27/11  
 Date

  
 Cheryl Johnson, Laboratory Quality Manager

9/22/2011  
 Date

  
 Cheryl Johnson, Laboratory Hazardous Waste Coordinator

9/22/2011  
 Date

### PERIODIC REVIEW

SIGNATURES BELOW INDICATE NO CHANGES HAVE BEEN MADE SINCE PREVIOUS APPROVAL.

Signature	Title	Date
Signature	Title	Date
Signature	Title	Date

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## 1. Purpose

1.1. Pace Analytical Services, Inc. (Pace) acknowledges its obligation to the responsible management of the environment and its resources. Pace Management is committed to operating in such a way that meets or exceeds the state and federal laws governing waste management and encourages the use of best practices to reduce, reuse and recycle waste material where possible. This Standard Operating Procedure (SOP) documents the systems, processes and procedures that Pace Charlotte uses to manage generated wastes.

1.2. It is Pace's policy to minimize the amount of hazardous waste it produces and to reduce the hazardous properties of those wastes whenever practical within regulatory compliance. This can be achieved by periodic auditing of all processes producing hazardous waste; reduction of sample volume delivered by the client; return of excess sample material to clients whenever practical and economical; investigation of new technologies that might require smaller volumes of sample, or produce fewer or less hazardous by-products; implementation of lab cleaning procedures that reduce the volume of cleaning residue; recycling of hazardous materials; and investigation of new treatment technologies that are comprehensively destructive or are effective in reducing the volume or hazardous qualities of the wastes produced.

## 2. Scope and Application

2.1. This SOP is applicable to all processes at Pace Charlotte that involve generated waste, and is designed to assist its operations in adhering to regulations set forth in the following federal statutes: Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), Toxic Substances Control Act (TSCA), and DOT Title 49, and Transportation (parts 100-199). Particular attention is given to local pretreatment standards covering discharges to publicly owned treatment works (POTW) when performing elementary neutralization on acidic and basic waste. The local standards are based in part upon provisions in the National Pretreatment Standards and Prohibited Discharge Standards.

2.2. The degree to which RCRA regulations apply to Pace facilities is dependent upon the generator status of the operation. Under the federal rules (state requirements may be more stringent or give the classes a slightly different name) there are three different classes of hazardous waste generators based upon the amount of waste generated in a month to month time frame.

**Table 2.3. Waste Generator Class Limits**

<b>Hazardous Waste Generator Class</b>	<i>Quantity of Hazardous Waste Generated per Month</i>	<b>Generated Monthly Acute Hazardous Waste</b>	<b>Maximum Allowable Hazardous Waste Quantity on-site</b>	<b>Maximum Permitted Waste Accumulation Time</b>
<b>Cond. Exempt Small Quantity</b>	<100kg	<1 kg	<1000kg	Unlimited
<b>Small Quantity</b>	100-1000kg	<1 kg	<6000kg	180 days ( 270 days if the waste must be sent >200 miles to TSDF)
<b>Large Quantity</b>	>1000kg	>1kg	Unlimited	90 days

**Table 2.4. RCRA Requirements for Labs as a Function of Generator Status.**

Requirement (40CFR)	CESQG	SQG	LQG
Waste Determination (262.11)	Applicable	Applicable	Applicable
Generation Rate Limits (261.5 and 262.34)	<100 kg/mo	100-1,000 kg/mo	1,000 kg/mo or greater
Accumulation Quantity Limit w/o Permit (261.5 and 262.34)	Not to exceed 1,000 kg at any time. Not to exceed 1 kg acute at any time	not to exceed 6,000 kg at any time	No limit
Accumulation Time (261.5 and 262.34)	No limit	180 days or 270 if waste is to be transported over 200 miles.	90 days
EPA ID Number (262.12)	Not required***; possible state requirement	Required	Required
Mark Containers with Start Date (262.34)	Not applicable	Applicable	Applicable
Mark Containers "Hazardous Waste" (262.34(a))	Not applicable	Applicable	Applicable
Air Emission Standards 40 CFR 265 Subpart CC	Not applicable	Not applicable	Applicable
Satellite Accumulation (262.34(c))	Not applicable	Applicable	Applicable
Use Manifests (262, Subpart B)	Not required; possible state requirement	Required	Required
Exception Reporting (262.42)	Not required	Required after 60 days. No TSDf notification requirement.	Required after 45 days. Notification of TSDf within 35 days.
Biennial Report (262.41)	Not required	Not required; possible state requirement	Required
Contingency Plan (265, Subpart D)	Not required, but OSHA (29 CFR 1910.38) requires emergency planning	Basic planning required in accordance with the standards in 262.34(d)(4) and (5) and 265, Subpart C as well as OSHA regulations	Full written plan in accordance with 265 Subpart D, is required by 262.34(a)(4) and OSHA regulations
RCRA Personnel Training (262.34 and 265.16)	Not required, but recommended	Basic training required by 262.34(d)(5)(iii)	Full compliance with the training requirements in 265.16 is required by 262.34(a)(4)
Storage Requirements (without permit) (262.34 and 265)	None, but OSHA regulations under 29 CFR 1910, Subparts H and N, apply, particularly 29 CFR 1910.106	Compliance with technical standards in Part 265, Subparts I and J; for containers and tanks is required by 262.34(d)(2) and (3) and OSHA regulations	Compliance with technical standards in Part 265, Subparts I, J, W, and DD, is required by 262.34(a)(1) and OSHA regulations
Recordkeeping Requirements (262.40)	Waste determinations and generation log required (notification of regulated waste activity, training records, manifests, and land disposal restriction notifications recommended)	Notification of regulated waste activity, waste determinations, generation log, manifests, land disposal restriction notifications, exception reports, and correspondence with local emergency responders (written contingency plan, weekly container inspection & periodic equipment maintenance logs, and RCRA training records recommended)	Notification of regulated waste activity, waste determinations, generation log, manifests, land disposal restriction notifications, exception reports, biennial reports, correspondence with local emergency responders, RCRA training records, and written contingency plan required (weekly container inspection is required & periodic equipment maintenance logs is recommended)
Waste "Designated Facility"	State-approved or RCRA permitted facility or legitimate recycler	RCRA-permitted facility or legitimate recycler	RCRA-permitted facility or legitimate recycler
Land Disposal Restrictions (268.7)	Possible state requirement	Applicable	Applicable

### 3. Summary of Method

3.1. Pace facilities that generate waste must initially contact the EPA to obtain an ID number. Each unique type of generated waste is classified and characterized into waste streams according to procedures in 40 CFR 261. The amount of waste the facility generates determines the Generator Status of a lab, which in turn determines how long and how much waste can accumulate. Pace Charlotte is ultimately responsible for the waste it generates, and is required obey any and all regulations during the process of creating, accumulating, disposing, and releasing waste to a TSDF for final disposal. Documentation is kept to prove all regulations have been obeyed.

### 4. Interferences

4.1. Not applicable to this SOP.

### 5. Safety

5.1. The laboratory is responsible for maintaining a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A formal safety plan is also available to all employees. Gloves and eye protection should be routinely worn when handling reagents or samples. When qualified employees are transferring wastes, additional protection such as goggles, face shield, and lab apron are recommended.

5.2. MSDS sheets are located in a central location and should be consulted prior to handling samples and standards.

5.3. A hazard assessment must be completed per S-ALL-S-001 *Hazard Assessments* for waste areas to ensure proper PPE are utilized.

### 6. Definitions

6.1. Definitions of terms found in this SOP are described in the Pace Analytical Services Quality Manual, Glossary Section unless as noted below.

6.2. **Acutely Hazardous Waste** - A waste which is hazardous as identified with an (H) Hazard Code in the lists of Hazardous Waste in 40 CFR Part 261, Subpart D, Sections 261.30, 261.31 and 261.33.

6.3. **Clean Air Act** - The Federal Clean Air Act, 42 U.S.C. 7401, and amendments thereto amending 42 U.S.C. 1857 et.seq.

6.4. **Conditionally Exempt Small Quantity Generator** - A generator who produces no more than 100 kilograms of hazardous waste or one kilogram of acutely hazardous waste (or a total of 100 kilograms of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or any acute hazardous waste) in a calendar month. The total amount of hazardous waste which may be accumulated on-site is 1000 kilograms.

6.5. **Confined Space** - A space that is large enough and so configured that an employee can bodily enter and perform assigned work; and has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and is not designed for continuous employee occupancy.

6.6. **Container** - Any device material is stored, transported, treated, disposed of, or otherwise handled.

6.7. **Contingency Plan** - A document setting out an organized, planned, and coordinated course of action to be followed in case of fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

6.8. **Designated Hazardous Waste Storage Area** - Area used to hold hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere. This is the storage area into which hazardous waste from the laboratory (e.g., satellite waste) is moved.

6.9. **DOT** - The United States Department of Transportation.

6.10. **DTSC** - Department of Toxic Substances Control

6.11. **Elementary Neutralization Unit** - A device which: (1) is used for neutralizing wastes which are hazardous only because they exhibit the corrosivity characteristic defined in 40 CFR 261.22 or are listed in Subpart D of Part 261; and (2) meets the definition of tank, container, transport vehicle, or vessel in 40 CFR 260.10.

6.12. **EPA** - The United States Environmental Protection Agency.

6.13. **EPA Hazardous Waste Number** - The EPA number assigned to each EPA hazardous waste identified in 40 CFR Part 260, Subpart D - Lists of Hazardous Wastes.

6.14. **EPA Identification Number** - The site-specific number assigned to each generator, transporter, and TSDF upon approval of a notification form.

6.15. **Federal Clean Water Act** - 33 U.S.C. 1251, et. seq.

6.16. **Foreseeable Emergency** - Any fire, explosion, or sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, or surface water, which could threaten human health or the environment.

6.17. **Generator** - Any person, by site who owns or operates a facility where hazardous waste is generated, i.e. Pace Analytical Services (Pace).

6.18. **Hazardous Waste Coordinator** - The Pace employee responsible for creating, guiding, and implementing all hazardous waste management operations.

6.19. **Hazardous Waste** - As defined in 40 CFR Part 261, Subparts B and C, a solid, semi-solid, liquid or contained gaseous waste, or any combination of these wastes:

6.19.1. Which, because of either quantity, concentration, physical, chemical, or infectious characteristics may:

6.19.1.1. Cause or contribute to an increase in mortality or an increase in irreversible or incapacitating reversible illness; or

6.19.1.2. Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise mismanaged

6.19.2. Or which has been identified as having a characteristic of hazardous waste by the EPA using the criteria established under 40 CFR Part 261, Subpart C, or as listed under Sections 261.32, 261.32, and 261.33. Such wastes include, but are not limited to, those which are reactive, toxic, corrosive, ignitable, irritants, strong sensitizers or which generate pressure through decomposition, heat or other means. Such wastes do not include radioactive substances that are regulated by the Atomic Energy Act of 1954, as amended. A Waste is considered hazardous if it is listed or it fits into one of four categories. These categories are as follows:

6.19.2.1. Ignitable - (40CFR261.21, Waste Code D001) Having a flash point of less than 60°C/140°F.

6.19.2.2. Corrosive - (40CFR261.22, Waste Code D002) Having a pH of less than 2.0 or greater than 12.5.

6.19.2.3. Reactive – (40CFR261.23, Waste Code D003) Reactive wastes exhibit one or more of the following characteristics:

6.19.2.3.1. It is unstable and can undergo a violent change without detonating.

6.19.2.3.2. It can react violently with water.

6.19.2.3.3. When mixed with water it can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.

6.19.2.3.4. It is cyanide or sulfide bearing waste that, when exposed to pH conditions between 2.0 and 12.5, can generate gases, vapors, or fumes that can present a danger to human health or the environment.

6.19.2.3.5. It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

6.19.2.3.6. It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

6.19.2.3.7. It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53, or a Class B explosive as defined in 49 CFR 173.88.

6.19.2.4. EPToxic - A solid waste is EPToxic if, after being subjected to the EP Toxicity extraction, or TCLP analysis, the extract contains any of the listed contaminants in concentrations above the limits shown in Attachment 2. It is listed as a hazardous waste by the EPA (via 40 CFR 261.30, 261.31, 261.32, and 261.33).

6.20. **Hazardous Waste Constituent** - A substance, compound, or element listed as hazardous waste in EPA 40 CFR 261.

6.21. **Lab Pack Material** - A hazardous waste that does not match a listed Pace waste stream category.

6.22. **Large Quantity Generator** - Any generator who generates at a rate greater than 1000 kilograms of hazardous waste per month.

6.23. **Manifest** - As defined in 40 CFR Part 262, Subpart B, namely “the form used for identifying the origin, quantity composition, routing and destination of hazardous waste.”

6.24. **Sample** - Except as provided below in 6.24.7, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of 40 CFR Part 261.5 or Parts 262 through 267 or Part 270 or Part 124 or to the notification requirements of Section 3010 of RCRA, when:

6.24.1. The sample is being transported to a laboratory for the purpose of testing; or

6.24.2. The sample is being transported back to the sample collector after testing; or

6.24.3. The sample is being stored by the sample collector before transport to a laboratory for testing; or

6.24.4. The sample is being stored in a laboratory before testing; or

6.24.5. The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

6.24.6. The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

6.24.7. In order to qualify for the exemption in 6.24.1 and 6.24.2 above, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

6.24.7.1. Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

6.24.7.2. Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

6.24.7.2.1. Assure that the following information accompanies the sample:

6.24.7.2.1.1. The sample collector's name, mailing address, and phone number;

6.24.7.2.1.2. The laboratory's name, mailing address, and phone number;

6.24.7.2.1.3. The quantity of the sample;

6.24.7.2.1.4. The date of shipment; and

6.24.7.2.1.5. A description of the sample.

6.24.7.2.2. Package the sample so that it does not leak, spill, or vaporize from its packaging.

6.24.7.2.3. This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in 6.22 above.

6.25. **Satellite Waste or Laboratory Satellite Waste** - Hazardous wastes created by Pace, as a result of organic or inorganic extractions, digestions, and analyses.

6.26. **Satellite Waste Container** - Any portable device used to accumulate laboratory generated waste prior to transfer to the hazardous waste storage area.

6.27. **Small Quantity Generator** - A generator who produces no more than 1000 kilograms of hazardous waste (or a total of 1000 kilograms of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or any acute hazardous waste) in a calendar monthly. The total amount of hazardous waste which may be accumulated on-site is 6000 kilograms.

6.28. **TSDF** - A Treatment/Storage/Disposal Facility.

6.29. **Universal Waste** - Commonly used items that are hazardous but can be recycled. These include fluorescent lights, computer monitors, etc.

6.30. **Waste Stream** - The generic profile of chemical and physical properties that satellite wastes exhibit.

## 7. Sample Collection, Preservation, and Handling

7.1. Not applicable to this SOP.

## 8. Equipment and Supplies

The following equipment is mandatory under RCRA guidelines unless otherwise denoted. Periodic review (not to exceed monthly) of availability of equipment and supplies below should be conducted to maintain an adequate and viable supply.

8.1. **Chemical Spill Control Neutralizers**: The waste room stores three types of bulk dry spill neutralizers: solvent, acid and base. They may be utilized by placing the dry neutralizer onto a liquid chemical spill. Neutralization is indicated by a prevalent color change.

8.2. **Communication Device**: Required for emergency notification of spill, fire, etc.

8.3. **Drums:** Common types of waste drums used for storing and shipping hazardous wastes are polyethylene, steel-polyethylene lined, and steel. Sizes are typically 5gal, 15gal, 30gal, and 55gal. Drums used for liquids typically are closed top with an opening to pour the solvent through a funnel, while drums used for solids or lab packs are open-top.

8.4. **Emergency Drench Shower:** Shower should deliver water approximately twenty gallons per minute with a non-interruptible flow. It may be turned on by pulling the shower handle down. It may be turned off by pushing the handle back to the 'off' position.

8.5. **Emergency Lighting** (as needed): The waste room is outfitted with emergency lighting that goes on if power fails.

8.6. **Exit Signs** (as needed): Exit signs are provided on all waste room doors. These signs are self-illuminating.

8.7. **Fire Alarm Pull Station:** A fire alarm pull station must be in close proximity to the hazardous waste room. The alarm may be activated by pulling the switch. Other alarm systems may be utilized as long as all personnel are trained on the procedures.

8.8. **Fire Extinguisher:** An extinguisher with a rating appropriate to the waste being stored in the area must be in close proximity to the hazardous waste room.

8.9. **Labels:** A multitude of labels are provided to ensure compliant labeling. They may be purchased or prepared manually.

8.10. **Liquid Chemical Neutralizers:** Liquid chemical neutralizers (base and acid) may be used to neutralize a contained hazardous liquid. This may be done by slowly adding the neutralizer to the liquid.

8.11. **Spill Control Pads:** Spill pads are used to soak up hazardous liquids. They do not neutralize spills. They are especially effective for cleaning up oily materials. Various pads are available for aqueous and petroleum based liquids.

8.12. **Spill Control Pillows:** Spill pillows may be used to soak up large amounts of liquid chemical spills. No neutralization occurs.

8.13. **Spill Dikes:** vary depending on the size and type of room: Their purpose is to encircle a spill, barring the spread of a hazardous chemical. They will also absorb liquids, but do not neutralize spills.

## 9. Reagents and Standards

9.1. Not applicable to this SOP.

## 10. Calibration

10.1. Not applicable to this SOP.

## 11. Procedure

11.1. All Pace facilities that generate hazardous waste must have a Generator's US EPA Identification Number. The ID number is obtained through the applicable EPA region's office by completing EPA form 8700-12, and must be completed before generating any hazardous waste.

11.1.1. Pace only utilizes transporters and treatment, storage, or disposal facilities (TSDFs) that have EPA identification numbers for hazardous waste handling and meet the TSDF transfer requirements.

11.1.2. A new ID number is necessary when changing locations as the number is tied to the facility address.

11.1.3. This facility's US EPA Identification Number is NCD986205086.



11.2. The laboratory generates wastes originating from several source types: materials and chemicals used to prepare and analyze samples (e.g., solvents, acids), unconsumed liquid and solid samples, certain types of batteries, mercury from lamps and broken thermometers and automobile waste. Unconsumed samples may include laboratory-contaminated sample residue (both liquid and soil) generated as part of digestion, extraction, etc., procedures used to prepare samples for analysis.

11.2.1. This facility is classified as a Small Quantity Generator.

11.3. Hazardous waste classification is the most critical step in establishing an effective, compliant waste-handling program. Laboratory wastes are classified using the criteria set forth under RCRA for ascertaining non-hazardous versus hazardous status, and this criterion is listed in the definition of hazardous waste in 6.19.

11.4. The following are the waste streams resulting from materials and chemicals used in the laboratory operation. Applicable information for each is given pertaining to packing, labeling, or listing on a manifest. A description of how the wastes are created, and the preferred method of final disposal for each, is included. The overriding principle in hazardous waste classification is application of a conservative formula based on all known or suspected hazards related to a waste material. While this formula may result in some materials being disposed as hazardous when in fact, they are non-hazardous (i.e., false positive), the formula will not be compromised in the interest of reducing the amount of waste produced. This will minimize any risk of a material being disposed of erroneously as non-hazardous when it, by definition, is a hazardous waste.

11.4.1. **Corrosive waste** is generated in the majority of the departments in the laboratory. This waste stream consists primarily of spent or excess aqueous reagent solutions generated from preservatives or other corrosive solutions generated in the course of analysis. The predominant corrosives include hydrochloric acid, nitric acid and sulfuric acid, but corrosives also include bases. Varying concentrations of metals may be present dependent upon the composition of the reagents added. This waste stream only has the hazardous quality of being corrosive therefore, if a waste has any additional hazardous waste quality (i.e. Toxic or Ignitable) it cannot be mixed with this stream. This stream is treated onsite.

Corrosive Waste	
DOT Shipping Name	RQ Waste, Corrosive Liquid, N.O.S (i.e. corrosive material)
EPA Waste #	D002
Container	Glass sample containers
Average pH	<2.0, >12.5
Disposal Method	Treatment by Neutralization
Label	Corrosive

11.4.2. The **Chlorinated Waste Stream** consists primarily of methylene chloride with a very small amount of other organic solvents derived from extraction procedures performed on samples and from rinsing glassware. As a best practice, effort is made to have this waste stream as pure as possible in order to offer for recycling.

Chlorinated Solvents	
DOT Shipping Name	RQ Hazardous Waste, Toxic Liquid, N.O.S (i.e. dichloromethane, acetone, methanol)
EPA Hazard Codes	F001

Container	55 Gallon Drum
Average pH	7.0
Disposal Method	Disposal by waste disposal firm
Label	Toxic, Chlorinated

11.4.3. The **Flammable Solvent Waste Stream** consists primarily of hexane, acetone, methanol, and used pump oil derived from extraction procedures performed on samples, rinsing glassware, and performing instrumentation maintenance. This waste stream must be strictly segregated from the chlorinated waste stream.

Flammable Solvent Waste	
DOT Shipping Name	RQ Hazardous Waste, Toxic Liquid, N.O.S. (i.e. acetone, methanol)
EPA Waste #	D001, F003
Container	55 Gallon Drum
Average pH	7.0
Disposal Method	Disposal by waste disposal firm
Label	Toxic, Flammable

11.4.4. **Universal Waste Stream** includes mercury containing fluorescent light bulbs and used batteries and is accumulated from the daily operations of the laboratory. This waste stream is disposed of with lab pack by a waste disposal firm.

Universal Waste Stream	
DOT Shipping Name	Universal Waste
EPA Waste #	Lab Pack
Container	Lab Pack
Average pH	Not applicable
Disposal Method	Disposal by waste disposal firm
Label	Universal Waste

11.4.5. **Hazardous Soil Waste Stream** includes unused samples with methanol and sodium bisulfate preservation and is accumulated from the daily operations of the laboratory. This waste stream is disposed of with lab pack by a waste disposal firm.

Hazardous Soil Waste Stream	
DOT Shipping Name	Hazardous Solid (methanol)
EPA Waste #	F003
Container	55 Gallon Drum
Average pH	Not applicable
Disposal Method	Disposal by waste disposal firm
Label	Flammable

11.5. Some waste can become complicated when attempting to classify as non-hazardous or hazardous due to the list of hazardous constituents contained in sections 261.30, 261.31, 261.32, and 261.33 of 40 CFR including a majority of analytes of interest routinely analyzed in Pace laboratories. Definitions have been established for each of the F, K, P, and U lists covering hazardous waste originating from non-specific sources, specific sources and discarded commercial chemical products, off-specification species, container residues, and spill residues. The application of listed hazardous

wastes and substances is intended for manufacturing processes involving pure products, by-products, wastes generated as part of the production process and cleanup of materials contaminated from a spill of the listed commercial chemical product or manufacturing chemical intermediate. See Attachment I for common F-listed wastes.

11.5.1. Hazardous waste classification of unconsumed samples by listed hazardous waste criteria is not commonly applied in laboratory operations. Examples of sample types which would be identified as listed hazardous wastes include the following:

11.5.1.1. Samples containing 5% or more (by volume) of halogenated and non-halogenated "spent solvents:" (e.g., drum sample with > 10% TCE).

11.5.1.2. Pure product and two phase solution samples containing a listed chemical product or manufacturing intermediate (e.g., drum sample)

11.5.1.3. Samples from specific sources listed in section 261.32 (e.g., bottom sediment sludge from the treatment of wastewaters from wood-preserving processes that use creosote and/or pentachlorophenol - K001).

11.5.1.4. Samples representing any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having a generic name listed in section 261.33, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in section 261.33.

11.5.2. For the wastes listed in 11.5.1.1 and 11.5.1.2, disposal can be achieved by individually lab packing them with other compatible hazardous wastes.

11.5.3. The remaining two sample types in 11.5.1.3 and 11.5.1.4 would also require lab packing for disposal. However, it is important to note that in order for the laboratory to ascertain that the samples were derived from a specific listed source or from a spill of a listed chemical, they must be so informed by the industrial concern or lead agency (e.g., EPA, state regulators) submitting the sample for analysis. If a water or soil sample contains a listed hazardous waste substance whose origin is unknown or uncertain to the lead agency, then that sample is not classified as a listed hazardous waste. Rather in this case, determination of a hazardous waste classification can only be obtained by the waste exhibiting a characteristic of hazardous waste (i.e., ignitability, corrosivity, reactivity, EP toxicity).

11.5.4. Due to the fact that the majority of samples analyzed by Pace do not meet the well-defined criteria for identifying "listed" hazardous waste, disposal classification of unconsumed samples will be based upon characteristics of hazardous waste.

11.5.4.1. Non-Hazardous - Analysis results indicate an absence of contaminants; unless contaminants listed under the hazardous disposal categories are parts of the requested sample analysis.

11.5.4.2. Hazardous - Analysis results indicate presence of contaminants (Attachment II) or sample analysis requires hazardous materials and contaminants. Samples in this category are segregated from others and disposed of as hazardous according to laboratory procedures.

11.5.4.3. PCB Waste - Generated exclusively by samples contaminated with greater than trace levels of polychlorinated biphenyls ( $\geq 50$  ppm). Samples containing 50 ppm (total) or higher of PCBs must be segregated and disposed of as PCB waste.

11.5.4.4. Waste Oil/Paint - Samples which are predominantly of an oil matrix (e.g., highly viscous organic liquid) or paint (solvent and pigment blend) are segregated and disposed in a separate container. Though these samples are defined as nonhazardous, oil samples are a special case and never disposed as nonhazardous.

Note: Bottle caps and liners do not typically contain sample residuals and can be disposed of directly through the non-hazardous building refuse.

11.5.5. USDA Regulated Soil is a special case of sample, and is strictly controlled under APHIS quarantine regulations 7 CFR 330 because it can readily provide a pathway for a variety of dangerous organisms into the United States. The movement of soil into the United States from foreign sources is prohibited, and movement within the continental U.S. (see Attachment III) is restricted unless authorized by APHIS under specific conditions or safeguards. The importation of soil from foreign sources and/or the interstate movement is authorized by APHIS solely under strictly controlled circumstances described in a permit and/or compliance agreement.

11.5.5.1. Any laboratory that plans to receive soil from a regulated area shown in Attachment III must first apply and receive a Soil Permit from the USDA.

11.5.5.2. All samples when received must be clearly marked as "USDA Regulated Soil" or some such marking to distinguish them from soils that are not from infested areas.

11.5.5.3. Any laboratory that receives soil from a foreign source or those shown in Attachment III, must either incinerate or autoclave any unconsumed samples and all apparatus used to handle the soil, including weigh boats, gloves, wooden spatulas, etc.

11.5.5.4. Refer to SOP CHR-L-005, current revision, for additional handling procedures.

11.6. Consolidation of wastes from the laboratory proceeds via two distinct routes covering either laboratory-generated hazardous wastes or excess unconsumed samples.

#### 11.6.1. Laboratory Accumulation and Satellite Waste Containers

11.6.1.1. Waste materials from routine lab procedures are collected in containers of appropriate construction, placed in convenient locations at the point of generation. Under RCRA guidelines, these are defined as satellite containers.

11.6.1.2. The amount of hazardous waste stored in the laboratory at the individual satellite areas cannot exceed 55 gallons (liquid) or 550 lbs (solid) per waste stream, for non-acute hazardous waste.

11.6.1.3. Satellite waste containers must be labeled in accordance with OSHA regulations, including:

11.6.1.3.1. Designation of the contents to be hazardous waste with the words "Hazardous Waste" clearly legible

11.6.1.3.2. The waste stream description (e.g., acid waste)

11.6.1.3.3. A reference to area generating the waste (e.g., metals prep)

11.6.1.3.4. A hazard label (e.g., corrosive)

11.6.1.4. The satellite containers must be maintained such that evolution of chemical vapors is precluded. This requires that the container be closed at all times, except when adding or emptying hazardous waste to and from the container.

11.6.1.5. The most critical point in the waste handling system is when a person (e.g., analyst, technician) places a waste material into a satellite container. Here, the characteristics or listing of the waste and the waste stream must both be known to match. For this reason, only

material from approved procedures should be placed in the compatible satellite containers. All materials from experimental procedures, unknown or out of the ordinary sources, or from spill cleanups must be characterized and described to the Hazardous Waste Coordinator, who determines the proper method of disposal.

11.6.1.6. Full satellite containers must be transferred to the proper accumulation drum within 3 calendar days. Lab collection containers must not be filled to the top of the opening. Space must be left to prevent splashing of hazardous material when containers are emptied and to allow for expansion and contraction within the drum during transport.

11.6.1.7. Satellite containers must have secondary containment made of material that could successfully contain the entire satellite container's contents.

#### 11.6.2. Unconsumed Sample Disposal

11.6.2.1. Samples which cannot be returned to the client for disposal must first be characterized in order to be processed for disposal.

11.6.2.2. Sample characterization is initiated at the time of final report generation by the individual signing the report (e.g., project manager). Samples are characterized by one of three methods

11.6.2.2.1. Analytical results are evaluated against characterization criteria established for the sample waste stream. The samples which exhibit waste characteristics as previously outlined are segregated and denoted per laboratory/facility policies. The completed form is then forwarded to the Hazardous Waste Coordinator, who in turn uses the information to coordinate removal of unconsumed samples from active sample storage by the log-in staff. OR:

11.6.2.2.2. Samples are scanned out of EPIC Pro (LIMS) as RCRA nonhazardous to be disposed as the waste stream is normally handled unless the sample tested over RCRA limits, in which EPIC Pro (LIMS) will prompt the employee that the sample is scheduled for Hazardous disposal, and is segregated from the nonhazardous samples. OR:

11.6.2.2.3. Samples of a certain type are all "assumed" to be hazardous, and all are placed into an accumulation drum with all required RCRA labeling for that waste stream.

11.6.2.3. Weekly, a Disposal Report by Sample is generated in EPIC Pro to facilitate the identification of samples designated as hazardous based on sample analysis. A sample custodian will attach a "LAB PACK" label to all samples identified as hazardous. Upon removal from the sample storage cooler, any sample labeled "LAB PACK" will be placed in the hazardous waste disposal area. The "LAB PACK" designated samples will be placed in a labeled drum. All "LAB PACK" designated samples will be disposed of by an approved waste disposal firm.

#### 11.7. Transferring Satellite Waste to the Waste Storage/Accumulation Area

11.7.1. All transfers of satellite waste to waste drums must be made by the Hazardous Waste Coordinator or designated, trained personnel. When a satellite waste container is full, the Hazardous Waste Coordinator, or designee must be notified. Regular disposal events may be scheduled to dispose satellite waste on a continuous basis.

11.7.2. Find the correct waste drum by referring to the Hazardous Waste placard and hazard label. Mixing solvents that are not compatible could result in a hazardous reaction.

11.7.3. Ensure there is enough capacity in the drum to hold all the content that will be dispensed.

11.7.4. Check to make sure there is a ground connection before opening a solvent waste drum.

11.7.5. Open and slowly pour the contents of the satellite container into the proper waste drum using an appropriate solvent resistant funnel.

11.7.6. Replace the cap on the bunghole and carefully screw the cap on but do not tighten the cap.

#### 11.8. Unconsumed Soil Samples

11.8.1. Non-hazardous soil samples will be consolidated in a drum for removal and incineration.

11.8.2. USDA regulated soils will be disposed of as described in section 11.5.5.4.

11.8.3. Hazardous soil samples will be disposed of as described in section 11.6.2.3.

#### 11.9. Elementary Neutralization

11.9.1. Dilute corrosive solutions (e.g. preserved metals samples) which do not exhibit any hazardous characteristics other than being corrosive, may be neutralized. Elementary neutralization is exempt from RCRA permitting requirements for on-site hazardous waste treatment. While exempt under RCRA guidelines, before utilizing this practice to reduce off-site treatment or disposal of wastes, local pretreatment and discharge standards must be met for publicly owned treatment works (POTW).

11.9.2. The discharges listed below are prohibited under the National Pretreatment Standards and Prohibited Discharge Standards:

11.9.2.1. Pollutants causing fire or explosion (waste with a flashpoint < 60°C)

11.9.2.2. Corrosive wastes with pH less than 2 or greater than 12.5

11.9.2.3. Solid or viscous pollutants that could potentially block the system

11.9.2.4. Oxygen-demanding pollutants

11.9.2.5. Wastes which generate toxic gases

11.9.3. Non-hazardous water samples can be neutralized and disposed of via the sewer. A neutralization tank is attached to the sink drains. Fill the sink half-way with tap water. Pour several samples into the sink until it is about ¾ full. Drain and flush with copious amounts of tap water. The neutralization tank must be checked monthly and the pH adjusted to a pH greater than 5. Any empty sample glass containers should be crushed and disposed of by an approved waste disposal firm.

#### 11.10. Waste Storage Container Requirements

11.10.1. Drums in the hazardous waste storage area are labeled consistent with both DOT and EPA regulations concerning hazardous materials and wastes (see Attachment IV for example of label).

11.10.2. Labels must be easily visible and legible (i.e., a drum must not be labeled and then placed in such a way that the label cannot be seen).

11.10.3. The Accumulation Start Date must be recorded on the drum. The date should reflect the first time waste was added to the drum and not the date when the waste was generated in the laboratory.

11.10.3.1. Once a waste is removed from the point of generation to a hazardous waste staging area, the clock is started for storage time prior to disposal.

11.10.3.2. Drums must be picked up by TSD for disposal before accumulation time exceeds RCRA requirement for lab's generator status (see table 2.3).

11.10.4. One hazard label should be placed on the drum's top and another adjacent to the accumulation label.

11.10.5. The hazardous waste staging room must be arranged in such a fashion to assure direct access pathways in the event of foreseeable emergency. A minimum aisle space of three feet must be maintained at all times. Hazardous waste drums are to be stored in a manner that facilitates easy access both for filling and in case of an emergency. Drums are never stored more than two deep.

11.10.6. All hazardous waste drums and containers must be securely closed when not in use. All volatile and flammable hazardous waste liquid containers must be securely grounded at all times. Drums containing these liquids should also be manipulated with non-sparking tools and fitted with a drum venting bung, to assure that excess pressure build-ups are safely released.

11.10.7. All liquid waste stream containers must be provided with secondary containment devices. Such containment devices must be made of materials compatible with each waste, and they must be free of leaks. The waste storage room may act as secondary containment as long as the room has been constructed to safely and effectively contain a hazardous waste spill.

11.10.7.1. Secondary containers must exceed the total volume of the largest container stored in each containment device for indoor storage.

11.10.8. Compatibility of wastes must be considered in arranging storage areas. For example, acid waste should never be stored adjacent to basic waste, particularly cyanide wastes. Further examples are outlined in 40CFR264, Appendix V.

11.10.9. The hazardous waste staging area is controlled so unauthorized personnel are not able to access the room or contents.

11.10.10. The maximum volume of acutely hazardous waste (e.g., P-listed wastes) that can be accumulated in the laboratory is one quart. The volumetric measurement of one quart is based upon container size in which the waste is stored and not the actual amount (volume) of waste present. An example of how this one quart limit can inadvertently be exceeded involves the disposal of a neat standard of 2,4-dinitrophenol into a one gallon bottle. While the neat standard itself may only constitute 1-2mL, the volume as defined under RCRA would be one gallon, thus the laboratory would be out of compliance.

#### 11.11. Waste Documentation and Reporting

11.11.1. All drums containing hazardous waste are recorded in a logbook or database. The information contained in this log is useful when filling out EPA biennial reports and for retaining an accurate description of how much waste has been accumulated. The following information is entered into the logbook/database:

11.11.1.1. The drum number.

11.11.1.2. The date filling the drum was started.

11.11.1.3. The drum capacity (e.g., 55-gallon, etc.).

11.11.1.4. The manifest number associated with the drum's disposal.

11.11.2. The following hazardous waste records must be maintained a minimum of five years and should be retained indefinitely:

11.11.2.1. Drum tracking logs.

11.11.2.2. Sample Reports.

11.11.2.3. Sample disposal information and waste records on computer disc.

- 11.11.2.4. Analytical records relating to sample waste stream profiling and characterization.
- 11.11.2.5. Labpack inventory logs.
- 11.11.2.6. Biennial Reports, Exception Reports, or other reports filed for compliance reasons.
- 11.11.2.7. Records related to unresolved enforcement action must be retained indefinitely until such a time that the matter is resolved.
- 11.11.2.8. Facility Certificates of Destruction or Recycling
- 11.11.3. A Waste Manifest is the documentation form that must accompany all shipments of hazardous waste while in transit.
  - 11.11.3.1. The manifest is be signed and dated by a DOT trained Pace employee responsible for the shipment and the transporter. The transporter will leave one of these “two-signature page” copies of the manifest.
  - 11.11.3.2. Within 35 days you will receive a three-signature page (generator, transporter, facility) showing the waste reached its intended destination. The waste coordinator is responsible to ensure it is filed in the Waste Manifests folder.
    - 11.11.3.2.1. If you do not receive the three signature page within 35 days of shipment, call the facility to find out why you have not received it. If you do not receive the three-signature page within 60 days you must file an exception report with NC DENR Hazardous Waste Section.
  - 11.11.3.3.. All manifests must be kept for a minimum of three years.
- 11.11.4. The central accumulation staging room must have a documented inspection weekly and satellite waste containers must have documented inspection as part of the monthly laboratory inspection. The inspections should ensure all regulations are obeyed; see 11.10 and 11.6.1 for accumulation storage and satellite rules, respectively.
  - 11.11.4.1. A record of the inspections must be kept in an inspection log or summary.
  - 11.11.4.2. Records must be maintained for at least three years from the date of inspection. At a minimum, the records must indicate:
    - 11.11.4.2.1. The date and time of the inspection
    - 11.11.4.2.2. The name and signature of the inspector (typically will be Hazardous Waste Coordinator)
    - 11.11.4.2.3. A notation of the observations made (can be in a check-off format, e.g., fire extinguisher: charged X requires recharging   )
    - 11.11.4.2.4. The date and nature of any repairs or other remedial actions.
- 11.11.5. Annual Generation Reports are required to be filed with Agency that requires Annual Report:
  - 11.11.5.1. Large Quantity Generators must file a biennial report with the local state or EPA Region.

## 12. Quality Control

12.1. Not applicable to this SOP.

## 13. Method Performance

13.1. Not applicable to this SOP.



## 14. Pollution Prevention and Waste Management

14.1 Not applicable to this SOP.

## 15. References

- 15.1. 40CFR261-268, Code of Federal Regulations Chapter 1, Subchapter I – Solid Waste.
- 15.2. 29CFR171-174, Code of Federal Regulations, Transportation.
- 15.3. Federal Plant Pest Regulations, Part 330.
- 15.4. Understanding the Hazardous Waste Rules, A Handbook for Small Business, 1996 Update, [www.epa.gov/docs](http://www.epa.gov/docs).

## 16. Tables, Diagrams, Flowcharts, Attachments, Appendices, etc.

- 16.1. Attachment I: Hazard Codes for Common F-List Wastes (solvents).
- 16.2. Attachment II: TCLP Contaminant List with Concentration Limits.
- 16.3. Attachment III: Soil Movement Regulations (Map).
- 16.4. Attachment IV: Hazardous Waste Label for Accumulation Drum (example).
- 16.5. Attachment V: Satellite Container Inspection Form
- 16.6. Attachment VI: Waste Accumulation Room Inspection Form

## 17. Revisions

Document Number	Reason for Change	Date
ALL-S-002-rev.0	First Issue	17Mar2005
	<p>General: converted old SOP and EMM into an SOP Template (SOT).  Removed MN address from header.  Sections 1, 2.1, 3: reworded.  Removed old section 2.3.  Inserted new Table 2.4- RCRA Requirements for labs.  Section 6: added definitions for DTSC and Universal Waste.  Moved old Table 2 to Attachment II and changed reference in section 6.19.2.4.  Removed old section 7 (Responsibilities).  Section 8.1: removed sentence regarding SOP addenda.  Section 8.4: reworded drum section to be more general.  Added new section 11.1 (from old section 2.3).  Added section 11.1.3: number entry is in editable red text.  Added section 11.2.1: size of generator is in editable red text.  Sections 11.4.1 thru 11.4.4: added these sections in red editable text so labs can enter information about their facility's waste streams.  Section 11.5: added reference to Attachment I.  Section 11.6.2.3: added in red text so labs can enter their method for sample disposal.  Sections 11.7.1 and 11.10.7; reworded for clarity.  Section 11.8: added in red text so labs can enter their method of segregating soils for USDA permit.</p>	
SOT-ALL-S-002-rev.01	<p>Section 11.9.3: added in red text so labs can enter their neutralization procedures.  Added sections 11.11.2.6 – 11.11.2.8.  Section 11.11.3: added red text so labs can enter procedure for maintaining waste documentation  Removed old section 11.11.5 (repeat information).  Added new label in Attachment IV.  Added new Attachments V and VI.</p>	14Oct2009
SOT-ALL-S-002-rev.02	<p>Removed old section 8.11- Over Pack Drums.  Section 15.4: Added DoD reference.</p>	04May2011
S-CHR-S-002-rev.02	Updated red text with local procedures	23July2011

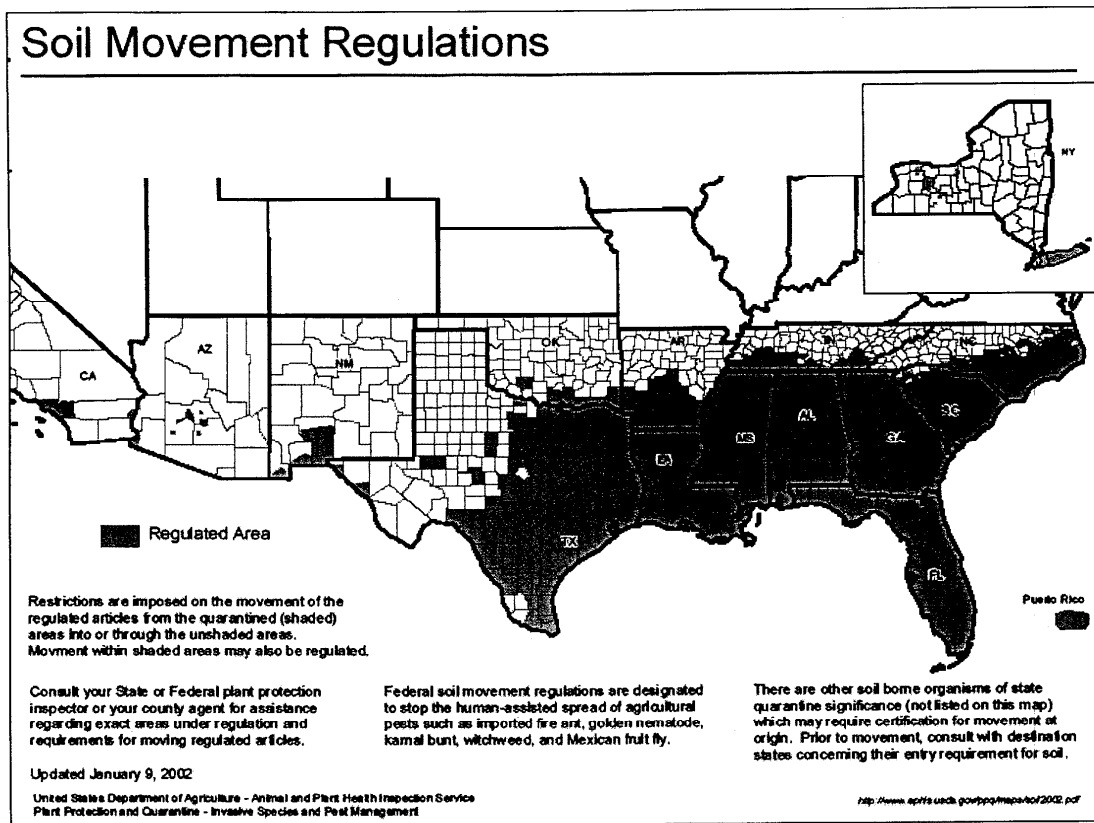
### Attachment I: Common F-Listed Solvents

Waste Name	Hazardous Waste Code(s)	Waste Name	Hazardous Waste Code(s)
Acetone	F003	Methylene Chloride	F001, F002
Benzene	F005	Methyl ethyl ketone (MEK)	F005
<i>iso</i> -Butanol	F005	Methyl isobutyl ketone	F003
<i>n</i> -Butyl alcohol	F003	Nitrobenzene	F004
Carbon Disulfide	F005	2-Nitropropane	F005
Carbon Tetrachloride	F001	Orthodichlorobenzene	F002
Chlorobenzene	F002	Pyridine	F005
Chlorinated fluorocarbons (CFC)s	F001	Tetrachloroethylene	F001, F002
Cresols	F004	Toluene	F005
Cresylic acid	F004	1,1,1-Trichloroethane	F001, F002
Cyclohexanone	F003	1,1,2-Trichloroethane	F002
2-Ethoxyethanol	F005	1,1,2-Trichloro-1,2,2-trifluoroethane	F002
Ethyl acetate	F003	Trichloroethylene	F001, F002
Ethyl benzene	F003	Trichlorofluoromethane	F002
Ethyl ether	F003	Xylene	F003
Methanol	F003		

### Attachment II: TCLP Contaminant List

Waste ID #	Contaminant	Conc (mg/L)
D004	Arsenic	5.0
D005	Barium	100.0
D006	Cadmium	1.0
D007	Chromium	5.0
D008	Lead	5.0
D009	Mercury	0.2
D010	Selenium	1.0
D011	Silver	5.0
D012	Endrin	0.02
D013	Lindane	0.4
D014	Methoxychlor	10.0
D015	Toxaphene	0.5
D016	2,4-D	10.0
D017	2,4,5-TP Silvex	1.0
D018	Benzene	0.5
D019	Carbon Tetrachloride	0.5
D020	Chlordane	0.03
D021	Chlorobenzene	100.0
D022	Chloroform	6.0
D023	o-Cresol	200.0
D024	m-Cresol	200.0
D025	p-Cresol	200.0
D026	Cresol	200.0
D027	1,4-Dichlorobenzene	7.5
D028	1,2-Dichloroethane	0.5
D029	1,1-Dichloroethylene	0.7
D030	2,4-Dinitrotoluene	0.13
D031	Heptachlor	0.008
D032	Hexachlorobenzene	0.13
D033	Hexachlorobutadiene	0.5
D034	Hexachloroethane	3.0
D035	Methyl ethyl ketone	200.0
D036	Nitrobenzene	2.0
D037	Pentachlorophenol	100.0
D038	Pyridine	5.0
D039	Tetrachloroethylene	0.7
D040	Trichloroethylene	0.5
D041	2,4,5-Trichlorophenol	400.0
D042	2,4,6-Trichlorophenol	2.0
D043	Vinyl Chloride	0.2

### Attachment III: USDA Soil Movement Regulation Map



**Attachment IV: Hazardous Waste Label for Accumulation Drum (Example)**

<b>HAZARDOUS WASTE</b>	
FEDERAL LAW PROHIBITS IMPROPER DISPOSAL	
IF FOUND, CONTACT THE NEAREST POLICE, PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY	
GENERATOR INFORMATION:	
NAME _____	
ADDRESS _____	
CITY _____	STATE _____ ZIP _____
EPA _____	EPA _____
ID NO. _____	WASTE NO. _____
ACCUMULATION _____	MANIFEST _____
START DATE _____	DOCUMENT NO. _____
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
D.O.T. PROPER SHIPPING NAME AND UN OR HAZ. W. WITH PREFIX	
<b>HANDLE WITH CARE!</b>	

### Attachment V: Satellite Container Inspection Form

Waste Container ID	Properly Labeled	Label Legible	Secondary Containment	Closed when not in use	Inspection Date
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
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	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
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	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	
	Yes / No	Yes / No	Yes / No	Yes / No	

If any of the above fields are a "NO", please document how the deviance was brought back into compliance.

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature of Inspector: \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
Review Date: \_\_\_\_\_

### ATTACHMENT VI: WASTE ACCUMULATION ROOM INSPECTION FORM

Containers closed when not in use	Labels Easily Seen and Legible	Drums have Accumulation Start Date	Storage Amounts and Limits Obeyed <sup>1</sup>	Secondary Containment	Adequate Aisle Space	Available Emergency Equip. and Materials	Signature and Date of Inspector	Corrective Action for NO Answers
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
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Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
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Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		

<sup>1</sup> : Accumulation limits are 90 days for LQG, and 180 days for SQG. SQG may have no more than 6000kg waste at any time.



**CHAIN-OF-CUSTODY / Analytical Request Document**  
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: \_\_\_\_\_ of \_\_\_\_\_  
1162922

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:			
Company:		Report To:		Attention:			
Address:		Copy To:		Company Name:		<b>REGULATORY AGENCY</b>	
Email To:		Purchase Order No.:		Address:		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
Phone:	Fax:	Project Name:		Pace Quote Reference:		Site Location	
Requested Due Date/TAT:		Project Number:		Pace Project Manager:		STATE: _____	
				Pace Profile #:			

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.				
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Analysis Test (Y/N)								
					DATE	TIME	DATE	TIME																			
1	Example																										
2																											
3																											
4																											
5																											
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11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS

ORIGINAL

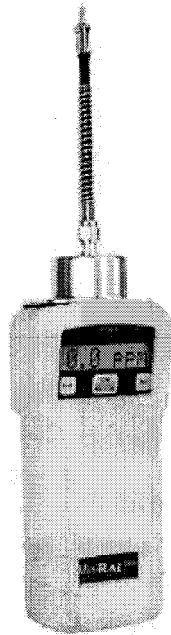
SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Customary Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	DATE Signed (MM/DD/YY):				
SIGNATURE of SAMPLER:					

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-Q-020rev.07, 15-May-2007



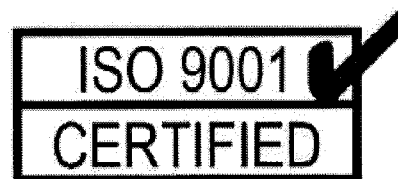
# MiniRAE 2000

## Portable VOC Monitor PGM-7600



## OPERATION AND MAINTENANCE MANUAL

(Document No.: 011-4001-000)  
Revision E, May 2005



## 4.4 Calibrate and Select Gas

### WARNINGS

The calibration of all newly purchased RAE Systems instruments should be tested by exposing the sensor(s) to known concentration calibration gas before the instrument is put into service for the first time.

For maximum safety, the accuracy of the MiniRAE 2000 should be checked by exposing it to known concentration calibration gas before each day's use.

In the first menu of the programming mode, the user can perform functions such as calibration of the MiniRAE 2000 Monitor, select default cal memories, and modify cal memories (see Table 4.4).

Table 4.4

Calibrate/Select Gas Sub-Menu
Fresh Air Cal?
Span Cal?
Select Cal Memory?
Change Span Value?
Modify Cal Memory?
Change Correction Factor?

Calibrating the MiniRAE 2000 monitor is a two-point process using "fresh air" and the standard reference gas (also known as span gas). First a "Fresh air" calibration, which contains no detectable VOC (0.0 ppm), is used to set the zero point for the sensor. Then a standard reference gas that contains a known concentration of a given gas is used to set the second point of reference.

**Note:** The span value must be set prior to calibrating for fresh air or span.

The user can store calibrations for up to 8 different measurement gases. The default gas selections are as follows:

- Cal Memory #0.....Isobutylene
- Cal Memory #1.....Hexane
- Cal Memory #2.....Xylene
- Cal Memory #3.....Benzene
- Cal Memory #4.....Styrene
- Cal Memory #5.....Toluene
- Cal Memory #6.....Vinyl Chloride
- Cal Memory #7.....Custom?

Memory #0 functions differently than the other 7 memories. For Memory #0, isobutylene is always the calibration gas. When the gas is changed in Memory #0 to one of 100 other preprogrammed chemicals or to a user-defined custom gas, a correction factor is applied to all the readings. During calibration, the unit requests isobutylene gas and displays the isobutylene concentration immediately following calibration, but when the unit is returned to the normal reading mode, it displays the selected gas and applies the correction factor.

The other 7 cal memories require the same calibration gas as the measurement gas. These memories may also be modified to a preprogrammed chemical or to a user-defined custom gas. In the gas library, only the gases that can be detected by the installed UV lamp will actually be displayed. Note that although the correction factor for the new gas will be displayed and can be modified, this factor is not applied when Memories #1-7 are

## PROGRAMMING

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used. Therefore the factor will not affect the readings in these memories.

Once each of the memories has been calibrated, the user can switch between the calibrated gases by changing the cal memory without the need to recalibrate. Or the user can switch the measurement gas in Memory #0 and the appropriate correction factor will automatically be applied without the need to recalibrate. If the gas is changed in Memories #1-7, it is necessary to recalibrate.

To change a default gas from the list above to a library or custom gas, first go to Select Cal Memory (Section 4.4.3) and then proceed to Modify Cal Memory (Section 4.4.5) to enter the desired gas. If the desired compound does not appear in the preprogrammed library, the user can use the Custom\_VOC entry in the library, or the name and correction factor of any of the existing compounds can be changed as described in Section 4.4.5. A list of some 300 correction factors is given in Technical Note 106, available at the website [www.raesystems.com](http://www.raesystems.com).

### **4.4.1 Fresh Air Calibration**

This procedure determines the zero point of the sensor calibration curve. To perform a fresh air calibration, use the calibration adapter to connect the MiniRAE 2000 to a “fresh” air source such as from a cylinder or Tedlar bag (option accessory). The “fresh” air is clean dry air without any organic impurities. If such an air cylinder is not available, any clean ambient air without detectable contaminant or a charcoal filter can be used.

1. The first sub-menu shows: “Fresh air Cal?”
2. Make sure that the MiniRAE 2000 is connected to one of the “fresh” air sources described above.
3. Press the [Y/+] key, the display shows “zero in progress” followed by “wait..” and a countdown timer.

After about 15 seconds pause, the display will show the message “update data...zeroed... reading = X.X ppm...” Press any key or wait about 20 seconds, the monitor will return back to “Fresh air Calibration?” submenu.

#### 4.4.2 Span Calibration

This procedure determines the second point of the sensor calibration curve for the sensor. A cylinder of standard reference gas (span gas) fitted with a 500 cc/min. flow-limiting regulator or a flow-matching regulator is the simplest way to perform this procedure. Choose the 500 cc/min. regulator only if the flow rate matches or slightly exceeds the flow rate of the instrument pump. Alternatively, the span gas can first be filled into a Tedlar Bag, or delivered through a demand-flow regulator. Connect the calibration adapter to the inlet port of the MiniRAE 2000 Monitor, and connect the tubing to the regulator or Tedlar bag.

Another alternative is to use a regulator with  $>500$  cc/min flow but allow the excess flow to escape through a T or an open tube. In the latter method, the span gas flows out through an open tube slightly wider than the probe, and the probe is inserted into the calibration tube.

Before executing a span calibration, make sure the span value has been set correctly (see next sub-menu).

1. Make sure the monitor is connected to one of the span gas sources described above.
2. Press the [Y/+] key at the "Span Cal?" to start the calibration. The display shows the gas name and the span value of the corresponding gas.
3. The display shows "Apply gas now!" Turn on the valve of the span gas supply.

## PROGRAMMING

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4. Display shows “wait.... 30” with a count down timer showing the number of remaining seconds while the monitor performs the calibration.
5. To abort the calibration, press any key during the count down. The display shows “Aborted!” and return to “Span Cal?” sub-menu.
6. When the count down timer reaches 0, the display shows the calibrated value.  
*Note:* The reading should be very close to the span gas value.
7. During calibration, the monitor waits for an increased signal before starting the countdown timer. If a minimal response is not obtained after 35 seconds, the monitor displays “No Gas!” Check the span gas valve is on and for lamp or sensor failure before trying again.
8. The calibration can be started manually by pressing any key while the “Apply gas now!” is displayed.
9. After a span calibration is completed, the display will show the message “Update Data Span Cal Done! Turn Off Gas.”
10. Turn off the flow of gas. Disconnect the calibration adapter or Tedlar bag from the MiniRAE 2000 Monitor.
11. Press any key and it returns back to “Span Gas Cal?”

## 7. TROUBLESHOOTING

To aid the user in diagnosing the monitor, a special diagnostic mode can be used displays critical, low level parameters. Section 7.1 describes the operation of the diagnostic mode. Section 7.2 summarizes the frequently encountered problems and suggested solutions. By turning on the MiniRAE 2000 monitor in diagnostic mode and by using the troubleshooting table in Section 7.2, the user can usually correct the problem without having to return the monitor for repair.

### **WARNING**

**This function should be used by qualified personnel only! The diagnostic mode allows the user to set several low-level parameters that are very critical to the operation of the monitor. Extra care should be taken when setting these parameters. If the user is not familiar with the function of these parameters and sets them incorrectly, it may cause the monitor to shut down or malfunction.**



## 7.1 Troubleshooting Table

Problem	Possible Reasons & Solutions
Cannot turn on power after charging the battery	<p><b>Reasons:</b> Discharged battery. Defective battery. Microcomputer hang-up.</p> <p><b>Solutions:</b> Charge or replace battery. Disconnect, then connect battery to reset computer.</p>
No LCD back light	<p><b>Reasons:</b> Trigger level too low, the current mode is not user mode, and the mode does not support automatic turn on back light.</p> <p><b>Solutions:</b> Adjust trigger level. Verify the back light can be turned on in user mode. Call authorized service center.</p>
Lost password	<p><b>Solutions:</b> Call Technical Support at +1.408 .752 .0723 or +1. 888 .723 .4800</p>
Reading abnormally High	<p><b>Reasons:</b> Dirty sensor module. Dirty water trap filter. Excessive moisture and water condensation.</p> <p><b>Solutions:</b> Clean sensor module and lamp housing. Replace water trap filter. Blow dry the sensor module.</p>
Buzzer Inoperative	<p><b>Reasons:</b> Bad buzzer.</p> <p><b>Solutions:</b> Call authorized service center.</p>

## TROUBLESHOOTING

<p>Inlet flow too low</p>	<p><b>Reasons:</b> Pump diaphragm damaged or has debris. Flow path leaks.</p> <p><b>Solutions:</b> Check flow path for leaks; sensor module O-ring, tube connectors, Teflon tube compression fitting. Replace pump or diaphragm.</p>
<p>“Lamp” message during operation</p>	<p><b>Reasons:</b> Lamp drive circuit. Weak or defective PID lamp, defective.</p> <p><b>Solutions:</b> Turn the unit off and back on Replace UV lamp</p>
<p>Full scale measurement in humid environment</p>	<p><b>Reasons:</b> Dirty or wet sensor.</p> <p><b>Solutions:</b> Clean and dry sensor and lamp housing. Adjust sensor fingers to ensure not touching Teflon. Use water trap filter.</p>
<p>Reading abnormally low</p>	<p><b>Reasons:</b> Incorrect calibration. Low sensitivity to the specific gas. Weak or dirty lamp. Air leakage.</p> <p><b>Solutions:</b> Calibrate the monitor. Replace sensor. Clean or replace lamp. Check air leakage.</p>



C. Earl Hunter, Commissioner

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

JAN 26 2012

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

Re: QAPP Contractor Addendum Directive  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release reported October 3, 1974  
AFVR Report received January 17, 2012  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced report. The report indicates the presence of chemicals of concern in the groundwater.

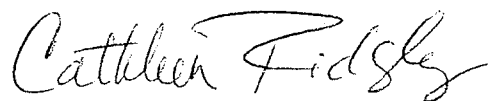
To determine what risk the referenced release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of a groundwater sampling event as outlined in the UST Quality Assurance Program Plan (QAPP) is necessary. The groundwater sampling event should be conducted in accordance with the UST Quality Assurance Program Plan and must be conducted in compliance with all applicable regulations. A copy of SCDHEC QAPP for the Underground Storage Tank Division is available at <http://www.dhec.sc.gov/environment/lwm/html/ust.htm>.

All monitoring wells and water supply wells on the site need to be sampled for BTEX, naphthalene, MtBE, the oxygenates, and 1,2-DCA.

**Please have your contractor complete and submit the QAPP Contractor Addendum and Cost Agreement within thirty days of the date of this letter.** Every component may not be necessary to complete the above scope of work. The State Underground Petroleum Environmental Response Bank (SUPERB) Account allowable cost for each component is included on the Assessment Component Cost Agreement Form. **Please note that technical and financial preapproval from the Department must be issued before work begins.**

On all correspondence regarding this site, please reference UST Permit #07960. If you have questions or need additional information, feel free to call me at (803) 896-6633.

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

cc: ECS, Inc., PO Box 3528, Fort Mill, SC 29708  
Technical File



**Contact Heron Instruments Inc.**

T 1-800-331-2032

905-634-4449

F 905-634-9657

E info@heroninstruments.com

**www.heroninstruments.com**

**Heron also carries:**

- dipper-log groundwater dataloggers
- H.OIL Interface Meters
- Sm.OIL Interface Meters



**Heron Instruments Inc** warrants to repair or replace any such defective equipment or part (determined to our satisfaction to have a defect in workmanship or original material) upon receipt and inspection of such defective equipment to Heron Instruments Inc. with all shipping pre paid by the user.

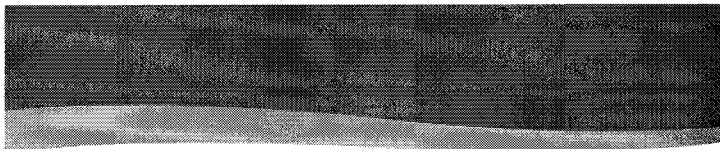
In no event shall Heron be liable for any direct, indirect or consequential damages, abuse, acts of third parties (rental equipment) environmental conditions or other expenses which may arise in connection with such defective equipment. This warranty shall not apply to damage of equipment caused by incorrect installation, usage, storage alteration or inadequate care.

**Heron Warranty** coverage does not extend to the following:

- Tape, bag or batteries used with the product.
- Products used as rental equipment.
- Products contaminated by materials which are hazardous and as such have rendered the unit unserviceable as outlined in the maintenance guide and warranty manual.
- Parts failure due to neglect in cleaning or servicing.
- Failure of parts caused by misuse or inappropriate use.

All probe tips (excluding dipper-T 5/8 probe tip) warranted for 1 year.

When returning a product under warranty, please review service options available or advise Heron Instruments in advance, by telephone at 1-800-331-2032 or 905-634-4449; by fax at 905-634-9657 or by e-mail at info@heroninstruments.com



Accurate. Efficient.  
**On the job!**

Groundwater monitoring instruments

Operating/Maintenance  
Instructions & Warranty for  
**dipper-T, little dipper,  
SKINNY DIPPER, WATER TAP  
& potable water meter  
Water Level Meters**



Avoid sharp edged casing

Avoid entanglement with other equipment in boreholes and wells.

Do not use to plumb borehole depths

Do not use as guide to backfilling with sand etc. Instrument may get locked in sand.

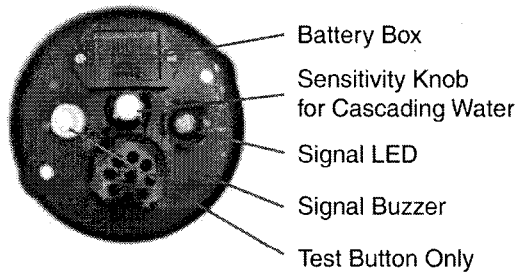
Rewind tape onto reel after each use

**Warranty is conditional upon adherence to these guide lines.**

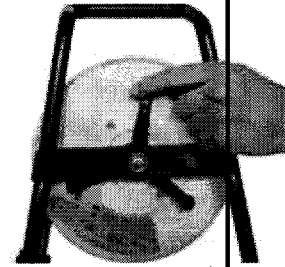
**Maintenance continued inside**

# Water Level Meter Instructions

## dipper-T, little dipper, potable water meter, SKINNY DIPPER

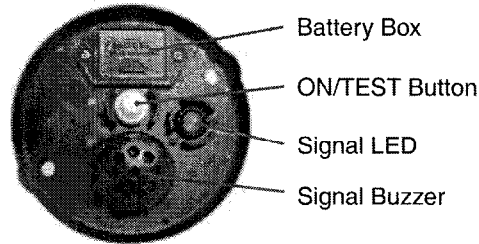


**IMPORTANT**  
This is not an ON/OFF switch

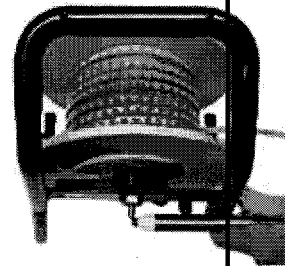


**Reel Lock**  
To unlock the reel turn the plastic lock handle in the direction shown until it touches the frame.

## WATER TAPE



**NOTE: WATER TAPE does not have a sensitivity control.**



**To Test Entire System**  
Hold the centre pin on the probe against the stud on the back of the axle at the same time touch against the screw on the frame. The buzzer will sound if the system is ok. **Make sure unit is on.**

## Equipment Check

- 1 Test circuit and battery by pressing the **white** button. Make sure the panel securing knobs are tight. If the unit does not sound, replace the battery (one 9 volt) in the drawer on the faceplate and repeat.
- 2 Test tape and probe by shorting out the centre conductor and probe body on the stud on the back axle of the unit as shown. The buzzer and light should activate; if not, adjust the sensitivity and repeat. **Make sure unit is on.**
- 3 Test the unit in tap water before going out to the field. **DO NOT** use distilled or deionized water.

## Use in the Field - Important\*

- 1 Reel the tape down the well carefully, avoiding the edge of the casing. Hang the unit on the casing where possible and run the tape over the tape guide on the frame leg to avoid cuts and nicks.
- 2 When the unit sounds, carefully measure the depth to water from your reference point by slowly lowering and raising the probe to the air/water interface. Raise the probe, shake off the water and repeat the measurement. In wells with cascading water, reduce the sensitivity by turning the Sensitivity Knob anti-clockwise.
- 3 The dipper-T, little dipper and WATER TAPE probes are rated to full depth and can be used to measure depth to bottom of well. Reel the tape until the probe touches bottom and the tape becomes slack. **DO NOT** let the probe fall under gravity or it will be damaged when it hits the bottom of the well. **DO NOT** use the unit to measure sand backfill as the tape and probe may get "locked" in the backfill.
- 4 Wind the tape back onto the reel, removing any excess moisture and dirt.

## Cleaning the Meters

- 1 Always clean the meters after use in the field to maintain optimal performance and extend the life of the unit.
- 2 Unwind the tape and probe and wash with a mild detergent. Rinse well, wipe and rewind onto the reel. The tape and probe can be cleaned and degreased with the following: soap solution, naphtha alcanox 10%, Joy detergent 10%, Lestoil; methyl, isopropyl and isobutyl alcohols; hexane, heptane and fully halogenated freon. Rinse thoroughly with water afterwards.

- 3 Wash reel if necessary. The central electronic panel can be removed and the reel washed down. Unthread the panel securing knobs and carefully pull out the central panel. Disconnect the panel from the tape. The reel may be cleaned with the following: soap solution, naphtha alcanox 10%, Fantastic, Windex, Joy, Top Job, Mr. Clean, Formula 409; hexane, heptane, white kerosene, mineral spirits; methyl, isopropyl, isobutyl and 1 + 3 denatured alcohols; freons TF + TE. Rinse well with water and let dry before putting the panel back in. **DO NOT** use abrasives, partially halogenated hydrocarbons or ketones to clean the reel.

## Trouble Shooting

### No Sound when the unit is tested

- 1 Check battery by pressing the **white** button. Replace battery if low and make sure panel securing knobs are tight. If unit still does not sound, remove central panel and check all connections.
- 2 Check probe conductor to make sure it is clean and not crusted with mineral deposits. Check tape/probe connection for any breaks.

### Continuous Sound when the unit is turned on or probe removed from water.

- 1 Make sure probe conductor tip is clean.
- 2 Check for excess moisture on the back of the electronic panel.
- 3 Check probe/tape connection and tape for any breaks or leaks where water might get in.

## General

- Avoid sharp edged casing
- Avoid entanglement with other equipment in boreholes and wells.
- Do not use as guide to backfilling with sand etc., Instrument may get locked in sand.
- Rewind tape onto reel after each use.

**Warranty is conditional upon adherence to these guide lines.**

**\*Important: Ensure that the Panel Securing Nuts are tight before use.**

**MULTI-PROBE**

**W-20XD  
Series**

**W-22XD.23XD**

**Operation Manual**



**HORIBA**

### 3.2.2 AUTO calibration method

To obtain correct measurement, it is necessary to calibrate the sensor using the standard solution before performing measurement. Previous calibration records shown in calibration data. See page 47 "Calling up The calibration data"

**Note**

- In the AUTO calibration mode, the pH and COND sensors are calibrated with pH4 standard solution, and the DO and DEP sensors in the atmosphere simultaneously.

Calibration contents at 25 °C are as follows:

- pH: Calibrate at 4.01 (zero calibration) and the Span is the adjustment value at the factory.
- COND: 0.449 S/m (Span calibration), the Zero is the adjustment value at the factory.
- TURB: 0 NTU (zero calibration), the Span is the adjustment value at the factory.
- DO: 8.52 mg/L (Span calibration), the Zero is the adjustment value at the factory.
- DEP: 0 m (Zero calibration), the Span is the adjustment value at the factory.

### Auto-Cal Explanations

When "Auto-Cal" function is used with no calibration record, it will make one point calibration with the value seen below. We recommend to use this function, when no calibration record exists or the calibration is lost, and you're in need for quick & fast calibration

When "Auto-Cal" function is used after manual two-point calibration, please be reminded of the description below. We recommend not to use "Auto-Cal" function when manual two-point calibration is performed already.

	Auto Cal Value	What happens when "Auto Cal" is performed after manual two point calibration	Recommendation
pH	4.01 pH	When "Auto Cal" is performed after two point manual calibration (manual zero calibration and span calibration): 1) The manual zero calibration value will be over written. 2) The slope of the calibration curve calculated by manual calibration will remain unchanged.	
Conductivity	0.449 S/m	"Auto Cal" will over write the mid-range span value (0.090~0.999 S/m) with 0.449 S/m. The span value of the lowest / highest ranges will also be automatically calculated and over-written by mid-range span value. The manual zero calibration value will remain unchanged.	In order to obtain a high accuracy in calibration, we recommend using the standard solution for each range.
Turbidity	0 NTU	The manual zero calibration value will be over-written by "Auto Cal". The manual span calibration value will remain unchanged.	For both manual and "Auto-Cal", make sure the container for the standards is clean and have no contamination. When the standard is contaminated, it will affect the lower turbidity value.
DO	8.52 mg/L	The manual span calibration value will be over-written by "Auto Cal". The manual zero calibration value will remain unchanged.	
Depth	0 m	The 0m amount will be replaced by "Auto Cal".	

- Values may be unstable if there is temperature fluctuation. Calibrate after waiting for about an hour.

Introduction

Before use

Basic operation

Using the data memory function

Techniques for more accurate measurement

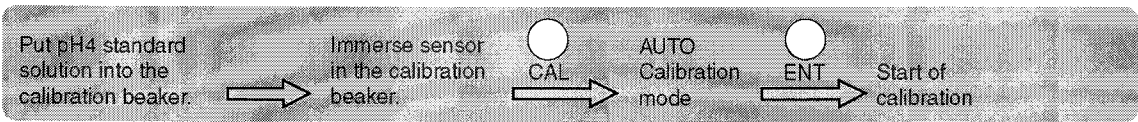
Using the various functions

Maintenance

Instrument specifications

Reference data





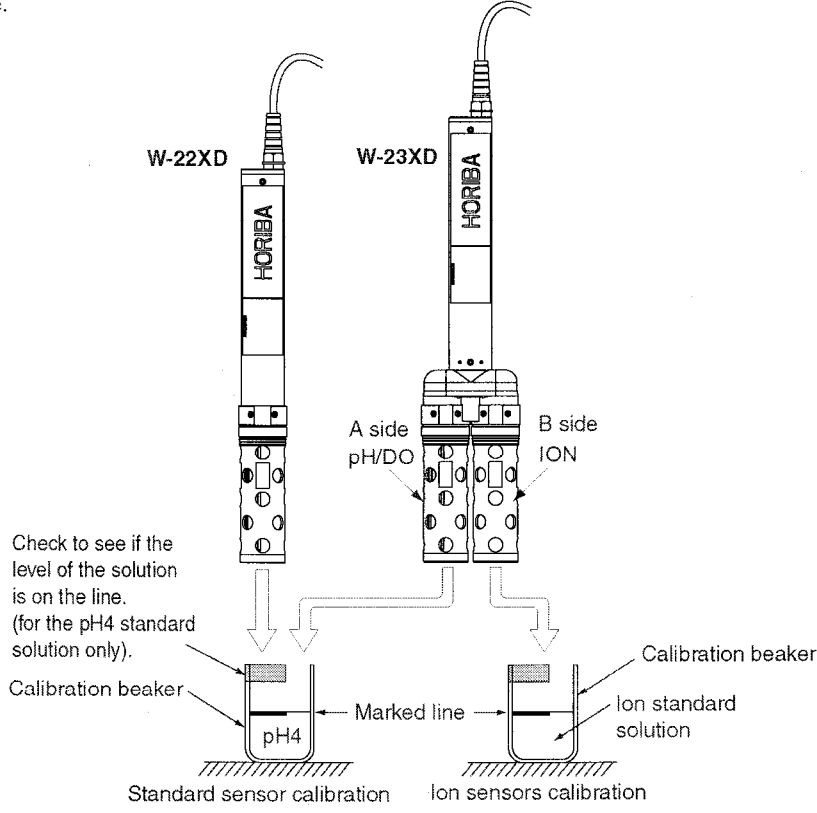
Calibrate with the following procedure.

**1.** Wash the sensor with distilled water a few times and put the pH4 standard solution into the calibration beaker to the marked line. Then immerse the sensor in it.

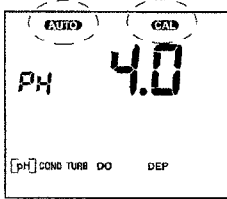
For the W-23XD model, immerse the sensor A side.

**Important**

- According to the label indication on the calibration beaker, check to see if the level of the calibration solution is on the label line.

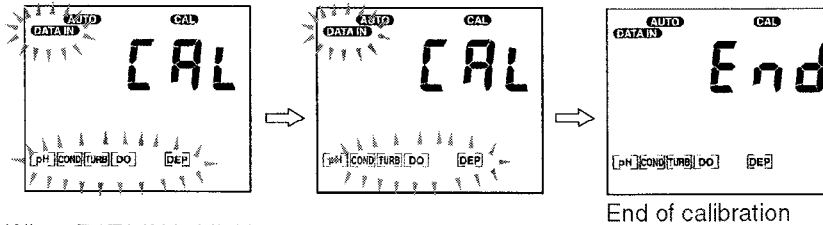


2. Press the **CAL** key, when one of pH, COND, TURB, DO or DEP is selected.  
**AUTO** and **CAL** appear and the control unit enters the AUTO Calibration mode.



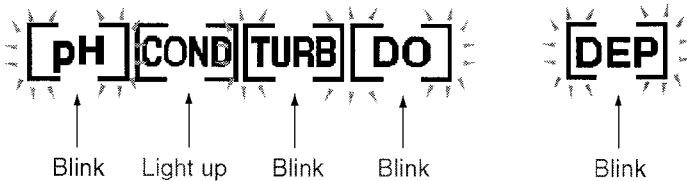
3. Press the **ENT** key to start AUTO Calibration.

Upon completion of all of the pH, COND, TURB, DO, and DEP, **End** will be displayed.  
 During calibration, **DATA IN** and [ ] for the selected measurement parameter blink. [ ] light up for the parameter of which calibration is finished.



When DATA IN is blinking  
 To stop the calibration ..... press the CAL key.  
 To fix the calibration ..... press the ENT key.

**Example: When COND calibration is finished:**  
 [ ] for [COND] stops blinking is lit



**Note**

- For any parameter in which the calibration error has happened, calibration can not be performed, and [ ] indication keeps blinking. If two or more errors happen, an error with a smaller error number appears. (See pages 98 to 100 for these errors and troubleshooting.)  
 These calibration errors disappear when the sensor is calibrated properly again, or when the control unit is turned ON again.
- Calibration is performed simultaneous and independently for all these parameters until each reading becomes stable, but the maximum duration allowed is three minutes. If the reading can not become stable within three minutes, the calibration terminates and calibration error is given to the correspondent parameter(s).

4. Press the **MEAS** key to return to the Measurement mode.

**Important**

- Neutralize pH 4 standard solution before disposal.

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## AUTO calibration of the ion sensors (W-23XD model only)

AUTO calibration is possible only for the combination of  $\text{Cl}^-$ ,  $\text{NO}_3^-$ ,  $\text{Ca}^{2+}$ .

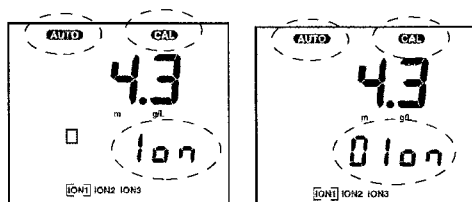
For other ion sensors, the manual calibration is required after setting ion valence described on page 82.

Span calibration value preset for auto calibration corresponds to the concentration of standard solution provided as an accessory or 10 times diluted value of the standard solution.

### Important

- Ion sensors take time to give stable indications. Therefore, immerse the ion sensors in standard solution for approximately one hour prior to the calibration. Then calibrate the ion sensors and perform measurements.

1. Wash the sensor with distilled water a few times. Put the supplied ion standard solution (#130) into the calibration beaker to the marked line. Then immerse the B side of the sensor in it.
2. Enter ion measurement mode at one of ion 1, ion 2 or ion 3.
3. Press the CAL key.  
**AUTO**, **CAL**, and "Ion" appear. The control unit then enters the AUTO Calibration mode.
4. Press the SET key.



#### When "Ion" is displayed:

When 35.5 mg/L, 31.0 mg/L, or 20.1 mg/L is displayed, use these values for span calibration 1 "For Chloride, Nitrate and Calcium ion sensors".

#### When "0 Ion" is displayed:

When 3.55 mg/L, 3.10 mg/L, or 2.01 mg/L is displayed, use these values for density by 1/10 of span calibration 2 "For Chloride, Nitrate and Calcium ion sensors".

5. Press the ENT key to start AUTO calibration.

Upon completion of the AUTO calibration of all the ion sensors ION1, ION2, and ION3, **End** will be displayed.



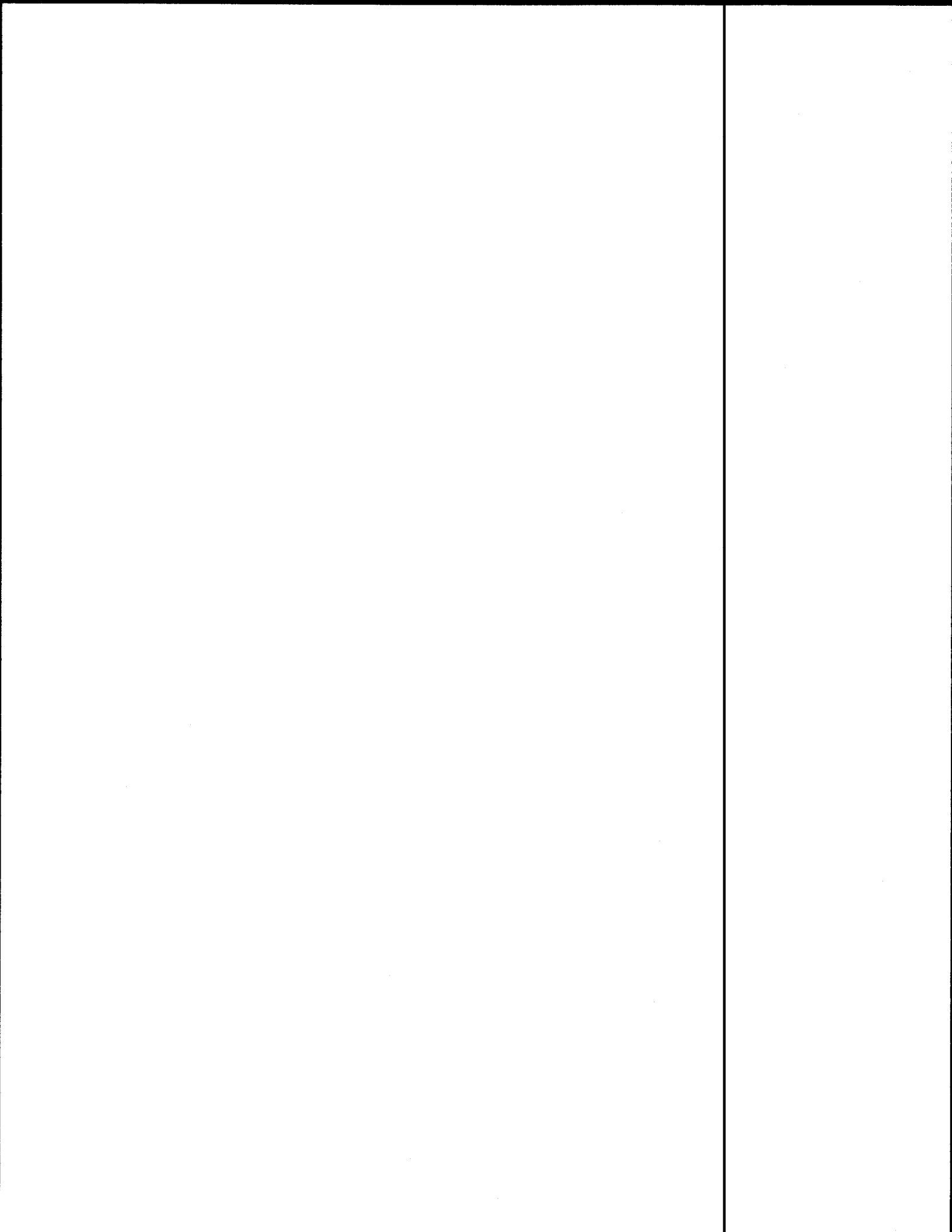
End of calibration

When DATA IN is blinking

To stop the calibration ..... press the CAL key.

To fix the calibration ..... press the ENT key.

6. Press the MEAS key to return to the Measurement mode.



## 7.2 Troubleshooting

The instrument has a simple error message that informs users of operational errors and failure. Err No. is displayed at the bottom of the screen.

### ● Error message list

Err No.	Designation	Err No.	Designation
1	Sensor memory failure	6	Span calibration error
2	Sensor battery voltage drop	7	Calibration stability error
3	Instrument battery voltage drop	8	Printer error
4	Communications error	9	DATA IN error
5	Zero calibration error		

### ● Error and remedy

#### Important

- For err Nos. 5 to 7, the calibration err display disappears when a proper calibration is performed after the following action, or when the instrument is turned on again. For the other err Nos., the err display disappears after any of the following actions is taken.
- Error Nos. 2 and 3 are displayed even when using the AC adapter if the sensor probe battery voltage or instrument battery voltage drops is low on voltage.

Err NO.	Problem	Cause	Remedy
1	No data can be read from or written into the sensor probe memory.	Internal IC failure	Call your nearest store for sensor probe repair.
2	Sensor probe battery voltage drop	① Battery voltage drop ② Improper installation of the battery	① Replace the sensor probe battery. ② Set the batteries (LR03) in the correct direction.
3	Instrument battery voltage drop	① Battery voltage drop ② Improper installation of the battery	① Replace the instrument battery. ② Set the battery (6LR61) in the correct direction.
4	No communications possible between the instrument and the sensor probe	① Improper connection of the connector to the instrument ② Cable disconnection	① Connect the connector to the instrument properly and turn on the instrument again. ② Call your nearest store for cable repair.
5	No zero calibration possible	pH • The standard solution is contaminated. • Contamination on the pH glass membrane • Change in concentration of the internal solution for the reference electrode • Cracks in the pH glass electrode COND • The standard solution is contaminated. • The sensor is dirty. • The COND sensor is broken.	pH • Change the standard solution. • Clean the pH glass membrane. • Replace the internal solution for the reference electrode. • Replace the sensor. COND • Change the standard solution. • Clean the sensor. • Contact your nearest store.

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Err NO.	Problem	Cause	Remedy
5	Zero calibration not possible	<p>TURB</p> <ul style="list-style-type: none"> <li>• Air bubbles in the cell</li> <li>• Cell contamination</li> </ul> <p>DO</p> <ul style="list-style-type: none"> <li>• Damage to the diaphragm of the DO sensor</li> </ul> <p>DEP</p> <ul style="list-style-type: none"> <li>• Contamination on the DEP sensor</li> <li>• Damage to the DEP sensor</li> </ul>	<p>TURB</p> <ul style="list-style-type: none"> <li>• Swing the sensor probe while drawing a large arc.</li> <li>• Clean the cell.</li> </ul> <p>DO</p> <ul style="list-style-type: none"> <li>• Check the sensor and replace it if damaged.</li> </ul> <p>IDEP</p> <ul style="list-style-type: none"> <li>• Clean the DEP sensor.</li> <li>• Contact your nearest store.</li> </ul>
6	Span calibration not possible	<p>pH</p> <ul style="list-style-type: none"> <li>• Contamination on the pH glass membrane</li> <li>• Change in concentration of the internal solution for the reference electrode</li> <li>• Cracks in the pH glass electrode</li> </ul> <p>COND</p> <ul style="list-style-type: none"> <li>• The standard solution isn't correct.</li> <li>• The standard solution value is set incorrectly.</li> <li>• The COND sensor is broken.</li> </ul> <p>TURB</p> <ul style="list-style-type: none"> <li>• Air bubbles in the cell</li> <li>• Cell contamination</li> <li>• The lid is attached incorrectly.</li> </ul> <p>DO</p> <ul style="list-style-type: none"> <li>• Damage to DO sensor diaphragm</li> <li>• DO sensor is unstable.</li> </ul> <p>DEP</p> <ul style="list-style-type: none"> <li>• Contamination on the DEP sensor</li> <li>• Damage to the DEP sensor</li> </ul> <p>TEMP</p> <ul style="list-style-type: none"> <li>• Damage to the TEMP sensor</li> </ul>	<p>pH</p> <ul style="list-style-type: none"> <li>• Clean the pH glass membrane.</li> <li>• Replace the internal solution for the reference electrode.</li> <li>• Replace the sensor.</li> </ul> <p>COND</p> <ul style="list-style-type: none"> <li>• Calibrate with correct standard solution.</li> <li>• Delete the calibration data for the conductivity, then calibrate the sensor again. (☞ Page 51)</li> <li>• Contact your nearest store.</li> </ul> <p>TURB</p> <ul style="list-style-type: none"> <li>• Swing the sensor probe while drawing a large arc.</li> <li>• Clean the cell.</li> <li>• Confirm if the lid is attached correctly, then calibrate the sensor again. (☞ Page 30)</li> </ul> <p>DO</p> <ul style="list-style-type: none"> <li>• Check the DO sensor and replace it if damaged.</li> <li>• Connect DO sensor to the sensor probe. Calibrate the sensor again 1 day later.</li> </ul> <p>DEP</p> <ul style="list-style-type: none"> <li>• Clean the DEP sensor.</li> <li>• Contact your nearest store.</li> </ul> <p>TEMP</p> <ul style="list-style-type: none"> <li>• Contact your nearest store.</li> </ul>
7	The calibration value does not become stable within approximately three minutes.	<p>① Sensor contamination</p> <p>② Dry sensor surface</p> <p>③ Severe temperature change</p>	<p>① Clean each sensor.</p> <p>② Pour the standard solution into the calibration beaker. Calibrate the sensor again 1 to 2 hours later.</p> <p>③ Calibrate the sensor in a place at a stable temperature or in a thermostatic oven.</p>

Err NO.	Problem	Cause	Remedy
8	Printer unit failure	<ul style="list-style-type: none"> <li>① Paper has jammed in the printer</li> <li>② Improper printer unit connection</li> <li>③ Printer failure</li> </ul>	<p>Turn OFF the instrument and use the remedy described below. Then turn ON the printer again.</p> <ul style="list-style-type: none"> <li>① Remove the jammed sheet of paper</li> <li>② Check to see if the printer is properly connected to the instrument.</li> <li>③ Replace the printer.</li> </ul> <p>* Contact your nearest store if the instrument does not recover after replacement of the printer.</p>
9	Data cannot be stored because the memory is full.	No free space in the memory	Delete the data stored in the memory. (☞ Page 81)

● Other troubles

Remedies for various trouble with no Err No. displayed are described below.

Problem	Cause	Remedy
No data display with the power on	<ul style="list-style-type: none"> <li>• No batteries</li> <li>• Improper position of the positive and negative poles</li> <li>• Battery voltage drop</li> <li>• Improper instrument battery contact</li> </ul>	<ul style="list-style-type: none"> <li>• Set new batteries.</li> <li>• Set the batteries properly while paying attention to the positive and negative poles.</li> <li>• Replace the batteries with new ones.</li> <li>• Use radio pliers to narrow the positive terminal of the battery snap.</li> </ul>
No setting change possible	<ul style="list-style-type: none"> <li>• Automatic data storage is under way</li> </ul>	<ul style="list-style-type: none"> <li>• Press the CAL key to stop the automatic data storage.</li> </ul>
No key operation possible	<ul style="list-style-type: none"> <li>• The key lock function is working</li> <li>• Failure to calibrate the sensor or wrong calibration.</li> </ul>	<ul style="list-style-type: none"> <li>• Turn OFF the instrument. Then turn ON the instrument again. (☞ Page 76)</li> <li>• Calibrate the sensor properly.</li> </ul>
Blinking measured value	<ul style="list-style-type: none"> <li>• Improper measurement sample</li> <li>• Sensor contamination</li> <li>• Poor calibration is possible. (The standard solution is contaminated.)</li> </ul>	<ul style="list-style-type: none"> <li>• Use a sample that is in the measurement range.</li> <li>• Clean each sensor.</li> <li>• Carry out correct calibration.</li> </ul>
<b>TYPE</b> <b>Err</b> The Err is displayed and the operation cannot be performed.	<ul style="list-style-type: none"> <li>• Improper connection of the cable connector to the instrument</li> <li>• Cable disconnection</li> <li>• Instrument inside failure</li> </ul>	<ul style="list-style-type: none"> <li>• Connect the connector to the instrument properly and turn on the instrument again.</li> <li>• Contact your nearest store.</li> <li>• Contact your nearest store.</li> </ul>

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## ● Troubleshooting for the TURB sensor

If an abnormal value such as -10, 800 or more is indicated, or indication does not become stable, follow as below instructions.

### **Remove the contamination of the sensor**

Remove the cover of the turbidity (TURB) sensor, and clean the sensor with cotton swab. Contamination or bubbles on the sensor may cause fluctuation of TURB values.

### **Remove bubbles around the sensor**

When immersing sensor in the calibration cup, be sure lower it slowly. Quick immersion may cause bubbles on the sensor, which can have bad influence on calibration accuracy to give abnormal value indication.

### **Use of new standard solution**

When calibration, clean the sensor before immersing it in the new standard solution. In case of zero calibration, when the standard solution is turbid or contaminated, calibrate again with the new standard one.

### **Points to be noted in making measurement**

Immerse the sensor slowly in the sample. In case of abnormal measurement value observed, contamination or bubbles adhering may be suspected. So, shake greatly the sensor. Since immersion of the sensor in the sludge layer at the bottom of the sample can prohibit accurate measurement, shake greatly enough to remove the sludge.

## ● Maintenance of DO sensor

Durable life of DO sensor is generally one year, however, it may vary depending on the using condition. In case of the failure of calibration or breakage of the diaphragm, take either of the following steps according to the using period.

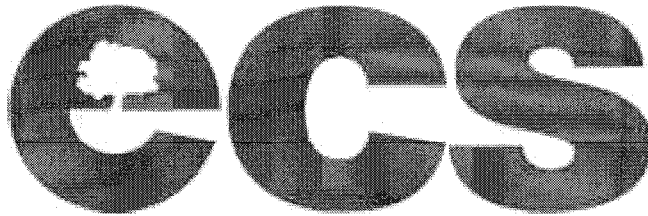
### **Within one year after purchasing :**

Obtain diaphragm replacement kit (optional) to replace the used diaphragm and replenish the internal solution for restoration.

### **When exceeding one year after purchasing :**

Replace by the new DO sensor.





## Environmental Compliance Services, Inc.

**STANDARD OPERATING PROCEDURES  
FOR  
ENVIRONMENTAL COMPLIANCE SERVICES,  
INC.  
AT  
SOUTH CAROLINA UST SITES**

**Prepared For:**

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October 2011  
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## STANDARD OPERATING PROCEDURES

This document details the standard operating procedures (SOPs) employed by Environmental Compliance Services (ECS) of Agawam, Massachusetts. These SOPs are employed by ECS when performing environmental assessments, hydrogeological investigations, and remedial activities on properties with releases of oil and hazardous materials. These SOPs are based on current commonly accepted professional standards and practices in the environmental field.

These SOPs cover the technical aspects of drilling, installation of monitoring wells, sampling of environmental media, and hydrogeological investigations. These activities will be conducted in general accordance with the SOPs unless site-specific conditions are encountered. Any changes in SOPs due to site specific conditions will be specified within a scope of services prior to the performance of the work, if known. If conditions are encountered during the performance of the work, the changes will be duly noted within the report documenting the work. Alternative methods are discussed for jobs requiring a lesser level of quality assurance and quality control (QA/QC).

These SOPs are based on established procedures included within the following: guidance documents produced by the American Society for Testing and Materials (ASTM), United States Environmental Protection Agency (USEPA), and South Carolina Department of Health and Environmental Control (SCDHEC); published professional papers; and current professional standards and practices. References for cited documents and papers are attached.

## GENERAL SAMPLING PROCEDURES FOR AQUEOUS AND SOLID MATRICES

During field sampling activities, the following applicable procedures will be practiced for sample collection:

- Whenever possible, samples will be collected first from the location expected to be least contaminated. Samples that are expected to be most contaminated will be collected last.
- Accurate and detailed field notes will be maintained in a bound field notebook. Soil samples will be examined and logged in the field.
- Sampling procedures will be performed with the overall intent of collecting representative samples and minimizing sample disturbance.
- Soil samples will be selected for analysis based on the results of qualitative field screening for total volatile organic vapors, visual and olfactory observations, and the depth of the water table.
- Sample containers will be labeled with the site name, project number and date prior to being filled with a sample.
- All sample collection, handling, and shipping information will be recorded in a field notebook.
- Groundwater samples will be logged in a field notebook. Samples of other matrices (sediment, surface water, soil, etc.) will be logged in a field notebook.
- All samples should be collected according the specific requirements of the intended analytical method. Tables 1 and 2 provide lists of sample containers, preservation and holding time requirements for aqueous and soil/sediment samples, respectively.

**Table 1: Sample Container, Preservation, and Holding Time for Groundwater**

<b>Table 1 Sample Container, Preservation, and Holding Time for Groundwater</b>				
<b>Analyte</b>	<b>Analytical Method</b>	<b>Container</b>	<b>Preservation</b>	<b>Holding Time</b>
Benzene	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
Toluene	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
Ethylbenzene	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
Total Xylenes	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days

**Table 1**  
**Sample Container, Preservation, and Holding Time for Groundwater**

Analyte	Analytical Method	Container	Preservation	Holding Time
Total Naphthalenes	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
1,2-Dichloroethane	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
MTBE	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
EDB	8011	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl, Residual Chlorine present: add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> to make 0.008% concentration	14 days
ETBE	5030B with 8260B- oxy	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
3,3-Dimethyl-1-butanol	5030B with 8260B- oxy	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
TAME	5030B with 8260B- oxy	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
DIPE	5030B with 8260B- oxy	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
TBF	5030B with 8260B- oxy	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
TBA	5030B with 8260B- oxy	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
TAA	5030B with 8260B- oxy	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
Ethanol	5030B with 8260B- oxy	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
1,2,4- and 1,3,5-trimethyl benzene isomers	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
n-butyl, sec-butyl, and tert-butyl benzene	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days

**Table 1**  
**Sample Container, Preservation, and Holding Time for Groundwater**

Analyte	Analytical Method	Container	Preservation	Holding Time
isomers				
Isopropyl benzene	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
n-propyl benzene	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	14 days
Full List 8260B Scan	5030B with 8260B	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C	7 days
Benzo(a)anthracene	3510C with 8270D	Amber glass container with Teflon-lined lid	Cool to 4° C	7 days until extraction 40 days after extraction
Benzo(b)flouranthene	3510C with 8270D	Amber glass container with Teflon-lined lid	Cool to 6° C	7 days until extraction 40 days after extraction
Benzo(k)flouranthene	3510C with 8270D	Amber glass container with Teflon-lined lid	Cool to 6° C	7 days until extraction 40 days after extraction
Chrysene	3510C with 8270D	Amber glass container with Teflon-lined lid	Cool to 6° C	7 days until extraction 40 days after extraction
Dibenz(a,h)anthracene	3510C with 8270D	Amber glass container with Teflon-lined lid	Cool to 6° C	7 days until extraction 40 days after extraction
TPH (Oil & Grease)	1664	1 Liter Glass	Cool to 6° C and adjust pH to less than 2 with H <sub>2</sub> SO <sub>4</sub> or HCl	28 days
Arsenic	6020A or 7010	Polyethylene or Glass	HNO <sub>3</sub> to pH <2	6 months
Barium	6010C or 6020A	Polyethylene or Glass	HNO <sub>3</sub> to pH <2	6 months
Cadmium	6010C, 6020A, or 7010	Polyethylene or Glass	HNO <sub>3</sub> to pH <2	6 months
Chromium	6010C, 6020A, or 7010	Polyethylene or Glass	HNO <sub>3</sub> to pH <2	6 months
Lead	6010C, 6020A, or 7010	Polyethylene or Glass	HNO <sub>3</sub> to pH <2	6 months
Mercury	7470A	Polyethylene or Glass	HNO <sub>3</sub> to pH <2	28 days
Selenium	6020A or 7010	Polyethylene or Glass	HNO <sub>3</sub> to pH <2	6 months
Silver	6010C, 6020A, or 7010	Polyethylene or Glass	HNO <sub>3</sub> to pH <2	6 months

**Table 1**  
**Sample Container, Preservation, and Holding Time for Groundwater**

Analyte	Analytical Method	Container	Preservation	Holding Time
Nitrate	9210 or 9056	Polyethylene or Glass	Cool to 4° C	48 hours
Sulfate	9056	Polyethylene or Glass	Cool to 4° C	28 days
Methane	Kerr Method RSKSOP-175 rev 2, May 2004	2 x 40 ml glass vials with Teflon-lined septum caps	Cool to 6° C, pH < 2 with 1:1 HCl	14 days
Ferrous Iron	SM3500-Fe D	Glass	None	48 hours <sup>1</sup>
pH	9040C	NA	NA	Within 15 minutes
Conductivity	9050A	NA	Cool to 4° C	28 days
Turbidity	SM-2130B	NA	Cool to ~ 6° C	48 hours
Temperature	SM-2550B	NA	NA	Within 15 minutes
Dissolved Oxygen	SM-4500 O G or ASTM D888-05	NA	NA	Within 15 minutes

<sup>1</sup> Analysis should be performed immediately in the field; however, if analysis is done in a laboratory, holding time is not to exceed 48 hours

**Table 2**  
**Sample Container, Preservation, & Holding Time for Soil**

Analyte	Analytical Method	Container	Preservation	Holding Time
Benzene	5035 with 8260B	See Method for Requirements in SW 846		
Toluene	5035 with 8260B			
Ethylbenzene	5035 with 8260B			
Xylenes	5035 with 8260B			
Total Naphthalenes	5035 with 8260B			
MTBE	5035 with 8260B			
Benzo(a)anthracene	3546, 3540C, 3541, 3545A or 3550C with 8270D	Amber glass with Teflon- lined lid	Cool to 6° C	14 days until extraction 40 days after extraction
Benzo(b)fluoranthene	3546, 3540C, 3541, 3545A or 3550C with 8270D	Amber glass with Teflon- lined lid	Cool to 6° C	14 days until extraction 40 days after extraction
Benzo(k)fluoranthene	3546, 3540C, 3541, 3545A or 3550C with 8270D	Amber glass with Teflon- lined lid	Cool to 6° C	14 days until extraction 40 days after extraction
Chrysene	3546, 3540C, 3541, 3545A or 3550C with	Amber glass with Teflon- lined lid	Cool to 6° C	14 days until extraction 40 days after

<b>Table 2 Sample Container, Preservation, &amp; Holding Time for Soil</b>				
<b>Analyte</b>	<b>Analytical Method</b>	<b>Container</b>	<b>Preservation</b>	<b>Holding Time</b>
	8270D			extraction
Dibenz(a,h)anthracene	3546, 3540C, 3541, 3545A or 3550C with 8270D	Amber glass with Teflon- lined lid	Cool to 6° C	14 days until extraction 40 days after extraction
TPH (DRO)	3546, 3540C, 3541, 3545A or 3550C with 8270D	Amber glass with Teflon- lined lid	Cool to 6° C	14 days until extraction 40 days after extraction
TPH (GRO)	5035 with 8015C	See Method for Requirements in SW 846		
TPH (Oil & Grease)	9071 B	Wide-mouth glass container with Teflon-lined lid	Cool to 6° C	28 days
Arsenic	6020A or 7010	Polyethylene or Glass	None	6 months
Barium	6010C or 6020A	Polyethylene or Glass	None	6 months
Cadmium	6010C, 6020A, or 7010	Polyethylene or Glass	None	6 months
Chromium	6010C or 6020A	Polyethylene or Glass	None	6 months
Lead	6010C, 6020A, or 7010	Polyethylene or Glass	None	6 months
Mercury	7471 B	Polyethylene or Glass	None	28 days
Selenium	6020A or 7010	Polyethylene or Glass	None	6 months
Silver	6010C, 6020A, or 7010	Polyethylene or Glass	None	6 months
TCLP (metals)	1311	See Method for Requirements in SW 846		
Total Organic Carbon (TOC)	9060A	Polyethylene or Glass	Cool to 4° C	28 days

- All samples will be placed in a chilled, thermally-insulated container containing ice. Blue ice, ice packs, or ice substitutes are not able to reach and maintain the required temperature until receipt at a laboratory.
- All soil samples for volatile organic compound analysis must be collected, preserved, and handled according to published method procedures.

## GROUNDWATER SAMPLE COLLECTION PROCEDURES USING BAILERS OR PUMPS

The following groundwater sampling protocols are based on standard methods found in ASTM Designation: D4448-85a, USEPA guidance documents (numerous references), and SCDHEC Quality Assurance Program Plan For The Underground Storage Tank Management Division, June 2011.

### 1. MATERIALS

The following equipment and materials may be used during groundwater sampling. Not all material and equipment is necessary all of the time.

- \* health and safety equipment;
- \* map of well locations;
- \* well keys;
- \* interface probe;
- \* electronic water level indicator;
- \* PID or FID;
- \* pH, conductivity, and temperature meters; or a water quality monitoring system (pH, conductivity, temperature, ORP, and optional dissolved oxygen);
- \* field book;
- \* disposable gloves;
- \* stainless-steel, Teflon™ or PVC, bailers with Teflon check valves;
- \* dedicated polypropylene cord;
- \* bucket (calibrated in gallons);
- \* sample containers and labels;
- \* chain-of-custody forms;
- \* cooler and cold source;
- \* decontamination equipment;
- \* polyethylene sheeting;
- \* polyethylene tubing and check valve;
- \* field filtering apparatus.

Pre-decontaminated bailers will be wrapped in an inert material (i.e. plastic bags) and stored in a clean environment during transport to the Site (See Decontamination Procedures).

In order to ensure the collection of groundwater samples representative of the aquifer, the standing water within the well is first purged. Note: Depth to water level measurements will be performed in each monitoring well prior to purging and sampling (see Water-Level Measurement Procedures).



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## 2.0 WELL PURGING

- An interface probe or electronic water level indicator will be lowered to the air-water interface and the depth to water and depth of the well will be recorded. If the presence of a free phase product (light non-aqueous phase liquid - LNAPL) is suspected, an interface probe will be lowered to the product-water interface and the thickness of the product will be measured. Depth of the well will not be measured if LNAPL is present.
- If no free phase product is present in the well purging will begin:
  - Groundwater will be purged from the well using a decontaminated stainless-steel or PVC bottom-emptying bailer equipped with a Teflon™ check valve, or a non-contaminating water pump.
  - Groundwater collected during purging and sampling of groundwater monitoring wells will be discharged to the subsurface at the point of withdrawal in accordance with Massachusetts General Law Chapter 21E and 310 CMR 40.0056 of the Massachusetts Contingency Plan. If purge water is grossly contaminated (i.e. contains free phase product) this water will be drummed and disposed of according to applicable municipal, state, and federal regulations (See Disposal Procedures).
  - When using a pump, clean, dedicated polyethylene tubing will be used for each well. In appropriate situations, the polyethylene tubing can be stored in the well casing for use during future sampling events.
  - When using dedicated stainless-steel, PVC, or Teflon™ bailers to purge the wells, a separate pre-decontaminated bailer will be used for each well.
  - The bailer will be suspended with disposable/dedicated polypropylene cord. Care will be taken that the cord does not touch the ground during sampling and purging. The cord will be discarded upon completion of each well sampling event.
  - Non-dedicated bailers will be decontaminated in the field between each well sampling event according to Decontamination Procedures.
  - One of the following procedures will be used to determine if the purging is complete:
    - A. The efficiency of purging will be verified by measuring changes in the temperature, pH, and specific conductance (in-situ parameters) of well water during purging. The stabilization of pH, temperature, and conductivity readings for two consecutive measurements, indicates that "stagnant water" has been removed from the well and that aquifer formation water (groundwater) is now entering the well. Stabilization will be defined as the following; The pH measurements should be to within  $\pm 0.1$  pH unit, the temperature to within  $\pm 1.0^{\circ}\text{C}$ , and specific conductance to within  $\pm 10$  umhos/cm for two consecutive readings.
    - B. An alternative method for determining if purging is complete may be used where the use of this method meets the assessment objectives. In this case, the well will be pumped or bailed until a specified volume of water has been removed from the well, commonly a minimum of 3 to 5 well bore volumes. In wells screened within low permeability formations, the well may go "dry" prior to the removal of 3 to 5 volumes. Purging is considered complete in this case. However, the complete

draining of a well will be avoided if possible during the purging process because of the potential loss of volatiles.

- For complete purging of "stagnant water" (using either a pump or a bailer) the removal of well water will occur from just below the air-water interface in the well. In some situations, when using a pump, the pump intake may be lowered to remain just below the water surface as pumping is in progress. If the well screen is 20 feet or longer, groundwater will be pumped or bailed from the mid-point of the screen.
- The temperature, conductivity, and pH of the first well volume will be recorded using individual pH, conductivity, and temperature meters or a water quality monitoring system. These parameters may be measured following the removal of each subsequent well volume. If specified, oxidation reduction potential will also be recorded.
- The volume of purge water will be measured by pumping or bailing groundwater directly into a container of known volume.
- When using a pump for purging, a water quality monitoring system can be connected to the pump discharge in order to monitor the in-situ parameters. In-situ parameters may be alternatively monitored in a beaker filled from the bailer or the pump discharge.
- When bailing, care will be taken to assure that the bailer cord is held in the hand or placed upon plastic surrounding the well to prevent the potential of cross contamination from the ground surface to the well.
- The volume of water purged from the well, the measurements of temperature, pH, and specific conductivity, and observations of color, odor, and turbidity will be recorded on a sampling log. An example of the ECS Groundwater Sampling Log is attached.
- All measuring equipment will be decontaminated between uses (See Decontamination Protocols). The groundwater measuring equipment will be calibrated daily prior to use and in the field if field personnel suspect a problem with the calibration.
- When using dedicated bailers, the stainless-steel bailers will be rinsed with clean potable water following sample collection and placed in a plastic bag for transport to the company's facility where decontamination will take place (See Decontamination Procedures).

### 3.0 GROUNDWATER SAMPLING PROTOCOL

- Water samples for the analysis of volatile organic compounds (VOCs) (including volatile petroleum hydrocarbons) will be collected as soon as the well has sufficiently recovered from purging and within three hours of purging. Samples for the analysis for VOCs will be collected from the first volume of water collected from the top of the water column in the well.
- Groundwater samples collected for the analysis of VOCs will be collected in duplicate 40-milliliter glass vials with zero headspace. Vials will be pre-preserved with hydrochloric acid to a pH of <2. The vial will be uncapped carefully in order to avoid contact with the Teflon septum. The vial will be filled slowly taking care to not to agitate the sample when transferring it from the bailer to the sample vial. Each vial will be filled until there is a meniscus over the lip of the vial. If no meniscus forms, a sample of water will be collected in the cap and poured slowly into the vial to create a meniscus. The Teflon-faced septum will be placed on the convex meniscus and the cap screwed

down. The vial will be inverted and tapped to check for the presence of air bubbles. If air bubbles are present, the sample will be discarded and another vial will be selected and filled.

- Groundwater samples for analysis for PCBs, pesticides, total and extractable petroleum hydrocarbons, semivolatiles organic compounds, metals, other inorganic compounds, and general chemical parameters, will be collected last. Assuming adequate recharge, all samples will be collected within 3 hours of purging or upon 90% recovery.
- Groundwater samples for the analysis for dissolved (soluble) metals will be collected by using HDPE tubing with a decontaminated checkvalve and an in-line dedicated 0.45 micron filter. Care will be taken to pump the sample with very gentle pressure, in order to avoid any potential failure of the cartridge filter. The sample will be collected directly in a 1-liter HDPE bottle pre-preserved with nitric acid to achieve a pH <2.
- The sample containers for groundwater samples collected for all analyses other than VOCs will be filled to 90% capacity. Care will be taken so that no portion of the sample comes in contact with the sampler's gloves. ECS Standard Operating Procedure (SOP) # 4.00 should be referenced for selection of proper sample containers and preservation methods for each analytical method.
- Duplicate samples, field blanks, and equipment rinsate blanks will be collected according to specified QA/QC frequency
- A trip blank consisting of deionized hydrocarbon-free laboratory water in a 40-milliliter Teflon-septum vial, prepared prior to sampling, will be present with the volatile samples at all times during sampling and transportation to the analytical laboratory, and will be subjected to the same analyses as the samples.
- All sample containers will be capped immediately after filling. The exterior of the container will be rinsed with deionized water and dried with paper towels. Samples will be cooled to 4°C by placing them immediately in a chilled, thermally insulated container with a cold source;
- All sample containers will be labeled immediately upon collection with the following information: site; project number; well number; date; time of collection; testing parameters; initials of sampling personnel.
- All equipment used to collect samples for analysis will be either decontaminated before each use or dedicated to a particular sample location after initial decontamination.
- Based on the results of previous sampling and analysis, sampling will progress from the least contaminated well to the most contaminated well.
- All groundwater samples will be immediately placed in a chilled, thermally-insulated container and submitted as soon as possible to a Massachusetts-certified analytical laboratory under Chain of Custody protocol. Information regarding sample holding times is found in Table 1. Information regarding Chain of Custody protocol is found in the Sample Custody Procedure.

## DECONTAMINATION

Decontamination will be performed in order to: minimize the spread of contaminants on the Site and from one sampling location to another; reduce the potential exposure of field personnel to contaminants; and to ensure good data quality and reliability. Decontamination of all field analytical testing and sampling equipment will be performed according to the following procedures. These procedures are based on ASTM Designation D 5088-90, USEPA CERCLA QAPP Review Guidance, 1987, and USAEPA Region 4 Environmental Investigation guidelines (SOP & QAM, 2001).

Equipment cleaning procedures include pre-field, field, and post-field decontamination. Non-disposable equipment will be decontaminated after completing each sampling event. In cases of gross contamination (free phase product), rinse water will be contained for proper disposal according to municipal, state, and federal regulations. Decontamination procedures will be monitored through sampling and analysis when quality assurance/quality control checks are necessary.

Equipment will be dedicated to each sampling point and decontamination will be performed at the off-site facility as much as possible.

Decontaminated equipment will be rested on polyethylene sheeting at each sampling point.

Samplers will use new disposable gloves at each sampling point.

Potable water from the public water supply will be used for control rinse water.

A certified laboratory supply of deionized water will be used for decontamination of field testing and sampling equipment and for the collection of rinsate blanks. Deionized water will be stored in Nalgene, glass, or Teflon containers. The storage area containing the deionized water will be separated from the storage area for solvents.

Equipment rinsate blanks will be collected when a quality control check of the decontamination procedure is necessary. This check will not be performed if dedicated equipment is used. One blank will be collected at least once during a sampling event for each different piece of sampling equipment used. Rinsate blanks will be prepared by pouring deionized water over the decontaminated piece of equipment and collecting it in the sample container. The equipment rinsate blank will be analyzed for the same analytes as the samples that have been collected with that piece of equipment.

## 1.0 MATERIALS

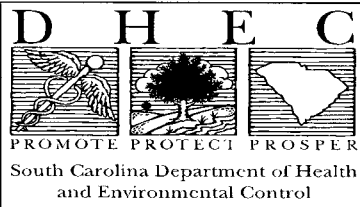
- health and safety equipment;
- laboratory-supplied deionized water;
- phosphate-free detergent (Alconox, Liquinox);
- potable water (municipal water source);
- methanol;
- Hexane;
- Acetone;
- nitric acid rinse solution;
- wash basins;
- inert brushes;
- polyethylene sheeting;
- large heavy duty garbage bags;
- spray bottles;
- zip-lock bags;
- paper towels/Handiwipes;
- disposable gloves.

## 2.0 DECONTAMINATION PROCEDURES

- Soil and sediment sampling equipment (stainless steel sampling scoop, tool, and bowl, split-spoon and macro-core sampler, knife) will be decontaminated in the field after each use.
- Soil and sediment sampling equipment will be decontaminated as follows: scrubbed with inert brushes in a bucket containing phosphate-free detergent and potable water; rinsed with potable water; rinsed with pesticide grade methanol; and finally rinsed with deionized water. The final potable water and deionized water rinse volumes will equal 5 times the volume of the methanol rinse. The equipment will be allowed to air dry and will be stored in a clean environment until reused.
- Water quality instruments (e.g. Horiba Water Quality Meter), interface probe, down-hole slug test equipment, well development equipment, and other measuring instruments will be decontaminated between uses by rinsing with Alconox or Liquinox, followed by potable water and deionized water rinses. A methanol rinse will be utilized prior to the deionized water rinse in the event of gross contamination such as contact with free-phase product.
- The drill rig, direct-push technology equipment, and all drilling equipment and associated tools, including but not limited to augers, drill casing, drill rods, sampling equipment, and wrenches, will be steam cleaned prior to beginning the drilling on the Site. This cleaning will consist of using a high pressure detergent steam cleaning equipment, followed by a nanograde methanol swabbing if gross contamination was present. This will be followed by a controlled water rinse. Any down-hole equipment (auger flights, rods, sampling equipment, etc.) coming in contact with gross contamination (i.e. free phase product) will be steam-cleaned between uses. Otherwise equipment will be scrubbed manually with potable water and Alconox as needed to remove soil between uses.
- Sampling equipment and probes will be decontaminated in an area covered by polyethylene sheeting adjacent to the sampling location.
- In cases of gross contamination (i.e. free phase product) rinse water will be collected for proper disposal according to municipal, state or federal regulations. Contaminated solids (disposable

gloves, clothing, polyethylene tubing and sheeting, etc.) will be collected and characterized for proper disposal.

- Decontamination procedures will be fully documented in the field notebook. The following information should be recorded: Site location, date, time and weather; sample location where equipment used; location where decontamination was performed; field personnel performing the decontamination; decontamination procedures; disposal of rinse water if necessary; samples collected for QA/QC and analytical results.
- Health and safety procedures associated with decontamination are found in the Health and Safety Plan.



**ASSESSMENT COMPONENT COST AGREEMENT  
SOUTH CAROLINA**

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

**Facility Name:** 378 Truck Stop

**UST Permit #:** 07960

**Cost Agreement #:**

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>1. Plan*</b>				
B. Tax Map		x	\$50.00	\$0.00
C. Tier II or Comp. Plan /QAPP Appendix B	1	x	\$525.00	\$525.00
<b>2. Receptor Survey *</b>		x	\$500.00	\$0.00
<b>3. Survey (500 x 500 feet)</b>				
A. Comprehensive Survey		x	\$1,000.00	\$0.00
B. Subsurface Geophysical Survey				
1. < 10 meters below grade		x	\$2,750.00	\$0.00
2. > 10 meters below grade		x	\$3,250.00	\$0.00
C. Geophysical UST or Drum Survey		x	\$1,125.00	\$0.00
<b>4. Mob/Demob (Each)</b>				
A. Equipment	2	x	\$575.00	\$1,150.00
B. Personnel	4	x	\$290.00	\$1,160.00
C. Adverse Terrain Vehicle to install wells		x	\$575.00	\$0.00
<b>5. Soil Borings (hand auger)* (Feet)</b>		feet x	\$14.00	\$0.00
<b>6. Soil Borings (drilled) &amp; Field Screening *</b>				
Rate includes collection of water sample or soil sample, and lab or other analyses				
A. Standard		feet x	\$17.00	\$0.00
C. Fractured Rock	200	feet x	\$27.50	\$5,500.00
<b>7. Soil Leachability Model (Each)</b>		each x	\$200.00	\$0.00
<b>8. Abandonment* (per foot)</b>				
A. 2" diameter or less	200	feet x	\$5.00	\$1,000.00
B. Greater than 2" to 6" diameter		feet x	\$5.50	\$0.00
C. Dug/Bored well (up to 6 foot diameter)		feet x	\$18.00	\$0.00
<b>9. Well Installation* (per foot)</b>				
A. Water Table (hand augered)		feet x	\$20.00	\$0.00
B. Water Table (drill rig)		feet x	\$38.00	\$0.00
C. Telescoping/ Pit Cased		feet x	\$58.00	\$0.00
D. Rock Drilling	135	feet x	\$58.00	\$7,830.00
E. 2" Rock Coring		feet x	\$45.00	\$0.00
G. Rock Multi-sampling ports/screens		feet x	\$47.20	\$0.00
H. Recovery Well (4 inch diameter)		each x	\$45.00	\$0.00
I. Pushed Pre-packed screen (1.25 diameter)		each x	\$18.50	\$0.00
J. Rotasonic (2 inch diameter)		each x	\$45.00	\$0.00
<b>10. Groundwater Sample Collection / Gauge Depth to Water or Product (Each)</b>				
A. Groundwater Purge	41	wells x	\$55.00	\$2,255.00
B. Air or Vapors		samples x	\$90.00	\$0.00
C. Water Supply	18	samples x	\$30.00	\$540.00
D. Groundwater No Purge or Duplicate	8	samples x	\$35.00	\$280.00
E. Gauge Well only		per well x	\$20.00	\$0.00
F. Sample Below Product		wells x	\$50.00	\$0.00
G. Pasive Diffusion Bag		each x	\$40.00	\$0.00
H. Field Blank	3	each x	\$5.00	\$15.00

<b>11. Laboratory Analyses-Groundwater (Each Sample)</b>					
A1. BTEX+Naphth.+ Oxyg's+ 1,2 DCA + Ethanol	76	samples x	\$100.00		\$7,600.00
AA. Lead, Filtered		samples x	\$46.00		\$0.00
B1. Rush EPA Method 8260B (All of item A.)		samples x	\$143.00		\$0.00
C1. Trimethal, Butyl, and Isopropyl Benzenes		samples x	\$40.00		\$0.00
D. PAH's		samples x	\$120.00		\$0.00
E. Lead, Unfiltered		samples x	\$20.00		\$0.00
F. EDB by EPA 8011	76	samples x	\$55.00		\$4,180.00
FF. EDB by EPA Method 8011 Rush		samples x	\$75.00		\$0.00
G. 8 RCRA Metals		samples x	\$140.00		\$0.00
H. TPH (9070)		samples x	\$55.00		\$0.00
I. pH		samples x	\$10.00		\$0.00
J. BOD		samples x	\$40.00		\$0.00
P1. Ethanol		samples x	\$21.50		\$0.00
<b>11. Analyses-Soil (Each Sample)</b>					
Q. BTEX + Naphth.	9	samples x	\$100.00		\$900.00
R. PAH's		samples x	\$120.00		\$0.00
S. 8 RCRA Metals		samples x	\$150.00		\$0.00
T. Oil & Grease (9071)		samples x	\$60.00		\$0.00
U. TPH-DRO (3550B/8015B)		samples x	\$65.00		\$0.00
V. TPH- GRO (5030B/8015B)		samples x	\$65.00		\$0.00
W. Grain size/hydrometer		samples x	\$99.00		\$0.00
X. Total Organic Carbon		samples x	\$35.00		\$0.00
<b>11. Analyses-Air (Each Sample)</b>					
Y. BTEX + Naphthalene		samples x	\$247.50		\$0.00
<b>11. Analyses-Free Phase Product (Each Sample)</b>					
Z. Hydrocarbon Fuel Identification		samples x	\$620.00		\$0.00
<b>12. Aquifer Characterization*</b>					
A. Pumping Test		hours x	\$120.00		\$0.00
B. Slug Test*		tests x	\$150.00		\$0.00
C. Fractured Rock		tests x	\$500.00		\$0.00
<b>13. Free Product Recovery Rate Test* (Each)</b>					
		tests x	\$120.00		\$0.00
<b>14. Fate/Transport Modeling</b>					
A. Mathematical Model		each x	\$300.00		\$0.00
B. Computer Model		each x	\$500.00		\$0.00
<b>15. Risk Evaluation</b>					
A. Tier I Risk Evaluation		x	\$300.00		\$0.00
B. Tier II Risk Evaluation		x	\$500.00		\$0.00
<b>16. Subsequent Survey*</b>					
		x	\$300.00		\$0.00
<b>17. Disposal* (gallons or tons)</b>					
A. Wastewater	300	gallons x	\$0.80		\$240.00
B1. Free Product		gallons x	\$0.85		\$0.00
C. Soil Treatment/Disposal	15	tons x	\$72.50		\$1,087.50
D. Drilling fluids		gallons x	\$0.80		\$0.00
<b>18. Miscellaneous (attach receipts)</b>					
		x			\$0.00
		x			\$0.00
		x			\$0.00
<b>20. Tier I Assessment (Use DHEC 3665 form)</b>					
		x			\$0.00
<b>21. IGWA (Use DHEC 3666 form)</b>					
		x			\$0.00
<b>22. Corrective Action (Use DHEC 3667 form)</b>					
		x			\$0.00



<b>23. Aggressive Fluid &amp; Vapor Recovery (AFVR)</b>					
A. 8-hour Event*		each	x	\$3,000.00	\$0.00
B. AFVR per-hour Continuance		per hour	x	\$204.00	\$0.00
C. Off-gas treatment per-hour Continuance		per hour	x	\$35.00	\$0.00
<b>24. Granulated Activated Carbon (GAC) filter system installation &amp; service:</b>					
A. New GAC System Installation*		each	x	\$2,500.00	\$0.00
B1. Refurbished GAC Sys. Install*		each	x	\$1,180.00	\$0.00
C. Filter replacement/removal*		each	x	\$450.00	\$0.00
D1. GAC System removal, cleaning, & refurbishment*		each	x	\$720.00	\$0.00
E. GAC System housing		each	x	\$450.00	\$0.00
F. In-line particulate filter		each	x	\$150.00	\$0.00
G. Additional piping & fittings		feet	x	\$4.00	\$0.00
<b>25. Well Repair</b>					
A. Additional Copies of the Report Delivered		each	x	\$32.50	\$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
F. Replace well cover bolts		each	x	\$10.00	\$0.00
G. Replace locking well cap & lock		each	x	\$15.00	\$0.00
H. Replace/Repair stick-up		each	x	\$137.50	\$0.00
I. Convert Flush-mount to Stick-up		each	x	\$175.00	\$0.00
J. Convert Stick-up to Flush-mount		each	x	\$125.00	\$0.00
K. Replace missing/illegible well ID plate		each	x	\$22.50	\$0.00
<b>Report Prep &amp; Project Management</b>	15%		x	\$34,262.50	\$5,139.38
<b>TOTAL</b>					\$39,401.88

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

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan  
Addendum to the SC DHEC UST Programmatic QAPP  
For

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378 Truck Stop, UST Permit # 07960

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731 Highway 378, Edgefield, SC

Prepared by: Cathleen Ridgley

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UST Management Division, Bureau of Land & Waste Management

Date: February 16, 2012

Approvals

Cathleen Ridgley  
SC DHEC Project Manager

Cathleen Ridgley Date 2/16/12  
Signature

Lee Monts  
SCDHEC Section Manager

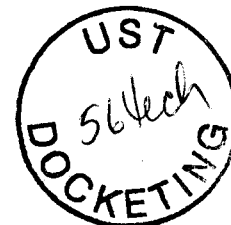
Lee Monts Date 2/21/12  
Signature

Michael Woodrum  
Laboratory Director

Michael Woodrum Date 2/21/12  
Signature

Debra Thoma  
Project Verifier

Debra Thoma Date 2/21/12  
Signature



**A3 Distribution List**

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
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Michael Woodrum	Laboratory Director	Shealy Environmental Services, 106 Vantage Dr., West Columbia, SC, 29172	803-791-9700	803-791-9111	mwoodrum@shealylab.com
Debra Thoma	SCDHEC Project Verifier	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6397	803-896-6245	thomadl@dhec.sc.gov

**Table 1A Addendum Distribution List**

**A4 Project Organization**

Role from the UST Master QAPP	Name of person in this Role for this Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Cathleen Ridgley	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6633	803-896-6245	ridglect@dhec.sc.gov
Analytical Laboratory Director	Michael Woodrum	Shealy Environmental Services, 106 Vantage Dr., West Columbia, SC, 29172	803-791-9700	803-791-9111	mwoodrum@shealylab.com
Field Manager	Bob Faller	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6345	803-896-6245	fallerrg@dhec.sc.gov
Project Verifier	Debra Thoma	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6397	803-896-6245	thomadl@dhec.sc.gov

**Table 2A Addendum Role Identification and Contact Information**

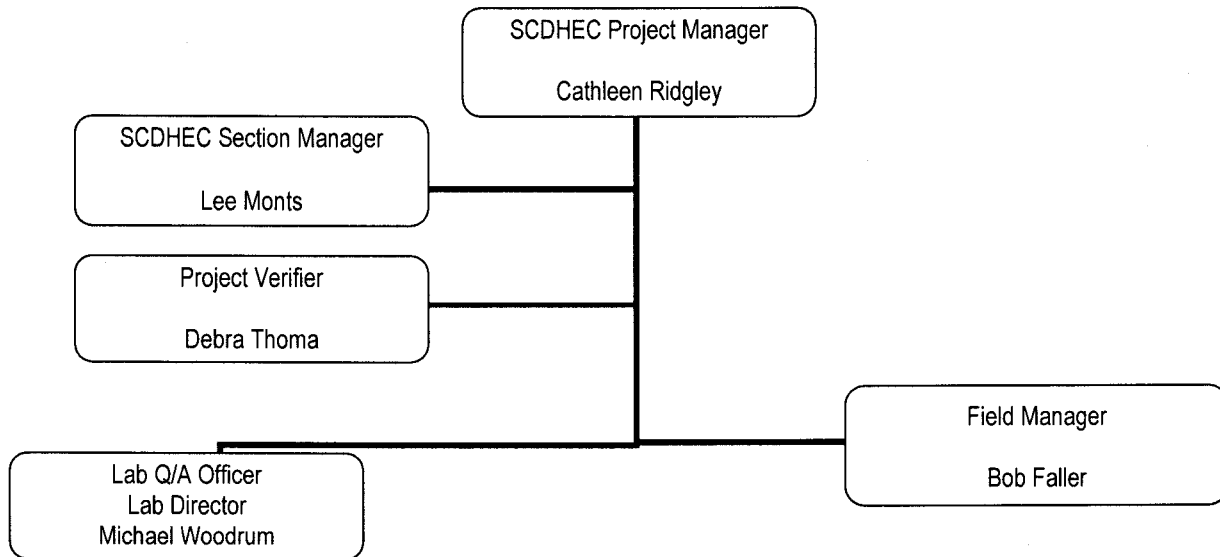


Figure 1A Organizational Chart

## A5 Problem Definition/Background

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

A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. One 550-gallon diesel, one 1,000-gallon gasoline, and one 2,000-gallon gasoline underground storage tanks and their associated piping and dispensers were removed from the site on January 1, 1987. A Tier I Assessment was completed in May 2010. Twenty water supply wells were indentified within a 1,000-ft. radius of the site, and 15 (five were disconnected) of these water supply wells (WSWs) were sampled as part of the Tier I Assessment. All WSWs were non-detect at that time for gasoline chemicals of concern (CoC). A Tier II Assessment was then conducted during the remainder of 2010 at which point two of the WSWs showed petroleum impact. As a result of the petroleum impact, a GAC unit was installed on each well. Additional assessment is ongoing at the site to delineate free phase product. AFVR events were conducted on MW-1 and MW-22 during 2011; however, due to a huge drop in the water table over the past two years, the AFVR events had to be suspended. This scope of work is in response to a second community presentation summarizing site rehabilitation activities when three owners of WSWs out of the 1,000-ft. radius asked to have their WSWs sampled for petroleum constituents.

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

Underground Storage Tanks

## A6 Project/Task Description

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

Water samples will be collected from three water supply wells and analyzed for BTEX, naphthalene, MtBE, the oxygenates, 1,2-DCA, and EDB.

2. **The QAPP will be sent to the analytical laboratory for signature within 15 days after cost approval. Sampling should be completed 30 days after the laboratory returns signed QAPP.**
3. **Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.**

Factors that may prevent scheduled work may be, but is not limited to, inclement weather, equipment malfunction, and machine failure

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

Topographic Map and Site Map with sampling locations is attached

## A8 Training and Certificates

See Section A8 of the UST Management Division Quality Assurance Programmatic Plan

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

### Commercial Lab(s)

Full Name of the Laboratory Shealy Environmental Services, Inc.

Name of Lab Director Michael Woodrum

SC DHEC Certification Number 32010

Parameters this Lab will analyze for this project: BTEX,N,MtBE,DCA, oxygenates by EPA method 8260;

EDB by EPA method 8011

## A9 Documents and Records

**Personnel will receive the most current version of the QAPP Addendum via:  
(Check all that apply)**

US Mail     Courier     Hand delivered

Other (please specify): \_\_\_\_\_

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Field Data Sheets	Project Manager	Hardcopy/ Electronic	Hardcopy kept until scanned into UST WebXtender	Yes
Chain of Custody	Project Manager	Hardcopy/ Electronic	Hardcopy kept until scanned into UST WebXtender	Yes
QAPP Addendum	Project Manager	Hardcopy/ Electronic	Hardcopy kept until scanned into UST WebXtender	Yes
Instrument Raw Data	Target Thermospec, or Iteva Software	Hardcopy and Electronic	Hardcopy: offsite storage for 7 years; Electronic: Two external storage device backups for 10 years	Yes
Final Report	LIMS	Electronic	Two external storage device backups for 10 years	Yes

Table 4A Record Identification, Storage, and Disposal

## Section B Measurement/Data Acquisition

### B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
QAPP Preparation	February 10, 2012	Ten days from QAPP Prep Date	
QAPP Approval	Ten days from QAPP Prep date	11 days from QAPP Prep Date	
Sampling	February 22, 2012	February 22, 2012	
Final report	Within 10 days for sampling	Within 21 days of sampling	

Table 5A Sampling Activities

### B2 Sampling Methods

**Estimate the number of samples of each matrix that are expected to be collected:**

Soil \_\_\_\_\_

Ground Water from monitoring wells \_\_\_\_\_

From Drinking/Irrigation water wells 3

From surface water features \_\_\_\_\_

Total number of Water samples 6 (3 wsw, 1 duplicate, 1 field blank, 1 trip blank)

The samples will be (check as many as apply):  Homogenized  Split  Yes Grab

***Please describe how samples will be collected and the equipment needed.***

Please see EQC Environmental Investigations Standard Operating Procedures & Quality Assurance Manual and the UST Management Division Master QAPP.

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

All equipment is disposable.

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

Please see EQC Environmental Investigations Standard Operating Procedures & Quality Assurance Manual and the UST Management Division Master QAPP.

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

All sampled will be delivered to the laboratory, picked up by laboratory courier, or shipped to the laboratory.

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

Failure	Response	Documentation	Individual Responsible
Sampling point not located/accessible	Use metal detector, measure from known points.	Record method used to attempt to locate point on field sheet and possible reason.	Project Manager

Table 6A Field Corrective Action

**B3 Sample Handling and Custody**

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

Following sample collection, samples are immediately placed in laboratory provided cooler, pre-filled with wet ice. Samples are transported to the UST Division office, laboratory, or nearest shipping location once sampling is completed. A chain of custody is filled out. If a lab courier is scheduled to pick up samples, the cooler is repacked with wet ice and left at office #2113 for pickup the following morning. If no courier is available or the analysis is time sensitive, cooler is dropped off at Shealy Environmental Services in West Columbia or approved shipping company for overnight delivery to the lab.

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

All samples will be kept on wet ice. Additional ice will be added as needed to ensure holding temperature is maintained.

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

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

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

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

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

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

See attached chain of custody

**B4 Analytical Methods**

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

Parameter	SOP ID*	Method Referenced	Equipment	Comments



BTEX+Naph+Ethanol+DCA + Oxygenates	S-VO-002	8260B	GC/MS	
PAH's	S-SV-021	8270D	GC/MS	
EDB	S-SV-012	8011	GC	
Lead, T.	S-IM-022	6010C	ICP	
Ferrous Iron	S-IN-009	SM 3500-FED	Spectrophotometer	
Nitrate	S-IN-042	353.2	Auto-analyzer/Lachate	
Sulfate	S-IN-010	300.0	Ion Chromatograph	
Methane	S-VO-004	RSK-175	GC	
TOC	S-IN-030	Walkley-Black	N/A	
DRO - TPH	S-SV-001	8015C	GC	
Mercury	S-IM-006	7470A/7471B	Hydra AA Analyzer	

**Table 7A Analytical SOPs and Referenced Methods**

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

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-VO-002	S-VO-002	GC/MS VOLATILES ANALYSIS BASED ON EPA METHODS 8260B AND 624 PREPARED BY EPA METHODS 5030B, 5035 AND 3585
S-SV-021	S-SV-021	GC/MS ANALYSIS BASED ON EPA METHOD 8270D PREPARED BY EPA METHODS 3520C, 3550C AND 3580A
S-SV-012	S-SV-012	GC/ECD ANALYSIS OF EDB AND DBCP BASED ON METHOD 8011 & 504.1
S-IM-022	S-IM-022	INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPECTROSCOPY-PECTROMETRIC METHOD for TRACE ELEMENT ANALYSES METHOD 6010C
S-IN-009	S-IN-009	FERROUS IRON (PHENANTHROLINE METHOD) STANDARD METHOD 3500-Fe D
S-IN-042	S-IN-042	NITRATE+NITRITE NITROGEN BY EPA METHOD 353.2, NITRATE NITROGEN BY 353.2 SUBTRACTION, AND NITRITE NITROGEN BY EPA METHOD 353.2
S-IN-010	S-IN-010	INORGANIC ANIONS BY ION CHROMATOGRAPHY EPA METHOD 300.0 and SW-846 9056 and 9056A
S-VO-004	S-VO-004	STANDARD OPERATING PROCEDURE GC ANALYSIS BASED ON METHOD RSKSOP-175
S-IN-030	S-IN-030	TOTAL ORGANIC CARBON (TOC) WALKLEY-BLACK PROCEDURE
S-SV-001	S-SV-001	GC/FID DIESEL RANGE ORGANICS ANALYSIS BASED ON METHOD 8015B and/or 8015C

		PREPARED BY EPA METHODS 3520C, 3550C and 3580A
S-IM-006	S-IM-006	MERCURY ANALYSIS BY COLD-VAPOR-ATOMIC ABSORPTION METHOD 245.1/7470A AND METHOD 245.5/7471B

**Table 8A SOP Abbreviation Key**

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
COC or Sample Receiving issues	Call Client	Sample Receiving Checklist (SRC)	PM – Kelly Maberry <a href="mailto:kmaberry@shealylab.com">kmaberry@shealylab.com</a>
Analytical errors	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum <a href="mailto:mwoodrum@shealylab.com">mwoodrum@shealylab.com</a>
QA/QC Failure	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum <a href="mailto:mwoodrum@shealylab.com">mwoodrum@shealylab.com</a> QA/QC Officer – Jami Savje <a href="mailto:Jsavje@shealylab.com">Jsavje@shealylab.com</a>
On time delivery	Corrective Action Form (CAF)	CAF filled out by PM	Lab Director –Michael Woodrum <a href="mailto:mwoodrum@shealylab.com">mwoodrum@shealylab.com</a> QA/QC Officer – Jami Savje <a href="mailto:Jsavje@shealylab.com">Jsavje@shealylab.com</a>

**Table 9A Corrective Action Procedures**

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal
BTEX + Naph + Ethanol + Oxygenates + DCA	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
PAH's	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
EDB	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
Lead	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.

Ferrous Iron	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
Nitrate, Sulfate	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
Methane	Waters/Soils	Six Weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.
Mercury	Waters/Soils	Six weeks	Tested for Hazardous Constituents and disposed as Hazardous or non-Hazardous waste.

**Table 10A Sample Disposal**

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

**B5 Quality Control Requirements:**

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

**B6 Field Instrument and Equipment Testing, Inspection and Maintenance**

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Not the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
Volatiles Mass Spec	ALL	Change traps, clean ion source, replace filaments	Periodic	Laboratory	MSV Analyst
Semivolatile Mass Specc	ALL	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
ECD GC	ALL	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
Dionex IC	ALL	Replace auto sampler filter, tubing, line filter, sample Line and Waste Line, as needed. Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst

ICP	ALL	Clean Sample introduction system , auto sampler, torch, Change spray chamber, torch tubing, tubing	Periodic	Laboratory	ICP Analyst
Leeman Mercury Analyzer	ALL	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst
Flow Injection Analysis – Lachat 8000	ALL	Replace sample and reagent lines, replace light source, re-wrap heating coil, replace column	Periodic/As Needed	Laboratory	Nitrate Analyst

**Table 11A Instrument and Equipment Maintenance**

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
Volatiles Mass Spec	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi-volatiles Mass Spec	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument maintenance
Dionex IC	Daily calibration check	Method Requirements	Nitrate Analyst	Recalibration or instrument maintenance
ICP	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument maintenance
Leeman Mercury Analyzer	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000	Daily and continuing calibration check	See calibration criteria	INM Analyst	Recalibration or instrument maintenance

**Table 12A Instrument and Equipment Inspection**

### **B7 Instrument Calibration and Frequency**

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.

3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
Volatiles Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by continuous calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst	S-VO-002
Semi-volatile Mass Spec	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-SV-021
GC ECD	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-SV-012
Dionex IC	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-IN-010
ICP	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst	S-IM-022
Cetac Mercury Analyzer	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-IM-006
Lacaht QuickChem 8000	Minimum of 5 calibration standards	Daily or when indicated by calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-IN-042

Table 13A Instrument Calibration Criteria and Corrective Action

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

### B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Nitrile Gloves	VWR	Unopened box, no holes in gloves	Stored in secure field equipment supply room	Field technician (Bob Faller), project manager
Sample Containers	Daniels Scientific, QEC	Certificates of analysis and laboratory testing	Stored in secure field equipment supply room	Bottle Room Personnel/ B. Fedorick, Field Staff
Laboratory Chemicals	Fisher, VWR	Certificates of analysis and laboratory testing	Laboratory storage	Receiving and laboratory personnel
Laboratory standards	O2Si, Restek, High Purity, VHG, Supelco	Certificates of analysis and laboratory verifications	Vendor specific storage conditions	Laboratory Analysts

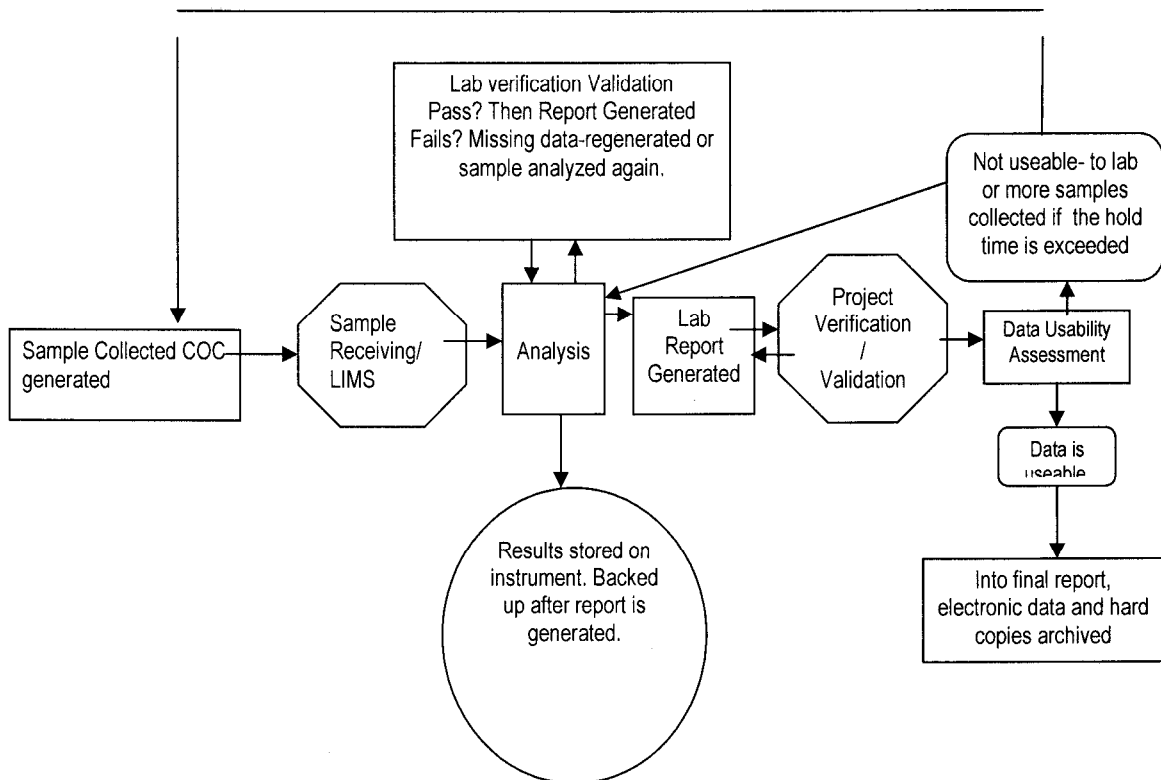
Table 14A List of Consumables and Acceptance Criteria

### B9 Data Acquisition Requirements (Non-Direct Measurements)

Not Applicable

### B10 Data Management

- Describe the data management scheme from field to final use and storage.



2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures, and Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All UST field work is produced using ink pens. Any attempt to alter field data, after sampling is complete, can be readily identified. UST sampling personnel keeps a carbon copy of the chain of custody after it is shipped to or picked up by the laboratory. The copy is kept with the field work. If any changes to the chain of custody is suspected, the original carbon copy can be used.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted.

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in the laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures.

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored offsite is logged, maintained, and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

UST Staff will have the paper copy of all field data scanned into WebXtender. The server is backed up on a daily basis. Any files stored can be retrieved by accessing the server.

## **Section C Assessment and Oversight**

### **C1 Assessment and Response Actions**

1. *The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification. If during a random audit, severe problems are found, work will be stopped by the

according to the Environmental representative and the QA offices contacted to determine corrective action.

## **C2 Reports to Management**

See the SC DHEC UST Programmatic QAPP.

## **Section D Data Validation and Usability**

See the SC DHEC UST Programmatic QAPP.





C. Earl Hunter, Commissioner

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



KELLY MABERRY  
SHEALY ENVIRONMENTAL SERVICES  
106 VANTAGE POINT DR  
WEST COLUMBIA SC 29172

FEB 23 2012

Re: Laboratory Analyses  
Bid # IFB-5400003038-6/2/11-EMW; PO # 4600107190

Dear Ms. Maberry:

Under the terms and conditions of the referenced bid package, the analytical sampling has been approved for the referenced facility. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order #4600107190 on the appropriate invoice submitted for payment against the facility. SCDHEC personnel will perform the sampling on February 22, 2012.

UST Permit #	County	Analyses-Groundwater	CA #	Bottles (Y/N)	Date Needed
07960	Edgefield	6- BTEXNM + 1,2 DCA + 8 oxygenates	43200	N	00/00/00

If you have any questions or need further assistance, please contact me at (803) 896-6633 or [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division

enc: Approved Cost Agreement

cc: Debra Thoma, Corrective Action Section  
Technical File

# Approved Cost Agreement 43200

Facility: 07960 378 TRUCK STOP

RIDGLECT

PO Number:

<u>Task / Description</u>	<u>Categories</u>	<u>Item Description</u>	<u>Qty / Pct</u>	<u>Unit Price</u>	<u>Amount</u>
11 ANALYSES					
	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	6.0000	35.00	210.00
		F EDB	6.0000	20.00	120.00
			<b>Total Amount</b>		<b>330.00</b>

Section A: Project Management

A1 Title and Approval Page



Quality Assurance Project Plan  
Addendum to the SC DHEC UST Programmatic QAPP  
For

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378 Truck Stop, UST Permit # 07960

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731 Highway 378, Edgefield, SC

Prepared by: Cathleen Ridgley

UST Management Division, Bureau of Land & Waste Management

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Date: February 16, 2012

Approvals

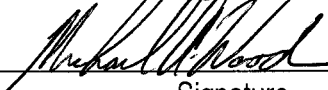
Cathleen Ridgley  
SC DHEC Project Manager

\_\_\_\_\_  
Signature Date \_\_\_\_\_

Lee Monts  
SCDHEC Section Manager

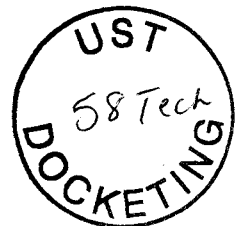
\_\_\_\_\_  
Signature Date \_\_\_\_\_

Michael Woodrum  
Laboratory Director

  
Signature Date 2/21/12

Debra Thoma  
Project Verifier

\_\_\_\_\_  
Signature Date \_\_\_\_\_



07960

UST  
Cathleen  
JUL 12 2010  
PROGRAM

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: **WV00000001** Part of: **3** 3. Emergency Contact: **704-383-2711** 4. Waste Tracking Number: **30466**

5. Generator's Name and Address: **Whitcomb Fast Company, Inc**  
**PO Box 2808**  
**Rock Hill, SC 29732** Generator's Site Address: **731 Highway 378**  
**Edgelyield, SC**

Generator's Phone: **704-383-2711** ECS - Christine Dupuis

6. Transporter 1 Company Name: **A&D Environmental Services (SC), LLC** U.S. EPA ID Number: **SC000700331**

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Address: **VLSRCS**  
**385 South Main Street**  
**Mauldin, SC 29082** U.S. EPA ID Number: **SCR000762488**

Facility's Phone: **864-962-8803**

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. <b>NON-HAZARDOUS NON-REGULATED MATERIAL</b> <b>Purge Water Profile # 11989</b>	1	DM	200	P
2. <b>NON-HAZARDOUS NON-REGULATED MATERIAL</b> <b>Soil Cuttings Profile # 11990</b>	9	DM	5700	P
3.				
4.				

13. Special Handling Instructions and Additional Information:  
**A&D (SC) Job # 10234 Project # 14-214210 PO #**

14. 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.  
Generator/Owner's Printed/Typed Name: **Christine Dupuis** Signature: *[Signature]* Month: **6** Day: **12** Year: **2010**

15. Transporter Signature (for receipt only): **Import to U.S.**  **Export from U.S.**  Part of emergency:  Part of manifest:   
Transporter 1 Printed/Typed Name: **Tommy Dennis** Signature: *[Signature]* Month: **6** Day: **12** Year: **2010**

16. Transporter Acknowledgment of Receipt of Materials: **Received**  **Not Received**

17. Discrepancy:  
17a. Discrepancy Indication Space:  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility for Generator: **VLS RECOVERY** Manifest Reference Number: U.S. EPA ID Number:  
Facility's Phone: **RECEIVED LOAD ON** Month: Day: Year:

17c. Signature of Alternate Facility (if Generator): **RECEIVED LOAD ON** Month: Day: Year:

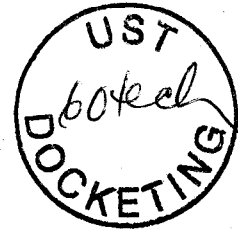
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in 17c. **ONLY PIECE COUNT VERIFIED AT THIS TIME**  
Printed/Typed Name: Signature: Month: Day: Year:

Check  
UST  
CKET



C. Earl Hunter, Commissioner

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



MAR 02 2012

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

Re: Assessment Directive  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960; Cost Agreement # 43007; MWA # UMW-24475  
Release Reported October 3, 1974  
Monitoring Report Received January 17, 2012  
Site Specific QAPP Contractor Addendum and Cost Agreement received February 13, 2012  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) has reviewed the referenced addendum submitted on your behalf by Environmental Compliance Services (ECS), Inc. The previous assessment work for this release indicates that petroleum Chemicals of Concern (CoC) are present in the soil and groundwater at concentrations that exceed risk-based screening levels. In order to determine the extent of the CoC, additional assessment is necessary. All work should be conducted in accordance with the UST Quality Assurance Division Plan and must be conducted in compliance with all applicable regulations. A copy of SCDHEC Quality Assurance Program Plan (QAPP) for the UST Management Division is available at <http://www.scdhec.gov/environment/lwm/html/ust.htm>.

Assessment activities at the site should begin immediately upon receipt of this letter. Cost agreement # 43007 has been approved for the amount shown on the enclosed cost agreement form for the installation of three shallow monitoring wells and six temporary wells to help define free product at the site. Six soil samples should be collected from the temporary borings and analyzed for BTEX and naphthalene, and six groundwater samples should be collected from the temporary wells and analyzed for BTEX, naphthalene, MtBE, 1,2-DCA, the oxygenates, ethanol, and EDB. Additional monitoring well installation may be necessary depending on the results of the temporary boring analysis. Following well installation activities, all monitoring wells associated with the release and all water supply wells within 1,000 feet of the site should be sampled for BTEX, naphthalene, MtBE, 1,2-DCA, the oxygenates, ethanol, and EDB. Analyses should be in accordance with Appendix E of the QAPP to include duplicate samples, field and trip blanks.

**The Assessment Report, contractor checklist (Appendix K), and invoice are due within 90 days from the date of this letter.** The report submitted at the completion of these activities should include the required information outlined in the QAPP. Please note that all applicable South Carolina certification requirements apply to the services and report preparation. All site rehabilitation activities must be performed and submitted by a South Carolina Certified Underground Storage Tank Site Rehabilitation Contractor.

ECS, Inc. can submit an invoice for direct payment from State Underground Petroleum Environmental Response Bank (SUPERB) Account for pre-approved costs. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. Please note that applicable South Carolina certification requirements regarding laboratory services, well installation, and report preparation must be satisfied. If the invoice is 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.

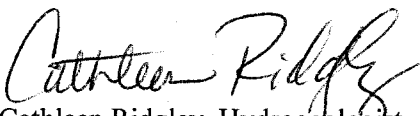
Please note that Sections 44-2-110(4) and 44-2-130 of the SUPERB Statute state that no costs will be allowed unless prior approval from the SCDHEC is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Department for the cost to be paid. 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.

Please note, if unnecessary dilutions are completed resulting in reporting limits of individual CoC in excess of Risk-Based Screening Levels (RBSLs), the data cannot be used. In those cases, the Division may deny payment for any non-detect analysis where the reporting limit exceeds the RBSL. The UST Management Division encourages the use of 'J' values as necessary so the appropriate action can be determined for a release.

The Department grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. The transport and disposal must be conducted in accordance with the QAPP. If the CoC concentrations based on laboratory analysis are below 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 #07960. If you have any questions regarding this correspondence, please contact me by telephone at (803) 896-6633, by fax at (803) 896-6245, or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Approved Cost Agreement  
Monitoring Well Approval UMW-24475  
Signed Site Specific QAPP Contractor Addendum

cc: ECS, Inc., PO Box 3528, Fort Mill, SC 29708 (with enc)  
Technical File (with enc)

Site Name: 378 Truck Stop  
Permit #: 07960  
Page: 2

ECS Project Number: 14-214210  
Date: 2/3/12  
QAPP Addendum Revision: 00

**Section A: Project Management**

**A1 Title and Approval Page**

Quality Assurance Project Plan  
Addendum to the SC DHEC UST Programmatic QAPP  
For  
378 Truck Stop; UST Permit #07960

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731 Highway 378, Edgefield, SC

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Prepared by:  
Brett G. Schaefer, PE  
Environmental Compliance Services, Inc.  
13504 South Point Blvd, Ste F  
Charlotte, NC 28273


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Date: February 3, 2012  
Certified UST Site Rehabilitation Contractor #358  
Environmental Compliance Services, Inc.


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Approvals:

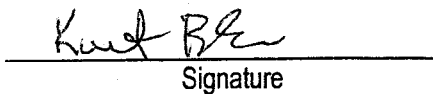
Cathleen Ridgley  
SC DHEC Project Manager

 Date 2/29/12  
Signature

Brett G. Schaefer, PE  
Contractor Project Manager


 Date 2/10/12  
Signature

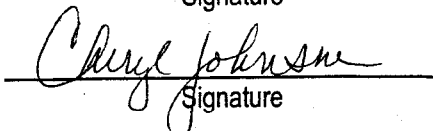
Kurt Blevins  
Site Rehabilitation Contractor

 Date 2/10/2012  
Signature

Craig L. Kennedy, PG  
Project Verifier/QA Manager

 Date 2/8/2012  
Signature

 Jeff Graham  
Pace Laboratory Director

 Date 2/6/2012  
Signature



C. Earl Hunter, Commissioner

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

## Monitoring Well Approval

**Approval is hereby granted to:** Environmental Compliance Services, Inc.  
**(On behalf of):** Wilkerson Fuel Company, Inc.  
**Facility:** Former 378 Truck Stop, 731 Hwy 378, Edgefield, SC  
**UST Permit Number:** 07960  
**County:** Edgefield

This approval is for the installation of six temporary wells and three shallow groundwater monitoring wells. The monitoring wells are to be installed in the approved locations. Monitoring wells are to be installed following the South Carolina Well Standards, R.61-71, and the applicable guidance documents.

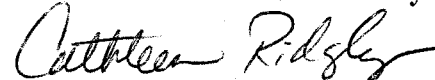
**Please note that R.61-71 requires the following:**

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the 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 the project manager (tel: 803-896-6633 or e-mail: [ridglect@dhec.sc.gov](mailto:ridglect@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:** February 29, 2012

**Approval #:** UMW-24475

  
Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management



**Approved Cost Agreement 43007**

Facility: 07960 378 TRUCK STOP

RIDGLECT

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		C. Earl Hunter, Commissioner <i>Promoting and protecting the health of the public and the environment.</i> C TIER II/COMP. PLAN/QAPP APP B	1.0000	525.00	525.00
04 MOB/DEMOB		A EQUIPMENT B PERSONNEL	2.0000 4.0000	575.00 290.00	1,150.00 1,160.00
06 SOIL BORINGS (DRILLED)		C FRACTURED ROCK	200.0000	27.50	5,500.00
08 ABANDONMENT		A ABANDONMENT 2" DIA OR LESS	200.0000	5.00	1,000.00
09 WELL INSTALLATION		D ROCK DRILLING	135.0000	58.00	7,830.00
10 SAMPLE COLLECTION		A GROUND WATER C WATER SUPPLY D GROUNDWATER NO-PURGE H FIELD BLANK	41.0000 18.0000 8.0000 3.0000	55.00 30.00 35.00 5.00	2,255.00 540.00 280.00 15.00
11 ANALYSES	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B F EDB	76.0000 76.0000	100.00 55.00	7,600.00 4,180.00
	SOIL SOIL	Q BTEX+NAPTH	9.0000	100.00	900.00
17 DISPOSAL		A WASTEWATER C SOIL (TREATMENT/DISPOSAL)	300.0000 15.0000	0.80 72.50	240.00 1,087.50
19 RPT/PROJECT MNGT & COORDINATIO		PCT PERCENT	0.1500	34,262.50	5,139.38
<b>Total Amount</b>					<b>39,401.88</b>

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Report of Analysis

**SC DHEC - UST Management**  
2600 Bull Street  
Columbia, SC 29201  
Attention: Debra Thoma

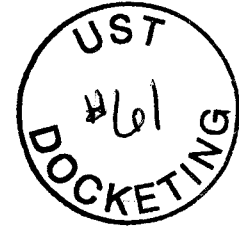


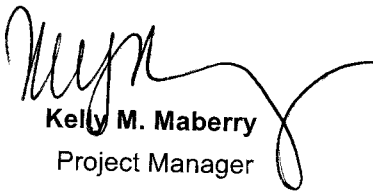
Project Name: **378 Truck Stop**

Project Number: **UST Permit #07960/CA #43200**

Lot Number: **NB22018**

Date Completed: **03/02/2012**



  
**Kelly M. Maberry**  
Project Manager



This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.



# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010

NELAC No: E87653

NC DENR No: 329

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## Case Narrative

### SC DHEC - UST Management

#### Lot Number: NB22018

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This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

#### GC/MS Volatiles

The LCS/LCSD associated with batch 79026 had ethanol recovered above the acceptance limits. This demonstrates a high bias on analytical results. There were no detections for this compound in the samples associated with this batch; therefore, data quality is not impacted.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Sample Summary SC DHEC - UST Management Lot Number: NB22018

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	WSWX	Aqueous	02/22/2012 1145	02/22/2012
002	WSWX D	Aqueous	02/22/2012 1155	02/22/2012
003	Fuller Well	Aqueous	02/22/2012 1210	02/22/2012
004	Williams Well	Aqueous	02/22/2012 1220	02/22/2012
005	Field Blank	Aqueous	02/22/2012 1200	02/22/2012

(5 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Executive Summary SC DHEC - UST Management Lot Number: NB22018

Sample ID	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
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(0 detections)

Description: WSWX

Matrix: Aqueous

Date Sampled: 02/22/2012 1145

Date Received: 02/22/2012

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/29/2012 2308	DD		79026

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		96	70-130

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/29/2012 2308	DD		79026

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		95	70-130
1,2-Dichloroethane-d4		88	70-130
Toluene-d8		96	70-130

## EDB &amp; DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/29/2012 0946	RBH	02/27/2012 1035	78798

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: WSWX

Matrix: Aqueous

Date Sampled: 02/22/2012 1145

Date Received: 02/22/2012

### EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	02/29/2012 0946	RBH	02/27/2012 1035	78798			
Parameter	CAS Number		Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)	106-93-4		8011	ND		0.019	0.019	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		92	57-137							

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: WSWX D

Matrix: Aqueous

Date Sampled: 02/22/2012 1155

Date Received: 02/22/2012

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/29/2012 2330	DD		79026

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		95	70-130

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/29/2012 2330	DD		79026

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		95	70-130
1,2-Dichloroethane-d4		87	70-130
Toluene-d8		95	70-130

## EDB &amp; DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/29/2012 1345	RBH	02/27/2012 1035	78798

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)



Description: WSWX D

Matrix: Aqueous

Date Sampled: 02/22/2012 1155

Date Received: 02/22/2012

**EDB & DBCP by Microextraction**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/29/2012 1345	RBH	02/27/2012 1035	78798

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		104	57-137

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: Fuller Well

Matrix: Aqueous

Date Sampled: 02/22/2012 1210

Date Received: 02/22/2012

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	02/29/2012 2351	DD		79026			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1		
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1		
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1		
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1		
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1		
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1		
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,2-Dichloroethane-d4		88	70-130							
Bromofluorobenzene		95	70-130							
Toluene-d8		95	70-130							

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	5030B	8260B	1	02/29/2012 2351	DD		79026			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1		
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1		
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1		
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1		
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1		
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1		
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1		
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1		
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Bromofluorobenzene		95	70-130							
1,2-Dichloroethane-d4		88	70-130							
Toluene-d8		95	70-130							

## EDB &amp; DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	02/29/2012 1407	RBH	02/27/2012 1035	78798			
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run		

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: Fuller Well

Matrix: Aqueous

Date Sampled: 02/22/2012 1210

Date Received: 02/22/2012

## EDB &amp; DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	02/29/2012 1407	RBH	02/27/2012 1035	78798			
Parameter		CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)		106-93-4	8011	ND		0.019	0.019	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
1,1,1,2-Tetrachloroethane		106	57-137							

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Description: Williams Well

Matrix: Aqueous

Date Sampled: 02/22/2012 1220

Date Received: 02/22/2012

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/01/2012 0012	DD		79026

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		95	70-130

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/01/2012 0012	DD		79026

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		96	70-130
1,2-Dichloroethane-d4		88	70-130
Toluene-d8		95	70-130

## EDB &amp; DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/29/2012 1513	RBH	02/27/2012 1035	78798

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
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PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      \* = Reportable result (only when report all runs)

### EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch			
1	8011	8011	1	02/29/2012 1513	RBH	02/27/2012 1035	78798			

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		106	57-137

PQL = Practical quantitation limit      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range      H = Out of holding time  
 ND = Not detected at or above the MDL      J = Estimated result < PQL and ≥ MDL      P = The RPD between two GC columns exceeds 40%      N = Recovery is out of criteria  
 Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"      \* = Reportable result (only when report all runs)

Description: Field Blank

Matrix: Aqueous

Date Sampled: 02/22/2012 1200

Date Received: 02/22/2012

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	03/01/2012 1700	AAC		79051		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1	
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1	
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1	
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1	
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1	
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1	
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
1,2-Dichloroethane-d4		88	70-130						
Bromofluorobenzene		97	70-130						
Toluene-d8		95	70-130						

## Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	5030B	8260B	1	02/29/2012 2205	DD		79026		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1	
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1	
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1	
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1	
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1	
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1	
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1	
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
Bromofluorobenzene		96	70-130						
1,2-Dichloroethane-d4		87	70-130						
Toluene-d8		95	70-130						

## EDB &amp; DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	8011	8011	1	02/29/2012 1535	RBH	02/27/2012 1035	78798		
Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result &lt; PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

Client: SC DHEC - UST Management

Laboratory ID: NB22018-005

Description: Field Blank

Matrix: Aqueous

Date Sampled: 02/22/2012 1200

Date Received: 02/22/2012

## EDB &amp; DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch					
1	8011	8011	1	02/29/2012 1535	RBH	02/27/2012 1035	78798					
Parameter				CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run	
1,2-Dibromoethane (EDB)				106-93-4	8011	ND		0.019	0.019	ug/L	1	
Surrogate	Q	Run 1 % Recovery	Acceptance Limits									
1,1,1,2-Tetrachloroethane		111	57-137									

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

\* = Reportable result (only when report all runs)

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## QC Summary



## Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ79026-001

Matrix: Aqueous

Batch: 79026

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	02/29/2012 2014
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	02/29/2012 2014
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	02/29/2012 2014
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	02/29/2012 2014
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	02/29/2012 2014
Ethanol	ND		1	1000	33	ug/L	02/29/2012 2014
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	02/29/2012 2014
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	02/29/2012 2014
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	70-130				
1,2-Dichloroethane-d4		84	70-130				
Toluene-d8		97	70-130				

## Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ79026-002

Matrix: Aqueous

Batch: 79026

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	720		1	72	70-130	02/29/2012 1848
tert-Amyl methyl ether (TAME)	50	39		1	78	70-130	02/29/2012 1848
tert-Butyl formate (TBF)	250	190		1	76	70-130	02/29/2012 1848
Diisopropyl ether (IPE)	50	51		1	103	70-130	02/29/2012 1848
3,3-Dimethyl-1-butanol	1000	760		1	76	70-130	02/29/2012 1848
Ethanol	5000	7500	N	1	149	70-130	02/29/2012 1848
Ethyl-tert-butyl ether (ETBE)	50	44		1	88	70-130	02/29/2012 1848
tert-butyl alcohol (TBA)	1000	840		1	84	70-130	02/29/2012 1848
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		93	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ79026-003

Batch: 79026

Analytical Method: 8260B

Matrix: Aqueous

Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	700		1	70	3.4	70-130	20	02/29/2012 1910
tert-Amyl methyl ether (TAME)	50	38		1	76	2.3	70-130	20	02/29/2012 1910
tert-Butyl formate (TBF)	250	180		1	74	2.6	70-130	20	02/29/2012 1910
Diisopropyl ether (IPE)	50	50		1	100	2.4	70-130	20	02/29/2012 1910
3,3-Dimethyl-1-butanol	1000	750		1	75	2.0	70-130	20	02/29/2012 1910
Ethanol	5000	7400	N	1	148	0.82	70-130	20	02/29/2012 1910
Ethyl-tert-butyl ether (ETBE)	50	44		1	87	0.99	70-130	20	02/29/2012 1910
tert-butyl alcohol (TBA)	1000	800		1	80	4.2	70-130	20	02/29/2012 1910
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	70-130						
1,2-Dichloroethane-d4		87	70-130						
Toluene-d8		98	70-130						

## Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ79026-001

Batch: 79026

Analytical Method: 8260B

Matrix: Aqueous

Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	1.0	0.20	ug/L	02/29/2012 2014
1,2-Dichloroethane	ND		1	1.0	0.30	ug/L	02/29/2012 2014
Ethylbenzene	ND		1	1.0	1.7	ug/L	02/29/2012 2014
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	02/29/2012 2014
Naphthalene	ND		1	1.0	1.7	ug/L	02/29/2012 2014
Toluene	ND		1	1.0	1.7	ug/L	02/29/2012 2014
Xylenes (total)	ND		1	1.0	1.7	ug/L	02/29/2012 2014
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	70-130				
1,2-Dichloroethane-d4		84	70-130				
Toluene-d8		97	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

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## Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ79026-002

Matrix: Aqueous

Batch: 79026

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	52		1	104	70-130	02/29/2012 1848
1,2-Dichloroethane	50	46		1	91	70-130	02/29/2012 1848
Ethylbenzene	50	56		1	113	70-130	02/29/2012 1848
Methyl tertiary butyl ether (MTBE)	50	49		1	99	70-130	02/29/2012 1848
Naphthalene	50	43		1	86	70-130	02/29/2012 1848
Toluene	50	52		1	105	70-130	02/29/2012 1848
Xylenes (total)	100	110		1	114	70-130	02/29/2012 1848
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		93	70-130				
Toluene-d8		100	70-130				

## Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ79026-003

Matrix: Aqueous

Batch: 79026

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	51		1	102	2.2	70-130	20	02/29/2012 1910
1,2-Dichloroethane	50	45		1	89	2.3	70-130	20	02/29/2012 1910
Ethylbenzene	50	55		1	110	2.2	70-130	20	02/29/2012 1910
Methyl tertiary butyl ether (MTBE)	50	48		1	96	2.5	70-130	20	02/29/2012 1910
Naphthalene	50	42		1	84	2.4	70-130	20	02/29/2012 1910
Toluene	50	51		1	103	1.6	70-130	20	02/29/2012 1910
Xylenes (total)	100	110		1	111	1.9	70-130	20	02/29/2012 1910
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	70-130						
1,2-Dichloroethane-d4		87	70-130						
Toluene-d8		98	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ79026-001

Matrix: Aqueous

Batch: 79026

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	1.0	0.13	ug/L	02/29/2012 2014
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	02/29/2012 2014
Ethylbenzene	ND		1	1.0	0.33	ug/L	02/29/2012 2014
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	02/29/2012 2014
<b>Naphthalene</b>	<b>0.56</b>	<b>J</b>	<b>1</b>	<b>1.0</b>	<b>0.40</b>	<b>ug/L</b>	<b>02/29/2012 2014</b>
Toluene	ND		1	1.0	0.33	ug/L	02/29/2012 2014
Xylenes (total)	ND		1	1.0	0.33	ug/L	02/29/2012 2014
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		97	70-130				
1,2-Dichloroethane-d4		84	70-130				
Toluene-d8		97	70-130				

## Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ79026-002

Matrix: Aqueous

Batch: 79026

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	52		1	104	70-130	02/29/2012 1848
1,2-Dichloroethane	50	46		1	91	70-130	02/29/2012 1848
Ethylbenzene	50	56		1	113	70-130	02/29/2012 1848
Methyl tertiary butyl ether (MTBE)	50	49		1	99	70-130	02/29/2012 1848
Naphthalene	50	43		1	86	70-130	02/29/2012 1848
Toluene	50	52		1	105	70-130	02/29/2012 1848
Xylenes (total)	100	110		1	114	70-130	02/29/2012 1848
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		99	70-130				
1,2-Dichloroethane-d4		93	70-130				
Toluene-d8		100	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

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## Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ79026-003

Batch: 79026

Matrix: Aqueous

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	51		1	102	2.2	70-130	20	02/29/2012 1910
1,2-Dichloroethane	50	45		1	89	2.3	70-130	20	02/29/2012 1910
Ethylbenzene	50	55		1	110	2.2	70-130	20	02/29/2012 1910
Methyl tertiary butyl ether (MTBE)	50	48		1	96	2.5	70-130	20	02/29/2012 1910
Naphthalene	50	42		1	84	2.4	70-130	20	02/29/2012 1910
Toluene	50	51		1	103	1.6	70-130	20	02/29/2012 1910
Xylenes (total)	100	110		1	111	1.9	70-130	20	02/29/2012 1910
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	70-130						
1,2-Dichloroethane-d4		87	70-130						
Toluene-d8		98	70-130						

## Volatile Organic Compounds by GC/MS - MB

Sample ID: NQ79051-001

Batch: 79051

Matrix: Aqueous

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.20	ug/L	03/01/2012 0823
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	03/01/2012 0823
Ethylbenzene	ND		1	5.0	1.7	ug/L	03/01/2012 0823
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	03/01/2012 0823
Naphthalene	ND		1	5.0	1.7	ug/L	03/01/2012 0823
Toluene	ND		1	5.0	1.7	ug/L	03/01/2012 0823
Xylenes (total)	ND		1	5.0	1.7	ug/L	03/01/2012 0823
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		95	70-130				
1,2-Dichloroethane-d4		86	70-130				
Toluene-d8		95	70-130				

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

Sample ID: NQ79051-002

Matrix: Aqueous

Batch: 79051

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	50		1	100	70-130	03/01/2012 0659
1,2-Dichloroethane	50	44		1	88	70-130	03/01/2012 0659
Ethylbenzene	50	53		1	106	70-130	03/01/2012 0659
Methyl tertiary butyl ether (MTBE)	50	49		1	97	70-130	03/01/2012 0659
Naphthalene	50	42		1	85	70-130	03/01/2012 0659
Toluene	50	50		1	100	70-130	03/01/2012 0659
Xylenes (total)	100	110		1	109	70-130	03/01/2012 0659
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		100	70-130				
1,2-Dichloroethane-d4		92	70-130				
Toluene-d8		99	70-130				

## Volatile Organic Compounds by GC/MS - LCSD

Sample ID: NQ79051-003

Matrix: Aqueous

Batch: 79051

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	49		1	98	1.7	70-130	20	03/01/2012 0720
1,2-Dichloroethane	50	43		1	87	1.4	70-130	20	03/01/2012 0720
Ethylbenzene	50	53		1	105	1.1	70-130	20	03/01/2012 0720
Methyl tertiary butyl ether (MTBE)	50	47		1	94	3.2	70-130	20	03/01/2012 0720
Naphthalene	50	41		1	82	2.8	70-130	20	03/01/2012 0720
Toluene	50	49		1	99	1.7	70-130	20	03/01/2012 0720
Xylenes (total)	100	110		1	107	1.8	70-130	20	03/01/2012 0720
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		97	70-130						
1,2-Dichloroethane-d4		84	70-130						
Toluene-d8		95	70-130						

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

### EDB & DBCP by Microextraction - MB

Sample ID: NQ78798-001

Matrix: Aqueous

Batch: 78798

Prep Method: 8011

Analytical Method: 8011

Prep Date: 02/27/2012 1035

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	02/29/2012 0506
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		99	57-137				

### EDB & DBCP by Microextraction - LCS

Sample ID: NQ78798-002

Matrix: Aqueous

Batch: 78798

Prep Method: 8011

Analytical Method: 8011

Prep Date: 02/27/2012 1035

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.26		1	106	60-140	02/29/2012 0550
Surrogate	Q	% Rec	Acceptance Limit				
1,1,1,2-Tetrachloroethane		104	57-137				

### EDB & DBCP by Microextraction - MS

Sample ID: NB22018-003MS

Matrix: Aqueous

Batch: 78798

Prep Method: 8011

Analytical Method: 8011

Prep Date: 02/27/2012 1035

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.25	0.29		1	119	60-140	02/29/2012 1429
Surrogate	Q	% Rec	Acceptance Limit					
1,1,1,2-Tetrachloroethane		110	57-137					

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and ≥ MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## EDB & DBCP by Microextraction - MSD

Sample ID: NB22018-003MD

Matrix: Aqueous

Batch: 78798

Prep Method: 8011

Analytical Method: 8011

Prep Date: 02/27/2012 1035

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.28		1	116	3.1	60-140	20	02/29/2012 1451
Surrogate	Q	% Rec	Acceptance Limit							
1,1,1,2-Tetrachloroethane		107	57-137							

PQL = Practical quantitation limit

P = The RPD between two GC columns exceeds 40%

N - Recovery is out of criteria

ND = Not detected at or above the MDL

J = Estimated result < PQL and  $\geq$  MDL

+ - RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**





Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 12244

Client: SCDHEC, Report to Contact: Debra Thoma, Sampler: Catherine Ridgley, Quote No.
Address: 2600 Bull St., City: Columbia, State: SC, Zip Code: 29201
Project Name: 378 Truck Stop
Sample ID / Description: WSWX, Fuller Well, Williams Well, Field Blank
Date/Time: 2/22/12 1145, 1155, 1210, 1220, 1200
Analysis: BTEX W, TMBE, PCBs, EOB
Remarks: Drinking H2O
Turn Around Time Required: Standard
Sample Disposal: Return to Client
QC Requirements: 1. Received by
Possible Hazard Identification: Non-Hazard
LAB USE ONLY: Received on Ice (Check) Yes No Ice Pack Receipt Temp. 10.8°C Temp. Blank Y N

### Sample Receipt Checklist (SRC)

Client: SCDHCC Cooler Inspected by/date: 6/22/12 Lot #: WB 22018

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Airborne Exp <input type="checkbox"/> Other			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	1. Were custody seals present on the cooler?	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	2. If custody seals were present, were they intact and unbroken?	
Cooler ID/temperature upon receipt <u>10</u> / <u>18</u> °C ___ / ___ °C ___ / ___ °C ___ / ___ °C			
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles			
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> None			
If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.			
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by <u>SRC</u> , phone, note (circle one), other: _____. (For coolers received via commercial courier, PMs are to be notified immediately.)
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	4. Is the commercial courier's packing slip attached to this form?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		5. Were proper custody procedures (relinquished/received) followed?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	5a Were samples relinquished by client to commercial courier?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		6. Were sample IDs listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		7. Was collection date & time listed?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		8. Were tests to be performed listed on the COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		9. Did all samples arrive in the proper containers for each test?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		10. Did all container label information (ID, date, time) agree with COC?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		12. Was adequate sample volume available?
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		13. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		14. Were any samples containers missing?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		15. Were there any excess samples not listed on COC?
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16. Were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any VOA vials?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	19. Were all applicable NH3/TKN/cyanide/phenol/BNA/pest/PCB/herb (<0.2mg/L) samples free of residual chlorine?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	20. Were collection temperatures documented on the COC for NC samples?
Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?

**Sample Preservation** (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) \_\_\_\_\_ were received incorrectly preserved and were adjusted accordingly in sample receiving with \_\_\_\_\_ (H<sub>2</sub>SO<sub>4</sub>, HNO<sub>3</sub>, HCl, NaOH) with the SR # (number) \_\_\_\_\_

Sample(s) \_\_\_\_\_ were received with bubbles >6 mm in diameter.

Sample(s) \_\_\_\_\_ were received with TRC >0.2 mg/L for NH<sub>3</sub>/TKN/cyanide/BNA/pest/PCB/herb.

**Corrective Action taken, if necessary:**

Was client notified: Yes  No  Did client respond: Yes  No

SESI employee: \_\_\_\_\_ Date of response: \_\_\_\_\_

Comments: \_\_\_\_\_

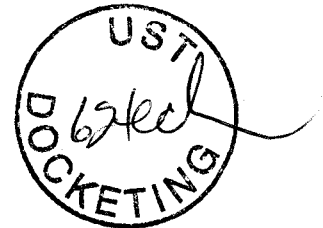


C. Earl Hunter, Commissioner

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

MAR 12 2012

GAIL & BARBARA WHITMER  
1226 HWY 378 EAST  
EDGEFIELD SC 29824



Re: Drinking Water Well Results  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Analytical Report received March 5, 2012  
Edgefield County

Dear Mr. and Mrs. Whitmer:

As you are aware, the Underground Storage Tank (UST) Division of the South Carolina Department of Health and Environmental Control recently directed Environmental Compliance Services, Inc. to conduct additional assessment activities of the petroleum release from the former facility. As part of this assessment, your water supply well was sampled. No petroleum chemicals were detected. The Department will continue to conduct periodic sampling of your well to ensure that it remains clean.

Enclosed is a copy of the analytical report of the sampling of your well. Your well is depicted as WSW-X.

If you have any questions regarding this correspondence, please contact me at (803) 896-6633 or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Assessment and Corrective Action Division  
Bureau of Land and Waste Management

enc: Analytical Report

cc: Technical File (w/o enc)



C. Earl Hunter, Commissioner

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

MARVIN & CAROLYN FULLER  
48 FAULKNER MOUNTAIN ROAD  
EDGEFIELD SC 29824

MAR 12 2012



Re: Drinking Water Well Results  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Analytical Report received March 5, 2012  
Edgefield County

Dear Mr. and Ms. Fuller:

As you are aware, the Underground Storage Tank (UST) Division of the South Carolina Department of Health and Environmental Control recently directed Environmental Compliance Services, Inc. to conduct additional assessment activities of the petroleum release from the former facility. As part of this assessment, your water supply well was sampled. No petroleum chemicals were detected. The Department will continue to conduct periodic sampling of your well to ensure that it remains clean.

Enclosed is a copy of the analytical report of the sampling of your well.

If you have any questions regarding this correspondence, please contact me at (803) 896-6633 or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Assessment and Corrective Action Division  
Bureau of Land and Waste Management

enc: Analytical Report

cc: Technical File (w/o enc)



C. Earl Hunter, Commissioner

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

MAR 12 2012

JONATHAN WILLIAMS  
1170 LONG CANE ROAD  
EDGEFIELD SC 29824



Re: Drinking Water Well Results  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Analytical Report received March 5, 2012  
Edgefield County

Dear Mr. Williams:

As you are aware, the Underground Storage Tank (UST) Division of the South Carolina Department of Health and Environmental Control recently directed Environmental Compliance Services, Inc. to conduct additional assessment activities of the petroleum release from the former facility. As part of this assessment, you requested that your water supply well be sampled. No petroleum chemicals were detected. Since the distance of the location of your water well exceeds the area of influence from the former facility, your well will not be sampled again unless you request otherwise.

Enclosed is a copy of the analytical report of the sampling of your well.

If you have any questions regarding this correspondence, please contact me at (803) 896-6633 or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Assessment and Corrective Action Division  
Bureau of Land and Waste Management

enc: Analytical Report

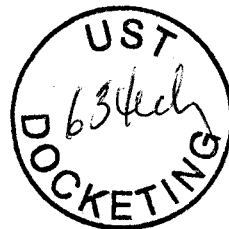
cc: Technical File (w/o enc)



Catherine B. Templeton, Director

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

MAY 07 2012



MS LYNN STROM  
CITY OF EDGEFIELD  
124 COURTHOUSE SQUARE  
EDGEFIELD SC 29824

Re: **Former 378 Truck Stop, 731 Hwy 378, Edgefield, SC**  
**UST Permit # 07960**  
Release Reported October 3, 1974  
AFVR & Groundwater Sampling Report Received November 14, 2011  
Edgefield County

Dear Ms. Stromm:

Enclosed is the AFVR & Groundwater Sampling Report I attempted to send you via e-mail on May 4, 2012. If you have any questions regarding the report, please contact me by telephone at (803) 896-6633, by fax at (803) 896-6245, or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: AFVR & Groundwater Sampling Report dated November 14, 2011

cc: Technical File (without enc)

**MONITORING WELL INSTALLATION & GROUNDWATER SAMPLING REPORT**

**378 TRUCK STOP  
731 HWY 378  
EDGEFIELD, SOUTH CAROLINA  
EDGEFIELD COUNTY**

**UST PERMIT NO. 07960  
ECS PROJECT NO. 14-214210**

Prepared For:

Wilkerson Fuel Company  
PO box 2835  
Rock Hill, South Carolina 29732

Prepared By:

Environmental Compliance Services, Inc.  
Post Office Box 3528  
Fort Mill, South Carolina 28273-3528

March 2013

  
Brett G. Schaefer, PE  
Project Manager



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- Appendix A: Well Construction Records
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## 1.0 INTRODUCTION

This report presents the results of the monitoring well installation and comprehensive groundwater sampling activities conducted at the 378 Truck Stop site between January 17, 2013 and February 14, 2013. These activities were conducted in accordance with the Underground Storage Tank (UST) Quality Assurance Program Plan (QAPP) Revision 1.0, and Cost Agreement Number 43007 as approved by the South Carolina Department of Health and Environmental Control (SCDHEC) in correspondence dated March 2, 2012.

### 1.1 SITE INFORMATION

**UST Facility Name:** 378 Truck Stop  
**UST Permit Number:** 07960  
**Facility Address:** 731 Hwy 378  
Edgefield, South Carolina  
**Telephone Number:** Unknown

### 1.2 UST OWNER/OPERATOR

**Name:** Wilkerson Fuel Company  
**Address:** PO Box 2835  
Rock Hill, South Carolina  
**Telephone Number:** (803) 324-4080

### 1.3 PROPERTY OWNER INFORMATION

**Name:** Gail and Barbara Whitmer  
**Address:** 1226 Hwy 378 East  
Edgefield, South Carolina 29824  
**Telephone Number:** Unknown

### 1.4 DHEC CERTIFIED UST SITE REHABILITATION CONTRACTOR INFORMATION

**Name:** Environmental Compliance Services, Inc.  
**Address:** Post Office Box 3528  
Fort Mill, South Carolina 29708  
**Telephone Number:** (800) 627-0493  
**Certification Number:** 358

### 1.5 CERTIFIED LABORATORY INFORMATION

**Company Name:** Pace Analytical Services, Inc.  
**Address:** 9800 Kincey Avenue, Suite 100  
Huntersville, North Carolina 28078  
**SC Certification:** 99006001

## 1.6 SITE HISTORY

**UST Permit:** 07960  
**Site Name:** 378 Truck Stop  
**Date Release Reported to SCDHEC:** Report: October 3, 1979; Confirmed: July 8, 1996  
**Estimated Quantity of Product Released:** Not reported  
**Cause of Release:** UST system  
**SC RBCA Classification Code:** 2BB

### UST Permit 02548

UST #	Size	Product	Date Installed	Currently in Use	Date Closed
1	550	Diesel	Unknown	No (removed)	1/1/1987
2	1,000	Gasoline	Unknown	No (removed)	1/1/1987
3	2,000	Gasoline	Unknown	No (removed)	1/1/1987

The site was not in use at the time of this assessment. An abandoned building was present onsite during our visits associated with the additional assessment activities. A concrete slab was located directly to the east of, and abutting, the onsite building. A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. Reportedly, one 550-gallon diesel, one 1,000-gallon gasoline, and one 2,000-gallon gasoline underground storage tanks (USTs) and their associated piping and dispensers were removed from the site on January 1, 1987. The site did not contain USTs at the time of this assessment. A Site Locus Map showing surrounding properties has been included as **Figure 1**. A Site Plan has been included as **Figure 2**.

## 1.7 REGIONAL GEOLOGY/HYDROGEOLOGY

The area was located in the Carolina Terrane of the Piedmont Physiographic Province. The Carolina Terrane consisted of upper Precambrian to Cambrian greenschist facies metasedimentary and metavolcanic rocks intruded by numerous granitic and gabbroic plutons ranging in age from 265 to 650 million years. A mantle of residual soil and saprolite has been reported to typically overlie the crystalline rocks of the Carolina Terrane. The thickness of the mantle has ranged from approximately six to 60 feet, although it apparently has been absent in places and thicker than 60 feet in others. The surface layers reported to be composed chiefly of sandy clay. The clay content of most saprolites typically ranges from 10 to 25 percent, with some containing as little as three percent and others as much as 70%.

The mantle that covers the underlying fractured bedrock in most places has provided an intergranular medium through which recharge into, and discharge of water from, the fractured rocks commonly occur. As a result, groundwater flow has been reported to occur within a composite two-media system. The top of the system has been the water table surface, which has been typically located within the saprolite. The fractured bedrock is expected to generally grade downward into unfractured rock below a depth of approximately 300 feet. The base of the groundwater system is therefore indistinct.

## **2.0 RECEPTOR SURVEY & SITE DATA**

### **2.1 RECEPTOR SURVEY**

A receptor survey was conducted within a 1,000 foot radius of the subject site during the May 2010 Tier I assessment activities. The 378 Truck Stop site was located in a predominantly residential area in Edgefield County. Properties directly surrounding the site were open fields. Nearby properties were mainly open fields and residences. A volunteer fire department station was located on the corner of Highway 378 and Faulkner Mountain Road.

Municipal water was not provided to the area. Multiple private water supply wells were identified during the Tier I receptor survey and were subsequently plotted on a site vicinity map. A comprehensive survey which included the private water supply wells, conducted during Tier II assessment activities, resulted in multiple changes to the site vicinity map.

### **2.2 SITE GEOLOGY**

The project area was underlain at shallow depths by light brown silt and silty clay. Rock and partially weathered rock were encountered below the silt and clay at varying depths throughout the study area. Partially weathered rock was first encountered at depths ranging from approximately 26 feet (MW-18 and MW-27) to 50 feet (TW-9) across the subject area. Overall, partially weathered rock was first encountered at or below a depth of 30 feet below grade onsite and in locations south of the site. Partially weathered rock was first encountered at more shallow depths in locations west, southwest, and southeast of the site. Rock was first encountered at depths ranging from approximately 30 feet (MW-8) to 68 feet (TW-3) across the subject area. The depths to rock observed during shallow monitoring well installation varied from approximately 30 feet to 39 feet below grade. Overall, rock was encountered a bit deeper onsite and south of the site as compared to other areas (north, east, west, southwest, and southeast). Depths to rock were observed at shallower depths (between 32 feet and 35 feet below grade) during telescoping well installation in areas southwest and southeast of the site, as compared to telescoping wells installed onsite and in areas south of the site. The largest discrepancy was observed at telescoping well TW-3, located southwest of the site, where rock was not encountered until a depth of 68 feet below grade.

The percentages of gravel, sand, and silt/clay in a soil sample collected during Tier I well installation activities from monitoring well MW-3 at a depth of 40 feet below grade were 10.0%, 39.8%, and 50.1%, respectively. The percentages of gravel, sand, silt, and clay in a soil sample collected during Tier II well installation activities from MW-12 at a depth of 30 feet below grade were 4.1%, 27.5%, 50.7%, and 17.7%, respectively. A soil sample was proposed for collection during installation of monitoring well TW-5 at a depth within the well's screened interval. This sample was subsequently collected at a depth of 55 feet below grade. Following discussions with SCDHEC, the sample was not submitted for laboratory grain size analysis, as this sample consisted mainly of pulverized rock particles from the well drilling process.

### 3.0 ASSESSMENT INFORMATION

The SCDHEC directive for this assessment included the installation of monitoring wells MW-29, MW-30, MW-31, and the completion of a comprehensive groundwater sampling event to monitor the migration of Chemicals of Concern (CoC) in groundwater.

#### 3.1 MONITORING WELL INSTALLATION & SOIL SAMPLING

##### 3.1.1 Well Installation

On January 17, 2013, ECS was on site to install shallow monitoring wells MW-29, MW-30 and MW-31. Monitoring well MW-29 was installed to a depth of 40 feet with 15 feet of screen to ensure enough groundwater would enter the well. Monitoring well MW-30 was installed to a depth of 45 feet below grade with 15 foot screen length. Monitoring well MW-31 was installed to a depth of 44 feet below grade with 15 feet of screen. All wells were developed and the development water was placed into a 55 gallon drum and left on site for disposal.

Well Construction Records and boring logs have been included in **Appendix A** and **Appendix B**, respectively.

##### 3.1.2 Soil samples

During well installation activities three soil samples were collected from the depth interval with the highest PID readings. Soil samples 07960-MW-29-5 and 07960-MW-30-30 were collected on January 17, 2013 during the installation of MW-29 and MW-30. Soil sample 07960-MW-31-30 was collected on January 25, 2013 during the installation of MW-31. The soil samples were analyzed for benzene, toluene, ethylbenzene, total xylenes, and naphthalene by EPA Method 8260 analysis.

Naphthalene was reported to exceed the RBSL for sandy soils in the soil samples collected in 07960-MW-29-5 and 07960-MW-30-30. No remaining chemicals of concern were reported to be above the RBSLs for sandy soil.

The analytical results are presented as **Table 1** and the laboratory analytical reports have been included in **Appendix C**.

#### 3.2 GROUNDWATER SAMPLING ACTIVITIES

##### 3.2.1 Well Gauging

Forty monitoring wells (MW-1 through MW-31, and TW-1 through TW-9) were gauged for depths to groundwater and total well depths on February 12, 2013. Monitoring wells MW-1 and MW-22 were reported to contain 0.09 feet and 0.37 feet of product, respectively. Monitoring wells MW-12 and MW-20 were reported to be dry during the sampling event.

The groundwater elevations in the shallow monitoring wells, relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 64.32 feet (MW-9) to 79.15 feet (MW-17). The groundwater elevations in the telescoping monitoring wells, relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 58.90 feet (TW-8) to 69.02 feet (TW-5).

Based on these data, the shallow groundwater flow direction was generally toward the west-southwest direction. The average horizontal hydraulic gradient for the shallow monitoring well network was approximately 0.0263 ft/ft throughout the site. The deep groundwater flow direction was generally toward the east-southeast direction. The average horizontal hydraulic gradient for the deep monitoring well network was approximately 0.0261 ft/ft throughout the site.

Historical Groundwater Elevation Data is presented in **Table 2**. Groundwater Elevation Maps based on the February 12, 2013 data have been included as **Figure 3** and **Figure 4**.

### 3.2.2 Well Sampling

Twenty-seven shallow monitoring wells (MW-2 through MW-11, MW-13 through MW-19, MW-21, and MW-23 through MW-31) and nine telescoping monitoring wells (TW-1 through TW-9) were purged prior to sample collection as they were last sampled more than 12 months ago. Free product was detected in monitoring wells MW-1 and MW-22 during the February 2013 groundwater sampling event. Monitoring wells MW-12 and MW-20 were reported to be dry during the sampling event. Water supply wells WSW-1 (pre & post GAC), WSW-2 through WSW-7, WSW-8 (pre & post GAC), WSW-9 through WSW-11, and WSW-13 through WSW-15 were sampled during the February 12, 2013 sampling event. Water supply well WSW-X was not sampled as access could not be attained due to a locked access door and the outside spigot was not functioning.

Groundwater samples (except for the water supply wells) were collected using a disposable bailer. Groundwater samples collected were containerized in laboratory-prepared glass bottles, packed on ice, and transported to Pace Analytical Services, Inc. (Huntersville, NC), a South Carolina certified laboratory. Standard chain-of-custody procedures were maintained, as documented in **Appendix C**.

Three duplicate samples identified as Duplicate-1, Duplicate-2 and Duplicate-3 were collected from MW-30, MW-29, and MW-31, within 5 minutes of the initial groundwater sample collection, respectively. The duplicate samples were assigned a unique identification name with no time listed on the chain of custody to avoid potential laboratory analytical bias. The duplicate samples were identified in the field book. Three field blanks were also collected during well sampling for quality assurance and quality control (one for each day onsite sampling). Three trip blanks (one set per cooler) were included for quality assurance and quality control.

Sixty-one water samples (27 MW, 16 WSW, 9 TW, 3 duplicates, 3 field blanks [one for each day on site], and 3 trip blanks) were analyzed for benzene, toluene, ethylbenzene, and total xylenes

(collectively referred to as BTEX compounds), naphthalene, methyl tert-butyl ether (MTBE), 1,2-DCA and oxygenates by EPA Method 8260 and EDB by EPA Method 8011.

### 3.2.3 Groundwater Quality

Groundwater samples collected from monitoring wells MW-2, MW-3, MW-7, MW-11, MW-13, MW-16, MW-29 through MW-31, TW-1, Duplicate-1, Duplicate-2, and Duplicate-3 were reported to contain one or more chemicals of concern above their respective RBSLs. Monitoring wells MW-3, MW-13, MW-39 and TW-1 were reported to contain one or more fuel oxygenates above the 2008 Action Levels.

Chemicals of Concern were not detected in the field blank or the trip blank samples.

Historical Groundwater Analytical Data for CoC is presented in **Table 3** and **Table 4**. A Groundwater Quality Maps based on the February 2013 data are included as **Figure 5** and **Figure 6**. The laboratory report for groundwater samples collected in February 2013 is included in **Appendix C**. Groundwater Sampling Field Data Sheets have been included in **Appendix D**.

### 3.3 INVESTIGATIVE DERIVED WASTE

Investigative derived waste (IDW) generated during the monitoring well installation and groundwater sampling activities was placed in four 55-gallon drum purge water drums and five soil drums for disposal by a licensed facility. At the time the report was completed, ECS did not receive the IDW manifest. The completed manifest shall be forwarded to SCDHEC immediately upon receipt.



## 4.0 CONCLUSIONS AND RECOMMENDATIONS

### 4.1 CONCLUSIONS

- A monitoring well installation and comprehensive groundwater sampling event requested by SCDHEC was initiated on March 2, 2012.
- Three monitoring wells MW-29, MW-30 and MW-31 were installed January 17, 2013 through January 25, 2013.
- Naphthalene was reported to exceed the RBSL for sandy soils in the soil samples collected in 07960-MW-29-5 and 07960-MW-30-30. No remaining chemicals of concern were reported to be above the RBSLs for sandy soil.
- ECS returned to the site to perform a comprehensive groundwater sampling event on February 12, 2013.
- Free product was detected in monitoring wells MW-1 and MW-22 during the February 2013 groundwater sampling event. Monitoring wells MW-12 and MW-20 were reported to be dry during the sampling event.
- Based on the February 2013 groundwater level measurements, shallow groundwater appears to flow towards the west-southwest direction and the deep groundwater appears to flow toward the east-southeast.
- Groundwater samples collected from monitoring wells MW-2, MW-3, MW-7, MW-11, MW-13, MW-16, MW-29 through MW-31, TW-1, Duplicate-1, Duplicate-2, and Duplicate-3 were reported to contain one or more chemicals of concern above their respective RBSLs.
- The distribution of dissolved-phase petroleum hydrocarbons in groundwater appear defined in the horizontal and vertical directions based on the February 2013 analytical data.

### 4.2 RECOMMENDATIONS

- It is recommended to perform AFVR's on monitoring wells MW-1 and MW-22 as they currently and historically contained free product.
- A comprehensive groundwater monitoring event should be performed on a after the AFVR events to establish distribution trends and natural attenuation parameters, if monitored natural attenuation should be considered.

## **5.0 LIMITATIONS**

This report has been prepared for the exclusive use of Wilkerson Fuel Company for specific application to the referenced site in Aiken County, South Carolina. The assessment was conducted based on the scope of work and level of effort desired by the SCDHEC and with resources adequate only for that scope of work. Our findings have been developed in accordance with generally accepted standards of geology and hydrogeology practices in the State of South Carolina, available information, and our professional judgment. No other warranty is expressed or implied.

The data that are presented in this report are indicative of conditions that existed at the precise locations sampled and at the time the samples were collected. Additionally, the data obtained from samples would be interpreted as being meaningful with respect to parameters indicated in the laboratory report. No additional information can logically be inferred from these data.

Certain data contained in this report were not obtained under the supervision of ECS. Although the accuracy of these data cannot be verified, for the purposes of this report, ECS assumes that they are correct.

## **TABLES**

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**TABLE 1**  
**SUMMARY OF SOIL ANALYTICAL DATA**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

<b>Sample ID</b>	<b>Date</b>	<b>Depth (feet)</b>	<b>PID Reading (ppm)</b>	<b>Benzene (mg/kg)</b>	<b>Toluene (mg/kg)</b>	<b>Ethylbenzene (mg/kg)</b>	<b>Xylenes (mg/kg)</b>	<b>Naphthalene (mg/kg)</b>
07960-MW-29-5	1/17/13	5	991	<0.114	0.3060	0.2070	1.1600	<b>0.3200</b>
07960-MW-30-30	1/17/13	30	580	<0.005	<0.005	0.0064	0.0682	<b>0.0640</b>
07960-MW-31-30	1/25/13	30	395	<0.0039	<0.0039	<0.0039	<0.0117	<0.0039
<b>RBSL<sup>1</sup></b>				<b>0.0007</b>	<b>1.450</b>	<b>1.150</b>	<b>14.500</b>	<b>0.036</b>

Notes:

1. May 2001 SCDHEC Risk Based Screening Level for sandy soils.

**TABLE 2**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Groundwater (ft)	Free Product Thickness (ft)	Groundwater Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
MW-1	5/25/10 <sup>3</sup>	101.85	15.33	15.37	0.04	86.51	unknown	unknown
	10/18/10 <sup>4</sup>	101.98	26.50	26.54	0.04	75.47		
	4/19/11		--	21.70	--	80.28		
	8/29/11		--	31.17	--	70.81		
	2/12/13		28.12	28.21	0.09	73.84		
MW-2	5/25/10	101.02	--	16.82	--	84.20	41.72	unknown
	10/18/10	100.99	--	27.10	--	73.89		
	4/19/11		--	23.34	--	77.68		
	8/29/11		--	30.91	--	70.08		
	2/12/13		--	31.33	--	69.66		
MW-3	5/25/10	101.46	--	17.28	--	84.18	40	10-40
	10/18/10	101.54	--	27.58	--	73.96		
	4/19/11		--	23.78	--	77.76		
	8/29/11		--	31.38	--	70.16		
	2/12/13		--	31.79	--	69.75		
MW-4	5/25/10	100.50	--	16.35	--	84.15	40	10-40
	10/18/10	100.48	--	26.20	--	74.28		
	4/19/11		--	22.12	--	78.36		
	8/29/11		--	29.92	--	70.56		
	2/12/13		--	30.00	--	70.48		
MW-5	5/25/10	104.21	--	27.30	--	76.91	40	20-40
	10/18/10	104.18	--	30.24	--	73.94		
	4/19/11		--	27.63	--	76.55		
	8/29/11		--	34.18	--	70.00		
	2/12/13		--	36.02	--	68.16		
MW-6	10/18/10	102.25	--	28.01	--	74.24	35.05	20.05-35.05
	4/19/11		--	23.06	--	79.19		
	8/29/11		--	32.01	--	70.24		
	2/12/13		--	30.98	--	71.27		
MW-7	10/18/10	99.72	--	25.10	--	74.62	34.92	19.92-34.92
	4/19/11		--	21.04	--	78.68		
	8/29/11		--	25.83	--	73.89		
	2/12/13		--	28.60	--	71.12		
MW-8	10/18/10	99.92	--	25.45	--	74.47	35.08	20.08-35.08
	4/19/11		--	22.51	--	77.41		
	8/29/11		--	28.62	--	71.30		
	2/12/13		--	29.52	--	70.40		

**TABLE 2**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Groundwater (ft)	Free Product Thickness (ft)	Groundwater Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
MW-9	10/18/10	94.83	--	30.31	--	64.52	35.17	20.17-35.17
	4/19/11		--	24.13	--	70.70		
	8/29/11		--	28.08	--	66.75		
	2/12/13		--	30.51	--	64.32		
MW-10	10/18/10	99.12	--	29.73	--	69.39	40.16	25.16-40.16
	4/19/11		--	26.18	--	72.94		
	8/29/11		--	31.51	--	67.61		
	2/12/13		--	27.25	--	71.87		
MW-11	10/18/10	102.61	--	28.75	--	73.86	35.23	20.23-35.23
	4/19/11		--	25.59	--	77.02		
	8/29/11		--	32.42	--	70.19		
	2/12/13		--	33.99	--	68.62		
MW-12	10/18/10	103.46	--	29.63	--	73.83	34.99	19.99-34.99
	4/19/11		--	26.11	--	77.35		
	8/29/11		--	33.56	--	69.90		
	2/12/13		--	Dry	--	Dry		
MW-13	10/18/10	101.48	--	27.63	--	73.85	40.19	25.19-40.19
	4/19/11		--	23.50	--	77.98		
	8/29/11		--	31.34	--	70.14		
	2/12/13		--	31.69	--	69.79		
MW-14	10/18/10	103.48	--	29.99	--	73.49	39.74	24.74-39.74
	4/19/11		--	28.52	--	74.96		
	8/29/11		--	34.59	--	68.89		
	2/12/13		--	35.07	--	68.41		
MW-15	10/18/10	103.16	--	30.32	--	72.84	40.13	25.13-40.13
	4/19/11		--	25.18	--	77.98		
	8/29/11		--	33.50	--	69.66		
	2/12/13		--	33.42	--	69.74		
MW-16	10/18/10	101.32	--	30.79	--	70.53	40.11	25.11-40.11
	4/19/11		--	24.59	--	76.73		
	8/29/11		--	32.68	--	68.64		
	2/12/13		--	33.56	--	67.76		
MW-17	10/18/10	98.40	--	23.74	--	74.66	35.02	20.02-35.02
	4/19/11		--	18.20	--	80.20		
	8/29/11		--	28.55	--	69.85		
	2/12/13		--	19.25	--	79.15		

**TABLE 2**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Groundwater (ft)	Free Product Thickness (ft)	Groundwater Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
MW-18	10/18/10	95.05	--	22.02	--	73.03	35.67	20.67-35.67
	4/19/11		--	15.71	--	79.34		
	8/29/11		--	23.00	--	72.05		
	2/12/13		--	23.23	--	71.82		
MW-19	10/18/10	101.07	--	27.62	--	73.45	38.57	23.57-38.57
	4/19/11		--	21.63	--	79.44		
	8/29/11		--	30.56	--	70.51		
	2/12/13		--	32.05	--	69.02		
MW-20 <sup>5</sup>	12/6/10	110.52	--	41.77	--	68.75	45.05	30.05-45.05
	4/19/11		--	37.72	--	72.80		
	8/29/11		--	41.27	--	69.25		
	2/12/13		--	Dry	--	Dry		
MW-21	12/6/10	101.70	--	32.66	--	69.04	40.16	25.16-40.16
	4/19/11		--	24.19	--	77.51		
	8/29/11		--	38.77	--	62.93		
	2/12/13		--	32.00	--	69.70		
MW-22	12/6/10	105.13	--	34.95	--	70.18	40.09	25.09-40.09
	4/19/11		--	28.56	--	76.57		
	8/29/11		--	35.88	--	69.25		
	2/12/13		37.61	37.98	0.37	67.43		
MW-23	12/6/10	100.01	--	29.26	--	70.75	37.24	22.24-37.24
	4/19/11		--	19.69	--	80.32		
	8/29/11		--	29.01	--	71.00		
	2/12/13		--	26.28	--	73.73		
MW-24	12/6/10	99.08	--	32.25	--	66.83	40.13	25.13-40.13
	4/19/11		--	25.58	--	73.50		
	8/29/11		--	31.62	--	67.46		
	2/12/13		--	33.17	--	65.91		
MW-25	12/6/10	101.54	--	32.00	--	69.54	39.98	24.98-39.98
	4/19/11		--	23.44	--	78.10		
	8/29/11		--	32.18	--	69.36		
	2/12/13		--	33.28	--	68.26		

**TABLE 2**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
MW-26	12/6/10	97.25	--	29.08	--	68.17	38.74	23.74-38.74
	4/19/11		--	21.07	--	76.18		
	8/29/11		--	29.08	--	68.17		
	2/12/13		--	30.29	--	66.96		
MW-27	12/6/10	97.20	--	28.48	--	68.72	35.10	20.10-35.10
	4/19/11		--	24.42	--	72.78		
	8/29/11		--	29.24	--	67.96		
	2/12/13		--	30.27	--	66.93		
MW-28	12/6/10	101.29	--	33.39	--	67.90	40.03	25.03-40.03
	4/19/11		--	20.91	--	80.38		
	8/29/11		--	29.92	--	71.37		
	2/12/13		--	28.86	--	72.43		
MW-29	2/12/13	101.08	--	32.04	--	69.04	40.15	25.15-40.15
MW-30	2/12/13	104.62	--	36.20	--	68.42	45.05	30.05-45.05
MW-31	2/12/13	103.20	--	35.31	--	67.89	43.96	28.96-43.96
TW-1	10/18/10	101.83	--	28.44	--	73.39	63.27	58.27-63.27
	4/19/11		--	25.53	--	76.30		
	8/29/11		--	32.26	--	69.57		
	2/12/13		--	33.22	--	68.61		
TW-2	10/18/10	101.97	--	29.57	--	72.40	80.23	75.23-80.23
	4/19/11		--	23.83	--	78.14		
	8/29/11		--	31.62	--	70.35		
	2/12/13		--	33.22	--	68.75		
TW-3	10/18/10	95.33	--	25.39	--	69.94	80.62	75.62-80.62
	4/19/11		--	23.83	--	71.50		
	8/29/11		--	27.78	--	67.55		
	2/12/13		--	29.97	--	65.36		
TW-4	10/18/10	99.23	--	43.13	--	56.10	68.56	63.56-68.56
	4/19/11		--	27.11	--	72.12		
	8/29/11		--	31.09	--	68.14		
	2/12/13		--	32.81	--	66.42		



**TABLE 2**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Groundwater (ft)	Free Product Thickness (ft)	Groundwater Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
TW-5	10/18/10	103.62	--	29.69	--	73.93	58.38	53.38-58.38
	4/19/11		--	25.96	--	77.66		
	8/29/11		--	33.09	--	70.53		
	2/12/13		--	34.60	--	69.02		
TW-6	10/18/10	101.29	--	31.22	--	70.07	58.55	53.55-58.55
	4/19/11		--	25.25	--	76.04		
	8/29/11		--	33.00	--	68.29		
	2/12/13		--	33.80	--	67.49		
TW-7	10/18/10	98.13	--	50.90	--	47.23	58.94	53.94-58.94
	4/19/11		--	16.83	--	81.30		
	8/29/11		--	36.98	--	61.15		
	2/12/13		--	37.54	--	60.59		
TW-8	10/18/10	101.03	--	28.18	--	72.85	58.53	53.53-58.53
	4/19/11		--	22.19	--	78.84		
	8/29/11		--	41.54	--	59.49		
	2/12/13		--	42.13	--	58.90		
TW-9	12/6/10	96.92	--	28.96	--	67.96	80.12	75.12-80.12
	4/19/11		--	21.14	--	75.78		
	8/29/11		--	28.94	--	67.98		
	2/12/13		--	30.22	--	66.70		

Notes:

1. Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.
2. Groundwater elevations adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.
3. May 2010 survey data collected by Environmental Compliance Services, Inc. during Tier I assessment activities.
4. Subsequent October and December 2010 survey data provided by Pittman Professional Land Surveying.
5. MW-20 installed with a 3 ft stickup riser.

**TABLE 3**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
MW-1	5/25/10	Free Product								
	10/18/10	Free Product								
	4/19/11	456	210	1,010	4,700	<50.0	277	<50.0	1.2	NR
	8/29/11	1,130	317	941	3,779	<50	225	82	1.3	NR
	2/13/13	Free Product								
MW-2	5/25/10	109 <sup>2</sup>	<5.0 <sup>3</sup>	114	312	<5.0	50.6	NR <sup>4</sup>	0.035	NR
	10/19/10	1.7 J <sup>5</sup>	<5.0	<5.0	2.9 J	<5.0	<5.0	24.8	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	28.5	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	26.1	<0.019	NR
	2/13/13	6.7	<5.0	5.0	13.1	<5.0	<5.0	28.8	<0.020	NR
MW-3	5/25/10	239	139	815	4,800	<5.0	285	126	0.099	28.9
	10/18/10	6,820	343	981	6,260	3.4 J	449	561	0.31	NR
	4/19/11	7,300	253	921	5,060	<250	342	542	0.30	NR
	8/29/11	7,000	572	1,170	6,710	<250	371	438	0.033	NR
	2/13/13	6,860	366	660	3,256	<250	349	586	0.40	NR
MW-4	5/25/10	2.9 J	<5.0	1.4 J	<15.0	<5.0	12.7	3.5 J	<0.020	62.8
	10/18/10	5.7	<5.0	<5.0	<15.0	3.0 J	3.7 J	4.8 J	<0.020	NR
	4/20/11	16.4	<5.0	6.0	14.0	<5.0	9.3	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.021	NR
MW-5	5/25/10	3.6 J	1.8 J	4.0 J	22.3	<5.0	<5.0	4.8 J	<0.020	11.8
	10/18/10	102	<5.0	4.1 J	135.9	3.2 J	43.5	6.6	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-6	10/19/10	<5.0	<5.0	<5.0	<15.0	3.0 J	<5.0	3.5 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-7	10/19/10	12.9	4.6 J	3.2 J	34.2 J	<5.0	<5.0	4.6 J	0.40	<5.0
	4/20/11	794	108	410	2,536	<5.0	116	66.6	6.9	NR
	8/29/11	275	<10.0	42.6	178.8	<10.0	30.7	26	0.58	NR
	2/13/13	186	<10.0	23.4	<30.0	<10.0	<10.0	11	0.028	NR
MW-8	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	4.0 J	<5.0	2.2 J	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

**TABLE 3**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
MW-9	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-10	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-11	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	1.3 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<b>7.9</b>	<5.0	<5.0	<15.0	<5.0	<5.0	2.8 J	<0.019	NR
	2/13/13	<b>14.2</b>	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-12	10/19/10	<b>387</b>	<b>1,210</b>	120	2,650	<5.0	<b>187</b>	<b>24.7</b>	<b>4.8</b>	<5.0
	4/20/11	<b>1,360</b>	987	462	1,659	<50.0	<b>91.3</b>	<b>75.7</b>	<b>6.0</b>	NR
	8/29/11	<b>429</b>	26.9	8.3 J	18.3 J	<12.5	5.2 J	<b>126</b>	<b>2.5</b>	NR
	2/13/13	DRY								
MW-13	10/19/10	<b>333</b>	109	58.3	282	<10.0	10.1	<b>61.9</b>	0.022	<5.0
	4/20/11	<b>376</b>	46.8	31.2	394	<12.5	11.7 J	<b>57.0</b>	<b>0.074</b>	NR
	8/29/11	<b>65.5</b>	11.7	9.2	34.2	<5.0	<5.0	<b>41.7</b>	0.033	NR
	2/13/13	<b>376</b>	28.7	33.5	330.7	<5.0	12.3	<b>34.3</b>	<0.020	NR
MW-14	10/19/10	<5.0	<5.0	2.5 J	9.5 J	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	2.8 J	<5.0	3.4 J	5.8 J	<5.0	22	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-15	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.0 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-16	10/19/10	<b>246</b>	26.1	14.3	229.2	<5.0	<5.0	2.5 J	<0.020	<5.0
	4/19/11	<b>158</b>	8.5	2.5 J	96.2	<5.0	5.8	<5.0	<0.020	NR
	8/29/11	NR	NR	NR	NR	NR	NR	NR	<0.019	NR
	2/13/13	<b>51.6</b>	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-17	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	4.3 J
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
MW-18	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR

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**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
MW-19	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.021	NR
MW-20	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	DRY								
MW-21	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-22	12/6/10	<b>11,900</b>	<b>29,500</b>	<b>1,800</b>	<b>11,400</b>	<100	<b>522</b>	<b>463</b>	<b>122</b>	<b>15.3</b>
	4/20/11	<b>8,690</b>	<b>20,600</b>	<b>1,870</b>	<b>11,070</b>	<1,250	<1,250	<1,250	<b>119</b>	NR
	8/29/11	<b>3,630</b>	<b>23,500</b>	<b>3,530</b>	<b>20,200</b>	<1,000	<b>859 J</b>	<1,000	<b>188</b>	NR
	2/13/13	Free Product								
MW-23	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-24	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>6.7</b>	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	4.1 J	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.5 J	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-25	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

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**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
MW-26	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-27	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>6.4</b>	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.6 J	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-28	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
MW-29	2/13/13	<b>21.4</b>	<5.0	20.8	63.4	<5.0	<5.0	<b>16.7</b>	<b>0.052</b>	NR
MW-30	2/13/13	<b>527</b>	17.7	12.2	270	<5.0	<b>8.3</b>	<b>21.7</b>	<0.020	NR
MW-31	2/13/13	<b>24.5</b>	26.2	14.7	109.6	<5.0	<5.0	<b>51.4</b>	<0.020	NR
TW-1	10/18/10	<5.0	<5.0	<5.0	<15.0	5.7	<5.0	<b>64.2</b>	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	5.0	<5.0	<b>48.9</b>	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	6.4	<5.0	<b>48.4</b>	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	5.1	<5.0	<b>52.4</b>	<0.020	NR
TW-2	10/19/10	<5.0	3.4 J	<5.0	2.8 J	<5.0	<5.0	4.2 J	<0.020	<5.0
	4/19/11	<5.0	1.6 J	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	18.7	<5.0	<5.0	<5.0	<0.019	NR
TW-3	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	6.5	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

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**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
TW-4	10/19/10	<5.0	<5.0	<5.0	<15.0	2.9 J	<5.0	<5.0	<0.019	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	34.9	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
TW-5	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	1.7 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-6	10/19/10	1.5 J	<5.0	<5.0	<15.0	<5.0	<5.0	<b>5.1</b>	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.6 J	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>8.9</b>	<0.019	NR
	2/13/13	<5.0	33.3	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-7	10/19/10	<5.0	1.9 J	<5.0	5.6 J	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
TW-8	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-9	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
TW-10 <sup>6</sup>	12/2/10	<5.0	<5.0	<5.0	<15.0	<5.0	2.9 J	<5.0	<0.020	NR
WSW-1	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.1 J	<0.020	NR

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Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
WSW-1 pre GAC <sup>7</sup>	11/18/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.5 J	<0.019	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	2.4	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-1 post GAC	11/18/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-2	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	Not Sampled								
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-3	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	5/3/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-4	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-5	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	Well pump not operational, could not collect sample								
	8/29/11	Not Sampled								
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-6	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.88 J	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-7	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-8	10/19/10	<5.0	<5.0	<5.0	<15.0	3.6 J	<5.0	9.2	<0.020	NR
WSW-8 pre GAC <sup>8</sup>	11/12/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	7.5	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.9 J	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	1.6	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-8 post GAC	11/12/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-9	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

**TABLE 3**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
WSW-10	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.45 J	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-11	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.45 J	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-12	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	Well pump not operational, could not collect sample								
	8/29/11	Well pump not operational, could not collect sample								
	2/13/13	Well pump not operational, could not collect sample								
WSW-13	10/19/10	<5.0	<5.0	<5.0	<15.0	3.2 J	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-14	10/19/10	<5.0	<5.0	<5.0	<15.0	4.0 J	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	1.3	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-15	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-X	2/13/13	Well House Secured & Locked with Padlock								
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>

Notes:

1. Analyses for BTEX compounds, MTBE, naphthalene, and 1,2-DCA by EPA Method 8260B; analyses for EDB by EPA Method 8011; analyses for total lead by EPA Method 6010.
2. Concentrations in bold face type exceeded the May 2001 Risk-Based Screening Level.
3. Less than the reporting limit specified in the laboratory report.
4. Analyses not requested.
5. Estimated value below the laboratory reporting limit.
6. TW-10 did not produce enough water and was subsequently abandoned following sample collection.
7. WSW-1 GAC installed on 11/18/10.
8. WSW-8 GAC installed on 11/12/10.
9. May 2001 Risk-Based Screening Level.



**TABLE 4**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
MW-1	10/18/10	Free Product							
	4/19/11	<2,000	<100	<50.0	<1,000	<1,000	<100	<1,000	<500
	8/29/11	<2,000	<100	<50.0	<1,000	<1,000	<100	<b>2,160</b>	<500
	2/13/13	Free Product							
MW-2	10/19/10	<200 <sup>2</sup>	<10.0	<5.0	<100	254	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	336	<10.0	96.2 J	<50.0
	8/29/11	<200	<10.0	<5.0	<100	386	<10.0	87.1 J	<50.0
	2/13/13	<200	<10.0	<5.0	<100	307	<10.0	132	<50.0
MW-3	10/18/10	<200	<10.0	55.7	<100	773	<10.0	<b>12,900<sup>3</sup></b>	<50.0
	4/19/11	<10,000	<500	<250	<5,000	<5,000	<500	<b>13,800</b>	<2,500
	8/29/11	<10,000	<500	<250	<5,000	<5,000	<500	<b>10,300</b>	<2,500
	2/13/13	<10,000	<500	<250	<5,000	<5,000	<500	<b>13,200</b>	<2,500
MW-4	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	199	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-5	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	168	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-6	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	131	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-7	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>2,650</b>	<50.0
	8/29/11	<400	<20.0	<10.0	<200	225	<20.0	<b>672</b>	<100
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-8	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>244</b>	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 4**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
MW-9	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-10	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-11	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-12	10/19/10	<200	<10.0	<5.0	<100	83.0 J <sup>4</sup>	<10.0	<b>267</b>	<50.0
	4/20/11	<2,000	<100	<50.0	<1,000	<1,000	<100	<1,000	<500
	8/29/11	<500	<25.0	4.8 J	<250	<250	<25.0	<b>615</b>	<125
	2/13/13	Dry							
MW-13	10/19/10	<400	<20.0	<10.0	<200	<200	<20.0	<b>1,260</b>	<100
	4/20/11	<500	<25.0	<12.5	<250	<250	<25.0	<b>1,210</b>	<125
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>1,040</b>	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<b>340</b>	<50.0
MW-14	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-15	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-16	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<b>360</b>	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>321</b>	<50.0
	8/29/11	Not Requested							
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 4**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
MW-17	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-18	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-19	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-20	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	Dry							
MW-21	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>368</b>	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-22	12/6/10	<4,000	<200	<100	<2,000	<2,000	<200	<b>9,730</b>	<1,000
	4/20/11	<50,000	<2,500	<1,250	<25,000	<25,000	<2,500	<25,000	<12,500
	8/29/11	<40,000	<2,000	<1,000	<20,000	<20,000	<2,000	<20,000	<10,000
	2/13/13	Free Product							
MW-23	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-24	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 4**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
MW-25	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-26	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-27	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-28	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-29	2/13/13	<200	<10.0	<5.0	<100	<b>347</b>	<10.0	<b>3,630</b>	<50.0
MW-30	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
MW-31	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-1	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	<b>1,180</b>	<50.0
	4/19/11	<200	<10.0	1.8 J	<100	<100	<10.0	<b>1,000</b>	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>871</b>	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<b>899</b>	<50.0
TW-2	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	95.4 J	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-3	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-4	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 4**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
TW-5	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>368</b>	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-6	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-7	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-8	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-9	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
TW-10 <sup>5</sup>	12/2/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-1 pre GAC <sup>6</sup>	11/18/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	8.3 J	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-1 post GAC	11/18/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-2	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	Not Sampled							
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 4**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
WSW-3	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	5/3/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-4	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-5	12/8/10	Not sampled for oxygenates. Well pump electric disconnected.							
	4/21/11	Well pump not operational, could not collect sample							
	8/29/11	Not Sampled							
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-6	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-7	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-8 pre GAC <sup>7</sup>	11/12/10	<200	<10.0	<5.0	<100	<100	<10.0	<b>262</b>	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-8 post GAC	11/12/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-9	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-10	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 4**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
WSW-11	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-12	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	Well pump not operational, could not collect sample							
	8/29/11	Well pump not operational, could not collect sample							
	2/13/13	Well pump not operational, could not collect sample							
WSW-13	12/8/10	Not sampled for oxygenates. Sampled by SCDHEC on 11/4/10.							
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-14	12/8/10	Not sampled for oxygenates. Sampled by SCDHEC on 11/4/10.							
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
WSW-15	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>

Notes:

1. Analyses for eight oxygenates by EPA Method 8260B.
2. Less than the reporting limit specified in the laboratory report.
3. Concentrations in bold face exceed the 2008 SCDHEC Action Level.
4. Estimated value below the laboratory reporting limit.
5. TW-10 did not produce enough water and was subsequently abandoned following sample collection.
6. WSW-1 GAC installed on 11/18/10.
7. WSW-8 GAC installed on 11/12/10.
8. Action Levels based on SCDHEC Revision 1 dated 8/22/08.

## **FIGURES**

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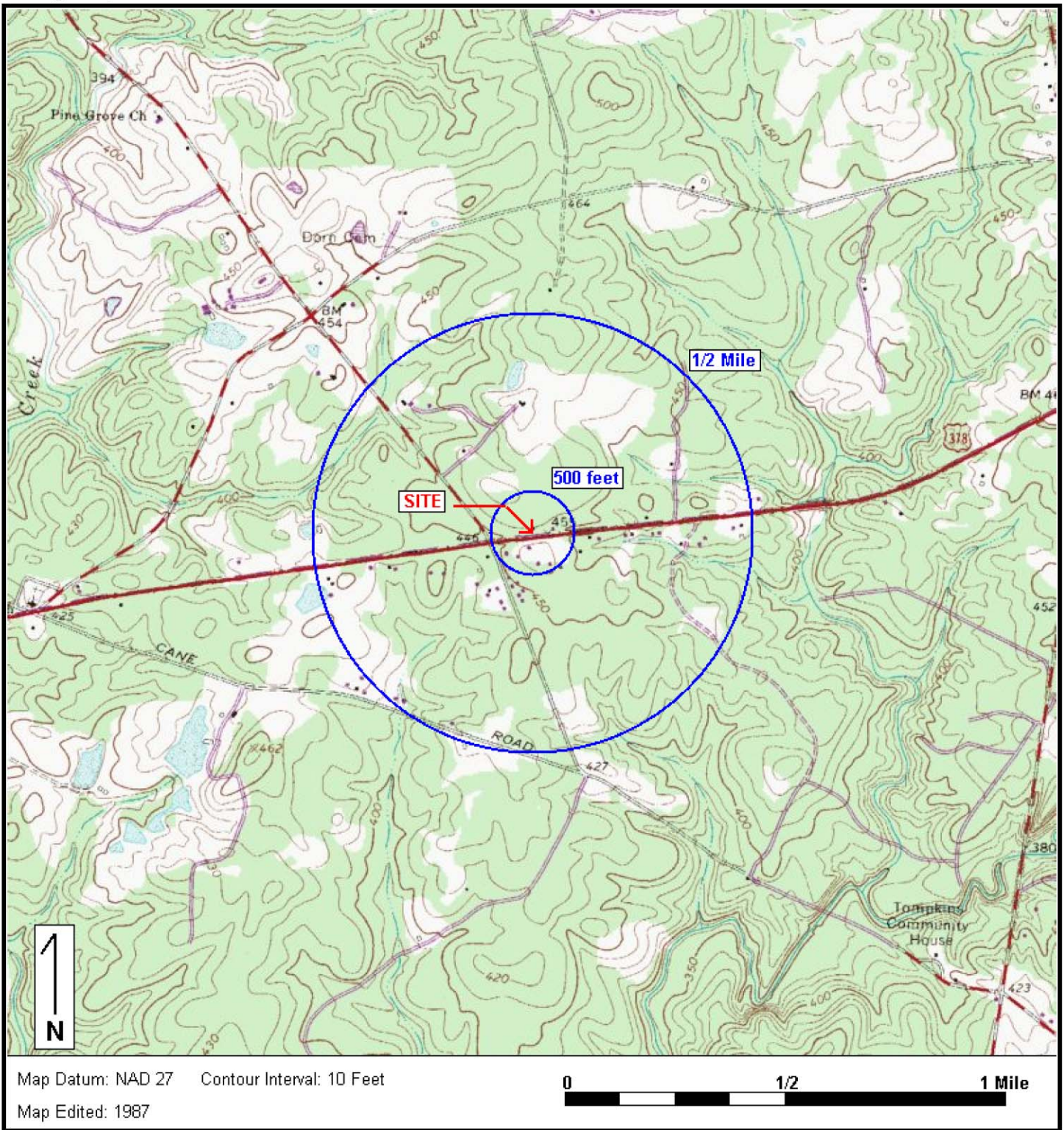




Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

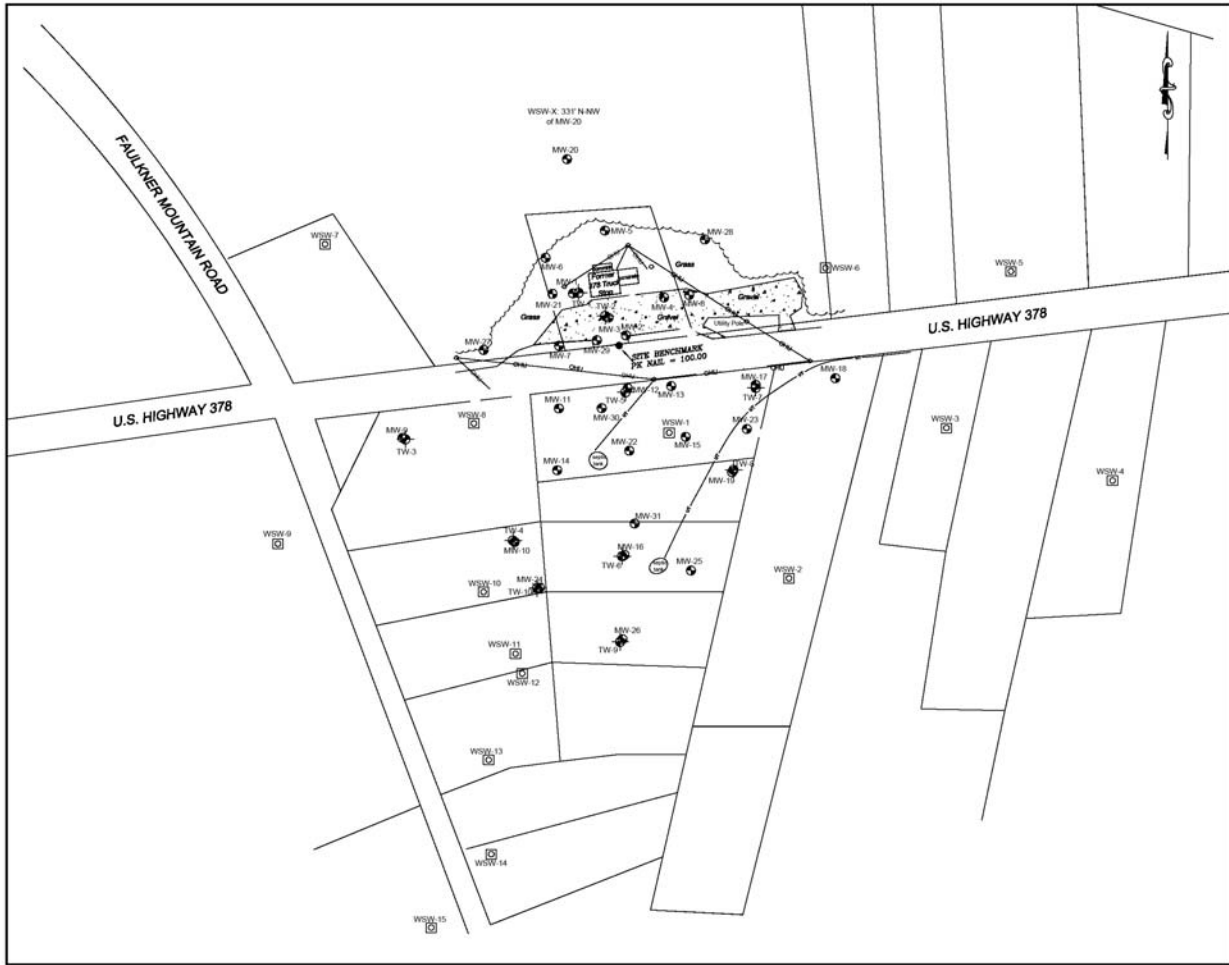
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas



**Legend**

- Approximate Property Line
- OHU Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊗ Abandoned Telescoping Monitoring Well
- Water Supply Well
- MW-1 Well I.D.

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

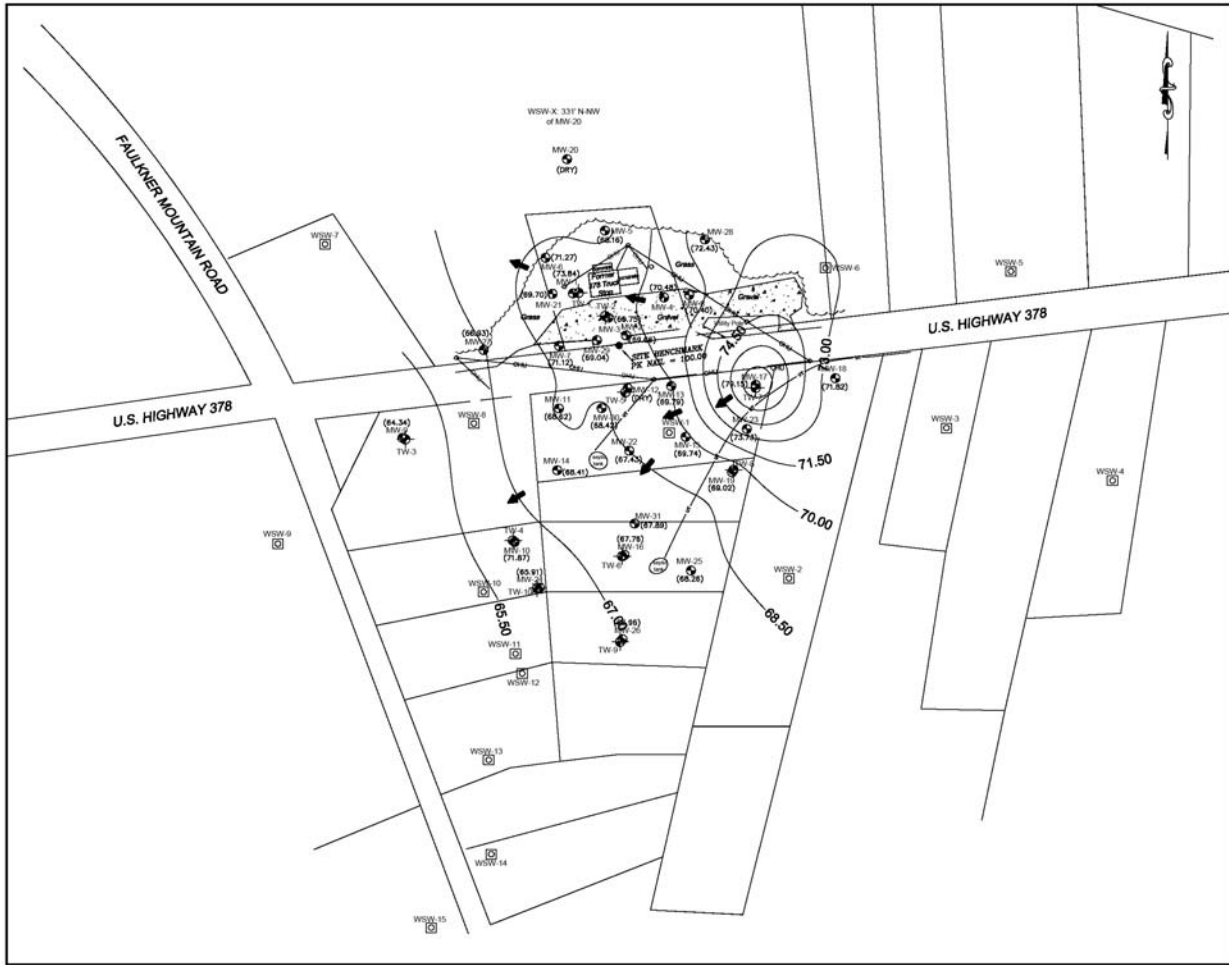
**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

**PROJECT:**  
**378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**CLIENT:**  
**Site Plan**  
**Wilkerson Fuel Company, Inc.**

**SCALE:**  
 1"=150'

DATE	BY	DESCRIPTION
5/2/11	CD	DESIGNED BY
5/2/11	CD	CHECKED BY
5/2/11	CD	APPROVED BY



**Legend**

- Approximate Property Line
- OHU — Overhead Electric Line
- UT — Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊗ Abandoned Telescoping Monitoring Well
- Water Supply Well
- MW-1 Well I.D.
- (73.71) Groundwater Elevation
- Water Table Contour (Dashed where Inferred)
- ➔ Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made on February 12, 2013.

Water table contours and flow directions assume homogenous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**DATE:**  
 Groundwater Elevation Map - Shallow  
**CLIENT:**  
 Wilkerson Fuel Company, Inc.

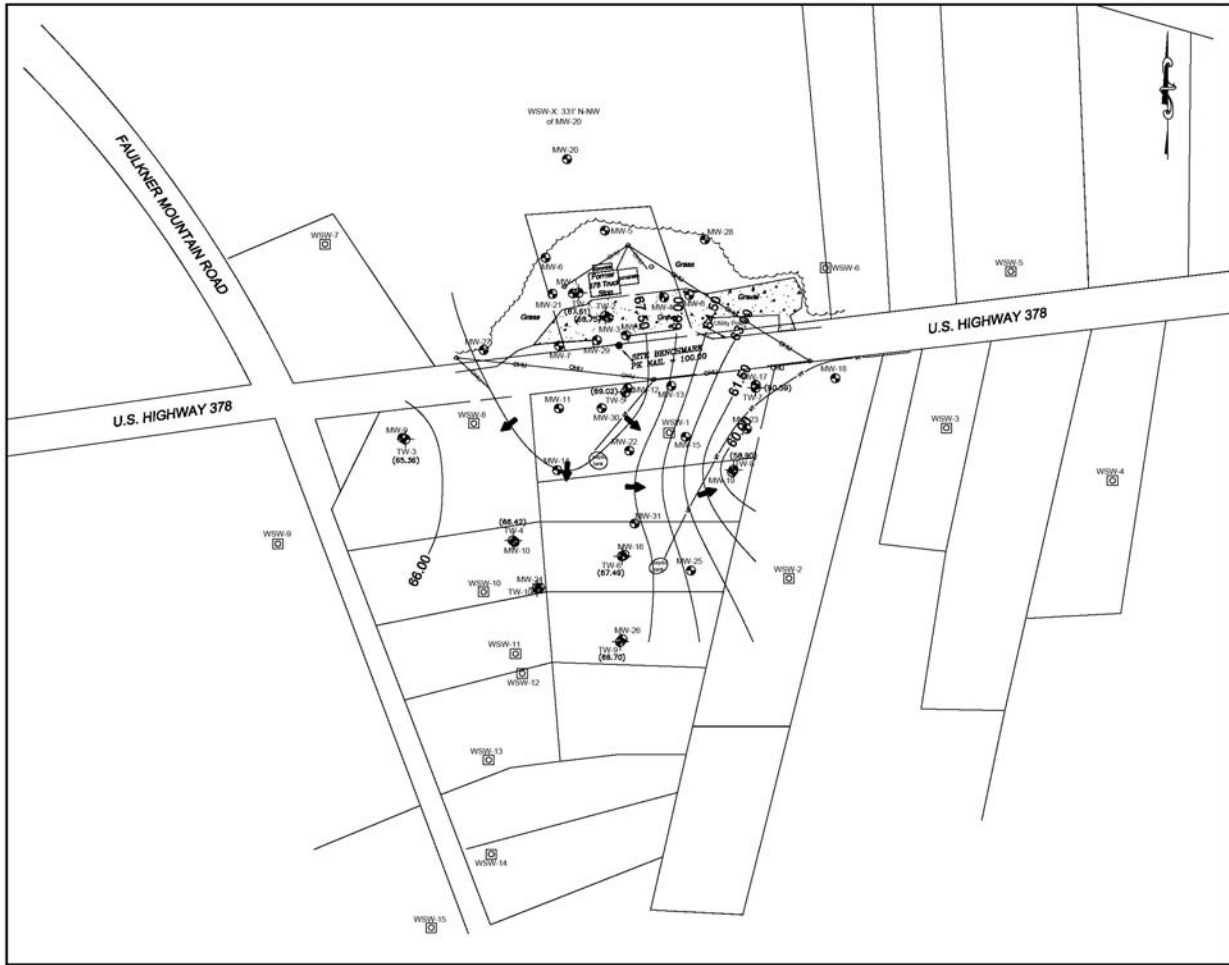
**GRAPHIC SCALE:** 0 25 50 75 100 FEET

DATE	DESIGNED BY	CHECKED BY	APPROVED BY
3/1/13	BS	CD	BS
3/1/13	BS	CD	BS
3/1/13	BS	CD	BS
3/1/13	BS	CD	BS

**SCALE:** 1"=150'

**JOB NO.:** 14-214210

**FIGURE NO.:** 3



**Legend**

- Approximate Property Line
- OHU Overhead Electric Line
- UT Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊗ Abandoned Telescoping Monitoring Well
- Water Supply Well
- MW-1 Well I.D.
- (73.71) Groundwater Elevation
- Water Table Contour (Dashed where inferred)
- ➔ Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made on February 12, 2013.

Water table contours and flow directions assume homogenous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

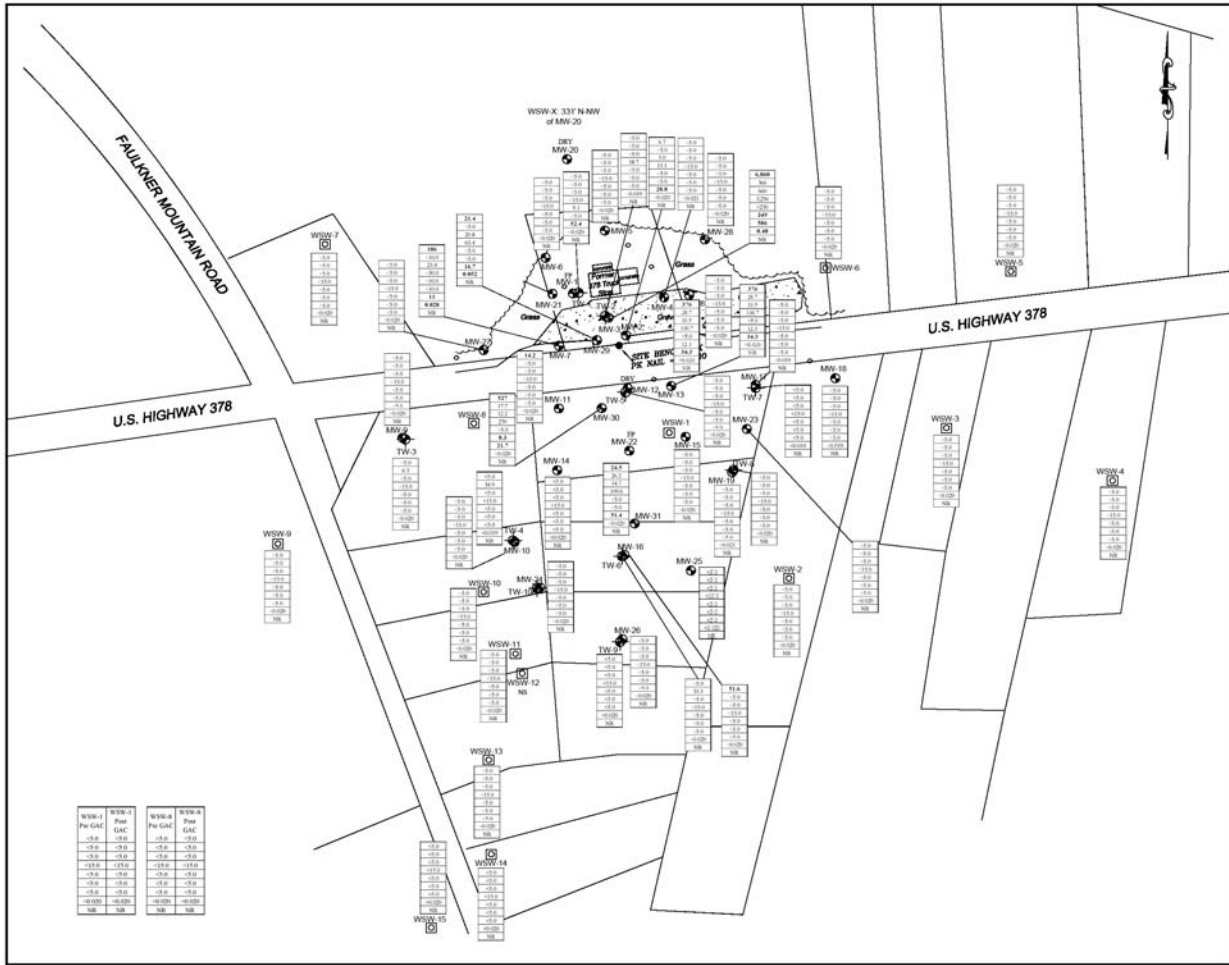
**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**TITLE:**  
 Groundwater Elevation Map - Deep

**CLIENT:**  
 Wilkerson Fuel Company, Inc.

**GRAPHIC SCALE:** 0 20 40 60 80 100

DATE	DESIGNED BY	CHECKED BY	APPROVED BY
CD	CD	BS	BS
SCALE	DATE	JOB NO.	FIGURE NO.
1"=150'	3/1/13	14-214210	4



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊗ Abandoned Telescoping Monitoring Well
- ⊙ Water Supply Well
- ⊙ MW-1 Well I.D.

5	Benzene
1,000	Toluene
700	Ethylbenzene
10,000	Xylenes
40	MTBE
25	Naphthalene
5	1,2-DCA
0.05	DDB
15	Lead

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

All concentrations are measured in micrograms per liter (ug/L).

Groundwater samples collected in April and May 2011.

Above concentrations represent May 2001 Risk-Based Screening Levels; Concentrations in bold face type exceeded the RBSL.

J - Estimated value between the method detection limit and the laboratory reporting limit.

<1.0 - Less than the reporting limit specified in the laboratory report.

NR - Not Requested.

NS - Not Sampled.

WSW-1 and WSW-8 data represent pre-treatment concentrations.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

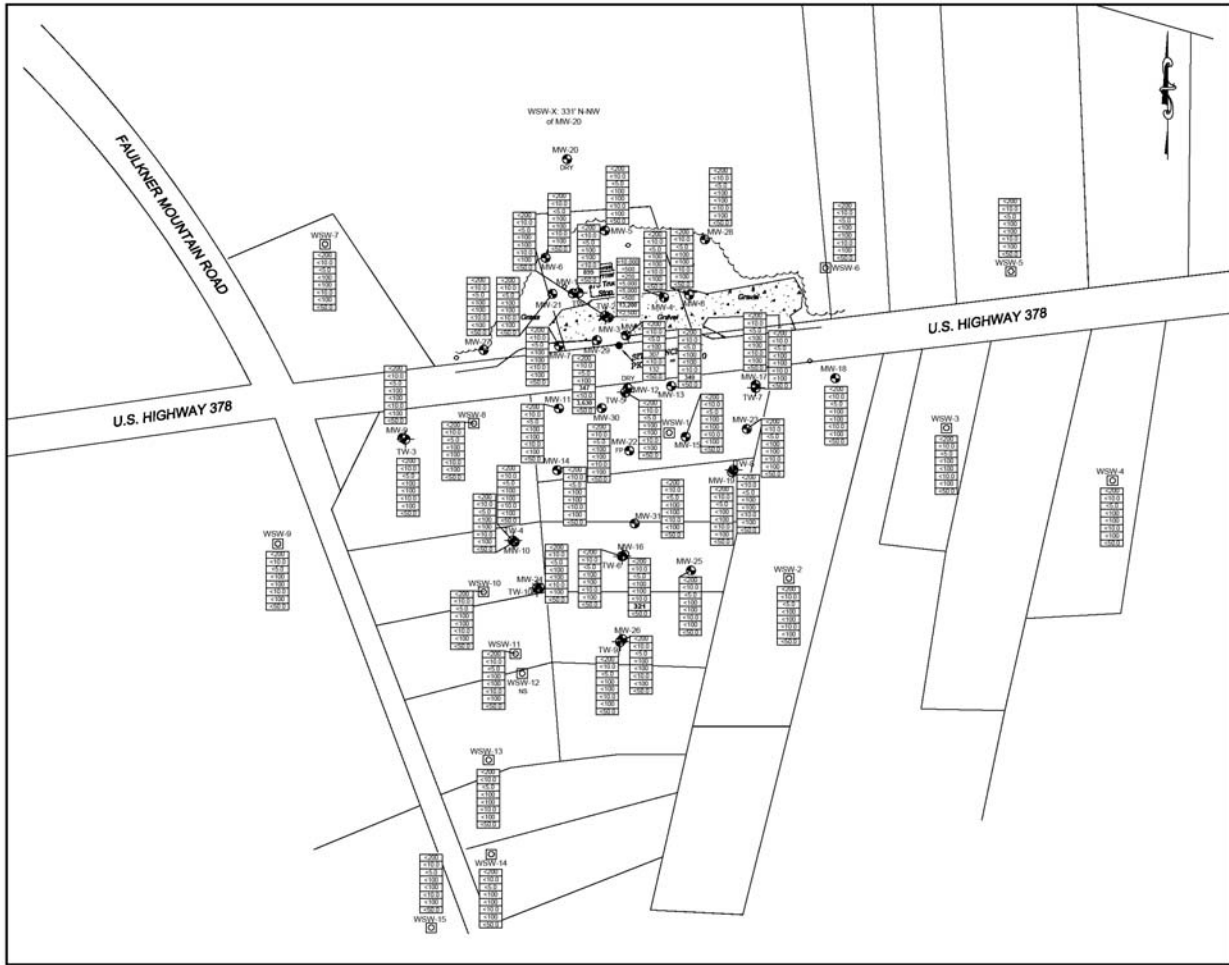
**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**TYPE:**  
 Groundwater Quality Map -CoC

**CLIENT:**  
 Wilkerson Fuel Company, Inc.

**GRAPHIC SCALE:**  
 0 25 50 75 100

DESIGNED BY	CHECKED BY	APPROVED BY
BS	BS	BS
SCALE	DATE	JOB NO.
1"=150'	3/6/13	14-214210
		FIGURE NO.
		5



**Legend**

- Approximate Property Line
  - OHU Overhead Electric Line
  - UT Underground Telephone Line
  - Utility Pole
  - Shallow (Water Table) Monitoring Well
  - ⊕ Telescoping Monitoring Well
  - ⊗ Abandoned Telescoping Monitoring Well
  - ⊙ Water Supply Well
  - MW-1 Well I.D.
- |        |                               |
|--------|-------------------------------|
| 10,000 | Ethanol                       |
| 47     | Ethyl tert-Butyl Ether (ETBE) |
| 150    | Di-isopropyl Ether (DIPE)     |
| NA     | 3,3-Dimethyl-1-Butanol        |
| 1,400  | Tertiary Butyl Alcohol (TBA)  |
| 128    | Tert-Amyl Methyl Ether (TAME) |
| 240    | tert-Amyl Alcohol (TAA)       |
| NA     | tert-Butyl Formate (TBF)      |

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

All concentrations are measured in micrograms per liter (ug/L).

Groundwater samples collected in April and May 2011.

Above concentrations represent 2008 SQDHEC Action Levels. Concentrations in bold face type exceeded the Action Level.

J - Estimated Value between the method detection limit and the reporting limit.

<L.D. - Less than the reporting limit specified in the laboratory report.

NS - Not Sampled

WSW-1 and WSW-8 data represent pre-treatment concentrations.



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)563-2711 FAX: (704)563-2744

**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**DATE:**  
 Groundwater Quality Map - Oxygenates  
 Wilkerson Fuel Company, Inc.

DESIGNED BY	BS	CHECKED BY	BS
SCALE	DATE	JOB NO.	FIGURE NO.
1"=150'	3/6/13	14-214210	6

**APPENDIX A**

---

Well Construction Records



### Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

<b>1. WELL OWNER INFORMATION:</b> Name: WILKERSON FUEL (last) (first) Address: PO BOX 2835 City: ROCK HILL State: SC Zip: 29732 Telephone: Work: Home:			<b>7. PERMIT NUMBER:</b> UMW-24475																																																																										
<b>2. LOCATION OF WELL:</b> SC COUNTY: EDGEFIELD Name: 378 TRUCK STOP Street Address: 731 US 378 City: EDGEFIELD Zip: 29824 Latitude: 33° 56' 12.91" Longitude: 81° 57' 03.75"			<b>8. USE:</b> <input type="checkbox"/> Residential <input type="checkbox"/> Public Supply <input type="checkbox"/> Process <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Emergency <input type="checkbox"/> Test Well <input checked="" type="checkbox"/> Monitor Well <input type="checkbox"/> Replacement																																																																										
<b>3. PUBLIC SYSTEM NAME:</b> PUBLIC SYSTEM NUMBER: 07960 MW-29			<b>9. WELL DEPTH (completed)</b> Date Started: 01/17/13 40.0 ft. Date Completed: 01/17/13																																																																										
<b>4. ABANDONMENT:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Grouted Depth: from _____ ft. to _____ ft.			<b>10. CASING:</b> <input checked="" type="checkbox"/> Threaded <input type="checkbox"/> Welded Diam.: 2 INCH Type: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Galvanized <input type="checkbox"/> Steel <input type="checkbox"/> Other 2.0 in. to 25.0 ft. depth _____ in. to _____ ft. depth Height: Above <input type="checkbox"/> Below <input type="checkbox"/> Surface 0.0 ft. Weight _____ lb./ft. Drive Shoe? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																										
<b>11. SCREEN:</b> Type: SCH 40 PVC Diam.: 2 INCH Slot/Gauge: .010 Length: 15.0 FEET Set Between: 25.0 ft. and 40.0 ft. NOTE: MULTIPLE SCREENS USE SECOND SHEET Sieve Analysis <input type="checkbox"/> Yes (please enclose) <input checked="" type="checkbox"/> No			<b>12. STATIC WATER LEVEL</b> 35.0 ft. below land surface after 24 hours																																																																										
<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>LIGHT BROWN/TAN SILT</td><td>22.0</td><td>22.0</td></tr><tr><td>LIGHT BROWN PARTIALLY WEATHERED ROCK/DRY</td><td>13.0</td><td>35.0</td></tr><tr><td>LIGHT BROWN PARTIALLY WEATHERED ROCK/WET</td><td>5.0</td><td>40.0</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><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><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	LIGHT BROWN/TAN SILT	22.0	22.0	LIGHT BROWN PARTIALLY WEATHERED ROCK/DRY	13.0	35.0	LIGHT BROWN PARTIALLY WEATHERED ROCK/WET	5.0	40.0																																																													<b>13. PUMPING LEVEL</b> Below Land Surface. _____ ft. after _____ hrs. Pumping _____ G.P.M. Pumping Test: <input type="checkbox"/> Yes (please enclose) <input type="checkbox"/> No Yield: _____		
Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum																																																																											
LIGHT BROWN/TAN SILT	22.0	22.0																																																																											
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LIGHT BROWN PARTIALLY WEATHERED ROCK/WET	5.0	40.0																																																																											
<b>14. WATER QUALITY</b> Chemical Analysis <input type="checkbox"/> Yes <input type="checkbox"/> No Bacterial Analysis <input type="checkbox"/> Yes <input type="checkbox"/> No Please enclose lab results.			<b>15. ARTIFICIAL FILTER (filter pack)</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Installed from 23.0 ft. to 40.0 ft. Effective size 1.43 Uniformity Coefficient 1.30																																																																										
<b>16. WELL GROUDED?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Bentonite/Cement <input type="checkbox"/> Other _____ Depth: From 0.0 ft. to 19.0 ft.			<b>17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:</b> _____ ft. _____ direction Type _____ Well Disinfected <input type="checkbox"/> Yes <input type="checkbox"/> No Type: _____ Amount: _____																																																																										
<b>18. PUMP:</b> Date installed: _____ Not installed <input type="checkbox"/> Mfr. Name: _____ Model No.: _____ H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm TYPE: <input type="checkbox"/> Submersible <input type="checkbox"/> Jet (shallow) <input type="checkbox"/> Turbine <input type="checkbox"/> Jet (deep) <input type="checkbox"/> Reciprocating <input type="checkbox"/> Centrifugal			<b>19. WELL DRILLER:</b> NICHOLAS HAYES CERT. NO.: 01983 Address: (Print) 176 COMMERCE BLVD Level: A B C D (circle one) STATESVILLE, NC 28625 <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Telephone No.: 704-872-7686 Fax No.: 704-872-0248																																																																										
<b>5. REMARKS:</b> BENTONITE SEAL FROM 19.0 TO 23.0 FEET			<b>20. WATER WELL DRILLER'S CERTIFICATION:</b> This well was drilled under my direction and this report is true to the best of my knowledge and belief.  Signed: _____ Date: 01/30/13 Well Driller																																																																										
<b>6. TYPE:</b> <input type="checkbox"/> Mud Rotary <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Air Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Cable tool <input type="checkbox"/> Other			If D Level Driller, provide supervising driller's name:																																																																										





Water Well Record
Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: WILKERSON FUEL (last) (first)
Address: PO BOX 2835
City: ROCK HILL State: SC Zip: 29732
Telephone: Work: Home:

7. PERMIT NUMBER: UMW-24475

2. LOCATION OF WELL: SC COUNTY: EDGEFIELD
Name: 378 TRUCK STOP
Street Address: 731 US 378
City: EDGEFIELD Zip: 29824
Latitude: 33° 56' 11.92" Longitude: 81° 57' 03.53"

8. USE:
Residential Public Supply Process
Irrigation Air Conditioning Emergency
Test Well Monitor Well Replacement

3. PUBLIC SYSTEM NAME: PUBLIC SYSTEM NUMBER:
07960 MW-30

9. WELL DEPTH (completed) Date Started: 01/17/13
45.0 ft. Date Completed: 01/17/13

4. ABANDONMENT: Yes No
Grouted Depth: from ft. to ft.

10. CASING: Threaded Welded
Diam.: 2 INCH
Type: PVC Galvanized
Steel Other
2.0 in. to 30.0 ft. depth

Table with 3 columns: Formation Description, Thickness of Stratum, Depth to Bottom of Stratum. Rows include: LIGHT BROWN/TAN CLAYEY SILT, LIGHT BROWN PARTIALLY WEATHERED ROCK/DRY, LIGHT GRAY PARTIALLY WEATHERED ROCK/DAMP.

11. SCREEN:
Type: SCH 40 PVC Diam.: 2 INCH
Slot/Gauge: .010 Length: 15.0 FEET
Set Between: 30.0 ft. and 45.0 ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis Yes (please enclose) No

5. REMARKS:
BENTONITE SEAL FROM 24.0 TO 28.0 FEET

12. STATIC WATER LEVEL 35.0 ft. below land surface after 24 hours

6. TYPE: Mud Rotary Jelled Bored
Dug Air Rotary Driven
Cable tool Other

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 28.0 ft. to 45.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

16. WELL GROUTED? Yes No
Neat Cement Bentonite Bentonite/Cement Other
Depth: From 0.0 ft. to 24.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type
Well Disinfected Yes No Type: Amount:

18. PUMP: Date installed: Not installed
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: Submersible Jet (shallow) Turbine
Jet (deep) Reciprocating Centrifugal

19. WELL DRILLER: NICHOLAS HAYES CERT. NO.: 01983
Address: (Print) 176 COMMERCE BLVD Level: A B C D (circle one)
STATESVILLE, NC 28625
Telephone No.: 704-872-7686 Fax No.: 704-872-0248

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Nicholas Hayes Date: 01/30/13
Well Driller

If D Level Driller, provide supervising driller's name:



Water Well Record
Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: WILKERSON FUEL
Address: PO BOX 2835
City: ROCK HILL State: SC Zip: 29732
Telephone: Work: Home:

2. LOCATION OF WELL: SC COUNTY: EDGEFIELD
Name: 378 TRUCK STOP
Street Address: 731 US 378
City: EDGEFIELD Zip: 29824
Latitude: 33° 56' 10.22" Longitude: 81° 57' 03.12"

3. PUBLIC SYSTEM NAME: PUBLIC SYSTEM NUMBER:
07960 MW-31

4. ABANDONMENT: [ ] Yes [X] No
Grouted Depth: from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Table with 3 columns: Formation Description, \*Thickness of Stratum, Depth to Bottom of Stratum. Rows include GRASS/TOPSOIL, LIGHT BROWN SILT, TAN PARTIALLY WEATHERED ROCK/DRY, BROWN/GRAY PARTIALLY WEATHERED ROCK/DAMP, GRAY ROCK.

5. REMARKS:
BENTONITE SEAL FROM 26.0 TO 28.0 FEET

6. TYPE: [ ] Mud Rotary [ ] Jetted [ ] Bored [X] Dug [X] Air Rotary [ ] Driven [ ] Cable tool [ ] Other

7. PERMIT NUMBER: UMW-24475

8. USE:
[ ] Residential [ ] Public Supply [ ] Process
[ ] Irrigation [ ] Air Conditioning [ ] Emergency
[ ] Test Well [X] Monitor Well [ ] Replacement

9. WELL DEPTH (completed) Date Started: 01/25/13
44.0 ft. Date Completed: 01/25/13

10. CASING: [X] Threaded [ ] Welded
Diam.: 2 INCH
Type: [X] PVC [ ] Galvanized [ ] Steel [ ] Other
2.0 in. to 29.0 ft. depth
Height: Above [ ] Below [ ]
Surface 0.0 ft.
Weight \_\_\_\_\_ lb./ft.
Drive Shoe? [ ] Yes [ ] No

11. SCREEN:
Type: SCH 40 PVC Diam.: 2 INCH
Slot/Gauge: .010 Length: 15.0 FEET
Set Between: 29.0 ft. and 44.0 ft. NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis [ ] Yes (please enclose) [X] No

12. STATIC WATER LEVEL 35.0 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) [X] No
Yield: \_\_\_\_\_

14. WATER QUALITY
Chemical Analysis [ ] Yes [X] No Bacterial Analysis [ ] Yes [X] No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) [X] Yes [ ] No
Installed from 28.0 ft. to 44.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

16. WELL GROUDED? [X] Yes [ ] No
[X] Neat Cement [ ] Bentonite [ ] Bentonite/Cement [ ] Other
Depth: From 0.0 ft. to 26.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: \_\_\_\_\_ ft. \_\_\_\_\_ direction
Type \_\_\_\_\_
Well Disinfected [ ] Yes [X] No Type: \_\_\_\_\_ Amount: \_\_\_\_\_

18. PUMP: Date installed: \_\_\_\_\_ Not installed [X]
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: JOHNNY BURR CERT. NO.: 01740
Address: (Print) 176 COMMERCE BLVD Level: A B C D (circle one)
STATESVILLE, NC 28625 [ ] [ ] [X] [ ]
Telephone No.: 704-872-7686 Fax No.: 704-872-0248

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Johnny Burr Date: 01/30/13
Well Driller

If D Level Driller, provide supervising driller's name:

**APPENDIX B**  
Soil Boring Logs

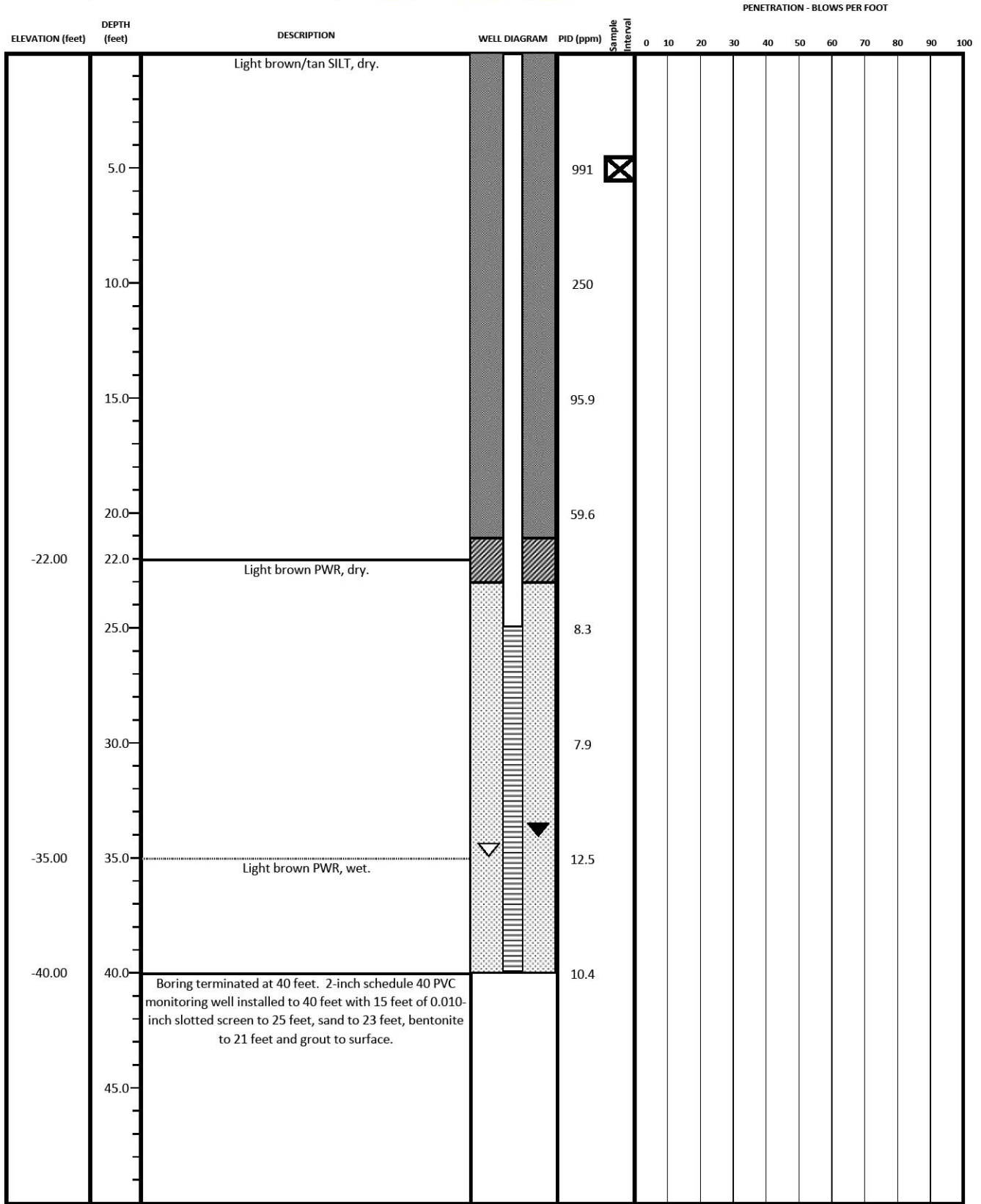
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# BORING LOG

Job Name: 378 Truck Stop  
 Location: 731 Highway 378  
Edgefield, SC



Datum Elevation: \_\_\_\_\_ feet  
 Height of Riser: \_\_\_\_\_ feet



**REMARKS:** Drilled with Drillmax 2400 using 6" Air Hammer.  
 Borehole diameter approximately 6".  
 Geologic Exploration - GEX

**DRILLED BY:** GEX - Bubba  
**LOGGED BY:** ECS - A. Williamson

**BORING NUMBER:** MW-29  
**DATE STARTED:** 1/17/2013  
**DATE COMPLETED:** 1/17/2013  
**PROJECT NUMBER:** 14-214210

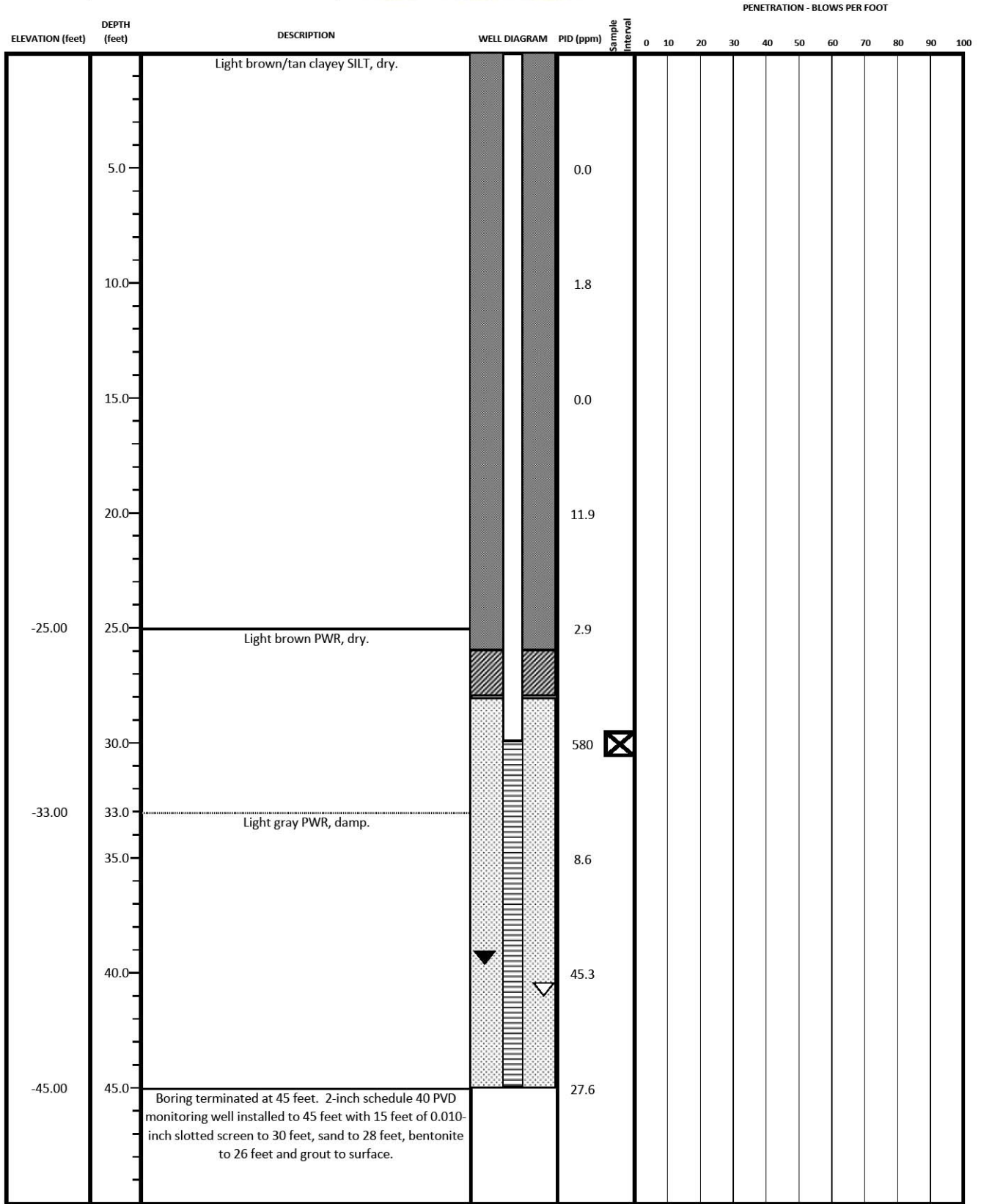
- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>▽ GW level @ time of boring</li> <li>▼ GW level measured after well installation</li> <li>■ Grout</li> </ul> | <ul style="list-style-type: none"> <li>▨ Bentonite</li> <li>▤ Sand</li> <li>□ Riser</li> </ul> | <ul style="list-style-type: none"> <li>▧ Screen</li> <li>▩ Hand Auger</li> <li>■ Standard Penetration Test</li> <li>▨ Drill Cuttings</li> </ul> |
|---|--|---|

# BORING LOG

Job Name: 378 Truck Stop  
 Location: 731 Highway 378  
Edgefield, SC



Datum Elevation: \_\_\_\_\_ feet  
 Height of Riser: \_\_\_\_\_ feet



**REMARKS:** Drilled with Drillmax 2400 using 6" Air Hammer.  
 Borehole diameter approximately 6".  
 Geologic Exploration - GEX

**DRILLED BY:** GEX - Bubba  
**LOGGED BY:** ECS - A. Williamson

**BORING NUMBER:** MW-30  
**DATE STARTED:** 1/17/2013  
**DATE COMPLETED:** 1/17/2013  
**PROJECT NUMBER:** 14-214210

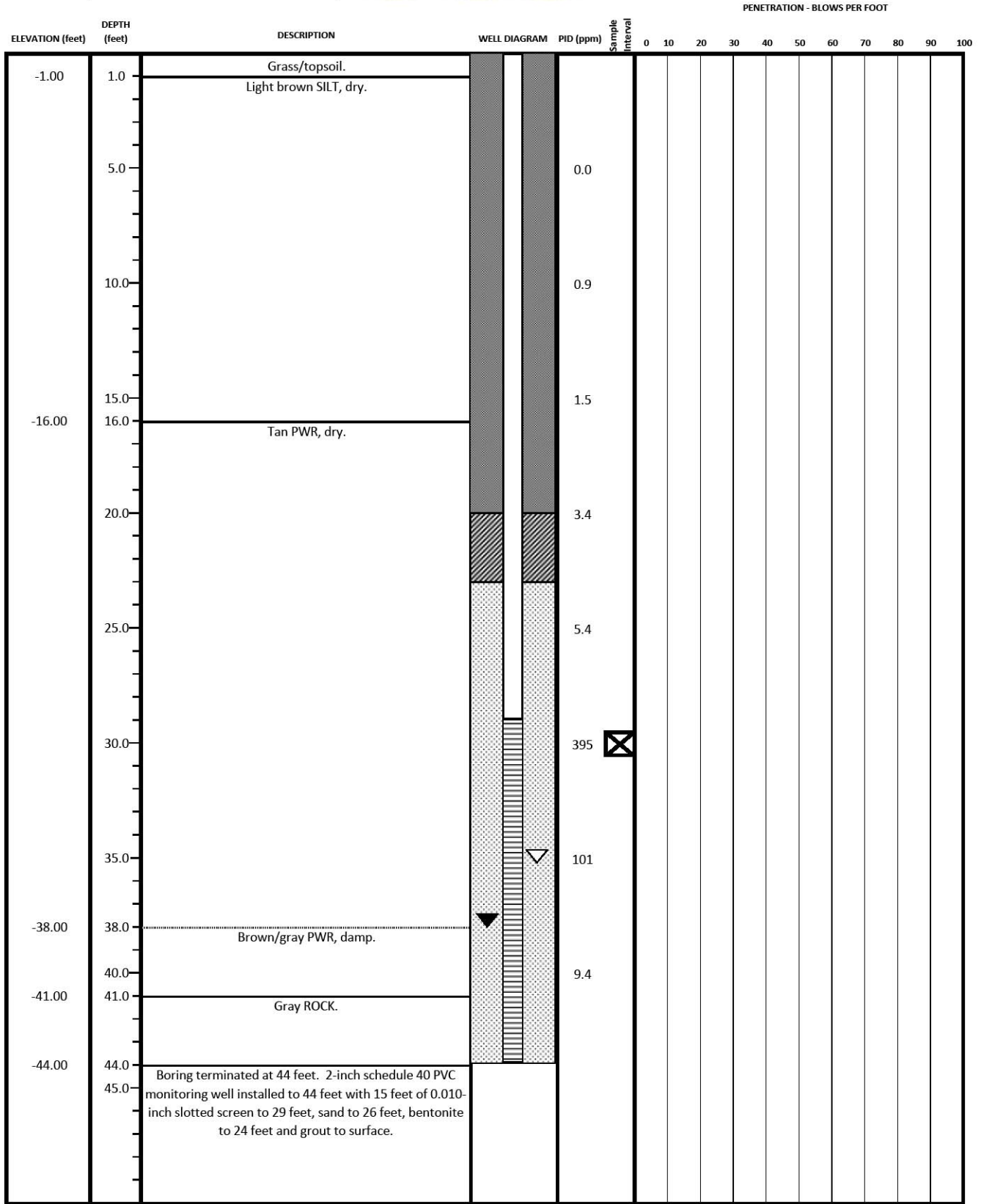
- |   |           |                           |
|---|-----------|---------------------------|
| GW level @ time of boring                 | Bentonite | Screen                    |
| GW level measured after well installation | Sand      | Hand Auger                |
| Grout                                     | Riser     | Standard Penetration Test |
|   |           | Drill Cuttings            |

# BORING LOG

Job Name: 378 Truck Stop  
 Location: 731 Highway 378  
Edgefield, SC



Datum Elevation: \_\_\_\_\_ feet  
 Height of Riser: \_\_\_\_\_ feet



**REMARKS:** Drilled with Geoprobe 7822DT using 6" Air Hammer.  
 Borehole diameter approximately 6".  
 Geologic Exploration - GEX

**DRILLED BY:** GEX - Johnny Burr  
**LOGGED BY:** ECS - A. Williamson

**BORING NUMBER:** MW-31  
**DATE STARTED:** 1/25/2013  
**DATE COMPLETED:** 1/25/2013  
**PROJECT NUMBER:** 14-214210

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>▽ GW level @ time of boring</li> <li>▼ GW level measured after well installation</li> <li>■ Grout</li> </ul> | <ul style="list-style-type: none"> <li>▨ Bentonite</li> <li>▤ Sand</li> <li>□ Riser</li> </ul> | <ul style="list-style-type: none"> <li>▧ Screen</li> <li>▩ Hand Auger</li> <li>■ Standard Penetration Test</li> </ul> |
|---|--|---|

**APPENDIX C**

---

Laboratory Report – Groundwater Samples

January 28, 2013

Mr. Brett Schaefer  
Environmental Compliance Services  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 Truck Stop 14-214210  
Pace Project No.: 92145441

Dear Mr. Schaefer:

Enclosed are the analytical results for sample(s) received by the laboratory on January 18, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Kevin Herring

kevin.herring@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..





Pace Analytical Services, Inc.  
205 East Meadow Road - Suite A  
Eden, NC 27288  
(336)623-8921

Pace Analytical Services, Inc.  
2225 Riverside Dr.  
Asheville, NC 28804  
(828)254-7176

Pace Analytical Services, Inc.  
9800 Kinsey Ave. Suite 100  
Huntersville, NC 28078  
(704)875-9092

## CERTIFICATIONS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92145441

---

### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

---

## REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, Inc.  
205 East Meadow Road - Suite A  
Eden, NC 27288  
(336)623-8921

Pace Analytical Services, Inc.  
2225 Riverside Dr.  
Asheville, NC 28804  
(828)254-7176

Pace Analytical Services, Inc.  
9800 Kinsey Ave. Suite 100  
Huntersville, NC 28078  
(704)875-9092

### SAMPLE ANALYTE COUNT

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92145441

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92145441001	07960-MW-29-5	EPA 8260	DLK	10	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92145441002	07960-MW-30-30	EPA 8260	DLK	10	PASI-C
		ASTM D2974-87	TNM	1	PASI-C

### REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.  
 205 East Meadow Road - Suite A  
 Eden, NC 27288  
 (336)623-8921

Pace Analytical Services, Inc.  
 2225 Riverside Dr.  
 Asheville, NC 28804  
 (828)254-7176

Pace Analytical Services, Inc.  
 9800 Kinsey Ave. Suite 100  
 Huntersville, NC 28078  
 (704)875-9092

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92145441

Sample: 07960-MW-29-5 Lab ID: 92145441001 Collected: 01/17/13 15:00 Received: 01/18/13 16:11 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/kg	114	20		01/28/13 13:46	71-43-2	D3
Ethylbenzene	207	ug/kg	114	20		01/28/13 13:46	100-41-4	
Naphthalene	320	ug/kg	114	20		01/28/13 13:46	91-20-3	
Toluene	306	ug/kg	114	20		01/28/13 13:46	108-88-3	
m&p-Xylene	789	ug/kg	229	20		01/28/13 13:46	179601-23-1	
o-Xylene	371	ug/kg	114	20		01/28/13 13:46	95-47-6	
<b>Surrogates</b>								
Dibromofluoromethane (S)	90	%	70-130	20		01/28/13 13:46	1868-53-7	
Toluene-d8 (S)	106	%	70-130	20		01/28/13 13:46	2037-26-5	
4-Bromofluorobenzene (S)	97	%	70-130	20		01/28/13 13:46	460-00-4	
1,2-Dichloroethane-d4 (S)	81	%	70-132	20		01/28/13 13:46	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	8.2	%	0.10	1		01/19/13 11:10		



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 (704)875-9092

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92145441

Sample: 07960-MW-30-30 Lab ID: 92145441002 Collected: 01/17/13 16:20 Received: 01/18/13 16:11 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/kg	5.0	1		01/28/13 14:04	71-43-2	
Ethylbenzene	6.4	ug/kg	5.0	1		01/28/13 14:04	100-41-4	
Naphthalene	64.0	ug/kg	5.0	1		01/28/13 14:04	91-20-3	
Toluene	ND	ug/kg	5.0	1		01/28/13 14:04	108-88-3	
m&p-Xylene	43.4	ug/kg	10.1	1		01/28/13 14:04	179601-23-1	
o-Xylene	24.8	ug/kg	5.0	1		01/28/13 14:04	95-47-6	
<b>Surrogates</b>								
Dibromofluoromethane (S)	84	%	70-130	1		01/28/13 14:04	1868-53-7	
Toluene-d8 (S)	97	%	70-130	1		01/28/13 14:04	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130	1		01/28/13 14:04	460-00-4	
1,2-Dichloroethane-d4 (S)	82	%	70-132	1		01/28/13 14:04	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	6.1	%	0.10	1		01/19/13 11:10		

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92145441

QC Batch: MSV/21829 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics  
Associated Lab Samples: 92145441001, 92145441002

METHOD BLANK: 911915 Matrix: Solid

Associated Lab Samples: 92145441001, 92145441002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	5.2	01/28/13 12:50	
Ethylbenzene	ug/kg	ND	5.2	01/28/13 12:50	
m&p-Xylene	ug/kg	ND	10.5	01/28/13 12:50	
Naphthalene	ug/kg	ND	5.2	01/28/13 12:50	
o-Xylene	ug/kg	ND	5.2	01/28/13 12:50	
Toluene	ug/kg	ND	5.2	01/28/13 12:50	
1,2-Dichloroethane-d4 (S)	%	128	70-132	01/28/13 12:50	
4-Bromofluorobenzene (S)	%	92	70-130	01/28/13 12:50	
Dibromofluoromethane (S)	%	120	70-130	01/28/13 12:50	
Toluene-d8 (S)	%	103	70-130	01/28/13 12:50	

LABORATORY CONTROL SAMPLE: 911916

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	60	54.9	92	70-130	
Ethylbenzene	ug/kg	60	54.9	92	70-137	
m&p-Xylene	ug/kg	120	113	94	70-140	
Naphthalene	ug/kg	60	51.5	86	70-148	
o-Xylene	ug/kg	60	55.2	92	70-141	
Toluene	ug/kg	60	52.9	88	70-130	
1,2-Dichloroethane-d4 (S)	%			120	70-132	
4-Bromofluorobenzene (S)	%			98	70-130	
Dibromofluoromethane (S)	%			113	70-130	
Toluene-d8 (S)	%			101	70-130	



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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92145441

QC Batch: PMST/5256 Analysis Method: ASTM D2974-87  
 QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture  
 Associated Lab Samples: 92145441001, 92145441002

SAMPLE DUPLICATE: 908271

Parameter	Units	92145441001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	8.2	8.0	3	

SAMPLE DUPLICATE: 908272

Parameter	Units	92145413011 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	17.3	16.2	6	

## QUALIFIERS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92145441

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.



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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 378 Truck Stop 14-214210

Pace Project No.: 92145441

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92145441001	07960-MW-29-5	EPA 8260	MSV/21829		
92145441002	07960-MW-30-30	EPA 8260	MSV/21829		
92145441001	07960-MW-29-5	ASTM D2974-87	PMST/5256		
92145441002	07960-MW-30-30	ASTM D2974-87	PMST/5256		





# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: <b>FCS</b>	Report To: <b>Brett Schaefer</b>	Attention: <b>Sue Streeter</b>	Page: <b>1</b> of <b>1</b>		
Address: <b>13504 South Point Blvd</b>	Copy To:	Company Name: <b>ECS</b>	Invoice Number: <b>1652274</b>		
<b>Charlotte, NC 28273</b>	Purchase Order No.: <b>14-214210</b>	Address: <b>Agawam, MA</b>	REGULATORY AGENCY		
Phone: <b>704-883-2711</b> Fax:	Project Name: <b>378 Truck Stop</b>	Pace Quote Reference:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER
Requested Due Date/TAT: <b>Standard</b>	Project Number: <b>14-214210</b>	Pace Project Manager: <b>Kevin Harding</b>	<input checked="" type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
		Pace Profile #: <b>3385-A</b>	Site Location	STATE: <b>SC</b>	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX.L.CODE	SAMPLE CODE (see yield codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test ↑	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB							
1	07960-MW-29-5	DW Water	4M6	G	DATE: 11/17/13	TIME: 1500		4	Unpreserved	X			001
2	07960-MW-30-30	WT Waste Water	SL6	G	DATE: 11/17/13	TIME: 1620		4	H <sub>2</sub> SO <sub>4</sub>	X			002
3		WW Waste Water							HCl				
4		P Product							NaOH				
5		SL Soil/Solid							HNO <sub>3</sub>				
6		OL Oil							Other				
7		WP Wipe							Methanol				
8		AR Air											
9		TS Tissue											
10		Other											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		SAMPLE CONDITIONS			
	DATE	TIME	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Sealed Cooler (Y/N)	Samples Intact (Y/N)
Please report 5-valves	11/18/13	1200	11/18/13	1200				
A. Williamson / ECS								
ECS office								
B. Moody	1-18-13	16:15	11/15/13	16:19				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: **Aaron Williamson**

SIGNATURE of SAMPLER: *Aaron Williamson*

DATE Signed (MM/DD/YYYY): **11/17/13**

ORIGINAL

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



Sample Condition Upon Receipt (SCUR)

Document Number:  
F-CHR-CS-03-rev.08

Issuing Authority:  
Pace Huntersville Quality Office

Client Name: FU Project # 92145441

Where Received:  Huntersville  Asheville  Eden  Raleigh

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Optional:  
Proj. Due Date  
Proj. Name

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used: IR Gun T1101 T1102 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor T1101: No Correction T1102: No Correction

Corrected Cooler Temp.: 4.4 C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: mm-11-13

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N  
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_

SCURF Review: [Signature] Date: 11/13 SRF Review: [Signature] Date: 11/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

February 04, 2013

Mr. Brett Schaefer  
Environmental Compliance Services  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 Truck Stop 14-214210  
Pace Project No.: 92146115

Dear Mr. Schaefer:

Enclosed are the analytical results for sample(s) received by the laboratory on January 28, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Kevin Herring

kevin.herring@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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(704)875-9092

## CERTIFICATIONS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92146115

---

### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

---

## REPORT OF LABORATORY ANALYSIS



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### SAMPLE ANALYTE COUNT

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92146115

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92146115001	07980-MW-31-30	EPA 8260	DLK	10	PASI-C
		ASTM D2974-87	JEA	1	PASI-C

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92146115

Sample: 07980-MW-31-30 Lab ID: 92146115001 Collected: 01/25/13 10:30 Received: 01/28/13 15:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Benzene	ND	ug/kg	3.9	1		02/02/13 16:58	71-43-2	
Ethylbenzene	ND	ug/kg	3.9	1		02/02/13 16:58	100-41-4	
Naphthalene	ND	ug/kg	3.9	1		02/02/13 16:58	91-20-3	
Toluene	ND	ug/kg	3.9	1		02/02/13 16:58	108-88-3	
m&p-Xylene	ND	ug/kg	7.8	1		02/02/13 16:58	179601-23-1	
o-Xylene	ND	ug/kg	3.9	1		02/02/13 16:58	95-47-6	
<b>Surrogates</b>								
Dibromofluoromethane (S)	106	%	70-130	1		02/02/13 16:58	1868-53-7	
Toluene-d8 (S)	100	%	70-130	1		02/02/13 16:58	2037-26-5	
4-Bromofluorobenzene (S)	99	%	70-130	1		02/02/13 16:58	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-132	1		02/02/13 16:58	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	6.5	%	0.10	1		01/29/13 14:06		

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92146115

QC Batch: MSV/21868 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics  
Associated Lab Samples: 92146115001

METHOD BLANK: 915297 Matrix: Solid

Associated Lab Samples: 92146115001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	5.4	02/02/13 12:25	
Ethylbenzene	ug/kg	ND	5.4	02/02/13 12:25	
m&p-Xylene	ug/kg	ND	10.9	02/02/13 12:25	
Naphthalene	ug/kg	ND	5.4	02/02/13 12:25	
o-Xylene	ug/kg	ND	5.4	02/02/13 12:25	
Toluene	ug/kg	ND	5.4	02/02/13 12:25	
1,2-Dichloroethane-d4 (S)	%	106	70-132	02/02/13 12:25	
4-Bromofluorobenzene (S)	%	96	70-130	02/02/13 12:25	
Dibromofluoromethane (S)	%	108	70-130	02/02/13 12:25	
Toluene-d8 (S)	%	100	70-130	02/02/13 12:25	

LABORATORY CONTROL SAMPLE: 915298

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	55.6	63.7	115	70-130	
Ethylbenzene	ug/kg	55.6	65.2	117	70-137	
m&p-Xylene	ug/kg	111	133	120	70-140	
Naphthalene	ug/kg	55.6	65.1	117	70-148	
o-Xylene	ug/kg	55.6	64.0	115	70-141	
Toluene	ug/kg	55.6	65.5	118	70-130	
1,2-Dichloroethane-d4 (S)	%			76	70-132	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			75	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 915381

Parameter	Units	92146115001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	ND	49	51.2	104	50-166	
Toluene	ug/kg	ND	49	60.1	123	52-163	
1,2-Dichloroethane-d4 (S)	%				87	70-132	
4-Bromofluorobenzene (S)	%				100	70-130	
Dibromofluoromethane (S)	%				84	70-130	
Toluene-d8 (S)	%				103	70-130	

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92146115

SAMPLE DUPLICATE: 915380

Parameter	Units	92145930001 Result	Dup Result	RPD	Qualifiers
Benzene	ug/kg	ND	1.7J		
Ethylbenzene	ug/kg	ND	ND		
m&p-Xylene	ug/kg	ND	ND		
Naphthalene	ug/kg	ND	5.6		
o-Xylene	ug/kg	ND	ND		
Toluene	ug/kg	ND	ND		
1,2-Dichloroethane-d4 (S)	%	127	107	20	
4-Bromofluorobenzene (S)	%	85	81	8	
Dibromofluoromethane (S)	%	114	95	20	
Toluene-d8 (S)	%	93	91	5	





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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92146115

QC Batch: PMST/5271 Analysis Method: ASTM D2974-87  
 QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture  
 Associated Lab Samples: 92146115001

SAMPLE DUPLICATE: 912158

Parameter	Units	92146067012 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	23.0	22.9	1	

SAMPLE DUPLICATE: 912159

Parameter	Units	92146115001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	6.5	6.6	0	

## QUALIFIERS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92146115

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte



Pace Analytical Services, Inc.  
205 East Meadow Road - Suite A  
Eden, NC 27288  
(336)623-8921

Pace Analytical Services, Inc.  
2225 Riverside Dr.  
Asheville, NC 28804  
(828)254-7176

Pace Analytical Services, Inc.  
9800 Kinsey Ave. Suite 100  
Huntersville, NC 28078  
(704)875-9092

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92146115

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92146115001	07980-MW-31-30	EPA 8260	MSV/21868		
92146115001	07980-MW-31-30	ASTM D2974-87	PMST/5271		

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



www.pacelabs.com

Page: 1 of 1

1604291

REGULATORY AGENCY  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

Site Location  
 STATE: SC

### Section A

Required Client Information:

Company: ECS

Address: 13504 South Point Blvd

Charlotte, NC 28223

Phone: 857.681.2711 Fax: 857.681.2711

Requested Due Date/TAT: Standard

### Section B

Required Project Information:

Report To: Brett Schaefer

Copy To: ECS

Purchase Order No.: 14-214210

Project Name: 378 Truck Stop

Project Number: 14-214210

### Section C

Invoice Information:

Attention: Joe Streeter

Company Name: ECS

Address: Agawam, MA

Pace Quote Reference: Kevin Herring

Pace Project Manager: 3385-7

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see vial codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB							
1	07980-mw-31-30	DW Drinking Water	SL 6	G	DATE: 1/25/13	TIME: 1030		4	Unpreserved	X			92146115
2		WT Water							NaOH	X			001
3		WW Waste Water							HCl				
4		P Product							HNO <sub>3</sub>				
5		SL Soil/Solid							H <sub>2</sub> O <sub>2</sub>				
6		OL Oil							Other				
7		WP Wipe											
8		AR Air											
9		TS Tissue											
10		OT Other											
11													
12													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please report 5-values.	A. Williamson/ECS	1/25/13	1500	ECS Office	1/25/13	1500	
ECS Office	B. Moody - Pace	1-28-13	12:25	B. Moody - Pace	1-28-13	12:25	
B. Moody	W. M. Tank	1-28-13	15:35	W. M. Tank	1-28-13	15:35	Received on Ice (Y/N) 4x ~ 5x Sealed Cooler (Y/N) Custody (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Williamson DATE Signed (MM/DD/YY): 1/25/13

SIGNATURE of SAMPLER: Aaron Williamson

ORIGINAL

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



Sample Condition Upon Receipt (SCUR)

Document Number:

Issuing Authority:

F-CHR-CS-03-rev.08

Pace Huntersville Quality Office

Client Name: EC Project # 92146115

Where Received:  Huntersville  Asheville  Eden  Raleigh

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Optional:  
Proj. Due Date  
Proj. Name

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used: IR Gun T1101  T1102 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Temp Correction Factor T1101: No Correction T1102: No Correction

Corrected Cooler Temp.: 1.5 C Biological Tissue Is Frozen: Yes No N/A

Date and Initials of person examining contents: mm-11-2013

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review: EW Date: 1/28/13 SRF Review: EW Date: 1/28/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



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(704)875-9092

February 18, 2013

Mr. Brett Schaefer  
Environmental Compliance Services  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

Dear Mr. Schaefer:

Enclosed are the analytical results for sample(s) received by the laboratory on February 15, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Jon D Bradley for  
Kevin Herring  
kevin.herring@pacelabs.com  
Project Manager

Enclosures



### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

---

### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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## REPORT OF LABORATORY ANALYSIS



**SAMPLE ANALYTE COUNT**

Project: Truck Stop 378 14.214210  
 Pace Project No.: 92148289

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92148289001	07960-TW 3	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289002	07960-MW 9	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289003	07960-TW 4	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289004	07960-MW 10	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289005	07960-TW 7	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289006	07960-TW 8	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289007	07960-MW 19	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289008	07960-TW 2	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289009	07960-MW 3	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289010	07960-TW 5	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289011	07960-MW 25	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289012	07960-MW 31	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289013	07960-TW 9	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289014	07960-MW 26	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289015	07960-TW 6	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289016	07960-MW 16	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289017	07960-TW 1	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289018	Duplicate 3	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148289019	Trip Blank	EPA 8011	NU1	2	PASI-C

**REPORT OF LABORATORY ANALYSIS**





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### SAMPLE ANALYTE COUNT

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	MCK	20	PASI-C

---

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
 Pace Project No.: 92148289

Sample: 07960-TW 3	Lab ID: 92148289001	Collected: 02/13/13 11:30	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:09	02/17/13 00:17	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	98 %		60-140	1	02/16/13 21:09	02/17/13 00:17	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 20:02	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 20:02	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 20:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 20:02	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 20:02	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 20:02	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 20:02	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 20:02	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 20:02	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 20:02	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 20:02	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 20:02	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 20:02	91-20-3	
Toluene	6.5 ug/L		5.0	1		02/15/13 20:02	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 20:02	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 20:02	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/15/13 20:02	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/15/13 20:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/15/13 20:02	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/15/13 20:02	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210

Project No.: 92148289

Sample: 07960-MW 9		Lab ID: 92148289002	Collected: 02/13/13 11:40	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	1	02/16/13 21:10	02/17/13 00:38	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	91	%	60-140	1	02/16/13 21:10	02/17/13 00:38	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	1		02/15/13 20:17	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/15/13 20:17	994-05-8	
Benzene	ND	ug/L	5.0	1		02/15/13 20:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/15/13 20:17	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/15/13 20:17	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/15/13 20:17	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		02/15/13 20:17	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/15/13 20:17	108-20-3	
Ethanol	ND	ug/L	200	1		02/15/13 20:17	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		02/15/13 20:17	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/15/13 20:17	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/15/13 20:17	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/15/13 20:17	91-20-3	
Toluene	ND	ug/L	5.0	1		02/15/13 20:17	108-88-3	
m&p-Xylene	ND	ug/L	10.0	1		02/15/13 20:17	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/15/13 20:17	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	70-130	1		02/15/13 20:17	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		02/15/13 20:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		02/15/13 20:17	17060-07-0	
Toluene-d8 (S)	94	%	70-130	1		02/15/13 20:17	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210

Project No.: 92148289

Sample: 07960-TW 4		Lab ID: 92148289003	Collected: 02/13/13 13:00	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	1	02/16/13 21:10	02/17/13 00:58	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	96	%	60-140	1	02/16/13 21:10	02/17/13 00:58	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	1		02/15/13 20:33	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/15/13 20:33	994-05-8	
Benzene	ND	ug/L	5.0	1		02/15/13 20:33	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/15/13 20:33	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/15/13 20:33	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	1		02/15/13 20:33	762-75-4	M1, P5
1,2-Dichloroethane	ND	ug/L	5.0	1		02/15/13 20:33	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/15/13 20:33	108-20-3	
Ethanol	ND	ug/L	200	1		02/15/13 20:33	64-17-5	M1
Ethylbenzene	ND	ug/L	5.0	1		02/15/13 20:33	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/15/13 20:33	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/15/13 20:33	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/15/13 20:33	91-20-3	
Toluene	34.9	ug/L	5.0	1		02/15/13 20:33	108-88-3	M1
m&p-Xylene	ND	ug/L	10.0	1		02/15/13 20:33	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/15/13 20:33	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	70-130	1		02/15/13 20:33	460-00-4	
Dibromofluoromethane (S)	101	%	70-130	1		02/15/13 20:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		02/15/13 20:33	17060-07-0	
Toluene-d8 (S)	94	%	70-130	1		02/15/13 20:33	2037-26-5	



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 (704)875-9092

### ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
 Pace Project No.: 92148289

Sample: 07960-MW 10	Lab ID: 92148289004	Collected: 02/13/13 12:40	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:10	02/17/13 01:19	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	95 %		60-140	1	02/16/13 21:10	02/17/13 01:19	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 20:49	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 20:49	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 20:49	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 20:49	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 20:49	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 20:49	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 20:49	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 20:49	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 20:49	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 20:49	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 20:49	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 20:49	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 20:49	91-20-3	
Toluene	ND ug/L		5.0	1		02/15/13 20:49	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 20:49	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 20:49	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104 %		70-130	1		02/15/13 20:49	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/15/13 20:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/15/13 20:49	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/15/13 20:49	2037-26-5	



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### ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
 Pace Project No.: 92148289

Sample: 07960-TW 7	Lab ID: 92148289005	Collected: 02/13/13 15:40	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.019	1	02/16/13 21:10	02/17/13 01:39	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92 %		60-140	1	02/16/13 21:10	02/17/13 01:39	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 21:05	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 21:05	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 21:05	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 21:05	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 21:05	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 21:05	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 21:05	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 21:05	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 21:05	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 21:05	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 21:05	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 21:05	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 21:05	91-20-3	
Toluene	ND ug/L		5.0	1		02/15/13 21:05	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 21:05	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 21:05	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104 %		70-130	1		02/15/13 21:05	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/15/13 21:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	103 %		70-130	1		02/15/13 21:05	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/15/13 21:05	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

Sample: 07960-TW 8		Lab ID: 92148289006	Collected: 02/13/13 15:54	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:10	02/17/13 01:59	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	96 %		60-140	1	02/16/13 21:10	02/17/13 01:59	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 21:21	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 21:21	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 21:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 21:21	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 21:21	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 21:21	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 21:21	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 21:21	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 21:21	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 21:21	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 21:21	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 21:21	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 21:21	91-20-3	
Toluene	ND ug/L		5.0	1		02/15/13 21:21	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 21:21	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 21:21	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/15/13 21:21	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/15/13 21:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	99 %		70-130	1		02/15/13 21:21	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/15/13 21:21	2037-26-5	



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### ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
 Pace Project No.: 92148289

Sample: 07960-MW 19	Lab ID: 92148289007	Collected: 02/13/13 15:30	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.021	1	02/16/13 21:10	02/17/13 02:20	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	81 %		60-140	1	02/16/13 21:10	02/17/13 02:20	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 21:37	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 21:37	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 21:37	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 21:37	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 21:37	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 21:37	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 21:37	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 21:37	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 21:37	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 21:37	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 21:37	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 21:37	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 21:37	91-20-3	
Toluene	ND ug/L		5.0	1		02/15/13 21:37	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 21:37	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 21:37	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/15/13 21:37	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/15/13 21:37	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/15/13 21:37	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/15/13 21:37	2037-26-5	



## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Project No.: 92148289

Sample: 07960-TW 2		Lab ID: 92148289008	Collected: 02/13/13 17:30	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.019	1	02/16/13 21:10	02/17/13 02:40	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	98 %		60-140	1	02/16/13 21:10	02/17/13 02:40	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 21:53	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 21:53	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 21:53	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 21:53	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 21:53	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 21:53	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 21:53	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 21:53	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 21:53	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 21:53	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 21:53	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 21:53	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 21:53	91-20-3	
Toluene	18.7 ug/L		5.0	1		02/15/13 21:53	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 21:53	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 21:53	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/15/13 21:53	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/15/13 21:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/15/13 21:53	17060-07-0	
Toluene-d8 (S)	94 %		70-130	1		02/15/13 21:53	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

Sample: 07960-MW 3		Lab ID: 92148289009	Collected: 02/13/13 17:20	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	0.40	ug/L	0.020	1	02/16/13 21:11	02/17/13 03:41	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	111	%	60-140	1	02/16/13 21:11	02/17/13 03:41	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	13200	ug/L	5000	50		02/15/13 22:08	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	50		02/15/13 22:08	994-05-8	
Benzene	6860	ug/L	250	50		02/15/13 22:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	50		02/15/13 22:08	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	50		02/15/13 22:08	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	50		02/15/13 22:08	762-75-4	
1,2-Dichloroethane	586	ug/L	250	50		02/15/13 22:08	107-06-2	
Diisopropyl ether	ND	ug/L	250	50		02/15/13 22:08	108-20-3	
Ethanol	ND	ug/L	10000	50		02/15/13 22:08	64-17-5	
Ethylbenzene	660	ug/L	250	50		02/15/13 22:08	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	50		02/15/13 22:08	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	50		02/15/13 22:08	1634-04-4	
Naphthalene	349	ug/L	250	50		02/15/13 22:08	91-20-3	
Toluene	366	ug/L	250	50		02/15/13 22:08	108-88-3	
m&p-Xylene	2310	ug/L	500	50		02/15/13 22:08	179601-23-1	
o-Xylene	946	ug/L	250	50		02/15/13 22:08	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	70-130	50		02/15/13 22:08	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	50		02/15/13 22:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130	50		02/15/13 22:08	17060-07-0	
Toluene-d8 (S)	97	%	70-130	50		02/15/13 22:08	2037-26-5	



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### ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
 Pace Project No.: 92148289

Sample: 07960-TW 5	Lab ID: 92148289010	Collected: 02/14/13 08:36	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:11	02/17/13 04:21	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	97 %		60-140	1	02/16/13 21:11	02/17/13 04:21	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 22:24	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 22:24	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 22:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 22:24	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 22:24	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 22:24	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 22:24	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 22:24	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 22:24	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 22:24	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 22:24	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 22:24	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 22:24	91-20-3	
Toluene	ND ug/L		5.0	1		02/15/13 22:24	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 22:24	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 22:24	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/15/13 22:24	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/15/13 22:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/15/13 22:24	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/15/13 22:24	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

Sample: 07960-MW 25		Lab ID: 92148289011	Collected: 02/14/13 09:36	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:11	02/17/13 04:41	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	99 %		60-140	1	02/16/13 21:11	02/17/13 04:41	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 22:40	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 22:40	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 22:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 22:40	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 22:40	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 22:40	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 22:40	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 22:40	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 22:40	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 22:40	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 22:40	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 22:40	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 22:40	91-20-3	
Toluene	ND ug/L		5.0	1		02/15/13 22:40	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 22:40	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 22:40	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/15/13 22:40	460-00-4	
Dibromofluoromethane (S)	100 %		70-130	1		02/15/13 22:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/15/13 22:40	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/15/13 22:40	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

Sample: 07960-MW 31	Lab ID: 92148289012	Collected: 02/14/13 10:10	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	1	02/16/13 21:11	02/17/13 05:02	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	97	%	60-140	1	02/16/13 21:11	02/17/13 05:02	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	1		02/15/13 22:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/15/13 22:56	994-05-8	
Benzene	24.5	ug/L	5.0	1		02/15/13 22:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/15/13 22:56	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/15/13 22:56	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/15/13 22:56	762-75-4	
1,2-Dichloroethane	51.4	ug/L	5.0	1		02/15/13 22:56	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/15/13 22:56	108-20-3	
Ethanol	ND	ug/L	200	1		02/15/13 22:56	64-17-5	
Ethylbenzene	14.7	ug/L	5.0	1		02/15/13 22:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/15/13 22:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/15/13 22:56	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/15/13 22:56	91-20-3	
Toluene	26.2	ug/L	5.0	1		02/15/13 22:56	108-88-3	
m&p-Xylene	77.3	ug/L	10.0	1		02/15/13 22:56	179601-23-1	
o-Xylene	32.3	ug/L	5.0	1		02/15/13 22:56	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	70-130	1		02/15/13 22:56	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		02/15/13 22:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	70-130	1		02/15/13 22:56	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		02/15/13 22:56	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210

Project No.: 92148289

Sample: 07960-TW 9	Lab ID: 92148289013	Collected: 02/14/13 11:04	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:11	02/17/13 05:22	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	96 %		60-140	1	02/16/13 21:11	02/17/13 05:22	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 23:12	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 23:12	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 23:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 23:12	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 23:12	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 23:12	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 23:12	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 23:12	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 23:12	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 23:12	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 23:12	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 23:12	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 23:12	91-20-3	
Toluene	ND ug/L		5.0	1		02/15/13 23:12	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 23:12	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 23:12	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/15/13 23:12	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/15/13 23:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	102 %		70-130	1		02/15/13 23:12	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/15/13 23:12	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Project No.: 92148289

Sample: 07960-MW 26	Lab ID: 92148289014	Collected: 02/14/13 11:40	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:12	02/17/13 05:42	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	97 %		60-140	1	02/16/13 21:12	02/17/13 05:42	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/15/13 23:28	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/15/13 23:28	994-05-8	
Benzene	ND ug/L		5.0	1		02/15/13 23:28	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/15/13 23:28	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/15/13 23:28	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/15/13 23:28	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/15/13 23:28	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/15/13 23:28	108-20-3	
Ethanol	ND ug/L		200	1		02/15/13 23:28	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/15/13 23:28	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/15/13 23:28	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/15/13 23:28	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/15/13 23:28	91-20-3	
Toluene	ND ug/L		5.0	1		02/15/13 23:28	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/15/13 23:28	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/15/13 23:28	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/15/13 23:28	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/15/13 23:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/15/13 23:28	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/15/13 23:28	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Project No.: 92148289

Sample: 07960-TW 6		Lab ID: 92148289015	Collected: 02/14/13 13:10	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	1	02/16/13 21:12	02/17/13 06:02	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	86	%	60-140	1	02/16/13 21:12	02/17/13 06:02	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	1		02/15/13 23:43	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/15/13 23:43	994-05-8	
Benzene	ND	ug/L	5.0	1		02/15/13 23:43	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/15/13 23:43	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/15/13 23:43	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/15/13 23:43	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		02/15/13 23:43	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/15/13 23:43	108-20-3	
Ethanol	ND	ug/L	200	1		02/15/13 23:43	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		02/15/13 23:43	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/15/13 23:43	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/15/13 23:43	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/15/13 23:43	91-20-3	
Toluene	33.3	ug/L	5.0	1		02/15/13 23:43	108-88-3	
m&p-Xylene	ND	ug/L	10.0	1		02/15/13 23:43	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/15/13 23:43	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	70-130	1		02/15/13 23:43	460-00-4	
Dibromofluoromethane (S)	103	%	70-130	1		02/15/13 23:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		02/15/13 23:43	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		02/15/13 23:43	2037-26-5	



## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Project No.: 92148289

Sample: 07960-MW 16	Lab ID: 92148289016	Collected: 02/14/13 14:00	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	1	02/16/13 21:12	02/17/13 06:22	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	88	%	60-140	1	02/16/13 21:12	02/17/13 06:22	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	263	ug/L	100	1		02/15/13 23:59	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/15/13 23:59	994-05-8	
Benzene	51.6	ug/L	5.0	1		02/15/13 23:59	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/15/13 23:59	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/15/13 23:59	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/15/13 23:59	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		02/15/13 23:59	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/15/13 23:59	108-20-3	
Ethanol	ND	ug/L	200	1		02/15/13 23:59	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		02/15/13 23:59	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/15/13 23:59	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/15/13 23:59	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/15/13 23:59	91-20-3	
Toluene	ND	ug/L	5.0	1		02/15/13 23:59	108-88-3	
m&p-Xylene	ND	ug/L	10.0	1		02/15/13 23:59	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/15/13 23:59	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	70-130	1		02/15/13 23:59	460-00-4	
Dibromofluoromethane (S)	101	%	70-130	1		02/15/13 23:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		02/15/13 23:59	17060-07-0	
Toluene-d8 (S)	94	%	70-130	1		02/15/13 23:59	2037-26-5	



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### ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
 Pace Project No.: 92148289

Sample: 07960-TW 1	Lab ID: 92148289017	Collected: 02/14/13 14:40	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	1	02/16/13 21:12	02/17/13 06:42	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	95	%	60-140	1	02/16/13 21:12	02/17/13 06:42	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	899	ug/L	100	1		02/16/13 00:15	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/16/13 00:15	994-05-8	
Benzene	ND	ug/L	5.0	1		02/16/13 00:15	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/16/13 00:15	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/16/13 00:15	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/16/13 00:15	762-75-4	
1,2-Dichloroethane	52.4	ug/L	5.0	1		02/16/13 00:15	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/16/13 00:15	108-20-3	
Ethanol	ND	ug/L	200	1		02/16/13 00:15	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		02/16/13 00:15	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/16/13 00:15	637-92-3	
Methyl-tert-butyl ether	5.1	ug/L	5.0	1		02/16/13 00:15	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/16/13 00:15	91-20-3	
Toluene	ND	ug/L	5.0	1		02/16/13 00:15	108-88-3	
m&p-Xylene	ND	ug/L	10.0	1		02/16/13 00:15	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/16/13 00:15	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104	%	70-130	1		02/16/13 00:15	460-00-4	
Dibromofluoromethane (S)	102	%	70-130	1		02/16/13 00:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130	1		02/16/13 00:15	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		02/16/13 00:15	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

Sample: Duplicate 3		Lab ID: 92148289018	Collected: 02/14/13 00:00	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	1	02/16/13 21:12	02/17/13 07:02	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92	%	60-140	1	02/16/13 21:12	02/17/13 07:02	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	100	ug/L	100	1		02/16/13 00:31	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/16/13 00:31	994-05-8	
Benzene	22.2	ug/L	5.0	1		02/16/13 00:31	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/16/13 00:31	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/16/13 00:31	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/16/13 00:31	762-75-4	
1,2-Dichloroethane	52.6	ug/L	5.0	1		02/16/13 00:31	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/16/13 00:31	108-20-3	
Ethanol	ND	ug/L	200	1		02/16/13 00:31	64-17-5	
Ethylbenzene	13.6	ug/L	5.0	1		02/16/13 00:31	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/16/13 00:31	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/16/13 00:31	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/16/13 00:31	91-20-3	
Toluene	23.6	ug/L	5.0	1		02/16/13 00:31	108-88-3	
m&p-Xylene	72.0	ug/L	10.0	1		02/16/13 00:31	179601-23-1	
o-Xylene	29.7	ug/L	5.0	1		02/16/13 00:31	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	70-130	1		02/16/13 00:31	460-00-4	
Dibromofluoromethane (S)	100	%	70-130	1		02/16/13 00:31	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		02/16/13 00:31	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		02/16/13 00:31	2037-26-5	

## ANALYTICAL RESULTS

Project: Truck Stop 378 14.214210  
Project No.: 92148289

Sample: Trip Blank		Lab ID: 92148289019	Collected: 02/14/13 00:00	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	1	02/16/13 21:12	02/17/13 07:23	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	96 %		60-140	1	02/16/13 21:12	02/17/13 07:23	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	1		02/15/13 15:48	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/15/13 15:48	994-05-8	
Benzene	ND	ug/L	5.0	1		02/15/13 15:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/15/13 15:48	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/15/13 15:48	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/15/13 15:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		02/15/13 15:48	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/15/13 15:48	108-20-3	
Ethanol	ND	ug/L	200	1		02/15/13 15:48	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		02/15/13 15:48	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/15/13 15:48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/15/13 15:48	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/15/13 15:48	91-20-3	
Toluene	ND	ug/L	5.0	1		02/15/13 15:48	108-88-3	
m&p-Xylene	ND	ug/L	10.0	1		02/15/13 15:48	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/15/13 15:48	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/15/13 15:48	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/15/13 15:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		02/15/13 15:48	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/15/13 15:48	2037-26-5	

### QUALITY CONTROL DATA

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

QC Batch: MSV/22036 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92148289001, 92148289002, 92148289003, 92148289019

METHOD BLANK: 923363 Matrix: Water  
Associated Lab Samples: 92148289001, 92148289002, 92148289003, 92148289019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/15/13 15:16	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/15/13 15:16	
Benzene	ug/L	ND	5.0	02/15/13 15:16	
Diisopropyl ether	ug/L	ND	5.0	02/15/13 15:16	
Ethanol	ug/L	ND	200	02/15/13 15:16	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/15/13 15:16	
Ethylbenzene	ug/L	ND	5.0	02/15/13 15:16	
m&p-Xylene	ug/L	ND	10.0	02/15/13 15:16	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/15/13 15:16	
Naphthalene	ug/L	ND	5.0	02/15/13 15:16	
o-Xylene	ug/L	ND	5.0	02/15/13 15:16	
tert-Amyl Alcohol	ug/L	ND	100	02/15/13 15:16	
tert-Amylmethyl ether	ug/L	ND	10.0	02/15/13 15:16	
tert-Butyl Alcohol	ug/L	ND	100	02/15/13 15:16	
tert-Butyl Formate	ug/L	ND	50.0	02/15/13 15:16	
Toluene	ug/L	ND	5.0	02/15/13 15:16	
1,2-Dichloroethane-d4 (S)	%	99	70-130	02/15/13 15:16	
4-Bromofluorobenzene (S)	%	100	70-130	02/15/13 15:16	
Dibromofluoromethane (S)	%	99	70-130	02/15/13 15:16	
Toluene-d8 (S)	%	97	70-130	02/15/13 15:16	

LABORATORY CONTROL SAMPLE: 923364

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	47.3	95	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	794	79	70-130	
Benzene	ug/L	50	47.4	95	70-130	
Diisopropyl ether	ug/L	50	44.4	89	70-130	
Ethanol	ug/L	2000	2380	119	70-130	
Ethyl-tert-butyl ether	ug/L	100	86.7	87	70-130	
Ethylbenzene	ug/L	50	48.4	97	70-130	
m&p-Xylene	ug/L	100	96.8	97	70-130	
Methyl-tert-butyl ether	ug/L	50	43.6	87	70-130	
Naphthalene	ug/L	50	48.9	98	70-130	
o-Xylene	ug/L	50	46.4	93	70-130	
tert-Amyl Alcohol	ug/L	1000	857	86	70-130	
tert-Amylmethyl ether	ug/L	100	99.0	99	70-130	
tert-Butyl Alcohol	ug/L	500	440	88	70-130	
tert-Butyl Formate	ug/L	400	338	84	70-130	
Toluene	ug/L	50	48.5	97	70-130	
1,2-Dichloroethane-d4 (S)	%			103	70-130	

### QUALITY CONTROL DATA

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

LABORATORY CONTROL SAMPLE: 923364

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923365 923366

Parameter	Units	92148289003		MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	50	50	56.3	48.1	113	96	70-130	16		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1030	911	103	91	70-130	12		
Benzene	ug/L	ND	50	50	56.9	49.6	114	99	70-130	14		
Diisopropyl ether	ug/L	ND	50	50	53.2	45.8	106	92	70-130	15		
Ethanol	ug/L	ND	2000	2000	3090	2950	154	147	70-130	5 M1		
Ethyl-tert-butyl ether	ug/L	ND	100	100	103	88.7	103	89	70-130	15		
Ethylbenzene	ug/L	ND	50	50	58.0	51.2	116	102	70-130	12		
m&p-Xylene	ug/L	ND	100	100	115	103	114	102	70-130	11		
Methyl-tert-butyl ether	ug/L	ND	50	50	51.3	46.2	103	92	70-130	10		
Naphthalene	ug/L	ND	50	50	51.4	46.3	103	93	70-130	10		
o-Xylene	ug/L	ND	50	50	55.1	48.8	110	97	70-130	12		
tert-Amyl Alcohol	ug/L	ND	1000	1000	1100	975	110	97	70-130	12		
tert-Amylmethyl ether	ug/L	ND	100	100	118	99.6	118	100	70-130	17		
tert-Butyl Alcohol	ug/L	ND	500	500	748	676	150	135	70-130	10 M1		
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	1	0	70-130	P5		
Toluene	ug/L	34.9	50	50	103	94.0	136	118	70-130	9 M1		
1,2-Dichloroethane-d4 (S)	%							107	101	70-130		
4-Bromofluorobenzene (S)	%							99	100	70-130		
Dibromofluoromethane (S)	%							98	97	70-130		
Toluene-d8 (S)	%							99	96	70-130		

### QUALITY CONTROL DATA

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

QC Batch: MSV/22037 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92148289004, 92148289005, 92148289006, 92148289007, 92148289008, 92148289009, 92148289010, 92148289011, 92148289012, 92148289013, 92148289014, 92148289015, 92148289016, 92148289017, 92148289018

METHOD BLANK: 923376 Matrix: Water

Associated Lab Samples: 92148289004, 92148289005, 92148289006, 92148289007, 92148289008, 92148289009, 92148289010, 92148289011, 92148289012, 92148289013, 92148289014, 92148289015, 92148289016, 92148289017, 92148289018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/15/13 15:00	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/15/13 15:00	
Benzene	ug/L	ND	5.0	02/15/13 15:00	
Diisopropyl ether	ug/L	ND	5.0	02/15/13 15:00	
Ethanol	ug/L	ND	200	02/15/13 15:00	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/15/13 15:00	
Ethylbenzene	ug/L	ND	5.0	02/15/13 15:00	
m&p-Xylene	ug/L	ND	10.0	02/15/13 15:00	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/15/13 15:00	
Naphthalene	ug/L	ND	5.0	02/15/13 15:00	
o-Xylene	ug/L	ND	5.0	02/15/13 15:00	
tert-Amyl Alcohol	ug/L	ND	100	02/15/13 15:00	
tert-Amylmethyl ether	ug/L	ND	10.0	02/15/13 15:00	
tert-Butyl Alcohol	ug/L	ND	100	02/15/13 15:00	
tert-Butyl Formate	ug/L	ND	50.0	02/15/13 15:00	
Toluene	ug/L	ND	5.0	02/15/13 15:00	
1,2-Dichloroethane-d4 (S)	%	100	70-130	02/15/13 15:00	
4-Bromofluorobenzene (S)	%	107	70-130	02/15/13 15:00	
Dibromofluoromethane (S)	%	100	70-130	02/15/13 15:00	
Toluene-d8 (S)	%	97	70-130	02/15/13 15:00	

LABORATORY CONTROL SAMPLE: 923377

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	44.9	90	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	800	80	70-130	
Benzene	ug/L	50	45.7	91	70-130	
Diisopropyl ether	ug/L	50	43.6	87	70-130	
Ethanol	ug/L	2000	1980	99	70-130	
Ethyl-tert-butyl ether	ug/L	100	86.3	86	70-130	
Ethylbenzene	ug/L	50	47.0	94	70-130	
m&p-Xylene	ug/L	100	96.3	96	70-130	
Methyl-tert-butyl ether	ug/L	50	46.0	92	70-130	
Naphthalene	ug/L	50	46.1	92	70-130	
o-Xylene	ug/L	50	46.0	92	70-130	
tert-Amyl Alcohol	ug/L	1000	868	87	70-130	
tert-Amylmethyl ether	ug/L	100	97.5	98	70-130	
tert-Butyl Alcohol	ug/L	500	438	88	70-130	

### QUALITY CONTROL DATA

Project: Truck Stop 378 14.214210

Pace Project No.: 92148289

LABORATORY CONTROL SAMPLE: 923377

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	341	85	70-130	
Toluene	ug/L	50	46.8	94	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			97	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923378 923379

Parameter	92148289013		MS		MSD		MS		MSD		% Rec Limits	RPD	Qual
	Units	Result	Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
1,2-Dichloroethane	ug/L	ND	50	50	52.4	50.8	105	102	70-130	3			
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	984	900	98	90	70-130	9			
Benzene	ug/L	ND	50	50	53.3	52.6	107	105	70-130	1			
Diisopropyl ether	ug/L	ND	50	50	50.7	48.9	101	98	70-130	4			
Ethanol	ug/L	ND	2000	2000	2790	2650	140	132	70-130	5	M0		
Ethyl-tert-butyl ether	ug/L	ND	100	100	98.1	94.5	98	94	70-130	4			
Ethylbenzene	ug/L	ND	50	50	55.8	52.9	112	106	70-130	5			
m&p-Xylene	ug/L	ND	100	100	112	108	111	107	70-130	4			
Methyl-tert-butyl ether	ug/L	ND	50	50	49.3	46.7	99	93	70-130	5			
Naphthalene	ug/L	ND	50	50	51.6	48.9	103	98	70-130	5			
o-Xylene	ug/L	ND	50	50	52.4	50.4	105	101	70-130	4			
tert-Amyl Alcohol	ug/L	ND	1000	1000	1080	1020	108	102	70-130	6			
tert-Amylmethyl ether	ug/L	ND	100	100	112	108	112	108	70-130	4			
tert-Butyl Alcohol	ug/L	ND	500	500	727	696	145	139	70-130	4	M0		
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130		P5		
Toluene	ug/L	ND	50	50	56.7	54.6	108	104	70-130	4			
1,2-Dichloroethane-d4 (S)	%						93	103	70-130				
4-Bromofluorobenzene (S)	%						99	100	70-130				
Dibromofluoromethane (S)	%						95	98	70-130				
Toluene-d8 (S)	%						96	96	70-130				



### QUALITY CONTROL DATA

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

QC Batch: OEXT/20840 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92148289001, 92148289002, 92148289003, 92148289004, 92148289005, 92148289006, 92148289007, 92148289008, 92148289009, 92148289010, 92148289011, 92148289012, 92148289013, 92148289014, 92148289015, 92148289016, 92148289017, 92148289018, 92148289019

METHOD BLANK: 923883 Matrix: Water  
Associated Lab Samples: 92148289001, 92148289002, 92148289003, 92148289004, 92148289005, 92148289006, 92148289007, 92148289008, 92148289009, 92148289010, 92148289011, 92148289012, 92148289013, 92148289014, 92148289015, 92148289016, 92148289017, 92148289018, 92148289019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	02/16/13 22:55	
1-Chloro-2-bromopropane (S)	%	98	60-140	02/16/13 22:55	

LABORATORY CONTROL SAMPLE & LCSD: 923884 923885

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.24	0.24	84	84	60-140	0	20	
1-Chloro-2-bromopropane (S)	%				97	98	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923886 923887

Parameter	Units	92148289008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.24	0.24	86	84	60-140	2	
1-Chloro-2-bromopropane (S)	%						99	99	60-140		

SAMPLE DUPLICATE: 923888

Parameter	Units	92148289009 Result	Dup Result	RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	0.40	0.38	4	
1-Chloro-2-bromopropane (S)	%	111	110	2	

## QUALIFIERS

Project: Truck Stop 378 14.214210  
Pace Project No.: 92148289

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Truck Stop 378 14.214210

Pace Project No.: 92148289

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148289001	07960-TW 3	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289002	07960-MW 9	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289003	07960-TW 4	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289004	07960-MW 10	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289005	07960-TW 7	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289006	07960-TW 8	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289007	07960-MW 19	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289008	07960-TW 2	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289009	07960-MW 3	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289010	07960-TW 5	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289011	07960-MW 25	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289012	07960-MW 31	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289013	07960-TW 9	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289014	07960-MW 26	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289015	07960-TW 6	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289016	07960-MW 16	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289017	07960-TW 1	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289018	Duplicate 3	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289019	Trip Blank	EPA 8011	OEXT/20840	EPA 8011	GCSV/13964
92148289001	07960-TW 3	EPA 8260	MSV/22036		
92148289002	07960-MW 9	EPA 8260	MSV/22036		
92148289003	07960-TW 4	EPA 8260	MSV/22036		
92148289004	07960-MW 10	EPA 8260	MSV/22037		
92148289005	07960-TW 7	EPA 8260	MSV/22037		
92148289006	07960-TW 8	EPA 8260	MSV/22037		
92148289007	07960-MW 19	EPA 8260	MSV/22037		
92148289008	07960-TW 2	EPA 8260	MSV/22037		
92148289009	07960-MW 3	EPA 8260	MSV/22037		
92148289010	07960-TW 5	EPA 8260	MSV/22037		
92148289011	07960-MW 25	EPA 8260	MSV/22037		
92148289012	07960-MW 31	EPA 8260	MSV/22037		
92148289013	07960-TW 9	EPA 8260	MSV/22037		
92148289014	07960-MW 26	EPA 8260	MSV/22037		
92148289015	07960-TW 6	EPA 8260	MSV/22037		
92148289016	07960-MW 16	EPA 8260	MSV/22037		
92148289017	07960-TW 1	EPA 8260	MSV/22037		
92148289018	Duplicate 3	EPA 8260	MSV/22037		
92148289019	Trip Blank	EPA 8260	MSV/22036		



Sample Condition Upon Receipt (SCUR)

Document Number:  
F-CHR-CS-03-rev.08

WO# 92148308



Client Name: ECS

Where Received:  Huntersville  Asheville  Eden  Raleigh

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Optional:  
Proj. Due Date:  
Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1101 T1102 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor T1101: No Correction T1102: No Correction

Corrected Cooler Temp.: 4.1 C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: RP 2-15-13

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

*Handwritten notes:*  
12. OWS03 TIME is 10-25 sample COC - 10-20  
13. Bath Trip Blank No TIME & Date on sample & COC  
14. as time for duplicate sample

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review: [Signature] Date: 2/15/13 SRF Review: [Signature] Date: 2/18/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: <b>ECS</b>	Report To: <b>Brett Schneider</b>	Copy To:	Attention: <b>Sue Strieder</b>	Page: <b>1</b> of <b>4</b>	
Address: <b>13504 South Point Blvd</b>	Address: <b>Charlotte, NC 28273</b>	Purchase Order No.: <b>14-214210</b>	Company Name: <b>ECS</b>	REGULATORY AGENCY	
Phone: <b>704-583-2711</b>	Project Name: <b>378 Truck Stop</b>	Project Number: <b>14-214210</b>	Address: <b>Agawam, MA</b>	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
Requested Due Date: <b>TAT Standard</b>			Pace Quote Manager: <b>Kevin Herring</b>	<input checked="" type="checkbox"/> UST	<input type="checkbox"/> RCRA
			Pace Profile #: <b>3385-1</b>	Site Location: <b>SC</b>	<input type="checkbox"/> OTHER
				STATE: <b>SC</b>	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	SAMPLER TEMP AT COLLECTION		# OF CONTAINERS	Preservatives	Analysis Test (Y/N)	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME						
1	07960-MW-5	DW			G	WT 6	2-12-13	1540	0					0801
2	07960-MW-28	WT					1525							0822
3	07960-MW-8	WW					1625							0823
4	07960-MW-4	P					1615							0824
5	FB-1	SL					1640							0825
6	07960-MW-27	OL					2-13-13	940						0826
7	07960-MW-18	WP						1105						0827
8	07960-MW-17	AR						1145						0828
9	07960-MW-23	TS						1225						0829
10	07960-MW-15	OT						1315						0830
11	FB-2	Other						1305						0831
12	07960-MW-30							1451						0832

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please report 5-values.	A. Williamson / ECS	2/14/13	1930	ECS Office	2/14/13	1930	
	ECS Office			2m woody - pace	2-15-13	8:25	
	2m woody	2-15-13	11:40	PP pace	2-15-13	11-4041	Y N Y

Temp in °C	Received on	Custody	Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE	DATE SIGNED (MM/DD/YYYY)
<i>Aaron Williamson</i>	2/14/13

PRINT NAME of SAMPLER:	SIGNATURE of SAMPLER:
Aaron Williamson	<i>Aaron Williamson</i>

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\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: <b>ECS</b>	Report To: <b>Brett Schaefer</b>	Attention: <b>Sue Streefer</b>	Page: <b>2</b> of <b>4</b>		
Address: <b>13504 South Point Blvd</b>	Copy To:	Company Name: <b>ECS</b>	Invoice Number: <b>1508791</b>		
<b>Charlotte, NC 28273</b>	Purchase Order No.: <b>14-214210</b>	Address: <b>12504 So Agawan, MA</b>	REGULATORY AGENCY		
<b>BSS@paceanalytical.com</b>	Project Name: <b>378 Truck Stop</b>	Pace Project Manager: <b>Kevin Henning</b>	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER
<b>704-583-2711</b> Fax:	Project Number: <b>14-214210</b>	Pace Profile #:	<input checked="" type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Requested Due Date/TAT: <b>Standard</b>			Site Location: <b>SC</b>		

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/DUAS								
1	07960-MW-21	DW	DATE: 2-13-13	TIME: 855	G	WT		Unpreserved	X			013
2	07960-MW-6	WT	DATE: 1025	TIME: 5201								014
3	07960-MW-7	WT	DATE: 1535	TIME: 555								015
4	07960-MW-11	WT	DATE: 21413	TIME: 255								016
5	WSW-7	WT	DATE: 810	TIME: 820								017
6	WSW-9	WT	DATE: 845	TIME: 845								018
7	WSW-15	WT	DATE: 900	TIME: 900								019
8	WSW-14	WT	DATE: 915	TIME: 915								020
9	WSW-13	WT	DATE: 935	TIME: 935								021
10	WSW-11	WT	DATE: 1005	TIME: 1005								022
11	WSW-10	WT										023
12	WSW-2	WT										024

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please report 5-values.	A. Williamson / ECS	2/14/13	1930	ECS Office	2/14/13	1930	
	ECS Office			A. Moody - Pace	2-15-13	8:25	
	A. Moody	2-15-13	11:40	R. Pace	2-15-13	11:40	Temp in °C
							Received on
							Sealed Cooler
							Custody
							(Y/N)
							Samples Intact
							(Y/N)

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SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER: **Aaron Williamson**  
 SIGNATURE of SAMPLER: *Aaron Williamson*  
 DATE Signed (MM/DD/YY): **2/14/13**

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



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Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: <b>ECS</b>	Report To: <b>Brett Schaefer</b>	Report To: <b>ECS Sue Stredar</b>	Attention: <b>ECS Sue Stredar</b>	Page: <b>3</b> of <b>4</b>	Invoice No: <b>1564392</b>
Address: <b>13504 South Point Blvd</b>	Copy To:	Company Name: <b>ECS</b>	REGULATORY AGENCY:		
<b>Charlotte, NC 28273</b>	Purchase Order No.: <b>14-214210</b>	Address: <b>Agawam, MA</b>	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER		
Project Name: <b>Broadwater@eecsconsult.com</b>	Project Name: <b>378 Truck Stop</b>	Reference: <b>Kevin Hessing</b>	<input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER		
Requested Due Date/TAT: <b>Standard</b>	Project Number: <b>14-214210</b>	Pace Project Manager:	Site Location: <b>SC</b>		
		Pace Profile #:	STATE:		

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME					
1	07960-mw-14	DW			WT 0		2-13-13	1545	6				025
2	WSW-1 Pre GAC	WT						1600		X			026
3	WSW-1 Post GAC	WW					1605						027
4	WSW-8 Pre GAC	P					1635						028
5	WSW-8 Post GAC	SL					1640						029
6	07960-mw-29	OL					1715						030
7	Duplicate 1	WF											031
8	Duplicate 2	AR											032
9	Trip Blank	TS											033
10		OT											
11		Other											
12													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please report 5 values	A. Williamson / ECS	2/14/13	17:30	ECS OFFICE	2/14/13	19:30	
	ECS OFFICE			2 AM body - Pace	2-15-13	8:25	
	2 AM body			PP Pace	2-15-13	11:40	Y N Y

Temp in °C	Received on	Custody	Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE	DATE SIGNED (MM/DD/YYYY)
PRINT Name of SAMPLER: <b>Aaron Williamson</b>	DATE SIGNED: <b>2/14/13</b>
SIGNATURE of SAMPLER: <b>Aaron Williamson</b>	

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\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

# CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 4 of 4  
 1537389

**Section A**  
 Required Client Information:  
 Company: ECS  
 Address: 3504 South Point Blvd  
Charlotte, NC 28273  
 Email: bill@paceanalytical.com  
 Phone: 704-583-2711 Fax:  
 Requested Due Date: TAT: Standards

**Section B**  
 Required Project Information:  
 Report To: Brett Schaefer  
 Copy To:  
 Purchase Order No.: 14-214210  
 Project Name: 378 Truck Stop  
 Project Number: 14-214210

**Section C**  
 Invoice Information:  
 Attention: Sue Specker  
 Company Name: ECS  
 Address: Agawam, MA  
 Face Quote Reference:  
 Pace Project Manager: Kevin Herring  
 Pace Profile #:

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
 Site Location: SC  
 STATE:

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
			COMPOSITE STRAT	COMPOSITE END/GRAB								
1	WSW-3	Drinking Water WT			WT							034
2	WSW-4	Waste Water WW										035
3	WSW-5	Product P										036
4	WSW-6	Soil/Solid SL										037
5	07960-MW-2	Oil OL										036
6	07960-MW-13	Wipes WP										039
7	07960-MW-24	Air AR										040
8	FB-3	Tissue TS										041
9	Trip Blank	Other OT										042
10												
11												
12												

**ADDITIONAL COMMENTS**  
 Please report J-values.  
 ECS Office  
 PMoody

**RELINQUISHED BY / AFFILIATION**  
 A. Williamson / ECS  
 ECS Office  
 PMoody

**DATE**  
 2/14/13  
 2-15-13  
 2-15-13

**TIME**  
 1930  
 11:40

**ACCEPTED BY / AFFILIATION**  
 ECS Office  
 PMoody-face  
 RP Face

**DATE**  
 2/14/13  
 2-15-13  
 2-15-13

**TIME**  
 1930  
 11:40

**TEMP IN °C**  
 Y

**Received on Ice (Y/N)**  
 Y

**Custody Sealed Cooler (Y/N)**  
 Y

**Samples Intact (Y/N)**  
 Y

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: Aaron Williamson  
 SIGNATURE OF SAMPLER: Aaron Williamson

**DATE SIGNED (MM/DD/YYYY)**  
2/14/13

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(336)623-8921

Pace Analytical Services, Inc.  
2225 Riverside Dr.  
Asheville, NC 28804  
(828)254-7176

Pace Analytical Services, Inc.  
9800 Kinsey Ave. Suite 100  
Huntersville, NC 28078  
(704)875-9092

February 25, 2013

Mr. Brett Schaefer  
Environmental Compliance Services  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

Dear Mr. Schaefer:

Enclosed are the analytical results for sample(s) received by the laboratory on February 15, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Jon D Bradley for  
Kevin Herring  
kevin.herring@pacelabs.com  
Project Manager

Enclosures



**REPORT OF LABORATORY ANALYSIS**

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Huntersville, NC 28078  
(704)875-9092

## CERTIFICATIONS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

---

### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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## REPORT OF LABORATORY ANALYSIS

Page 2 of 61

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**SAMPLE ANALYTE COUNT**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92148308001	07960-MW-5	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308002	07960-MW-28	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308003	07960-MW-8	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308004	07960-MW-4	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308005	FB-1	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308006	07960-MW-27	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308007	07960-MW-18	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308008	07960-MW-17	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308009	07960-MW-23	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308010	07960-MW-15	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308011	FB-2	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308012	07960-MW-30	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308013	07960-MW-21	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308014	07960-MW-6	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308015	07960-MW-7	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308016	07960-MW-11	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308017	WSW-7	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308018	WSW-9	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308019	WSW-15	EPA 8011	NU1	2	PASI-C

**REPORT OF LABORATORY ANALYSIS**



**SAMPLE ANALYTE COUNT**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92148308020	WSW-14	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308021	WSW-13	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308022	WSW-11	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308023	WSW-10	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308024	WSW-2	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308025	07960-MW-14	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308026	WSW-1 PRE GAC	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308027	WSW-1 POST GAC	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308028	WSW-8 PRE GAC	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308029	WSW-8 POST GAC	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308030	07960-MW-29	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308031	DUPLICATE 1	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308032	DUPLICATE 2	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308033	TRIP BLANK	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308034	WSW-3	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308035	WSW-4	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308036	WSW-5	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C
92148308037	WSW-6	EPA 8260	MCK	20	PASI-C
		EPA 8011	NU1	2	PASI-C

**REPORT OF LABORATORY ANALYSIS**



Pace Analytical Services, Inc.  
 205 East Meadow Road - Suite A  
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Pace Analytical Services, Inc.  
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 (828)254-7176

Pace Analytical Services, Inc.  
 9800 Kinsey Ave. Suite 100  
 Huntersville, NC 28078  
 (704)875-9092

### SAMPLE ANALYTE COUNT

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92148308038	07960-MW-2	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308039	07960-MW-13	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308040	07960-MW-24	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308041	FB-3	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92148308042	TRIP BLANK	EPA 8011	NU1	2	PASI-C
		EPA 8260	MCK	20	PASI-C

### REPORT OF LABORATORY ANALYSIS

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 Huntersville, NC 28078  
 (704)875-9092

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-5	Lab ID: 92148308001	Collected: 02/12/13 15:40	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:29	02/17/13 09:03	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	86 %		60-140	1	02/16/13 21:29	02/17/13 09:03	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 03:42	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 03:42	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 03:42	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 03:42	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 03:42	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 03:42	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 03:42	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 03:42	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 03:42	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 03:42	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 03:42	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 03:42	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 03:42	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 03:42	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 03:42	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 03:42	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 03:42	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/16/13 03:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 03:42	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 03:42	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-28	Lab ID: 92148308002	Collected: 02/12/13 15:25	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:29	02/17/13 09:23	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	97 %		60-140	1	02/16/13 21:29	02/17/13 09:23	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 03:57	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 03:57	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 03:57	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 03:57	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 03:57	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 03:57	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 03:57	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 03:57	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 03:57	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 03:57	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 03:57	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 03:57	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 03:57	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 03:57	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 03:57	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 03:57	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/16/13 03:57	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 03:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 03:57	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/16/13 03:57	2037-26-5	

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: 07960-MW-8	Lab ID: 92148308003	Collected: 02/12/13 16:25	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:29	02/17/13 09:44	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	93 %		60-140	1	02/16/13 21:29	02/17/13 09:44	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 04:13	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 04:13	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 04:13	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 04:13	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 04:13	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 04:13	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 04:13	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 04:13	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 04:13	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 04:13	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 04:13	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 04:13	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 04:13	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 04:13	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 04:13	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 04:13	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 04:13	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 04:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 04:13	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 04:13	2037-26-5	



## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Project No.: 92148308

Sample: 07960-MW-4	Lab ID: 92148308004	Collected: 02/12/13 16:15	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.021	1	02/16/13 21:29	02/17/13 10:04	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/16/13 21:29	02/17/13 10:04	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 04:29	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 04:29	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 04:29	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 04:29	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 04:29	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 04:29	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 04:29	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 04:29	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 04:29	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 04:29	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 04:29	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 04:29	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 04:29	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 04:29	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 04:29	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 04:29	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/16/13 04:29	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 04:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 04:29	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 04:29	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: FB-1	Lab ID: 92148308005	Collected: 02/12/13 16:40	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:29	02/17/13 10:24	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	95 %		60-140	1	02/16/13 21:29	02/17/13 10:24	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 04:45	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 04:45	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 04:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 04:45	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 04:45	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 04:45	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 04:45	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 04:45	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 04:45	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 04:45	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 04:45	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 04:45	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 04:45	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 04:45	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 04:45	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 04:45	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104 %		70-130	1		02/16/13 04:45	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/16/13 04:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 04:45	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 04:45	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-27	Lab ID: 92148308006	Collected: 02/13/13 09:40	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:29	02/17/13 10:45	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/16/13 21:29	02/17/13 10:45	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 05:01	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 05:01	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 05:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 05:01	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 05:01	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 05:01	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 05:01	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 05:01	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 05:01	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 05:01	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 05:01	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 05:01	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 05:01	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 05:01	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 05:01	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 05:01	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 05:01	460-00-4	
Dibromofluoromethane (S)	104 %		70-130	1		02/16/13 05:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 05:01	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 05:01	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Project No.: 92148308

Sample: 07960-MW-18		Lab ID: 92148308007	Collected: 02/13/13 11:05	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.019	1	02/16/13 21:30	02/17/13 11:05	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	93 %		60-140	1	02/16/13 21:30	02/17/13 11:05	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 05:17	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 05:17	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 05:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 05:17	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 05:17	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 05:17	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 05:17	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 05:17	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 05:17	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 05:17	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 05:17	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 05:17	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 05:17	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 05:17	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 05:17	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 05:17	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 05:17	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 05:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 05:17	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 05:17	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: 07960-MW-17	Lab ID: 92148308008	Collected: 02/13/13 11:45	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.019	1	02/16/13 21:30	02/17/13 11:26	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/16/13 21:30	02/17/13 11:26	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 05:33	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 05:33	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 05:33	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 05:33	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 05:33	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 05:33	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 05:33	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 05:33	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 05:33	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 05:33	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 05:33	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 05:33	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 05:33	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 05:33	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 05:33	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 05:33	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 05:33	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 05:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 05:33	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 05:33	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-23	Lab ID: 92148308009	Collected: 02/13/13 12:25	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:30	02/17/13 11:46	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	93 %		60-140	1	02/16/13 21:30	02/17/13 11:46	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 05:48	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 05:48	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 05:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 05:48	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 05:48	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 05:48	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 05:48	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 05:48	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 05:48	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 05:48	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 05:48	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 05:48	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 05:48	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 05:48	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 05:48	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 05:48	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 05:48	460-00-4	
Dibromofluoromethane (S)	104 %		70-130	1		02/16/13 05:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 05:48	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 05:48	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-15	Lab ID: 92148308010	Collected: 02/13/13 13:15	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:30	02/17/13 12:07	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92 %		60-140	1	02/16/13 21:30	02/17/13 12:07	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 06:04	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 06:04	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 06:04	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 06:04	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 06:04	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 06:04	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 06:04	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 06:04	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 06:04	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 06:04	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 06:04	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 06:04	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 06:04	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 06:04	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 06:04	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 06:04	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 06:04	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/16/13 06:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 06:04	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 06:04	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: FB-2	Lab ID: 92148308011	Collected: 02/13/13 13:05	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:30	02/17/13 12:27	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/16/13 21:30	02/17/13 12:27	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 06:20	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 06:20	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 06:20	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 06:20	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 06:20	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 06:20	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 06:20	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 06:20	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 06:20	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 06:20	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 06:20	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 06:20	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 06:20	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 06:20	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 06:20	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 06:20	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		02/16/13 06:20	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 06:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 06:20	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 06:20	2037-26-5	



### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: 07960-MW-30	Lab ID: 92148308012	Collected: 02/13/13 14:51	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:30	02/17/13 12:48	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	96 %		60-140	1	02/16/13 21:30	02/17/13 12:48	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	1080 ug/L		100	1		02/16/13 06:36	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 06:36	994-05-8	
Benzene	527 ug/L		50.0	10		02/17/13 15:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 06:36	624-95-3	
tert-Butyl Alcohol	462 ug/L		100	1		02/16/13 06:36	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 06:36	762-75-4	
1,2-Dichloroethane	21.7 ug/L		5.0	1		02/16/13 06:36	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 06:36	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 06:36	64-17-5	L3
Ethylbenzene	12.2 ug/L		5.0	1		02/16/13 06:36	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 06:36	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 06:36	1634-04-4	
Naphthalene	8.3 ug/L		5.0	1		02/16/13 06:36	91-20-3	
Toluene	17.7 ug/L		5.0	1		02/16/13 06:36	108-88-3	
m&p-Xylene	164 ug/L		10.0	1		02/16/13 06:36	179601-23-1	
o-Xylene	106 ug/L		5.0	1		02/16/13 06:36	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		02/16/13 06:36	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 06:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	102 %		70-130	1		02/16/13 06:36	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 06:36	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-21	Lab ID: 92148308013	Collected: 02/13/13 08:55	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:31	02/17/13 13:08	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	97 %		60-140	1	02/16/13 21:31	02/17/13 13:08	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 06:52	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 06:52	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 06:52	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 06:52	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 06:52	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 06:52	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 06:52	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 06:52	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 06:52	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 06:52	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 06:52	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 06:52	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 06:52	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 06:52	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 06:52	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 06:52	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 06:52	460-00-4	
Dibromofluoromethane (S)	100 %		70-130	1		02/16/13 06:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 06:52	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 06:52	2037-26-5	

### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: 07960-MW-6	Lab ID: 92148308014	Collected: 02/13/13 09:10	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:31	02/17/13 13:29	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	98 %		60-140	1	02/16/13 21:31	02/17/13 13:29	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 07:08	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 07:08	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 07:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 07:08	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 07:08	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 07:08	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 07:08	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 07:08	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 07:08	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 07:08	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 07:08	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 07:08	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 07:08	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 07:08	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 07:08	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 07:08	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 07:08	460-00-4	
Dibromofluoromethane (S)	100 %		70-130	1		02/16/13 07:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	99 %		70-130	1		02/16/13 07:08	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/16/13 07:08	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-7	Lab ID: 92148308015	Collected: 02/13/13 10:25	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	0.028 ug/L		0.020	1	02/16/13 21:31	02/17/13 13:50	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	95 %		60-140	1	02/16/13 21:31	02/17/13 13:50	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		200	2		02/16/13 07:24	75-85-4	
tert-Amylmethyl ether	ND ug/L		20.0	2		02/16/13 07:24	994-05-8	
Benzene	186 ug/L		10.0	2		02/16/13 07:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		200	2		02/16/13 07:24	624-95-3	
tert-Butyl Alcohol	ND ug/L		200	2		02/16/13 07:24	75-65-0	
tert-Butyl Formate	ND ug/L		100	2		02/16/13 07:24	762-75-4	
1,2-Dichloroethane	11.0 ug/L		10.0	2		02/16/13 07:24	107-06-2	
Diisopropyl ether	ND ug/L		10.0	2		02/16/13 07:24	108-20-3	
Ethanol	ND ug/L		400	2		02/16/13 07:24	64-17-5	L3
Ethylbenzene	23.4 ug/L		10.0	2		02/16/13 07:24	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		20.0	2		02/16/13 07:24	637-92-3	
Methyl-tert-butyl ether	ND ug/L		10.0	2		02/16/13 07:24	1634-04-4	
Naphthalene	ND ug/L		10.0	2		02/16/13 07:24	91-20-3	
Toluene	ND ug/L		10.0	2		02/16/13 07:24	108-88-3	
m&p-Xylene	ND ug/L		20.0	2		02/16/13 07:24	179601-23-1	
o-Xylene	ND ug/L		10.0	2		02/16/13 07:24	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104 %		70-130	2		02/16/13 07:24	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	2		02/16/13 07:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	2		02/16/13 07:24	17060-07-0	
Toluene-d8 (S)	96 %		70-130	2		02/16/13 07:24	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-11	Lab ID: 92148308016	Collected: 02/13/13 15:35	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:31	02/17/13 14:10	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92 %		60-140	1	02/16/13 21:31	02/17/13 14:10	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 07:40	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 07:40	994-05-8	
Benzene	14.2 ug/L		5.0	1		02/16/13 07:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 07:40	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 07:40	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 07:40	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 07:40	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 07:40	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 07:40	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 07:40	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 07:40	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 07:40	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 07:40	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 07:40	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 07:40	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 07:40	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99 %		70-130	1		02/16/13 07:40	460-00-4	
Dibromofluoromethane (S)	96 %		70-130	1		02/16/13 07:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 07:40	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 07:40	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-7	Lab ID: 92148308017	Collected: 02/14/13 07:55	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:31	02/17/13 14:31	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92 %		60-140	1	02/16/13 21:31	02/17/13 14:31	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 07:56	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 07:56	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 07:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 07:56	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 07:56	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 07:56	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 07:56	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 07:56	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 07:56	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 07:56	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 07:56	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 07:56	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 07:56	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 07:56	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 07:56	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 07:56	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 07:56	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 07:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 07:56	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 07:56	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-9	Lab ID: 92148308018	Collected: 02/14/13 08:10	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:31	02/17/13 14:52	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	93 %		60-140	1	02/16/13 21:31	02/17/13 14:52	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 08:12	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 08:12	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 08:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 08:12	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 08:12	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 08:12	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 08:12	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 08:12	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 08:12	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 08:12	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 08:12	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 08:12	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 08:12	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 08:12	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 08:12	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 08:12	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 08:12	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 08:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 08:12	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 08:12	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-15	Lab ID: 92148308019	Collected: 02/14/13 08:20	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:31	02/17/13 15:12	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92 %		60-140	1	02/16/13 21:31	02/17/13 15:12	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 08:28	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 08:28	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 08:28	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 08:28	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 08:28	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 08:28	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 08:28	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 08:28	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 08:28	64-17-5	L3
Ethylbenzene	ND ug/L		5.0	1		02/16/13 08:28	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 08:28	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 08:28	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 08:28	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 08:28	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 08:28	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 08:28	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		02/16/13 08:28	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 08:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 08:28	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 08:28	2037-26-5	





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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-14	Lab ID: 92148308020	Collected: 02/14/13 08:45	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/16/13 21:32	02/17/13 16:13	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	90 %		60-140	1	02/16/13 21:32	02/17/13 16:13	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 08:44	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 08:44	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 08:44	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 08:44	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 08:44	75-65-0	M1
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 08:44	762-75-4	M1
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 08:44	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 08:44	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 08:44	64-17-5	L3,M0
Ethylbenzene	ND ug/L		5.0	1		02/16/13 08:44	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 08:44	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 08:44	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 08:44	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 08:44	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 08:44	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 08:44	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 08:44	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 08:44	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 08:44	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/16/13 08:44	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-13	Lab ID: 92148308021	Collected: 02/14/13 09:00	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 18:00	02/18/13 00:28	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	93 %		60-140	1	02/17/13 18:00	02/18/13 00:28	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 09:00	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 09:00	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 09:00	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 09:00	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 09:00	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 09:00	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 09:00	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 09:00	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 09:00	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 09:00	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 09:00	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 09:00	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 09:00	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 09:00	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 09:00	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 09:00	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/16/13 09:00	460-00-4	
Dibromofluoromethane (S)	96 %		70-130	1		02/16/13 09:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 09:00	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 09:00	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: WSW-11	Lab ID: 92148308022	Collected: 02/14/13 09:15	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 18:01	02/18/13 01:29	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/17/13 18:01	02/18/13 01:29	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 09:16	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 09:16	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 09:16	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 09:16	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 09:16	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 09:16	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 09:16	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 09:16	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 09:16	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 09:16	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 09:16	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 09:16	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 09:16	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 09:16	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 09:16	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 09:16	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		02/16/13 09:16	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 09:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	102 %		70-130	1		02/16/13 09:16	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 09:16	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Project No.: 92148308

Sample: WSW-10		Lab ID: 92148308023	Collected: 02/14/13 09:35	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 18:01	02/18/13 02:09	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	91 %		60-140	1	02/17/13 18:01	02/18/13 02:09	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 09:32	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 09:32	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 09:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 09:32	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 09:32	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 09:32	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 09:32	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 09:32	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 09:32	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 09:32	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 09:32	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 09:32	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 09:32	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 09:32	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 09:32	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 09:32	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/16/13 09:32	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 09:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 09:32	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 09:32	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: WSW-2	Lab ID: 92148308024	Collected: 02/14/13 10:05	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 18:01	02/18/13 02:29	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	97 %		60-140	1	02/17/13 18:01	02/18/13 02:29	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 09:47	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 09:47	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 09:47	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 09:47	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 09:47	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 09:47	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 09:47	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 09:47	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 09:47	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 09:47	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 09:47	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 09:47	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 09:47	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 09:47	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 09:47	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 09:47	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		02/16/13 09:47	460-00-4	
Dibromofluoromethane (S)	99 %		70-130	1		02/16/13 09:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 09:47	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 09:47	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: 07960-MW-14	Lab ID: 92148308025	Collected: 02/13/13 15:45	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 18:01	02/18/13 02:49	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	93 %		60-140	1	02/17/13 18:01	02/18/13 02:49	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 10:03	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 10:03	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 10:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 10:03	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 10:03	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 10:03	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 10:03	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 10:03	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 10:03	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 10:03	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 10:03	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 10:03	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 10:03	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 10:03	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 10:03	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 10:03	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		02/16/13 10:03	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/16/13 10:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 10:03	17060-07-0	
Toluene-d8 (S)	94 %		70-130	1		02/16/13 10:03	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-1 PRE GAC	Lab ID: 92148308026	Collected: 02/13/13 16:00	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 18:01	02/18/13 03:09	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	93 %		60-140	1	02/17/13 18:01	02/18/13 03:09	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 10:19	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 10:19	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 10:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 10:19	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 10:19	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 10:19	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 10:19	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 10:19	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 10:19	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 10:19	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 10:19	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 10:19	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 10:19	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 10:19	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 10:19	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 10:19	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/16/13 10:19	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 10:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 10:19	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 10:19	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92148308

Sample: WSW-1 POST GAC		Lab ID: 92148308027	Collected: 02/13/13 16:05	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 18:01	02/18/13 03:30	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/17/13 18:01	02/18/13 03:30	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 10:35	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 10:35	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 10:35	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 10:35	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 10:35	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 10:35	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 10:35	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 10:35	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 10:35	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 10:35	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 10:35	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 10:35	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 10:35	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 10:35	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 10:35	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 10:35	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 10:35	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 10:35	1868-53-7	
1,2-Dichloroethane-d4 (S)	99 %		70-130	1		02/16/13 10:35	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 10:35	2037-26-5	





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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-8 PRE GAC	Lab ID: 92148308028	Collected: 02/13/13 16:35	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.019	1	02/17/13 21:12	02/18/13 18:19	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/17/13 21:12	02/18/13 18:19	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 10:51	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 10:51	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 10:51	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 10:51	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 10:51	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 10:51	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 10:51	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 10:51	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 10:51	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 10:51	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 10:51	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 10:51	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 10:51	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 10:51	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 10:51	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 10:51	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 10:51	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 10:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 10:51	17060-07-0	
Toluene-d8 (S)	94 %		70-130	1		02/16/13 10:51	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-8 POST GAC	Lab ID: 92148308029	Collected: 02/13/13 16:40	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:12	02/18/13 18:40	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	93 %		60-140	1	02/17/13 21:12	02/18/13 18:40	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 11:07	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 11:07	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 11:07	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 11:07	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 11:07	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 11:07	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 11:07	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 11:07	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 11:07	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 11:07	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 11:07	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 11:07	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 11:07	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 11:07	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 11:07	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 11:07	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99 %		70-130	1		02/16/13 11:07	460-00-4	
Dibromofluoromethane (S)	104 %		70-130	1		02/16/13 11:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 11:07	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/16/13 11:07	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: 07960-MW-29	Lab ID: 92148308030	Collected: 02/13/13 17:15	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	0.052	ug/L	0.020	1	02/17/13 21:12	02/18/13 19:00	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	91	%	60-140	1	02/17/13 21:12	02/18/13 19:00	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	3630	ug/L	100	1		02/16/13 00:47	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/16/13 00:47	994-05-8	
Benzene	21.4	ug/L	5.0	1		02/16/13 00:47	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/16/13 00:47	624-95-3	
tert-Butyl Alcohol	347	ug/L	100	1		02/16/13 00:47	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/16/13 00:47	762-75-4	
1,2-Dichloroethane	16.7	ug/L	5.0	1		02/16/13 00:47	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/16/13 00:47	108-20-3	
Ethanol	ND	ug/L	200	1		02/16/13 00:47	64-17-5	
Ethylbenzene	20.8	ug/L	5.0	1		02/16/13 00:47	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/16/13 00:47	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/16/13 00:47	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/16/13 00:47	91-20-3	
Toluene	ND	ug/L	5.0	1		02/16/13 00:47	108-88-3	
m&p-Xylene	22.2	ug/L	10.0	1		02/16/13 00:47	179601-23-1	
o-Xylene	41.2	ug/L	5.0	1		02/16/13 00:47	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	70-130	1		02/16/13 00:47	460-00-4	
Dibromofluoromethane (S)	101	%	70-130	1		02/16/13 00:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		02/16/13 00:47	17060-07-0	
Toluene-d8 (S)	97	%	70-130	1		02/16/13 00:47	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Project No.: 92148308

Sample: DUPLICATE 1		Lab ID: 92148308031	Collected: 02/13/13 00:00	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	1	02/17/13 21:12	02/18/13 19:21	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	95 %		60-140	1	02/17/13 21:12	02/18/13 19:21	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	1180	ug/L	100	1		02/16/13 11:23	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/16/13 11:23	994-05-8	
Benzene	524	ug/L	50.0	10		02/17/13 15:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/16/13 11:23	624-95-3	
tert-Butyl Alcohol	502	ug/L	100	1		02/16/13 11:23	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/16/13 11:23	762-75-4	
1,2-Dichloroethane	22.9	ug/L	5.0	1		02/16/13 11:23	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/16/13 11:23	108-20-3	
Ethanol	ND	ug/L	200	1		02/16/13 11:23	64-17-5	
Ethylbenzene	20.6	ug/L	5.0	1		02/16/13 11:23	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/16/13 11:23	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/16/13 11:23	1634-04-4	
Naphthalene	11.2	ug/L	5.0	1		02/16/13 11:23	91-20-3	
Toluene	24.0	ug/L	5.0	1		02/16/13 11:23	108-88-3	
m&p-Xylene	238	ug/L	10.0	1		02/16/13 11:23	179601-23-1	
o-Xylene	140	ug/L	5.0	1		02/16/13 11:23	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99 %		70-130	1		02/16/13 11:23	460-00-4	
Dibromofluoromethane (S)	100 %		70-130	1		02/16/13 11:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	102 %		70-130	1		02/16/13 11:23	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 11:23	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: DUPLICATE 2		Lab ID: 92148308032	Collected: 02/13/13 00:00	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	0.051 ug/L		0.020	1	02/17/13 21:13	02/18/13 19:42	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92 %		60-140	1	02/17/13 21:13	02/18/13 19:42	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	3790 ug/L		100	1		02/16/13 11:39	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 11:39	994-05-8	
Benzene	17.8 ug/L		5.0	1		02/16/13 11:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 11:39	624-95-3	
tert-Butyl Alcohol	378 ug/L		100	1		02/16/13 11:39	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 11:39	762-75-4	
1,2-Dichloroethane	17.5 ug/L		5.0	1		02/16/13 11:39	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 11:39	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 11:39	64-17-5	
Ethylbenzene	14.6 ug/L		5.0	1		02/16/13 11:39	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 11:39	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 11:39	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 11:39	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 11:39	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 11:39	179601-23-1	
o-Xylene	34.8 ug/L		5.0	1		02/16/13 11:39	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/16/13 11:39	460-00-4	
Dibromofluoromethane (S)	100 %		70-130	1		02/16/13 11:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	103 %		70-130	1		02/16/13 11:39	17060-07-0	
Toluene-d8 (S)	94 %		70-130	1		02/16/13 11:39	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: TRIP BLANK	Lab ID: 92148308033	Collected: 02/13/13 00:00	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:13	02/18/13 20:02	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/17/13 21:13	02/18/13 20:02	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 04:55	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 04:55	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 04:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 04:55	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 04:55	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 04:55	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 04:55	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 04:55	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 04:55	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 04:55	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 04:55	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 04:55	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 04:55	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 04:55	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 04:55	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 04:55	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 04:55	460-00-4	
Dibromofluoromethane (S)	103 %		70-130	1		02/16/13 04:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	119 %		70-130	1		02/16/13 04:55	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 04:55	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-3	Lab ID: 92148308034	Collected: 02/13/13 10:20	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:13	02/18/13 20:23	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	91 %		60-140	1	02/17/13 21:13	02/18/13 20:23	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 11:55	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 11:55	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 11:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 11:55	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 11:55	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 11:55	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 11:55	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 11:55	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 11:55	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 11:55	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 11:55	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 11:55	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 11:55	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 11:55	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 11:55	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 11:55	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 11:55	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 11:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 11:55	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 11:55	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-4	Lab ID: 92148308035	Collected: 02/13/13 10:41	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:13	02/18/13 20:43	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92 %		60-140	1	02/17/13 21:13	02/18/13 20:43	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 12:11	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 12:11	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 12:11	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 12:11	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 12:11	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 12:11	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 12:11	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 12:11	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 12:11	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 12:11	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 12:11	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 12:11	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 12:11	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 12:11	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 12:11	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 12:11	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 12:11	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/16/13 12:11	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 12:11	17060-07-0	
Toluene-d8 (S)	95 %		70-130	1		02/16/13 12:11	2037-26-5	





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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: WSW-5	Lab ID: 92148308036	Collected: 02/13/13 10:51	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:13	02/18/13 21:45	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/17/13 21:13	02/18/13 21:45	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 12:27	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 12:27	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 12:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 12:27	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 12:27	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 12:27	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 12:27	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 12:27	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 12:27	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 12:27	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 12:27	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 12:27	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 12:27	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 12:27	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 12:27	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 12:27	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1		02/16/13 12:27	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 12:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		70-130	1		02/16/13 12:27	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		02/16/13 12:27	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: WSW-6	Lab ID: 92148308037	Collected: 02/13/13 11:11	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:14	02/18/13 22:27	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	92 %		60-140	1	02/17/13 21:14	02/18/13 22:27	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 12:43	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 12:43	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 12:43	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 12:43	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 12:43	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 12:43	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 12:43	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 12:43	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 12:43	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 12:43	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 12:43	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 12:43	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 12:43	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 12:43	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 12:43	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 12:43	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 12:43	460-00-4	
Dibromofluoromethane (S)	101 %		70-130	1		02/16/13 12:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		02/16/13 12:43	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		02/16/13 12:43	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

Sample: 07960-MW-2	Lab ID: 92148308038	Collected: 02/13/13 11:45	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	1	02/17/13 21:14	02/18/13 22:47	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	90	%	60-140	1	02/17/13 21:14	02/18/13 22:47	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	132	ug/L	100	1		02/16/13 12:58	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/16/13 12:58	994-05-8	
Benzene	6.7	ug/L	5.0	1		02/16/13 12:58	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/16/13 12:58	624-95-3	
tert-Butyl Alcohol	307	ug/L	100	1		02/16/13 12:58	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/16/13 12:58	762-75-4	
1,2-Dichloroethane	28.8	ug/L	5.0	1		02/16/13 12:58	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/16/13 12:58	108-20-3	
Ethanol	ND	ug/L	200	1		02/16/13 12:58	64-17-5	
Ethylbenzene	5.0	ug/L	5.0	1		02/16/13 12:58	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/16/13 12:58	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/16/13 12:58	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		02/16/13 12:58	91-20-3	
Toluene	ND	ug/L	5.0	1		02/16/13 12:58	108-88-3	
m&p-Xylene	13.1	ug/L	10.0	1		02/16/13 12:58	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/16/13 12:58	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100	%	70-130	1		02/16/13 12:58	460-00-4	
Dibromofluoromethane (S)	103	%	70-130	1		02/16/13 12:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		02/16/13 12:58	17060-07-0	
Toluene-d8 (S)	95	%	70-130	1		02/16/13 12:58	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Project No.: 92148308

Sample: 07960-MW-13		Lab ID: 92148308039	Collected: 02/13/13 14:21	Received: 02/15/13 11:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	1	02/17/13 21:14	02/18/13 23:08	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	90	%	60-140	1	02/17/13 21:14	02/18/13 23:08	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	340	ug/L	100	1		02/16/13 05:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		02/16/13 05:12	994-05-8	
Benzene	376	ug/L	50.0	10		02/17/13 15:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		02/16/13 05:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		02/16/13 05:12	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		02/16/13 05:12	762-75-4	
1,2-Dichloroethane	34.3	ug/L	5.0	1		02/16/13 05:12	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		02/16/13 05:12	108-20-3	
Ethanol	ND	ug/L	200	1		02/16/13 05:12	64-17-5	
Ethylbenzene	33.5	ug/L	5.0	1		02/16/13 05:12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		02/16/13 05:12	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/16/13 05:12	1634-04-4	
Naphthalene	12.3	ug/L	5.0	1		02/16/13 05:12	91-20-3	
Toluene	28.7	ug/L	5.0	1		02/16/13 05:12	108-88-3	
m&p-Xylene	275	ug/L	10.0	1		02/16/13 05:12	179601-23-1	
o-Xylene	55.7	ug/L	5.0	1		02/16/13 05:12	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105	%	70-130	1		02/16/13 05:12	460-00-4	
Dibromofluoromethane (S)	96	%	70-130	1		02/16/13 05:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		02/16/13 05:12	17060-07-0	
Toluene-d8 (S)	98	%	70-130	1		02/16/13 05:12	2037-26-5	

## ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
Project No.: 92148308

Sample: 07960-MW-24	Lab ID: 92148308040	Collected: 02/13/13 13:30	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:14	02/18/13 23:29	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	95 %		60-140	1	02/17/13 21:14	02/18/13 23:29	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 05:28	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 05:28	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 05:28	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 05:28	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 05:28	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 05:28	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 05:28	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 05:28	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 05:28	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 05:28	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 05:28	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 05:28	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 05:28	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 05:28	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 05:28	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 05:28	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 05:28	460-00-4	
Dibromofluoromethane (S)	104 %		70-130	1		02/16/13 05:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	119 %		70-130	1		02/16/13 05:28	17060-07-0	
Toluene-d8 (S)	98 %		70-130	1		02/16/13 05:28	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: FB-3	Lab ID: 92148308041	Collected: 02/13/13 13:35	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:14	02/18/13 23:49	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	94 %		60-140	1	02/17/13 21:14	02/18/13 23:49	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 05:45	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 05:45	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 05:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 05:45	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 05:45	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 05:45	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 05:45	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 05:45	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 05:45	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 05:45	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 05:45	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 05:45	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 05:45	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 05:45	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 05:45	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 05:45	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		70-130	1		02/16/13 05:45	460-00-4	
Dibromofluoromethane (S)	104 %		70-130	1		02/16/13 05:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	120 %		70-130	1		02/16/13 05:45	17060-07-0	
Toluene-d8 (S)	98 %		70-130	1		02/16/13 05:45	2037-26-5	



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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92148308

Sample: TRIP BLANK	Lab ID: 92148308042	Collected: 02/13/13 00:00	Received: 02/15/13 11:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	1	02/17/13 21:15	02/19/13 00:10	106-93-4	
<b>Surrogates</b>								
1-Chloro-2-bromopropane (S)	98 %		60-140	1	02/17/13 21:15	02/19/13 00:10	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	1		02/16/13 06:02	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	1		02/16/13 06:02	994-05-8	
Benzene	ND ug/L		5.0	1		02/16/13 06:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	1		02/16/13 06:02	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	1		02/16/13 06:02	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1		02/16/13 06:02	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1		02/16/13 06:02	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1		02/16/13 06:02	108-20-3	
Ethanol	ND ug/L		200	1		02/16/13 06:02	64-17-5	
Ethylbenzene	ND ug/L		5.0	1		02/16/13 06:02	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	1		02/16/13 06:02	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1		02/16/13 06:02	1634-04-4	
Naphthalene	ND ug/L		5.0	1		02/16/13 06:02	91-20-3	
Toluene	ND ug/L		5.0	1		02/16/13 06:02	108-88-3	
m&p-Xylene	ND ug/L		10.0	1		02/16/13 06:02	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/16/13 06:02	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		02/16/13 06:02	460-00-4	
Dibromofluoromethane (S)	102 %		70-130	1		02/16/13 06:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	117 %		70-130	1		02/16/13 06:02	17060-07-0	
Toluene-d8 (S)	99 %		70-130	1		02/16/13 06:02	2037-26-5	

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

QC Batch: MSV/22037 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92148308030

METHOD BLANK: 923376 Matrix: Water

Associated Lab Samples: 92148308030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/15/13 15:00	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/15/13 15:00	
Benzene	ug/L	ND	5.0	02/15/13 15:00	
Diisopropyl ether	ug/L	ND	5.0	02/15/13 15:00	
Ethanol	ug/L	ND	200	02/15/13 15:00	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/15/13 15:00	
Ethylbenzene	ug/L	ND	5.0	02/15/13 15:00	
m&p-Xylene	ug/L	ND	10.0	02/15/13 15:00	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/15/13 15:00	
Naphthalene	ug/L	ND	5.0	02/15/13 15:00	
o-Xylene	ug/L	ND	5.0	02/15/13 15:00	
tert-Amyl Alcohol	ug/L	ND	100	02/15/13 15:00	
tert-Amylmethyl ether	ug/L	ND	10.0	02/15/13 15:00	
tert-Butyl Alcohol	ug/L	ND	100	02/15/13 15:00	
tert-Butyl Formate	ug/L	ND	50.0	02/15/13 15:00	
Toluene	ug/L	ND	5.0	02/15/13 15:00	
1,2-Dichloroethane-d4 (S)	%	100	70-130	02/15/13 15:00	
4-Bromofluorobenzene (S)	%	107	70-130	02/15/13 15:00	
Dibromofluoromethane (S)	%	100	70-130	02/15/13 15:00	
Toluene-d8 (S)	%	97	70-130	02/15/13 15:00	

LABORATORY CONTROL SAMPLE: 923377

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	44.9	90	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	800	80	70-130	
Benzene	ug/L	50	45.7	91	70-130	
Diisopropyl ether	ug/L	50	43.6	87	70-130	
Ethanol	ug/L	2000	1980	99	70-130	
Ethyl-tert-butyl ether	ug/L	100	86.3	86	70-130	
Ethylbenzene	ug/L	50	47.0	94	70-130	
m&p-Xylene	ug/L	100	96.3	96	70-130	
Methyl-tert-butyl ether	ug/L	50	46.0	92	70-130	
Naphthalene	ug/L	50	46.1	92	70-130	
o-Xylene	ug/L	50	46.0	92	70-130	
tert-Amyl Alcohol	ug/L	1000	868	87	70-130	
tert-Amylmethyl ether	ug/L	100	97.5	98	70-130	
tert-Butyl Alcohol	ug/L	500	438	88	70-130	
tert-Butyl Formate	ug/L	400	341	85	70-130	
Toluene	ug/L	50	46.8	94	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	



### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

LABORATORY CONTROL SAMPLE: 923377

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			97	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923378 923379

Parameter	Units	92148289013		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.							
1,2-Dichloroethane	ug/L	ND	50	50	52.4	50.8	105	102	70-130	3		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	984	900	98	90	70-130	9		
Benzene	ug/L	ND	50	50	53.3	52.6	107	105	70-130	1		
Diisopropyl ether	ug/L	ND	50	50	50.7	48.9	101	98	70-130	4		
Ethanol	ug/L	ND	2000	2000	2790	2650	140	132	70-130	5	M0	
Ethyl-tert-butyl ether	ug/L	ND	100	100	98.1	94.5	98	94	70-130	4		
Ethylbenzene	ug/L	ND	50	50	55.8	52.9	112	106	70-130	5		
m&p-Xylene	ug/L	ND	100	100	112	108	111	107	70-130	4		
Methyl-tert-butyl ether	ug/L	ND	50	50	49.3	46.7	99	93	70-130	5		
Naphthalene	ug/L	ND	50	50	51.6	48.9	103	98	70-130	5		
o-Xylene	ug/L	ND	50	50	52.4	50.4	105	101	70-130	4		
tert-Amyl Alcohol	ug/L	ND	1000	1000	1080	1020	108	102	70-130	6		
tert-Amylmethyl ether	ug/L	ND	100	100	112	108	112	108	70-130	4		
tert-Butyl Alcohol	ug/L	ND	500	500	727	696	145	139	70-130	4	M0	
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130		P5	
Toluene	ug/L	ND	50	50	56.7	54.6	108	104	70-130	4		
1,2-Dichloroethane-d4 (S)	%						93	103	70-130			
4-Bromofluorobenzene (S)	%						99	100	70-130			
Dibromofluoromethane (S)	%						95	98	70-130			
Toluene-d8 (S)	%						96	96	70-130			

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

QC Batch: MSV/22038 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92148308001, 92148308002, 92148308003, 92148308004, 92148308005, 92148308006, 92148308007, 92148308008, 92148308009, 92148308010, 92148308011, 92148308012, 92148308013, 92148308014, 92148308015, 92148308016, 92148308017, 92148308018, 92148308019, 92148308020

METHOD BLANK: 923392 Matrix: Water

Associated Lab Samples: 92148308001, 92148308002, 92148308003, 92148308004, 92148308005, 92148308006, 92148308007, 92148308008, 92148308009, 92148308010, 92148308011, 92148308012, 92148308013, 92148308014, 92148308015, 92148308016, 92148308017, 92148308018, 92148308019, 92148308020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/16/13 03:26	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/16/13 03:26	
Benzene	ug/L	ND	5.0	02/16/13 03:26	
Diisopropyl ether	ug/L	ND	5.0	02/16/13 03:26	
Ethanol	ug/L	ND	200	02/16/13 03:26	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/16/13 03:26	
Ethylbenzene	ug/L	ND	5.0	02/16/13 03:26	
m&p-Xylene	ug/L	ND	10.0	02/16/13 03:26	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/16/13 03:26	
Naphthalene	ug/L	ND	5.0	02/16/13 03:26	
o-Xylene	ug/L	ND	5.0	02/16/13 03:26	
tert-Amyl Alcohol	ug/L	ND	100	02/16/13 03:26	
tert-Amylmethyl ether	ug/L	ND	10.0	02/16/13 03:26	
tert-Butyl Alcohol	ug/L	ND	100	02/16/13 03:26	
tert-Butyl Formate	ug/L	ND	50.0	02/16/13 03:26	
Toluene	ug/L	ND	5.0	02/16/13 03:26	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/16/13 03:26	
4-Bromofluorobenzene (S)	%	102	70-130	02/16/13 03:26	
Dibromofluoromethane (S)	%	100	70-130	02/16/13 03:26	
Toluene-d8 (S)	%	95	70-130	02/16/13 03:26	

LABORATORY CONTROL SAMPLE: 923393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	47.0	94	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	882	88	70-130	
Benzene	ug/L	50	46.7	93	70-130	
Diisopropyl ether	ug/L	50	44.7	89	70-130	
Ethanol	ug/L	2000	2810	140	70-130 L3	
Ethyl-tert-butyl ether	ug/L	100	86.6	87	70-130	
Ethylbenzene	ug/L	50	47.9	96	70-130	
m&p-Xylene	ug/L	100	97.8	98	70-130	
Methyl-tert-butyl ether	ug/L	50	45.7	91	70-130	
Naphthalene	ug/L	50	46.8	94	70-130	
o-Xylene	ug/L	50	46.6	93	70-130	
tert-Amyl Alcohol	ug/L	1000	1010	101	70-130	
tert-Amylmethyl ether	ug/L	100	99.0	99	70-130	
tert-Butyl Alcohol	ug/L	500	522	104	70-130	

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

LABORATORY CONTROL SAMPLE: 923393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	336	84	70-130	
Toluene	ug/L	50	47.7	95	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923394 923395

Parameter	92148308020		MS		MSD		MS		MSD		% Rec Limits	RPD	Qual
	Units	Result	Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
1,2-Dichloroethane	ug/L	ND	50	50	49.7	52.8	99	106	70-130	6			
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	891	975	89	97	70-130	9			
Benzene	ug/L	ND	50	50	50.5	54.3	101	109	70-130	7			
Diisopropyl ether	ug/L	ND	50	50	46.6	50.7	93	101	70-130	8			
Ethanol	ug/L	ND	2000	2000	2840	3100	142	155	70-130	9 M0			
Ethyl-tert-butyl ether	ug/L	ND	100	100	89.4	97.9	89	98	70-130	9			
Ethylbenzene	ug/L	ND	50	50	50.3	55.0	101	110	70-130	9			
m&p-Xylene	ug/L	ND	100	100	102	110	102	110	70-130	8			
Methyl-tert-butyl ether	ug/L	ND	50	50	45.3	52.8	89	104	70-130	15			
Naphthalene	ug/L	ND	50	50	45.9	50.1	92	100	70-130	9			
o-Xylene	ug/L	ND	50	50	48.9	52.2	98	104	70-130	7			
tert-Amyl Alcohol	ug/L	ND	1000	1000	1000	1070	100	107	70-130	6			
tert-Amylmethyl ether	ug/L	ND	100	100	102	110	102	110	70-130	8			
tert-Butyl Alcohol	ug/L	ND	500	500	689	716	138	143	70-130	4 M1			
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130	P5			
Toluene	ug/L	ND	50	50	51.4	54.7	103	109	70-130	6			
1,2-Dichloroethane-d4 (S)	%						105	94	70-130				
4-Bromofluorobenzene (S)	%						97	97	70-130				
Dibromofluoromethane (S)	%						98	97	70-130				
Toluene-d8 (S)	%						97	96	70-130				

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210

Pace Project No.: 92148308

QC Batch: MSV/22039 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92148308021, 92148308022, 92148308023, 92148308024, 92148308025, 92148308026, 92148308027, 92148308028, 92148308029, 92148308031, 92148308032, 92148308034, 92148308035, 92148308036, 92148308037, 92148308038

METHOD BLANK: 923410 Matrix: Water

Associated Lab Samples: 92148308021, 92148308022, 92148308023, 92148308024, 92148308025, 92148308026, 92148308027, 92148308028, 92148308029, 92148308031, 92148308032, 92148308034, 92148308035, 92148308036, 92148308037, 92148308038

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/16/13 03:10	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/16/13 03:10	
Benzene	ug/L	ND	5.0	02/16/13 03:10	
Diisopropyl ether	ug/L	ND	5.0	02/16/13 03:10	
Ethanol	ug/L	ND	200	02/16/13 03:10	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/16/13 03:10	
Ethylbenzene	ug/L	ND	5.0	02/16/13 03:10	
m&p-Xylene	ug/L	ND	10.0	02/16/13 03:10	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/16/13 03:10	
Naphthalene	ug/L	ND	5.0	02/16/13 03:10	
o-Xylene	ug/L	ND	5.0	02/16/13 03:10	
tert-Amyl Alcohol	ug/L	ND	100	02/16/13 03:10	
tert-Amylmethyl ether	ug/L	ND	10.0	02/16/13 03:10	
tert-Butyl Alcohol	ug/L	ND	100	02/16/13 03:10	
tert-Butyl Formate	ug/L	ND	50.0	02/16/13 03:10	
Toluene	ug/L	ND	5.0	02/16/13 03:10	
1,2-Dichloroethane-d4 (S)	%	99	70-130	02/16/13 03:10	
4-Bromofluorobenzene (S)	%	103	70-130	02/16/13 03:10	
Dibromofluoromethane (S)	%	101	70-130	02/16/13 03:10	
Toluene-d8 (S)	%	95	70-130	02/16/13 03:10	

LABORATORY CONTROL SAMPLE: 923411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	46.0	92	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	907	91	70-130	
Benzene	ug/L	50	46.6	93	70-130	
Diisopropyl ether	ug/L	50	43.9	88	70-130	
Ethanol	ug/L	2000	2850	142	70-130	L3
Ethyl-tert-butyl ether	ug/L	100	86.9	87	70-130	
Ethylbenzene	ug/L	50	47.0	94	70-130	
m&p-Xylene	ug/L	100	95.2	95	70-130	
Methyl-tert-butyl ether	ug/L	50	45.1	90	70-130	
Naphthalene	ug/L	50	46.8	94	70-130	
o-Xylene	ug/L	50	45.4	91	70-130	
tert-Amyl Alcohol	ug/L	1000	1050	105	70-130	
tert-Amylmethyl ether	ug/L	100	100	100	70-130	
tert-Butyl Alcohol	ug/L	500	522	104	70-130	

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

LABORATORY CONTROL SAMPLE: 923411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	335	84	70-130	
Toluene	ug/L	50	46.7	93	70-130	
1,2-Dichloroethane-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			96	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923412 923413

Parameter	92148308024		MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	50	50	48.5	48.4	97	97	70-130	0	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	942	915	94	92	70-130	3	
Benzene	ug/L	ND	50	50	50.2	50.5	100	101	70-130	0	
Diisopropyl ether	ug/L	ND	50	50	46.6	47.2	93	94	70-130	1	
Ethanol	ug/L	ND	2000	2000	3260	2860	163	143	70-130	13	M0
Ethyl-tert-butyl ether	ug/L	ND	100	100	90.9	91.7	91	92	70-130	1	
Ethylbenzene	ug/L	ND	50	50	50.6	49.4	101	99	70-130	2	
m&p-Xylene	ug/L	ND	100	100	102	99.6	102	100	70-130	2	
Methyl-tert-butyl ether	ug/L	ND	50	50	47.5	45.1	95	90	70-130	5	
Naphthalene	ug/L	ND	50	50	49.1	45.0	98	90	70-130	9	
o-Xylene	ug/L	ND	50	50	49.0	46.5	98	93	70-130	5	
tert-Amyl Alcohol	ug/L	ND	1000	1000	1060	998	106	100	70-130	6	
tert-Amylmethyl ether	ug/L	ND	100	100	103	102	103	102	70-130	1	
tert-Butyl Alcohol	ug/L	ND	500	500	738	691	148	138	70-130	7	M0
tert-Butyl Formate	ug/L	ND	400	400	ND	ND	0	0	70-130		P5
Toluene	ug/L	ND	50	50	50.6	50.7	101	101	70-130	0	
1,2-Dichloroethane-d4 (S)	%						104	95	70-130		
4-Bromofluorobenzene (S)	%						99	98	70-130		
Dibromofluoromethane (S)	%						95	98	70-130		
Toluene-d8 (S)	%						96	97	70-130		

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

QC Batch: MSV/22042 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92148308033, 92148308039, 92148308040, 92148308041, 92148308042

METHOD BLANK: 923560 Matrix: Water  
Associated Lab Samples: 92148308033, 92148308039, 92148308040, 92148308041, 92148308042

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	02/16/13 03:00	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	02/16/13 03:00	
Benzene	ug/L	ND	5.0	02/16/13 03:00	
Diisopropyl ether	ug/L	ND	5.0	02/16/13 03:00	
Ethanol	ug/L	ND	200	02/16/13 03:00	
Ethyl-tert-butyl ether	ug/L	ND	10.0	02/16/13 03:00	
Ethylbenzene	ug/L	ND	5.0	02/16/13 03:00	
m&p-Xylene	ug/L	ND	10.0	02/16/13 03:00	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/16/13 03:00	
Naphthalene	ug/L	ND	5.0	02/16/13 03:00	
o-Xylene	ug/L	ND	5.0	02/16/13 03:00	
tert-Amyl Alcohol	ug/L	ND	100	02/16/13 03:00	
tert-Amylmethyl ether	ug/L	ND	10.0	02/16/13 03:00	
tert-Butyl Alcohol	ug/L	ND	100	02/16/13 03:00	
tert-Butyl Formate	ug/L	ND	50.0	02/16/13 03:00	
Toluene	ug/L	ND	5.0	02/16/13 03:00	
1,2-Dichloroethane-d4 (S)	%	117	70-130	02/16/13 03:00	
4-Bromofluorobenzene (S)	%	103	70-130	02/16/13 03:00	
Dibromofluoromethane (S)	%	100	70-130	02/16/13 03:00	
Toluene-d8 (S)	%	98	70-130	02/16/13 03:00	

LABORATORY CONTROL SAMPLE: 923561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.9	100	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	967	97	70-130	
Benzene	ug/L	50	48.8	98	70-130	
Diisopropyl ether	ug/L	50	44.8	90	70-130	
Ethanol	ug/L	2000	1420	71	70-130	
Ethyl-tert-butyl ether	ug/L	100	101	101	70-130	
Ethylbenzene	ug/L	50	52.9	106	70-130	
m&p-Xylene	ug/L	100	109	109	70-130	
Methyl-tert-butyl ether	ug/L	50	44.0	88	70-130	
Naphthalene	ug/L	50	50.8	102	70-130	
o-Xylene	ug/L	50	47.5	95	70-130	
tert-Amyl Alcohol	ug/L	1000	945	95	70-130	
tert-Amylmethyl ether	ug/L	100	110	110	70-130	
tert-Butyl Alcohol	ug/L	500	468	94	70-130	
tert-Butyl Formate	ug/L	400	423	106	70-130	
Toluene	ug/L	50	49.0	98	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

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LABORATORY CONTROL SAMPLE: 923561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			97	70-130	
Toluene-d8 (S)	%			98	70-130	

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

QC Batch: OEXT/20841 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92148308001, 92148308002, 92148308003, 92148308004, 92148308005, 92148308006, 92148308007, 92148308008, 92148308009, 92148308010, 92148308011, 92148308012, 92148308013, 92148308014, 92148308015, 92148308016, 92148308017, 92148308018, 92148308019, 92148308020

METHOD BLANK: 923889 Matrix: Water  
Associated Lab Samples: 92148308001, 92148308002, 92148308003, 92148308004, 92148308005, 92148308006, 92148308007, 92148308008, 92148308009, 92148308010, 92148308011, 92148308012, 92148308013, 92148308014, 92148308015, 92148308016, 92148308017, 92148308018, 92148308019, 92148308020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	02/17/13 08:03	
1-Chloro-2-bromopropane (S)	%	97	60-140	02/17/13 08:03	

LABORATORY CONTROL SAMPLE & LCSD: 923890 923891

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.24	0.24	82	82	60-140	1	20	
1-Chloro-2-bromopropane (S)	%				97	98	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923892 923893

Parameter	Units	92148308019 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.22	0.22	78	78	60-140		0
1-Chloro-2-bromopropane (S)	%						94	94	60-140		

SAMPLE DUPLICATE: 923894

Parameter	Units	92148308020 Result	Dup Result	RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		
1-Chloro-2-bromopropane (S)	%	90	92	3	



### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

QC Batch: OEXT/20850 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92148308021, 92148308022, 92148308023, 92148308024, 92148308025, 92148308026, 92148308027

METHOD BLANK: 923971 Matrix: Water  
Associated Lab Samples: 92148308021, 92148308022, 92148308023, 92148308024, 92148308025, 92148308026, 92148308027

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	02/17/13 19:02	
1-Chloro-2-bromopropane (S)	%	94	60-140	02/17/13 19:02	

LABORATORY CONTROL SAMPLE & LCSD: 923972 923973

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.24	0.23	82	80	60-140	4	20	
1-Chloro-2-bromopropane (S)	%				94	94	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923974 923975

Parameter	Units	92148308021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.22	0.21	78	76	60-140	3	
1-Chloro-2-bromopropane (S)	%						93	93	60-140		

SAMPLE DUPLICATE: 923976

Parameter	Units	92148308022 Result	Dup Result	RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		
1-Chloro-2-bromopropane (S)	%	94	94	1	

### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

QC Batch: OEXT/20852 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92148308028, 92148308029, 92148308030, 92148308031, 92148308032, 92148308033, 92148308034, 92148308035, 92148308036, 92148308037, 92148308038, 92148308039, 92148308040, 92148308041, 92148308042

METHOD BLANK: 923983 Matrix: Water  
Associated Lab Samples: 92148308028, 92148308029, 92148308030, 92148308031, 92148308032, 92148308033, 92148308034, 92148308035, 92148308036, 92148308037, 92148308038, 92148308039, 92148308040, 92148308041, 92148308042

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	02/18/13 17:18	
1-Chloro-2-bromopropane (S)	%	93	60-140	02/18/13 17:18	

LABORATORY CONTROL SAMPLE & LCSD: 923984 923985

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.22	0.22	78	80	60-140	0	20	
1-Chloro-2-bromopropane (S)	%				94	93	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 923986 923987

Parameter	Units	92148308035 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.21	0.23	72	82	60-140	13	
1-Chloro-2-bromopropane (S)	%						90	93	60-140		

SAMPLE DUPLICATE: 923988

Parameter	Units	92148308036 Result	Dup Result	RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		
1-Chloro-2-bromopropane (S)	%	94	94	2	

## QUALIFIERS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148308001	07960-MW-5	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308002	07960-MW-28	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308003	07960-MW-8	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308004	07960-MW-4	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308005	FB-1	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308006	07960-MW-27	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308007	07960-MW-18	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308008	07960-MW-17	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308009	07960-MW-23	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308010	07960-MW-15	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308011	FB-2	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308012	07960-MW-30	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308013	07960-MW-21	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308014	07960-MW-6	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308015	07960-MW-7	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308016	07960-MW-11	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308017	WSW-7	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308018	WSW-9	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308019	WSW-15	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308020	WSW-14	EPA 8011	OEXT/20841	EPA 8011	GCSV/13965
92148308021	WSW-13	EPA 8011	OEXT/20850	EPA 8011	GCSV/13969
92148308022	WSW-11	EPA 8011	OEXT/20850	EPA 8011	GCSV/13969
92148308023	WSW-10	EPA 8011	OEXT/20850	EPA 8011	GCSV/13969
92148308024	WSW-2	EPA 8011	OEXT/20850	EPA 8011	GCSV/13969
92148308025	07960-MW-14	EPA 8011	OEXT/20850	EPA 8011	GCSV/13969
92148308026	WSW-1 PRE GAC	EPA 8011	OEXT/20850	EPA 8011	GCSV/13969
92148308027	WSW-1 POST GAC	EPA 8011	OEXT/20850	EPA 8011	GCSV/13969
92148308028	WSW-8 PRE GAC	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308029	WSW-8 POST GAC	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308030	07960-MW-29	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308031	DUPLICATE 1	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308032	DUPLICATE 2	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308033	TRIP BLANK	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308034	WSW-3	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308035	WSW-4	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308036	WSW-5	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308037	WSW-6	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308038	07960-MW-2	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308039	07960-MW-13	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308040	07960-MW-24	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308041	FB-3	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308042	TRIP BLANK	EPA 8011	OEXT/20852	EPA 8011	GCSV/13971
92148308001	07960-MW-5	EPA 8260	MSV/22038		
92148308002	07960-MW-28	EPA 8260	MSV/22038		
92148308003	07960-MW-8	EPA 8260	MSV/22038		
92148308004	07960-MW-4	EPA 8260	MSV/22038		
92148308005	FB-1	EPA 8260	MSV/22038		

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92148308

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148308006	07960-MW-27	EPA 8260	MSV/22038		
92148308007	07960-MW-18	EPA 8260	MSV/22038		
92148308008	07960-MW-17	EPA 8260	MSV/22038		
92148308009	07960-MW-23	EPA 8260	MSV/22038		
92148308010	07960-MW-15	EPA 8260	MSV/22038		
92148308011	FB-2	EPA 8260	MSV/22038		
92148308012	07960-MW-30	EPA 8260	MSV/22038		
92148308013	07960-MW-21	EPA 8260	MSV/22038		
92148308014	07960-MW-6	EPA 8260	MSV/22038		
92148308015	07960-MW-7	EPA 8260	MSV/22038		
92148308016	07960-MW-11	EPA 8260	MSV/22038		
92148308017	WSW-7	EPA 8260	MSV/22038		
92148308018	WSW-9	EPA 8260	MSV/22038		
92148308019	WSW-15	EPA 8260	MSV/22038		
92148308020	WSW-14	EPA 8260	MSV/22038		
92148308021	WSW-13	EPA 8260	MSV/22039		
92148308022	WSW-11	EPA 8260	MSV/22039		
92148308023	WSW-10	EPA 8260	MSV/22039		
92148308024	WSW-2	EPA 8260	MSV/22039		
92148308025	07960-MW-14	EPA 8260	MSV/22039		
92148308026	WSW-1 PRE GAC	EPA 8260	MSV/22039		
92148308027	WSW-1 POST GAC	EPA 8260	MSV/22039		
92148308028	WSW-8 PRE GAC	EPA 8260	MSV/22039		
92148308029	WSW-8 POST GAC	EPA 8260	MSV/22039		
92148308030	07960-MW-29	EPA 8260	MSV/22037		
92148308031	DUPLICATE 1	EPA 8260	MSV/22039		
92148308032	DUPLICATE 2	EPA 8260	MSV/22039		
92148308033	TRIP BLANK	EPA 8260	MSV/22042		
92148308034	WSW-3	EPA 8260	MSV/22039		
92148308035	WSW-4	EPA 8260	MSV/22039		
92148308036	WSW-5	EPA 8260	MSV/22039		
92148308037	WSW-6	EPA 8260	MSV/22039		
92148308038	07960-MW-2	EPA 8260	MSV/22039		
92148308039	07960-MW-13	EPA 8260	MSV/22042		
92148308040	07960-MW-24	EPA 8260	MSV/22042		
92148308041	FB-3	EPA 8260	MSV/22042		
92148308042	TRIP BLANK	EPA 8260	MSV/22042		

**APPENDIX D**

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Groundwater Sampling Field Data Sheets

# GAUGE REPORT

Environmental Compliance Services, Inc.  
 13504 South Point Blvd., Unit F  
 Charlotte, North Carolina 28273

Project Name 378 Truck Stop Location Edgedfield, SC  
 Project No. 14-214210 UST Permit # 07960 Date 2/12/2013  
 Measured By A. Williamson Weather Mostly Sunny, 50-60s

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
07960-MW-1	28.12	28.21	0.09	----	----	----
07960-MW-2	----	31.33	----	----	41.57	5.01
07960-MW-3	----	31.79	----	----	39.89	1.32
07960-MW-4	----	30.00	----	----	39.74	4.77
07960-MW-5	----	36.02	----	----	39.80	1.24
07960-MW-6	----	30.98	----	----	35.09	1.34
07960-MW-7	----	28.60	----	----	34.98	3.12
07960-MW-8	----	29.52	----	----	35.13	2.07
07960-MW-9	----	30.51	----	----	35.23	1.54
07960-MW-10	----	27.25	----	----	40.22	6.33
07960-MW-11	----	33.99	----	----	35.29	0.21
07960-MW-12	----	DRY	----	----	34.97	----
07960-MW-13	----	31.69	----	----	40.24	3.28
07960-MW-14	----	35.07	----	----	39.80	1.54
07960-MW-15	----	33.42	----	----	40.20	3.33
07960-MW-16	----	33.56	----	----	40.16	2.16
07960-MW-17	----	19.25	----	----	35.05	7.74
07960-MW-18	----	23.23	----	----	35.74	6.12
07960-MW-19	----	32.05	----	----	38.46	3.12
07960-MW-20	----	DRY	----	----	45.08	----
07960-MW-21	----	32.00	----	----	40.20	4.02
07960-MW-22	37.61	37.98	0.37	----	----	----
07960-MW-23	----	26.28	----	----	37.68	5.58
07960-MW-24	----	33.17	----	----	40.05	2.74

# GAUGE REPORT

Environmental Compliance Services, Inc.  
13504 South Point Blvd., Unit F  
Charlotte, North Carolina 28273

Project Name 378 Truck Stop Location Edgedfield, SC  
Project No. 14-214210 UST Permit # 07960 Date 2/12/2013  
Measured By A. Williamson Weather Mostly Sunny, 50-60s

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
07960-MW-25	----	33.28	----	----	40.01	2.20
07960-MW-26	----	30.29	----	----	38.77	4.14
07960-MW-27	----	30.27	----	----	35.12	2.37
07960-MW-28	----	28.86	----	----	40.08	5.49
07960-MW-29	----	32.04	----	----	40.15	3.96
07960-MW-30	----	36.20	----	----	45.05	4.32
07960-MW-31	----	35.31	----	----	43.96	4.23
07960-TW-1	----	33.22	----	----	63.32	14.73
07960-TW-2	----	33.62	----	----	80.29	11.61
07960-TW-3	----	29.97	----	----	80.67	16.52
07960-TW-4	----	32.81	----	----	68.61	7.84
07960-TW-5	----	34.60	----	----	58.43	5.88
07960-TW-6	----	33.80	----	----	59.18	5.14
07960-TW-7	----	37.54	----	----	59.02	7.00
07960-TW-8	----	42.13	----	----	58.58	6.36
07960-TW-9	----	30.22	----	----	80.15	24.42



# GAUGE REPORT

Environmental Compliance Services, Inc.  
 13504 South Point Blvd., Unit F  
 Charlotte, North Carolina 28273

Project Name 378 Truck Stop Location Edgedfield, SC  
 Project No. 14-214210 UST Permit # 07960 Date 2/12/2013  
 Measured By A. Williamson Weather Mostly Sunny, 50-60s

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
WSW-1 Pre GAC						
WSW-1 Post GAC						
WSW-2						
WSW-3						
WSW-4						
WSW-5						
WSW-6						
WSW-7						
WSW-8 Pre GAC						
WSW-8 Post GAC						
WSW-9						
WSW-10						
WSW-11						
WSW-12						
WSW-13						
WSW-14						
WSW-15						
WSW-X						

Water Supply Wells not gauged.

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/12/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny, 50s-60's</u></p> <p>Ambient Air Temperature <u>60</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: _____</p> <p>Calibration Measurement Results</p> <p>pH 4.0 = _____ Conductivity 4.49 = _____</p> <p>Turbidity 0.0 = _____ Dissolved Oxygen 8.52 = _____</p> <p style="text-align: center;"><u>Chain of Custody</u></p> <p>Relinquished by _____ Date/Time _____ ECS Office Received by _____ Date/Time _____</p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>07960-MW-1</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>Unknown</u> ft. to <u>Unknown</u> ft.</p> <p>Total Well Depth (TWD) _____ ft.</p> <p>Depth to GW(DGW) <u>28.21</u> ft.</p> <p>Depth to FP (Free product) <u>28.12</u> ft.</p> <p>FP Thickness <u>0.09</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling _____ gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Time (military)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>pH (s.u.)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>O.R.P. (mV)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Temperature (°C)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Turbidity (NTU)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>			Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)									Time (military)									pH (s.u.)									O.R.P. (mV)									Temperature (°C)									Specific Cond. (mS/cm)									Dissolved Oxygen (mg/L)									Turbidity (NTU)								
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Turbidity (NTU)																																																																																		
<p>Remarks <u>Not sampled due to the presence of free product.</u></p> <p>_____</p> <p>_____</p>																																																																																		

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-MW-2</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>Unknown</u> ft. to <u>Unknown</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>41.57</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>31.33</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>10.24</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= $\frac{10.24}{1} \times 0.163 = 1.67$ gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = $3 \times 1.67 = 5.01$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>5.01</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low _____ Medium _____ High <input checked="" type="checkbox"/>	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.67	1.67	1.67				0.00
Time (military)	11:24	11:28	11:34	11:38				11:45
pH (s.u.)	6.63	6.65	6.68	6.71				6.69
O.R.P. (mV)	2	-16	-16	-14				-10
Temperature (°C)	19.88	20.25	19.81	19.94				20.01
Specific Cond. (mS/cm)	0.636	0.630	0.540	0.519				0.514
Dissolved Oxygen (mg/L)	0.00	0.00	0.00	0.00				0.00
Turbidity (NTU)	88.5	>999	131.0	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-3</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>10</u> ft. to <u>40</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>39.89</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>31.79</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>8.10</u> ft.	
pH 4.0 = <u>4.06 @ 14°C</u> Conductivity 4.49 = <u>4.48</u>		1Csg. Vol. (LWC*C)= <u>8.10</u> X <u>0.163</u> = <u>1.32</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.23</u>		3Csg. Volume = 3x <u>1.32</u> = <u>3.96</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>1.32</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low <input checked="" type="checkbox"/> Medium _____ High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.32						0.00
Time (military)	17:00	17:03						17:20
pH (s.u.)	6.62	6.25						6.21
O.R.P. (mV)	-1	16						29
Temperature (°C)	19.08	18.79						18.7
Specific Cond. (mS/cm)	0.725	0.719						0.654
Dissolved Oxygen (mg/L)	0.79	0.85						1.34
Turbidity (NTU)	30.1	>999						202.1

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after one well volume.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/12/13</u>		Well # <u>07960-MW-4</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly sunny, 50s-60s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>60</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>10</u> ft. to <u>40</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>39.74</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>30.00</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>9.74</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= $\frac{9.74}{1} \times 0.163 = 1.59$ gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = $3 \times 1.59 = 4.76$ gals.(Std. Purge Vol)	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.59	1.59	1.59				0.00
Time (military)	16:01	16:04	16:07	16:12				16:15
pH (s.u.)	6.30	6.26	6.36	6.41				6.44
O.R.P. (mV)	112	142	52	41				24
Temperature (°C)	20.39	20.35	20.14	19.79				19.61
Specific Cond. (mS/cm)	0.443	0.411	0.472	0.529				0.543
Dissolved Oxygen (mg/L)	0.00	0.31	0.00	0.00				0.00
Turbidity (NTU)	122.0	>999	>999	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/12/13</u>		Well # <u>07960-MW-5</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly sunny, 50s-60s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>60</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20</u> ft. to <u>40</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>39.80</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>36.02</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>3.78</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= $\frac{3.78}{1} \times \frac{0.163}{1} = \frac{0.62}{1}$ gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = $3 \times \frac{0.62}{1} = \frac{1.85}{1}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>1.24</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low <input checked="" type="checkbox"/> Medium _____ High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	0.62	0.62					0.00
Time (military)	14:49	14:53	14:58					15:40
pH (s.u.)	6.07	6.30	6.60					6.71
O.R.P. (mV)	169	115	48					46
Temperature (°C)	18.20	18.05	17.89					17.99
Specific Cond. (mS/cm)	0.949	0.889	0.999					0.999
Dissolved Oxygen (mg/L)	1.15	1.28	0.42					0.91
Turbidity (NTU)	0.0	439.0	925.0					849.0

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after two well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-6</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20.05</u> ft. to <u>35.05</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.09</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>30.98</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>4.11</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= $\frac{4.11}{1} \times 0.163 = 0.67$ gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = $3 \times 0.67 = 2.01$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>1.34</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office	<u>2/14/13 19:30</u>	Well Yield Low <input checked="" type="checkbox"/> Medium _____ High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	0.67	0.67					0.00
Time (military)	8:36	8:38	8:43					9:10
pH (s.u.)	6.31	6.03	6.06					6.16
O.R.P. (mV)	127	137	79					82
Temperature (°C)	17.55	17.73	17.49					17.16
Specific Cond. (mS/cm)	0.133	0.121	0.120					0.145
Dissolved Oxygen (mg/L)	0.00	1.92	0.30					0.00
Turbidity (NTU)	101.0	284.0	935.0					687.0

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after two well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-7</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>19.92</u> ft. to <u>34.92</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>34.98</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>28.60</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>6.38</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	1Csg. Vol. (LWC*C)= $\frac{6.38}{1} \times 0.163 = 1.04$ gal.	
Turbidity 0.0 = <u>1.4</u>	Dissolved Oxygen 8.52 = <u>8.45</u>	3Csg. Volume = $3 \times 1.04 = 3.12$ gals.(Std. Purge Vol)	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.04	1.04	1.04				0.00
Time (military)	10:06	10:09	10:17	10:22				10:25
pH (s.u.)	5.99	5.97	6.05	6.05				6.08
O.R.P. (mV)	37	34	22	18				11
Temperature (°C)	19.46	20.13	19.67	20.16				20
Specific Cond. (mS/cm)	0.192	0.209	0.181	0.188				0.195
Dissolved Oxygen (mg/L)	0.00	0.00	0.00	0.00				0.00
Turbidity (NTU)	76.8	136.0	380.0	>999				>999

Remarks	<u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u>
	<u>Medium Yield.</u>



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/12/13</u>		Well # <u>07960-MW-8</u>																																																																																		
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet																																																																																		
General Weather Conditions <u>Mostly sunny, 50s-60s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>																																																																																		
Ambient Air Temperature <u>60</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>																																																																																		
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20.08</u> ft. to <u>35.08</u> ft.																																																																																		
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.13</u> ft.																																																																																		
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>29.52</u> ft.																																																																																		
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.																																																																																		
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	FP Thickness <u>-----</u> ft.																																																																																		
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>5.61</u> ft.																																																																																		
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	1Csg. Vol. (LWC*C)= $\frac{5.61}{1} \times 0.163 = 0.91$ gal.																																																																																		
Turbidity 0.0 = <u>1.4</u>	Dissolved Oxygen 8.52 = <u>8.45</u>	3Csg. Volume = $3 \times 0.91 = 2.74$ gals.(Std. Purge Vol)																																																																																		
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>2.07</u> gal.																																																																																		
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>																																																																																	
Relinquished by	Date/Time	Received by	Date/Time																																																																																	
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Relinquished by	Date/Time	Received by	Date/Time																																																																																	
<table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td>0.00</td> <td>0.91</td> <td>0.91</td> <td>0.25</td> <td></td> <td></td> <td></td> <td>0.00</td> </tr> <tr> <td>Time (military)</td> <td>15:49</td> <td>15:52</td> <td>15:55</td> <td></td> <td></td> <td></td> <td></td> <td>16:25</td> </tr> <tr> <td>pH (s.u.)</td> <td>6.07</td> <td>6.06</td> <td>6.08</td> <td></td> <td></td> <td></td> <td></td> <td>6.15</td> </tr> <tr> <td>O.R.P. (mV)</td> <td>126</td> <td>126</td> <td>151</td> <td></td> <td></td> <td></td> <td></td> <td>109</td> </tr> <tr> <td>Temperature (°C)</td> <td>19.91</td> <td>20.20</td> <td>20.19</td> <td></td> <td></td> <td></td> <td></td> <td>19.44</td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td>0.723</td> <td>0.717</td> <td>0.714</td> <td></td> <td></td> <td></td> <td></td> <td>0.719</td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td></td> <td></td> <td></td> <td></td> <td>0.21</td> </tr> <tr> <td>Turbidity (NTU)</td> <td>45.7</td> <td>965.0</td> <td>&gt;999</td> <td></td> <td></td> <td></td> <td></td> <td>&gt;999</td> </tr> </tbody> </table>					Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)	0.00	0.91	0.91	0.25				0.00	Time (military)	15:49	15:52	15:55					16:25	pH (s.u.)	6.07	6.06	6.08					6.15	O.R.P. (mV)	126	126	151					109	Temperature (°C)	19.91	20.20	20.19					19.44	Specific Cond. (mS/cm)	0.723	0.717	0.714					0.719	Dissolved Oxygen (mg/L)	0.00	0.00	0.00					0.21	Turbidity (NTU)	45.7	965.0	>999					>999
	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																												
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Turbidity (NTU)	45.7	965.0	>999					>999																																																																												
Remarks <u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u>																																																																																				
<u>Well purged dry after two well volumes plus ¼ gallon.</u>																																																																																				

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-9</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>20.17</u> ft. to <u>35.17</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.23</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>30.51</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>4.72</u> ft.	
pH 4.0 = <u>4.06 @ 14°C</u> Conductivity 4.49 = <u>4.48</u>		1Csg. Vol. (LWC*C)= $\frac{4.72}{1} \times 0.163 = 0.77$ gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.23</u>		3Csg. Volume = $3 \times 0.77 = 2.31$ gals.(Std. Purge Vol)	
Chain of Custody			
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Total Vol. of Water Purged Before Sampling <u>1.54</u> gal.	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>		Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____	
Relinquished by _____ <u>2/15/13 8:25</u>		Received by _____ <u>2/15/13 8:25</u>	
Received by _____ <u>2/15/13 8:25</u>		Date/Time _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	0.77	0.77					0.00
Time (military)	11:10	11:13	11:16					11:40
pH (s.u.)	6.40	6.20	6.22					6.27
O.R.P. (mV)	161	198	228					180
Temperature (°C)	17.94	17.81	17.89					17.72
Specific Cond. (mS/cm)	0.993	0.900	0.993					0.985
Dissolved Oxygen (mg/L)	3.06	3.49	3.45					3.17
Turbidity (NTU)	141.0	>999	>999					>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after two well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-10</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.16</u> ft. to <u>40.16</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.22</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>27.25</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>12.97</u> ft.	
pH 4.0 = <u>4.06 @ 14°C</u>	Conductivity 4.49 = <u>4.48</u>	1Csg. Vol. (LWC*C)= $\frac{12.97}{1} \times 0.163 = 2.11$ gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>9.23</u>	3Csg. Volume = $3 \times 2.11 = 6.34$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>6.33</u> gal.	
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time
		Well Yield Low _____ Medium _____ High <input checked="" type="checkbox"/>	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.11	2.11	2.11				0.00
Time (military)	12:25	12:29	12:32	12:36				12:40
pH (s.u.)	7.51	6.99	7.10	7.11				7.16
O.R.P. (mV)	133	187	196	200				268
Temperature (°C)	17.23	17.16	17.21	17.29				17.18
Specific Cond. (mS/cm)	0.599	0.509	0.572	0.587				0.596
Dissolved Oxygen (mg/L)	2.57	3.46	2.63	2.37				2.32
Turbidity (NTU)	7.5	393.0	677.0	748.0				794.0

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-11</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20.23</u> ft. to <u>35.23</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.29</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>33.99</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>1.30</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= <u>1.30</u> X <u>0.163</u> = <u>0.21</u> gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = 3x <u>0.21</u> = <u>0.64</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>0.21</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low <input checked="" type="checkbox"/> Medium _____ High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	0.21						0.00
Time (military)	14:23	14:26						15:35
pH (s.u.)	6.71	6.66						6.71
O.R.P. (mV)	25	10						10
Temperature (°C)	16.28	17.67						17.8
Specific Cond. (mS/cm)	0.662	0.668						0.691
Dissolved Oxygen (mg/L)	0.08	0.00						0.00
Turbidity (NTU)	>999	>999						>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after one well volume.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/12/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny, 50s-60s</u></p> <p>Ambient Air Temperature <u>60</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: _____</p> <p>Calibration Measurement Results</p> <p>pH 4.0 = _____ Conductivity 4.49 = _____</p> <p>Turbidity 0.0 = _____ Dissolved Oxygen 8.52 = _____</p> <p style="text-align: center;"><u>Chain of Custody</u></p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>07960-MW-12</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143 \cdot (D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>19.99</u> ft. to <u>34.99</u> ft.</p> <p>Total Well Depth (TWD) <u>34.97</u> ft.</p> <p>Depth to GW(DGW) <u>DRY</u> ft.</p> <p>Depth to FP (Free product) _____ ft.</p> <p>FP Thickness _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling _____ gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Time (military)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>pH (s.u.)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>O.R.P. (mV)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Temperature (°C)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Turbidity (NTU)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>			Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)									Time (military)									pH (s.u.)									O.R.P. (mV)									Temperature (°C)									Specific Cond. (mS/cm)									Dissolved Oxygen (mg/L)									Turbidity (NTU)								
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<p>Remarks <u>Well was dry. Not sampled.</u></p> <p>_____</p> <p>_____</p>																																																																																		

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-MW-13</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.19</u> ft. to <u>40.19</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.24</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>31.69</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>8.55</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= $\frac{8.55}{1} \times \frac{0.163}{1} = \underline{1.39}$ gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = $3 \times \frac{1.39}{1} = \underline{4.18}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>3.28</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.39	1.39	0.50				0.00
Time (military)	11:57	12:02	12:06					14:21
pH (s.u.)	6.90	6.94	6.97					7.03
O.R.P. (mV)	-35	-35	-36					82
Temperature (°C)	18.34	18.32	18.32					17.8
Specific Cond. (mS/cm)	1.060	1.050	1.090					1.010
Dissolved Oxygen (mg/L)	0.00	0.00	0.00					2.78
Turbidity (NTU)	175.0	851.0	950.0					78.1

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after two well volumes plus ½ gallon.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-14</u>																																																																																		
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet																																																																																		
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>																																																																																		
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>																																																																																		
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>24.74</u> ft. to <u>39.74</u> ft.																																																																																		
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>39.80</u> ft.																																																																																		
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>35.07</u> ft.																																																																																		
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.																																																																																		
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	FP Thickness <u>-----</u> ft.																																																																																		
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>4.73</u> ft.																																																																																		
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	1Csg. Vol. (LWC*C)= $\frac{4.73}{1} \times 0.163 = 0.77$ gal.																																																																																		
Turbidity 0.0 = <u>1.4</u>	Dissolved Oxygen 8.52 = <u>8.45</u>	3Csg. Volume = $3 \times 0.77 = 2.31$ gals.(Std. Purge Vol)																																																																																		
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>1.54</u> gal.																																																																																		
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>																																																																																	
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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																												
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-15</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.13</u> ft. to <u>40.13</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.20</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>33.42</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>6.78</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= $\frac{6.78}{1} \times 0.163 = 1.11$ gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = $3 \times 1.11 = 3.32$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>3.33</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.11	1.11	1.11				0.00
Time (military)	12:42	12:46	12:50	12:57				13:15
pH (s.u.)	6.41	6.15	6.29	6.41				6.49
O.R.P. (mV)	176	183	181	176				174
Temperature (°C)	17.39	17.35	17.20	16.96				17.05
Specific Cond. (mS/cm)	0.579	0.568	0.590	0.576				0.555
Dissolved Oxygen (mg/L)	0.00	0.00	0.00	0.00				0.00
Turbidity (NTU)	67.8	728.0	>999	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Medium Yield.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-MW-16</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.11</u> ft. to <u>40.11</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.16</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>33.56</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>6.60</u> ft.	
pH 4.0 = <u>4.06 @ 5°C</u> Conductivity 4.49 = <u>4.65</u>		1Csg. Vol. (LWC*C)= $\frac{6.60}{1} \times 0.163 = 1.08$ gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.31</u>		3Csg. Volume = $3 \times 1.08 = 3.23$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>2.16</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low <input checked="" type="checkbox"/> Medium _____ High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.08	1.08					0.00
Time (military)	13:32	13:36	13:40					14:00
pH (s.u.)	6.73	6.72	6.73					6.76
O.R.P. (mV)	-29	-36	-46					-49
Temperature (°C)	17.08	17.06	17.01					16.98
Specific Cond. (mS/cm)	1.05	1.09	1.06					1.06
Dissolved Oxygen (mg/L)	0.75	0.85	0.51					1.17
Turbidity (NTU)	43.6	441.0	>999					>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after two well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-17</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>20.02</u> ft. to <u>35.02</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.05</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>19.25</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>15.80</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= <u>15.80</u> X <u>0.163</u> = <u>2.58</u> gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = 3x <u>2.58</u> = <u>7.73</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>7.74</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>	Relinquished by <u>Date/Time</u> Received by <u>Date/Time</u>	Well Yield Low _____ Medium _____ High <input checked="" type="checkbox"/>	
<u>ECS Office</u> <u>2/15/13 8:25</u> <u>Pace</u> <u>2/15/13 8:25</u>	Relinquished by <u>Date/Time</u> Received by <u>Date/Time</u>		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.58	2.58	2.58				0.00
Time (military)	11:22	11:27	11:32	11:38				11:45
pH (s.u.)	6.20	6.06	6.10	6.09				6.11
O.R.P. (mV)	159	165	167	170				175
Temperature (°C)	18.44	18.51	18.78	18.51				18.53
Specific Cond. (mS/cm)	0.098	0.109	0.109	0.117				0.103
Dissolved Oxygen (mg/L)	6.96	6.47	6.50	6.73				6.95
Turbidity (NTU)	139.0	175.0	202.0	885.0				299.0

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-18</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20.67</u> ft. to <u>35.67</u> ft.	Total Well Depth (TWD) <u>35.74</u> ft.
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>23.23</u> ft.	Depth to FP (Free product) <u>-----</u> ft.
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		FP Thickness <u>-----</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>12.51</u> ft.
Quality Assurance:		1Csg. Vol. (LWC*C)= <u>12.51</u> X <u>0.163</u> = <u>2.04</u> gal.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	3Csg. Volume = 3x <u>2.04</u> = <u>6.12</u> gals.(Std. Purge Vol)	
Calibration Measurement Results		Total Vol. of Water Purged Before Sampling <u>6.12</u> gal.	
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____	
Turbidity 0.0 = <u>1.4</u>	Dissolved Oxygen 8.52 = <u>8.45</u>		
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.04	2.04	2.04				0.00
Time (military)	10:44	10:49	10:54	10:58				11:05
pH (s.u.)	6.73	6.42	6.54	6.65				6.69
O.R.P. (mV)	42	102	108	106				117
Temperature (°C)	17.55	17.68	17.79	17.64				17.84
Specific Cond. (mS/cm)	0.344	0.272	0.274	0.298				0.314
Dissolved Oxygen (mg/L)	0.00	1.27	1.70	1.35				0.91
Turbidity (NTU)	160.0	751.0	>999	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Medium Yield.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-19</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>23.57</u> ft. to <u>38.57</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>38.46</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>32.05</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>6.41</u> ft.	
pH 4.0 = <u>4.06 @ 14°C</u> Conductivity 4.49 = <u>4.48</u>		1Csg. Vol. (LWC*C)= $\frac{6.41}{1} \times \frac{0.163}{1} = \frac{1.04}{1}$ gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.23</u>		3Csg. Volume = $3 \times \frac{1.04}{1} = \frac{3.13}{1}$ gals.(Std. Purge Vol)	
Chain of Custody			
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Total Vol. of Water Purged Before Sampling <u>3.12</u> gal.	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>		Well Yield Low _____ Medium _____ High <input checked="" type="checkbox"/>	
Relinquished by _____ <u>2/15/13 8:25</u>		Received by _____ <u>2/15/13 8:25</u>	
Received by _____ <u>2/15/13 8:25</u>		Date/Time _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.04	1.04	1.04				0.00
Time (military)	15:11	15:16	15:19	15:22				15:30
pH (s.u.)	7.20	6.60	6.56	6.49				6.40
O.R.P. (mV)	-60	85	106	54				60
Temperature (°C)	18.13	18.21	18.23	18.33				18.17
Specific Cond. (mS/cm)	0.560	0.315	0.390	0.386				0.376
Dissolved Oxygen (mg/L)	1.56	3.30	1.88	1.19				1.33
Turbidity (NTU)	43.3	424.0	>999	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/12/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny, 50s-60s</u></p> <p>Ambient Air Temperature <u>60</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: _____</p> <p>Calibration Measurement Results</p> <p>pH 4.0 = _____ Conductivity 4.49 = _____</p> <p>Turbidity 0.0 = _____ Dissolved Oxygen 8.52 = _____</p> <p style="text-align: center;"><u>Chain of Custody</u></p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>07960-MW-20</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>30.05</u> ft. to <u>45.05</u> ft.</p> <p>Total Well Depth (TWD) <u>45.08</u> ft.</p> <p>Depth to GW(DGW) <u>DRY</u> ft.</p> <p>Depth to FP (Free product) _____ ft.</p> <p>FP Thickness _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling _____ gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																																	
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<p>Remarks <u>Well was dry. Not sampled. Stick up manhole approximately 3 feet above ground surface.</u></p>																																																																																		

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/13/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Cloudy with intermittent rain, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u></p> <p>Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border: none;"> <tr> <td style="border: none;"><u>A. Williamson</u></td> <td style="border: none;"><u>2/14/13 19:30</u></td> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>2/14/13 19:30</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> <tr> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>2/15/13 8:25</u></td> <td style="border: none;"><u>Pace</u></td> <td style="border: none;"><u>2/15/13 8:25</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>07960-MW-21</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>25.16</u> ft. to <u>40.16</u> ft.</p> <p>Total Well Depth (TWD) <u>40.20</u> ft.</p> <p>Depth to GW(DGW) <u>32.00</u> ft.</p> <p>Depth to FP (Free product) _____ ft.</p> <p>FP Thickness _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>8.20</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{8.20}{1} \times \frac{0.163}{1} = \frac{1.34}{1}</math> gal.</p> <p>3Csg. Volume = <math>3 \times \frac{1.34}{1} = \frac{4.01}{1}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>4.02</u> gal.</p> <p>Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____</p>																																																																	
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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																										
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/12/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny, 50s-60's</u></p> <p>Ambient Air Temperature <u>60</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: _____</p> <p>Calibration Measurement Results</p> <p>pH 4.0 = _____ Conductivity 4.49 = _____</p> <p>Turbidity 0.0 = _____ Dissolved Oxygen 8.52 = _____</p> <p style="text-align: center;"><u>Chain of Custody</u></p> <p>Relinquished by _____ Date/Time _____ ECS Office Received by _____ Date/Time _____</p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>07960-MW-22</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143 \cdot (D/2)^2</math> for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>25.09</u> ft. to <u>40.09</u> ft.</p> <p>Total Well Depth (TWD) _____ ft.</p> <p>Depth to GW(DGW) <u>37.98</u> ft.</p> <p>Depth to FP (Free product) <u>37.61</u> ft.</p> <p>FP Thickness <u>0.37</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times 0.163 = 0.00</math> gal.</p> <p>3Csg. Volume = <math>3 \times \frac{0.00}{0.00} = 0.00</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling _____ gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Time (military)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>pH (s.u.)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>O.R.P. (mV)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Temperature (°C)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Turbidity (NTU)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>			Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)									Time (military)									pH (s.u.)									O.R.P. (mV)									Temperature (°C)									Specific Cond. (mS/cm)									Dissolved Oxygen (mg/L)									Turbidity (NTU)								
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

### Field Data Information Sheet for Ground Water Sampling

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-23</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Ambient Air Temperature <u>50</u> F		Screen Interval <u>22.24</u> ft. to <u>37.24</u> ft.	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Total Well Depth (TWD) <u>37.68</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>26.28</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to FP (Free product) <u>-----</u> ft.	
Quality Assurance:		FP Thickness <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		Length of Water Column (LWC=TWD-DGW) <u>11.40</u> ft.	
Calibration Measurement Results		1Csg. Vol. (LWC*C)= <u>11.40</u> X <u>0.163</u> = <u>1.86</u> gal.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		3Csg. Volume = 3x <u>1.86</u> = <u>5.57</u> gals.(Std. Purge Vol)	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		Total Vol. of Water Purged Before Sampling <u>5.58</u> gal.	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.86	1.86	1.86				0.00
Time (military)	12:11	12:14	12:19	12:23				12:25
pH (s.u.)	6.18	6.38	6.24	6.21				6.29
O.R.P. (mV)	179	171	178	180				177
Temperature (°C)	17.56	18.36	18.40	18.32				18.06
Specific Cond. (mS/cm)	0.176	0.162	0.167	0.177				0.178
Dissolved Oxygen (mg/L)	0.28	4.96	2.92	0.31				0.87
Turbidity (NTU)	224.0	606.0	922.0	>999				>999

Remarks	<u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u> <u>Medium Yield.</u>
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-MW-24</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.13</u> ft. to <u>40.13</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type _____		Total Well Depth (TWD) <u>40.05</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type _____		Depth to GW(DGW) <u>33.17</u> ft.	
Quality Assurance:		Depth to FP (Free product) _____ ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness _____ ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>6.88</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= <u>6.88</u> X <u>0.163</u> = <u>1.12</u> gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = 3x <u>1.12</u> = <u>3.36</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>2.74</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.12	1.12	0.50				0.00
Time (military)	13:06	13:09	13:12					13:30
pH (s.u.)	7.26	7.16	7.14					7.37
O.R.P. (mV)	89	89	88					94
Temperature (°C)	17.22	17.40	17.43					17.14
Specific Cond. (mS/cm)	0.684	0.674	0.751					0.826
Dissolved Oxygen (mg/L)	0.14	0.19	0.00					0.00
Turbidity (NTU)	12.9	582.0	>999					>999

Remarks	<u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u>
	<u>Well purged dry after two well volumes plus ½ gallon.</u>

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-MW-25</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>24.98</u> ft. to <u>39.98</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.01</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>33.28</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>6.73</u> ft.	
pH 4.0 = <u>4.06 @ 5°C</u> Conductivity 4.49 = <u>4.65</u>		1Csg. Vol. (LWC*C)= <u>6.73</u> X <u>0.163</u> = <u>1.10</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.31</u>		3Csg. Volume = 3x <u>1.10</u> = <u>3.29</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>2.20</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>	Received by <u>_____</u> <u>2/15/13 8:25</u>		Well Yield Low <input checked="" type="checkbox"/> Medium <u>_____</u> High <u>_____</u>
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Pace <u>2/15/13 8:25</u>		
Relinquished by <u>_____</u> <u>_____</u>	Received by <u>_____</u> <u>_____</u>		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.10	1.10					0.00
Time (military)	9:00	9:03	9:06					9:36
pH (s.u.)	7.51	7.15	7.07					6.87
O.R.P. (mV)	214	232	240					244
Temperature (°C)	15.96	17.10	17.35					17.09
Specific Cond. (mS/cm)	0.468	0.471	0.473					0.510
Dissolved Oxygen (mg/L)	2.29	3.74	2.57					2.81
Turbidity (NTU)	16.3	>999	>999					>999

Remarks	<u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u>
	<u>Well purged dry after two well volumes.</u>

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

### Field Data Information Sheet for Ground Water Sampling

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-MW-26</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>23.74</u> ft. to <u>38.74</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>38.77</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>30.29</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>8.48</u> ft.	
pH 4.0 = <u>4.06 @ 5°C</u>	Conductivity 4.49 = <u>4.65</u>	1Csg. Vol. (LWC*C)= $\frac{8.48}{1} \times \frac{0.163}{1} = \frac{1.38}{1}$ gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>9.31</u>	3Csg. Volume = $3 \times \frac{1.38}{1} = \frac{4.15}{1}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>4.14</u> gal.	
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time
		Well Yield Low _____ Medium _____ High <input checked="" type="checkbox"/>	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.38	1.38	1.38				0.00
Time (military)	11:20	11:23	11:27	11:31				11:40
pH (s.u.)	6.63	6.59	6.53	6.50				6.50
O.R.P. (mV)	185	226	233	246				257
Temperature (°C)	17.25	17.33	17.38	17.47				17.41
Specific Cond. (mS/cm)	0.725	0.703	0.710	0.710				0.710
Dissolved Oxygen (mg/L)	1.78	3.51	1.72	1.51				1.52
Turbidity (NTU)	7.2	737.0	>999	>999				>999

Remarks	<u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u>
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-27</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>20.10</u> ft. to <u>35.10</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.12</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>30.27</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>4.85</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= $\frac{4.85}{0.79} \times 0.163 = 0.79$ gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = $3 \times 0.79 = 2.37$ gals.(Std. Purge Vol)	
Chain of Custody			
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Total Vol. of Water Purged Before Sampling <u>2.37</u> gal.	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>		Well Yield Low _____ Medium _____ High <input checked="" type="checkbox"/>	
Relinquished by _____ <u>2/15/13 8:25</u>		Received by _____ <u>2/15/13 8:25</u>	
Received by _____ <u>2/15/13 8:25</u>		Date/Time _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	0.79	0.79	0.79				0.00
Time (military)	9:23	9:26	9:30	9:34				9:40
pH (s.u.)	6.52	6.55	6.56	6.65				6.68
O.R.P. (mV)	95	110	122	120				141
Temperature (°C)	17.68	18.15	18.34	17.92				17.35
Specific Cond. (mS/cm)	0.391	0.397	0.400	0.393				0.386
Dissolved Oxygen (mg/L)	0.53	1.69	1.07	0.00				0.00
Turbidity (NTU)	53.1	439.0	>999	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/12/13</u>		Well # <u>07960-MW-28</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly sunny, 50s-60s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>60</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>25.03</u> ft. to <u>40.03</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.08</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>28.86</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>11.22</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= <u>11.22</u> X <u>0.163</u> = <u>1.83</u> gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = 3x <u>1.83</u> = <u>5.49</u> gals.(Std. Purge Vol)	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time
		Total Vol. of Water Purged Before Sampling <u>5.49</u> gal.	
		Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.83	1.83	1.83				0.00
Time (military)	15:05	15:08	15:13	15:19				15:25
pH (s.u.)	6.09	6.07	6.08	6.08				6.12
O.R.P. (mV)	125	137	106	111				116
Temperature (°C)	18.28	18.12	18.22	18.07				17.99
Specific Cond. (mS/cm)	0.294	0.274	0.269	0.279				0.277
Dissolved Oxygen (mg/L)	0.00	0.00	0.00	0.00				0.00
Turbidity (NTU)	27.0	>999	>999	>999				>999

Remarks	<u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u>
	<u>Medium Yield.</u>

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/13/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Cloudy with intermittent rain, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u></p> <p>Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><u>A. Williamson</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> <td style="width: 25%;"><u>ECS Office</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>2/15/13 8:25</u></td> <td><u>Pace</u></td> <td><u>2/15/13 8:25</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>07960-MW-29</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>25.15</u> ft. to <u>40.15</u> ft.</p> <p>Total Well Depth (TWD) <u>40.15</u> ft.</p> <p>Depth to GW(DGW) <u>32.04</u> ft.</p> <p>Depth to FP (Free product) _____ ft.</p> <p>FP Thickness _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>8.11</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>8.11</u> X <u>0.163</u> = <u>1.32</u> gal.</p> <p>3Csg. Volume = 3x <u>1.32</u> = <u>3.97</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>3.96</u> gal.</p> <p>Well Yield Low _____ Medium _____ High <input checked="" type="checkbox"/></p>																																																																	
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>																																																																															
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td>0.00</td> <td>1.32</td> <td>1.32</td> <td>1.32</td> <td></td> <td></td> <td></td> <td>0.00</td> </tr> <tr> <td>Time (military)</td> <td>17:00</td> <td>17:03</td> <td>17:08</td> <td>17:13</td> <td></td> <td></td> <td></td> <td>17:15</td> </tr> <tr> <td>pH (s.u.)</td> <td>6.12</td> <td>6.03</td> <td>6.01</td> <td>5.97</td> <td></td> <td></td> <td></td> <td>6.01</td> </tr> <tr> <td>O.R.P. (mV)</td> <td>154</td> <td>164</td> <td>174</td> <td>179</td> <td></td> <td></td> <td></td> <td>193</td> </tr> <tr> <td>Temperature (°C)</td> <td>18.77</td> <td>19.83</td> <td>19.47</td> <td>19.83</td> <td></td> <td></td> <td></td> <td>19.2</td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td>0.231</td> <td>0.238</td> <td>0.230</td> <td>0.223</td> <td></td> <td></td> <td></td> <td>0.221</td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td>4.22</td> <td>5.36</td> <td>4.87</td> <td>4.23</td> <td></td> <td></td> <td></td> <td>3.75</td> </tr> <tr> <td>Turbidity (NTU)</td> <td>7.9</td> <td>257.0</td> <td>429.0</td> <td>&gt;999</td> <td></td> <td></td> <td></td> <td>&gt;999</td> </tr> </tbody> </table>		Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)	0.00	1.32	1.32	1.32				0.00	Time (military)	17:00	17:03	17:08	17:13				17:15	pH (s.u.)	6.12	6.03	6.01	5.97				6.01	O.R.P. (mV)	154	164	174	179				193	Temperature (°C)	18.77	19.83	19.47	19.83				19.2	Specific Cond. (mS/cm)	0.231	0.238	0.230	0.223				0.221	Dissolved Oxygen (mg/L)	4.22	5.36	4.87	4.23				3.75	Turbidity (NTU)	7.9	257.0	429.0	>999				>999	<p>Remarks <u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u></p> <p><u>Duplicate 2 collected from MW-29.</u></p>
	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																										
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-MW-30</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>30.05</u> ft. to <u>45.05</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type _____		Total Well Depth (TWD) <u>45.05</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type _____		Depth to GW(DGW) <u>36.20</u> ft.	
Quality Assurance:		Depth to FP (Free product) _____ ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness _____ ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>8.85</u> ft.	
pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u>		1Csg. Vol. (LWC*C)= $\frac{8.85}{1} \times 0.163 = 1.44$ gal.	
Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u>		3Csg. Volume = $3 \times 1.44 = 4.33$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>4.32</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>	Received by <u>_____</u> <u>2/15/13 8:25</u>		Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Pace <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.44	1.44	1.44				0.00
Time (military)	14:33	14:36	14:40	14:45				14:51
pH (s.u.)	7.33	7.43	7.55	7.56				7.62
O.R.P. (mV)	8	31	48	50				76
Temperature (°C)	17.85	17.94	18.01	17.96				17.43
Specific Cond. (mS/cm)	0.688	0.730	0.703	0.703				0.706
Dissolved Oxygen (mg/L)	3.77	4.36	4.80	4.50				4.08
Turbidity (NTU)	166.0	485.0	880.0	>999				675.0

Remarks	<u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u>
	<u>Medium Yield. Duplicate 1 collected from MW-30.</u>

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-MW-31</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>28.96</u> ft. to <u>43.96</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>43.96</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>35.31</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>8.65</u> ft.	
pH 4.0 = <u>4.06 @ 5°C</u> Conductivity 4.49 = <u>4.65</u>		1Csg. Vol. (LWC*C)= $\frac{8.65}{1} \times \frac{0.163}{1} = \frac{1.41}{1}$ gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.31</u>		3Csg. Volume = $3 \times \frac{1.41}{1} = \frac{4.23}{1}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>4.23</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low _____ Medium _____ High <input checked="" type="checkbox"/>	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Received by <u>Pace</u> <u>2/15/13 8:25</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.41	1.41	1.41				0.00
Time (military)	9:15	9:19	9:23	9:28				10:10
pH (s.u.)	6.51	6.49	6.50	6.48				6.52
O.R.P. (mV)	269	273	260	241				257
Temperature (°C)	16.47	16.83	16.74	16.78				16.41
Specific Cond. (mS/cm)	1.12	1.19	1.17	1.15				1.14
Dissolved Oxygen (mg/L)	5.36	5.84	4.89	3.70				3.20
Turbidity (NTU)	32.2	629.0	>999	>999				669.0

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-TW-1</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>58.27</u> ft. to <u>63.27</u> ft.	
Method of Well Purging: Bailer <u>--</u>	Pump Type <u>Down hole</u>	Total Well Depth (TWD) <u>63.32</u> ft.	
Method of Sample Collection: Bailer <u>--</u>	Pump Type <u>Down hole</u>	Depth to GW(DGW) <u>33.22</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>30.10</u> ft.	
pH 4.0 = <u>4.06 @ 5°C</u>	Conductivity 4.49 = <u>4.65</u>	1Csg. Vol. (LWC*C)= <u>30.10</u> X <u>0.163</u> = <u>4.91</u> gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>9.31</u>	3Csg. Volume = 3x <u>4.91</u> = <u>14.72</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>14.73</u> gal.	
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time
		Well Yield Low _____ Medium _____ High <u>X</u>	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	4.91	4.91	4.91				0.00
Time (military)	14:20	14:25	14:30	14:35				14:40
pH (s.u.)	7.28	7.05	6.97	6.96				6.99
O.R.P. (mV)	-68	-42	-43	-30				-34
Temperature (°C)	17.78	18.43	18.72	18.58				18.62
Specific Cond. (mS/cm)	0.590	0.532	0.515	0.511				0.517
Dissolved Oxygen (mg/L)	1.29	1.06	0.73	2.11				0.92
Turbidity (NTU)	>999	74.6	28.8	56.7				10.8

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

### Field Data Information Sheet for Ground Water Sampling

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-TW-2</u>																																																																																		
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet																																																																																		
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>																																																																																		
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>																																																																																		
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>75.23</u> ft. to <u>80.23</u> ft.																																																																																		
Method of Well Purging: Bailer <u>--</u>	Pump Type <u>Down hole</u>	Total Well Depth (TWD) <u>80.29</u> ft.																																																																																		
Method of Sample Collection: Bailer <u>--</u>	Pump Type <u>Down hole</u>	Depth to GW(DGW) <u>33.62</u> ft.																																																																																		
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.																																																																																		
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>-----</u> ft.																																																																																		
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>46.67</u> ft.																																																																																		
pH 4.0 = <u>4.06 @ 14°C</u>	Conductivity 4.49 = <u>4.48</u>	1Csg. Vol. (LWC*C)= $\frac{46.67}{1} \times 0.163 = 7.61$ gal.																																																																																		
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>9.23</u>	3Csg. Volume = $3 \times 7.61 = 22.82$ gals.(Std. Purge Vol)																																																																																		
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>11.61</u> gal.																																																																																		
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>																																																																																	
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Specific Cond. (mS/cm)	1.640	1.530						1.550																																																																												
Dissolved Oxygen (mg/L)	5.04	4.85						6.51																																																																												
Turbidity (NTU)	28.7	48.3						46.8																																																																												
Well Yield Low <u>X</u> Medium _____ High _____																																																																																				
Remarks <u>Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.</u>																																																																																				
<u>Well purged dry after one well volume plus 4 gallons.</u>																																																																																				

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-TW-3</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>75.62</u> ft. to <u>80.62</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>Down hole</u>		Total Well Depth (TWD) <u>80.67</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>Down hole</u>		Depth to GW(DGW) <u>29.97</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>50.70</u> ft.	
pH 4.0 = <u>4.06 @ 14°C</u>	Conductivity 4.49 = <u>4.48</u>	1Csg. Vol. (LWC*C)= $\frac{50.70}{1} \times \frac{0.163}{1} = \underline{8.26}$ gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>9.23</u>	3Csg. Volume = $3 \times \frac{8.26}{1} = \underline{24.79}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>16.52</u> gal.	
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time
		Well Yield Low _____ Medium <u>X</u> High _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	8.26	8.26					0.00
Time (military)	10:45	10:54	11:03					11:30
pH (s.u.)	11.11	10.05	8.28					7.51
O.R.P. (mV)	-600	-519	-153					-175
Temperature (°C)	15.89	17.40	17.71					17.74
Specific Cond. (mS/cm)	0.759	0.602	0.694					0.721
Dissolved Oxygen (mg/L)	1.29	0.74	2.02					2.59
Turbidity (NTU)	4.7	49.3	>999					262.0

Remarks	<u>Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.</u> <u>Well purged dry after two well volumes.</u>
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-TW-4</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>63.56</u> ft. to <u>68.56</u> ft.	Total Well Depth (TWD) <u>68.61</u> ft.
Method of Well Purging: Bailer <u>--</u>	Pump Type <u>Down hole</u>	Depth to GW(DGW) <u>32.81</u> ft.	Depth to FP (Free product) <u>0.00</u> ft.
Method of Sample Collection: Bailer <u>--</u>	Pump Type <u>Down hole</u>	FP Thickness <u>----</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>35.80</u> ft.
Quality Assurance:		1Csg. Vol. (LWC*C)= $\frac{35.80}{1} \times \frac{0.163}{1} = \frac{5.84}{1}$ gal.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	3Csg. Volume = $3 \times \frac{5.84}{1} = \frac{17.51}{1}$ gals.(Std. Purge Vol)	
Calibration Measurement Results		Total Vol. of Water Purged Before Sampling <u>7.84</u> gal.	
pH 4.0 = <u>4.06 @ 14°C</u>	Conductivity 4.49 = <u>4.48</u>	Well Yield Low <u>X</u> Medium _____ High _____	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>9.23</u>		
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	5.84	2.00					0.00
Time (military)	12:05	12:14						13:00
pH (s.u.)	12.60	11.57						12.30
O.R.P. (mV)	-93	-8						-35
Temperature (°C)	16.79	17.46						17.51
Specific Cond. (mS/cm)	8.030	1.180						3.530
Dissolved Oxygen (mg/L)	9.34	6.49						6.22
Turbidity (NTU)	357.0	27.4						144.0

Remarks	<u>Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.</u>
	<u>Well purged dry after one well volume plus 2 gallons.</u>

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/14/13</u></p> <p>Field Personnel <u>P. Pike</u></p> <p>General Weather Conditions <u>Mostly cloudy, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.06 @ 5°C</u> Conductivity 4.49 = <u>4.65</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.31</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><u>A. Williamson</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> <td style="width: 25%;"><u>ECS Office</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>2/15/13 8:25</u></td> <td><u>Pace</u></td> <td><u>2/15/13 8:25</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>07960-TW-5</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>53.38</u> ft. to <u>58.38</u> ft.</p> <p>Total Well Depth (TWD) <u>58.43</u> ft.</p> <p>Depth to GW(DGW) <u>34.60</u> ft.</p> <p>Depth to FP (Free product) _____ ft.</p> <p>FP Thickness _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>23.83</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{23.83}{3} \times 0.163 = 3.88</math> gal.</p> <p>3Csg. Volume = <math>3 \times 3.88 = 11.65</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>5.88</u> gal.</p> <p>Well Yield Low <input checked="" type="checkbox"/> Medium _____ High _____</p>																																																																	
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>																																																																															
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td>0.00</td> <td>3.88</td> <td>2.00</td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td> </tr> <tr> <td>Time (military)</td> <td>8:05</td> <td>8:15</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>8:36</td> </tr> <tr> <td>pH (s.u.)</td> <td>6.80</td> <td>7.92</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9.73</td> </tr> <tr> <td>O.R.P. (mV)</td> <td>290</td> <td>266</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>204</td> </tr> <tr> <td>Temperature (°C)</td> <td>15.66</td> <td>17.15</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>17.37</td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td>0.599</td> <td>0.580</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.588</td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td>5.23</td> <td>5.06</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4.61</td> </tr> <tr> <td>Turbidity (NTU)</td> <td>16.5</td> <td>85.8</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>&gt;999</td> </tr> </tbody> </table>		Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)	0.00	3.88	2.00					0.00	Time (military)	8:05	8:15						8:36	pH (s.u.)	6.80	7.92						9.73	O.R.P. (mV)	290	266						204	Temperature (°C)	15.66	17.15						17.37	Specific Cond. (mS/cm)	0.599	0.580						0.588	Dissolved Oxygen (mg/L)	5.23	5.06						4.61	Turbidity (NTU)	16.5	85.8						>999	<p>Remarks <u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u></p> <p><u>Well purged dry after one well volume plus 2 gallons.</u></p>
	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																										
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-TW-6</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Ambient Air Temperature <u>50</u> F		Screen Interval <u>53.55</u> ft. to <u>58.55</u> ft.	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Total Well Depth (TWD) <u>59.18</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>Down hole</u>		Depth to GW(DGW) <u>33.80</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>Down hole</u>		Depth to FP (Free product) <u>-----</u> ft.	
Quality Assurance:		FP Thickness <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		Length of Water Column (LWC=TWD-DGW) <u>25.38</u> ft.	
Calibration Measurement Results		1Csg. Vol. (LWC*C)= $\frac{25.38}{1} \times 0.163 = 4.14$ gal.	
pH 4.0 = <u>4.06 @ 5°C</u> Conductivity 4.49 = <u>4.65</u>		3Csg. Volume = $3 \times 4.14 = 12.41$ gals.(Std. Purge Vol)	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.31</u>		Total Vol. of Water Purged Before Sampling <u>5.14</u> gal.	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	ECS Office	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	4.14	1.00					0.00
Time (military)	12:38	12:43						13:10
pH (s.u.)	7.68	7.78						7.41
O.R.P. (mV)	55	44						255
Temperature (°C)	17.06	16.44						16.38
Specific Cond. (mS/cm)	0.819	0.640						0.872
Dissolved Oxygen (mg/L)	2.59	3.89						2.25
Turbidity (NTU)	254.0	74.3						115.0

Remarks	<u>Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.</u> <u>Well purged dry after one well volume plus 1 gallon.</u>
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-TW-7</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>53.94</u> ft. to <u>58.94</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>59.02</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>37.54</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>21.48</u> ft.	
pH 4.0 = <u>4.06 @ 14°C</u>	Conductivity 4.49 = <u>4.48</u>	1Csg. Vol. (LWC*C)= $\frac{21.48}{1} \times 0.163 = 3.50$ gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>9.23</u>	3Csg. Volume = $3 \times 3.50 = 10.50$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>7.00</u> gal.	
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time
		Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	3.50	3.50					0.00
Time (military)	14:16	14:28	14:37					15:40
pH (s.u.)	12.94	12.98	12.95					12.85
O.R.P. (mV)	-79	-84	-86					-80
Temperature (°C)	16.71	16.65	16.89					17.11
Specific Cond. (mS/cm)	17.200	17.500	18.000					17.400
Dissolved Oxygen (mg/L)	6.91	6.08	6.57					6.31
Turbidity (NTU)	0.0	1.6	21.5					27.7

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>07960-TW-8</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>53.53</u> ft. to <u>58.53</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>58.58</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>42.13</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
pH 4.0 = <u>4.06 @ 14°C</u> Conductivity 4.49 = <u>4.48</u>		1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.23</u>		3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
A. Williamson <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>		Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>			
Received by _____ <u>2/15/13 8:25</u>			
Relinquished by _____			
Received by _____			

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.68	2.68	1.00				0.00
Time (military)	14:50	14:56	15:03					15:54
pH (s.u.)	12.11	12.52	12.50					12.51
O.R.P. (mV)	-30	-62	-62					-61
Temperature (°C)	17.71	17.24	17.53					17.36
Specific Cond. (mS/cm)	2.110	4.730	4.450					4.870
Dissolved Oxygen (mg/L)	8.23	4.08	3.87					5.59
Turbidity (NTU)	8.0	43.2	22.2					23.2

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.



South Carolina Department of Health and Environmental Control  
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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>07960-TW-9</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>75.12</u> ft. to <u>80.12</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>80.15</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>30.22</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
pH 4.0 = <u>4.06 @ 5°C</u> Conductivity 4.49 = <u>4.65</u>		1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>9.31</u>		3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
<u>A. Williamson</u> <u>2/14/13 19:30</u> ECS Office <u>2/14/13 19:30</u>	Received by <u>-----</u> Date/Time <u>-----</u>	Well Yield Low <u>-----</u> Medium <u>-----</u> High <input checked="" type="checkbox"/>	
Relinquished by <u>ECS Office</u> <u>2/15/13 8:25</u>	Pace <u>2/15/13 8:25</u>		
Relinquished by <u>-----</u> <u>-----</u>	Received by <u>-----</u> <u>-----</u>		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	8.14	8.14	8.14				0.00
Time (military)	10:36	10:44	10:52	11:00				11:04
pH (s.u.)	7.08	7.06	7.06	7.06				7.07
O.R.P. (mV)	148	146	152	158				164
Temperature (°C)	15.43	16.86	17.09	17.13				16.98
Specific Cond. (mS/cm)	0.859	0.908	0.913	0.903				0.921
Dissolved Oxygen (mg/L)	2.31	0.89	0.73	0.91				0.86
Turbidity (NTU)	792.0	29.2	3.8	76.2				44.4

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/13/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Cloudy with intermittent rain, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Quality Assurance:</p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u></p> <p>Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width: 100%; border: none;"> <tr> <td style="border: none;"><u>A. Williamson</u></td> <td style="border: none;"><u>2/14/13 19:30</u></td> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>2/14/13 19:30</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> <tr> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>2/15/13 8:25</u></td> <td style="border: none;"><u>Pace</u></td> <td style="border: none;"><u>2/15/13 8:25</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-1 Pre GAC</u></p> <p>Well Diameter (D) <u>6.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval _____ ft. to _____ ft.</p> <p>Total Well Depth (TWD) <u>280</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																	
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/13/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Cloudy with intermittent rain, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Quality Assurance:</p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u></p> <p>Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><u>A. Williamson</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> <td style="width: 25%;"><u>ECS Office</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>2/15/13 8:25</u></td> <td><u>Pace</u></td> <td><u>2/15/13 8:25</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-1 Post GAC</u></p> <p>Well Diameter (D) <u>6.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>280</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times 0.163 = 0.00</math> gal.</p> <p>3Csg. Volume = <math>3 \times 0.00 = 0.00</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																							
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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>WSW-2</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>    </u> inch <u>    </u> or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50 F</u>		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>    </u> ft. to <u>    </u> ft.	Total Well Depth (TWD) <u>    </u> ft.
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>	Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>	Depth to GW(DGW) <u>    </u> ft.	Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.
Quality Assurance:		1Csg. Vol. (LWC*C)= $\frac{0.00}{0.00} \times 0.163 = 0.00$ gal.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	3Csg. Volume = $3 \times \frac{0.00}{0.00} = 0.00$ gals. (Std. Purge Vol)	
Calibration Measurement Results		Total Vol. of Water Purged Before Sampling <u>    </u> gal.	
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	Well Yield Low <u>    </u> Medium <u>    </u> High <u>    </u>	
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Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								10:05
pH (s.u.)								7.57
O.R.P. (mV)								118
Temperature (°C)								16.85
Specific Cond. (mS/cm)								0.498
Dissolved Oxygen (mg/L)								3.04
Turbidity (NTU)								3.6

Remarks	<u>Sampled from spigot inside well house after purging for 10 minutes.</u>
	<u>736 Hwy 378 E.</u>

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**Field Data Information Sheet for Ground Water Sampling**

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<p>Remarks <u>Sampled from open hole inside well house using a bailer. No purge.</u></p> <p><u>744 Hwy 378 E.</u></p>																																																																																								

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Dissolved Oxygen (mg/L)								1.63																																																																																
Turbidity (NTU)								0.0																																																																																
<p>Remarks <u>Sampled from spigot on well head after purging for 10 minutes.</u></p> <p><u>Total well depth as indicated on ID tag.</u></p>																																																																																								



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>WSW-7</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>--</u> inch <u>        </u> or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>--</u> ft. to <u>--</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Total Well Depth (TWD) <u>--</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Depth to GW(DGW) <u>--</u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		1Csg. Vol. (LWC*C)= $\frac{0.00}{0.00} \times 0.163 = 0.00$ gal.	
Calibration Measurement Results		3Csg. Volume = $3x \frac{0.00}{0.00} = 0.00$ gals.(Std. Purge Vol)	
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>1.4</u>	Dissolved Oxygen 8.52 = <u>8.45</u>	Well Yield Low <u>        </u> Medium <u>        </u> High <u>        </u>	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								7:55
pH (s.u.)								6.91
O.R.P. (mV)								136
Temperature (°C)								11.48
Specific Cond. (mS/cm)								0.374
Dissolved Oxygen (mg/L)								1.52
Turbidity (NTU)								34.1

Remarks	<u>Sampled from spigot on back side of Northside VFD after purging for 10 minutes.</u> <u>719 Hwy 378 E.</u>
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>WSW-8 Pre GAC</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>--</u> inch <u>--</u> or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>--</u> ft. to <u>--</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Total Well Depth (TWD) <u>--</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Depth to GW(DGW) <u>--</u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		1Csg. Vol. (LWC*C)= $\frac{0.00}{0.00} \times 0.163 = 0.00$ gal.	
Calibration Measurement Results		3Csg. Volume = $3 \times \frac{0.00}{0.00} = 0.00$ gals. (Std. Purge Vol)	
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>1.4</u>	Dissolved Oxygen 8.52 = <u>8.45</u>	Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u>	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								16:35
pH (s.u.)								7.61
O.R.P. (mV)								68
Temperature (°C)								17.57
Specific Cond. (mS/cm)								0.647
Dissolved Oxygen (mg/L)								5.33
Turbidity (NTU)								0.0

Remarks	<u>Sampled from "Pre" sample port inside GAC building next to well house, prior to GAC treatment, after purging for 10 minutes.</u> <u>724 Hwy 378 E.</u>
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/13/13</u>		Well # <u>WSW-8 Post GAC</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>--</u> inch <u>--</u> or feet	
General Weather Conditions <u>Cloudy with intermittent rain, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>--</u> ft. to <u>--</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Total Well Depth (TWD) <u>--</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Depth to GW(DGW) <u>--</u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		1Csg. Vol. (LWC*C)= $\frac{0.00}{0.00} \times 0.163 = 0.00$ gal.	
Calibration Measurement Results		3Csg. Volume = $3 \times \frac{0.00}{0.00} = 0.00$ gals. (Std. Purge Vol)	
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>1.4</u>	Dissolved Oxygen 8.52 = <u>8.45</u>	Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u>	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								16:40
pH (s.u.)								7.76
O.R.P. (mV)								75
Temperature (°C)								17.33
Specific Cond. (mS/cm)								0.636
Dissolved Oxygen (mg/L)								6.25
Turbidity (NTU)								0.0

Remarks	<u>Sample collected from "Post" sample port inside GAC building next to well house, after GAC treatment, after purging for 10 minutes.</u> <u>724 Hwy 378 E.</u>
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South Carolina Department of Health and Environmental Control  
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/14/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Mostly cloudy, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u></p> <p>Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border: none;"> <tr> <td style="border: none;"><u>A. Williamson</u></td> <td style="border: none;"><u>2/14/13 19:30</u></td> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>2/14/13 19:30</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> <tr> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>2/15/13 8:25</u></td> <td style="border: none;"><u>Pace</u></td> <td style="border: none;"><u>2/15/13 8:25</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-9</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times 0.163 = 0.00</math> gal.</p> <p>3Csg. Volume = <math>3 \times \frac{0.00}{0.00} = 0.00</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u></p>																																																																	
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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																										
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/14/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Mostly cloudy, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u></p> <p>Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"><u>A. Williamson</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> <td style="width: 25%;"><u>ECS Office</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>2/15/13 8:25</u></td> <td><u>Pace</u></td> <td><u>2/15/13 8:25</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-10</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times 0.163 = 0.00</math> gal.</p> <p>3Csg. Volume = <math>3 \times \frac{0.00}{0.00} = 0.00</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u></p>																																																																							
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Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/14/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Mostly cloudy, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.02 @ 17°C</u> Conductivity 4.49 = <u>4.21</u></p> <p>Turbidity 0.0 = <u>1.4</u> Dissolved Oxygen 8.52 = <u>8.45</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><u>A. Williamson</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> <td style="width: 25%;"><u>ECS Office</u></td> <td style="width: 25%;"><u>2/14/13 19:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>2/15/13 8:25</u></td> <td><u>Pace</u></td> <td><u>2/15/13 8:25</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-11</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times 0.163 = 0.00</math> gal.</p> <p>3Csg. Volume = <math>3x \frac{0.00}{0.00} = 0.00</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u></p>																																																																							
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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																										
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>02/14/13</u>		Well # <u>WSW-15</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>--</u> inch <u>        </u> or feet	
General Weather Conditions <u>Mostly cloudy, 50s</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>50</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>--</u> ft. to <u>--</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Total Well Depth (TWD) <u>--</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Depth to GW(DGW) <u>--</u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		1Csg. Vol. (LWC*C)= $\frac{0.00}{0.00} \times 0.163 = 0.00$ gal.	
Calibration Measurement Results		3Csg. Volume = $3 \times \frac{0.00}{0.00} = 0.00$ gals. (Std. Purge Vol)	
pH 4.0 = <u>4.02 @ 17°C</u>	Conductivity 4.49 = <u>4.21</u>	Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>1.4</u>	Dissolved Oxygen 8.52 = <u>8.45</u>	Well Yield Low <u>        </u> Medium <u>        </u> High <u>        </u>	
Chain of Custody			
<u>A. Williamson</u>	<u>2/14/13 19:30</u>	<u>ECS Office</u>	<u>2/14/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>2/15/13 8:25</u>	<u>Pace</u>	<u>2/15/13 8:25</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								8:20
pH (s.u.)								7.16
O.R.P. (mV)								101
Temperature (°C)								15.32
Specific Cond. (mS/cm)								1.000
Dissolved Oxygen (mg/L)								1.56
Turbidity (NTU)								0.5

Remarks	<u>Sampled from spigot on side of well house after purging for 10 minutes.</u>
	<u>57 Faulkner Mountain Raod.</u>

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>02/14/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Mostly cloudy, 50s</u></p> <p>Ambient Air Temperature <u>50</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: _____</p> <p>Calibration Measurement Results</p> <p>pH 4.0 = _____ Conductivity 4.49 = _____</p> <p>Turbidity 0.0 = _____ Dissolved Oxygen 8.52 = _____</p> <p style="text-align: center;"><u>Chain of Custody</u></p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>WSW-X</u></p> <p>Well Diameter (D) <u>--</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143 \cdot (D/2)^2</math> for a 2 inch well C= 0.163</p> <p>for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) _____ ft.</p> <p>Depth to GW(DGW) _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times 0.163 = 0.00</math> gal.</p> <p>3Csg. Volume = <math>3 \times \frac{0.00}{0.00} = 0.00</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling _____ gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																																	
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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																										
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**APPENDIX E**  
Waste Manifests

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### Contractor Checklist

For each report submitted to the UST Management Division, the contractor will be required to verify that all data elements for the required scope of work have been provided. For items not required for the scope of work, the N/A box should be checked. For items required and not completed or provided, the No box should be checked and a thorough description of the reason must be provided.

Item #	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?	X		
3	Is name, address, & phone number of current property owner provided?	X		
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?	X		
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?	X		
9	Are the receptor survey results provided as required?	X		
10	Has current use of the site and adjacent land been described?	X		
11	Has the site-specific geology and hydrogeology been described?	X		
12	Has the primary soil type been described?	X		
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?	X		
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?	X		
17	Has the method of well development been detailed?	X		
18	Has justification been provided for the locations of the monitoring wells?	X		
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	X		
20	Has the groundwater sampling methodology been detailed?	X		
21	Have the groundwater sampling dates and groundwater measurements been provided?	X		
22	Has the purging methodology been detailed?	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete?	X		
24	If free-product is present, has the thickness been provided?	X		
25	Does the report include a brief discussion of the assessment done and the results?	X		
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item #	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?	X		
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)	X		
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)	X		
34	Has the current and historical laboratory data been provided in tabular format?	X		
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)	X		
40	Has the site potentiometric map been provided? (Figure 5)	X		
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)			X
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? (Appendix G)			X
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Explanation for missing and incomplete information?



Catherine B. Templeton, Director

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

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

APR 08 2013



Re: **Corrective Action Options**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Assessment Report received March 11, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report submitted by Environmental Compliance Services, Inc. on your behalf. The report indicates that active corrective action is necessary at the site to mitigate petroleum impact and ensure that there is no detrimental exposure to human health or the environment.

Funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account will soon be available for active corrective action. The selected technology must reduce free product and petroleum chemicals of concern (CoC) concentrations to site-specific target levels (SSTLs) determined by the Division.

The SUPERB Site Rehabilitation and Fund Access Regulations R.61-98 require the UST owner/operator to develop and implement a reasonable, cost-effective corrective action to be performed by a Agency-certified site rehabilitation contractor. As the owner/operator for the release reported on October 3, 1974, you may choose one of two options as to how to proceed with this requirement: state lead or owner/operator lead.

State Lead Option:

- If you choose the state lead option, the Division will procure a certified site rehabilitation contractor to perform corrective action on your behalf. The Agency will enter into an enforceable contract with the awarded contractor. As long as you do not interfere with or prohibit the work at your site, you will not be responsible in the event the state selected contractor does not perform appropriately or does not make satisfactory progress towards achieving the established corrective action goals. To utilize the state lead option, please sign and return the applicable Permission and Right-of-Entry forms within 15 days of the date of this letter.

Owner/Operator Lead Option:

- If you select the owner/operator lead option, you will be required to select a contractor to perform the corrective action. In order to assist you in determining the clean-up technology, time frame, clean-up levels, and associated costs, the Division will prepare a technical specification package and provide you copies to send to contractors of your choice. In addition, the Division will announce the request for solicitations in the South Carolina Business Opportunities, a bi-weekly state government publication, to ensure that an adequate solicitation

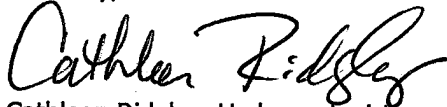


response is obtained so that a fair and competitive price can be established. This announcement will clearly indicate that you will select the contractor to implement the corrective action.

- Compensation to the contractor will be from the SUPERB Account, but you may have the obligation to pay your selected contractor for any costs not approved by the Agency.
- The Division strongly suggests that a written contract between you and the selected contractor be developed following the completion of the solicitation process. The parties to this contract would be you and the contractor you choose; the Agency would not be a party to this contract. The Division's function would be to monitor and ensure progress of corrective action activities.
- If the contractor you select does not or cannot complete the required activities, you will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount. No additional funding from the SUPERB Account may be allowed. Under R.61-92, Part 280: Underground Storage Tank Control Regulations, you as the owner/operator are ultimately responsible to the Agency for the actions of your contractor. The Agency will pursue enforcement actions against you if the contractor you select does not make satisfactory progress towards achieving established corrective actions goals. To utilize the owner/operator lead option, please sign and return the enclosed Active Corrective Action Options Form within 15 days of the date of this letter.

On all correspondence or inquiries regarding this project, please reference UST Permit #07960. If you have any questions, please contact me at (803) 896-6633 or by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Permission/Right-of-Entry forms  
Active Corrective Action Options form

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

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

**RONNIE LOWDER  
EMERALD INC  
PO BOX 3050  
SUMTER SC 29151**

**APR 11 2013**



**Re: Notice to Proceed-GAC Change**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960; CA # 45088  
Edgefield County

Dear Mr. Lowder:

Under the terms and conditions of the referenced contract, the existing GAC units should be removed and replaced with new GAC units with housing units at the Scurry and Gordon residences.

This facility has been assigned an individual Cost Agreement (CA) number as listed above. Please reference the **CA number and Purchase Order** on the invoice submitted for payment. Emerald, Inc. should complete the work in accordance with the contract specifications.

Documentation of the work completed shall be submitted on the form provided by the contract manager, Maia Milenkova. If an alternative format is desired, it shall be provided to Maia Milenkova for approval prior to use.

Please contact each owner before mobilizing to each respective property. A copy of the enclosed note should also be left on each door before leaving. A report documenting the service completed and the date of completion should be submitted within ten days from the date of completion.

If you have any questions or need further assistance, please contact me at (803) 896-6584 or by e-mail at [miners@dhec.sc.gov](mailto:miners@dhec.sc.gov).

Sincerely,

Read S. Miner, P.G., Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

Enc: Approved Cost Agreement #45088

cc: Technical File (with enclosure)  
Maia Milenkova, UST Management Division (with enclosure)

# Approved Cost Agreement 45088

Facility: 07960 378 TRUCK STOP

RIDGLECT

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		B PERSONNEL	2.0000	75.00	150.00
24 GAC SYSTEM		A NEW SYSTEM INSTALLATION	2.0000	1,950.00	3,900.00
		D SYST REMOVAL, CLEANING, REBUR	2.0000	600.00	1,200.00
		E SYSTEM HOUSING	2.0000	380.00	760.00
			<b>Total Amount</b>		<b>6,010.00</b>



PERMISSION FORM
UNDERGROUND STORAGE TANK OWNER

UST Permit # 07960

If you are the owner of the former or existing underground storage tanks or are designated as their authorized representative, but do not own the property, please complete this form.

I, Wilkerson Fuel Co, Inc certify that I am the legal owner of the underground storage tank(s) located at the facility identified below or serve as the authorized representative for the UST owner for the release reported on October 3, 1974. I grant permission to the South Carolina Agency of Health and Environmental Control (Agency) to secure on my behalf services of a contractor to install and maintain a Granular Carbon (GAC) Unit, as required. The contractor will be designated as my contractor for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that Agency will be responsible for obtaining right-of-entry from the property owner and notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Underground Storage Tank Management Division in writing.

Name of Facility 378 Truck Stop Phone #

Street Address of Facility 731 Hwy 378

Town, City, District, Suburb Edgefield

Name of nearest intersecting street, road, highway, alley Faulkner Mountain Road

Is this facility within the city limits? (yes or no) NO

Does a public water or sewer utility service this facility? (yes or no) NO, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines Carl + Barbara Whitner (property owner) phone number 803-637-3878

Were underground storage tanks previously removed from the ground at this facility? (yes or no) YES If yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation Carl + Barbara Whitner Phone number 803-637-3878

Is the property currently leased or rented to someone? (yes or no) NO, If yes, please provide their name and phone number and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before the Agency's contractor gets to the site.

NAME of UST owner (Please Print) Wilkerson Fuel Co, Inc

Phone Number (home) (work) 803-324-4080

Signature of UST Owner: Frank M ...

Witness: Thomas K ...

Date: April Month 4 Day 2013 Year



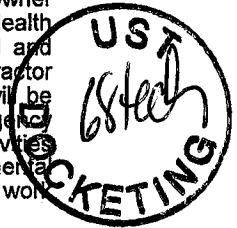
PERMISSION FORM

UNDERGROUND STORAGE TANK OWNER

UST Permit # 07960

If you are the owner of the former or existing underground storage tanks or are designated as their authorized representative, but do not own the property, please complete this form.

I, Wilkinson Fuel Co, Inc certify that I am the legal owner of the underground storage tank(s) located at the facility identified below or serve as the authorized representative for the UST owner for the release reported on October 3, 1974. I grant permission to the South Carolina Agency of Health and Environmental Control (Agency) to secure on my behalf services of a contractor to install and maintain a Granular Carbon (GAC) Unit, as required. The contractor will be designated as my contractor for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that Agency will be responsible for obtaining right-of-entry from the property owner and notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Underground Storage Tank Management Division in writing.



Name of Facility 378 Truck Stop Phone # \_\_\_\_\_

Street Address of Facility 731 Hwy 378

Town, City, District, Suburb Edgefield

Name of nearest intersecting street, road, highway, alley Faulkner & Mountain Road

Is this facility within the city limits? (yes or no) NO

Does a public water or sewer utility service this facility? (yes or no) NO, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines Gail + Barbara Whitner (property owner) phone number 803-637-3878

Were underground storage tanks previously removed from the ground at this facility? (yes or no) yes If yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation Gail + Barbara Whitner Phone number 803-637-3878

Is the property currently leased or rented to someone? (yes or no) NO. If yes, please provide their name \_\_\_\_\_ and phone number \_\_\_\_\_ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before the Agency's contractor gets to the site.

NAME of UST owner (Please Print): Wilkinson Fuel Co, Inc

Phone Number (home) \_\_\_\_\_ (work) 803-324-4080

Signature of UST Owner: Frank M. [Signature]

Witness: Thomas K. [Signature]

Date: April Month 4 Day 2013 Year

# GAC Unit Installation and Maintenance

Date 4/22/13 – 4/23/13

UST Permit number 07960

Street Address 730 Highway 378, Edgefield, SC (Scurry Residence)

GAC Unit serial and model number and meter reading  
Tank #1 (no serial number)



## NEW INSTALLATION

Date installation completed \_\_\_\_\_

Attachments required:  schematic of system as installed  
 copy of analytical data for pre and post GAC samples  
 calculations for filter change  
 calculations for breakthrough

## MAINTENANCE AND SERVICE

### FILTER CHANGE

Filter Disposal method: Landfill

Condition of GAC Unit \_\_\_\_\_ in need of repair\*  good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\*  good

\*Repair needed: \_\_\_\_\_

### SERVICE/REPAIR CALL

Service or repair provided \_\_\_\_\_

SAMPLE COLLECTION (circle)      Pre-GAC      Post GAC

**Comments:** 34 gallons used the previous day. Removed existing GAC, removed the GAC housing, reinstalled the unit with a new housing and changed the carbon for WSW-1 on the property of Ms. Scurry. Emerald personnel performed this work as described in the Notice to Proceed Letter received April 11, 2013. Replumbing of unit conducted by Hill Plumbing. Samples not collected.

# GAC Unit Installation and Maintenance

Date 4/22/13 – 4/23/13

UST Permit number 07960

Street Address 724 Highway 378, Edgefield, SC (Gordon Residence)

GAC Unit serial and model number and meter reading  
Tank #2 (no serial number)

## NEW INSTALLATION

Date installation completed \_\_\_\_\_

Attachments required:  schematic of system as installed  
 copy of analytical data for pre and post GAC samples  
 calculations for filter change  
 calculations for breakthrough

## MAINTENANCE AND SERVICE

### FILTER CHANGE

Filter Disposal method: Landfill

Condition of GAC Unit \_\_\_\_\_ in need of repair\*  good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\*  good

\*Repair needed: \_\_\_\_\_

### SERVICE/REPAIR CALL

Service or repair provided \_\_\_\_\_

SAMPLE COLLECTION (circle)      Pre-GAC      Post GAC

**Comments:** 46 gallons used the previous day. Removed existing GAC, removed the GAC housing, reinstalled the unit with a new housing and changed the carbon for WSW-8 on the property of Mr. Gordon. Emerald personnel performed this work as described in the Notice to Proceed Letter received April 11, 2013. Replumbing of unit conducted by Hill Plumbing. Samples not collected.

# GAC Maintenance Report

Permit # 07960

Emerald Job # 22

Address	Serial #	Model #	Date serviced	Condition of unit	Samples collected
730 Hwy 378, Edgefield, SC Scurry Residence			4/22/13 - 4/23/13	Needs Repairs <u>Good</u>	Pre-GAC Post-GAC
724 Hwy 378, Edgefield, SC Gordon Residence			4/22/13 - 4/23/13	Needs Repairs <u>Good</u>	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC

**Notes:**

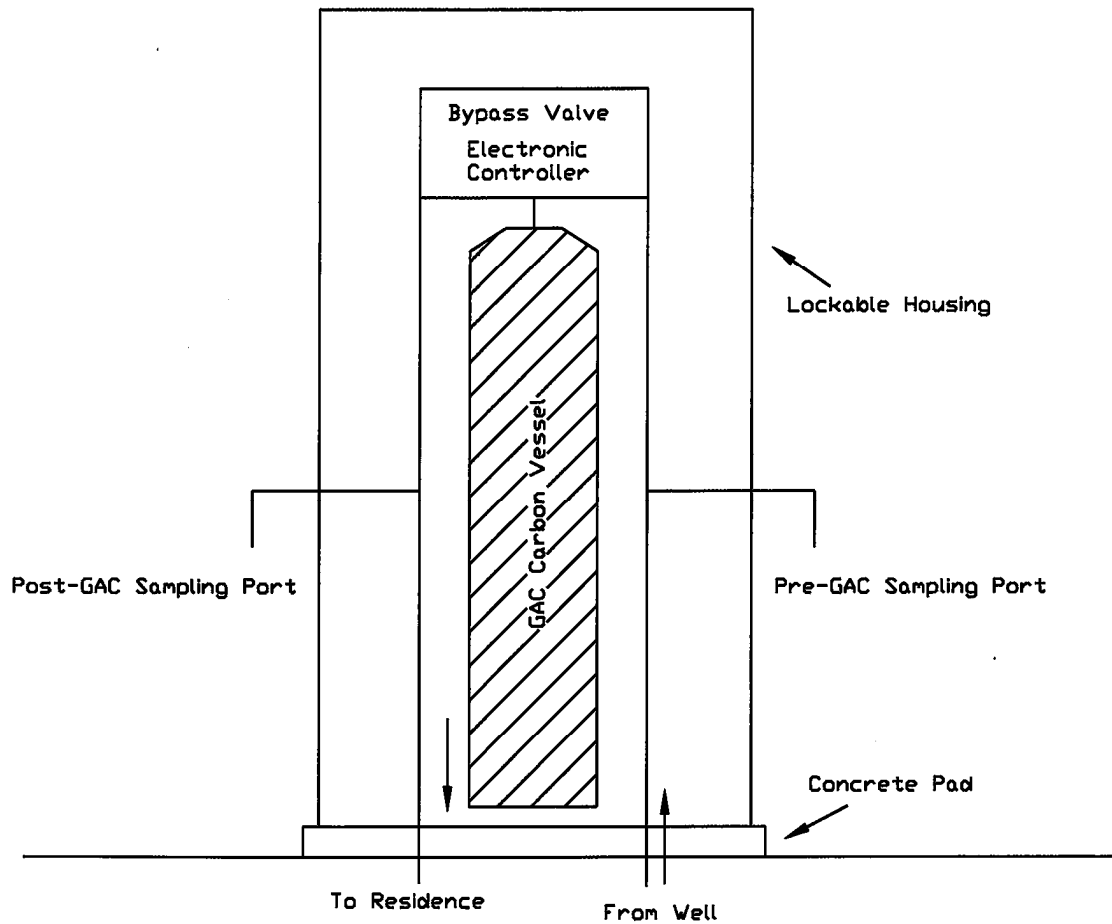
Repairs/service: \_\_\_\_\_

Filter disposal method: Landfill

Comments: Emerald, Inc. reinstalled the existing GAC units, replumbed and installed a new GAC housing for the Scurry Residence (WSW-1) and Gordon Residence (WSW-8). Plumbing work was conducted by Hill Plumbing. Samples were not collected.



# Scurry Residence GAC Installation



## GAC Information

GAC Type - Pentair 5600 SE

Controller Serial - 1

### PROJECT:

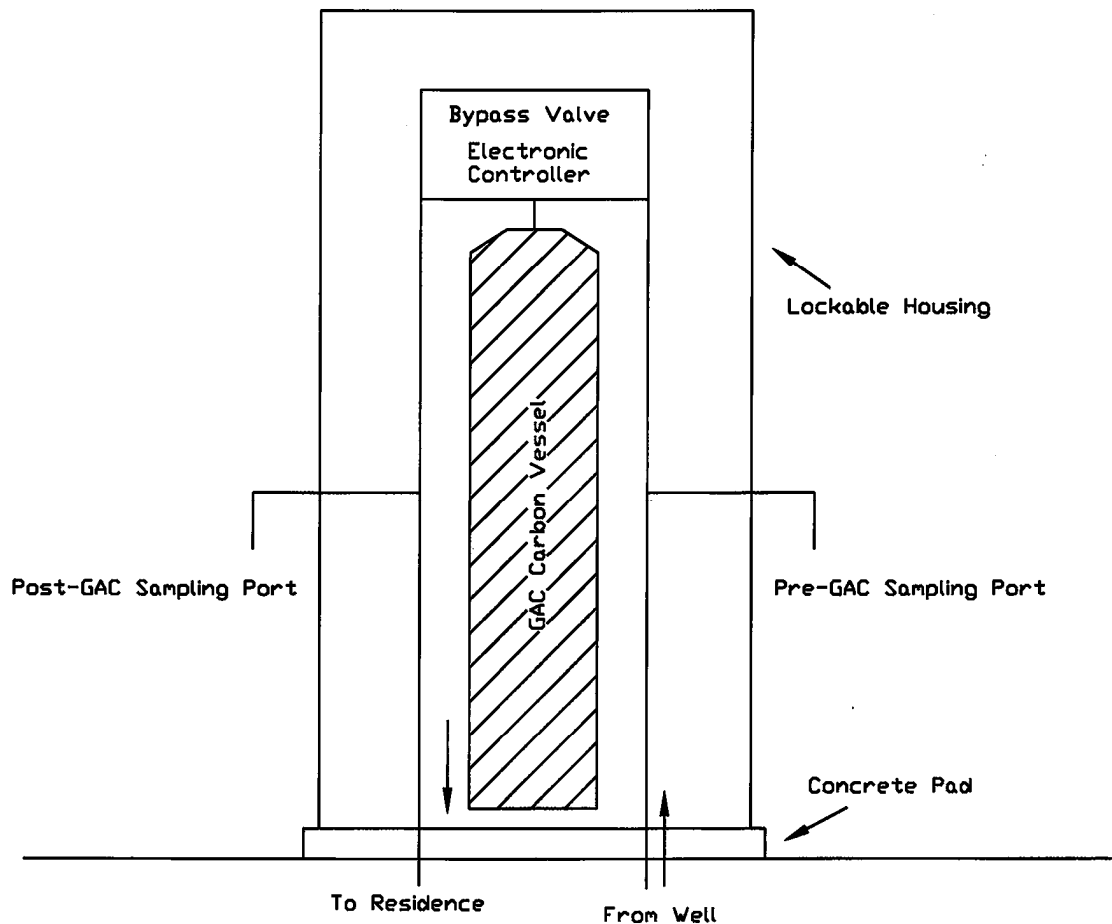
378 Truck Stop  
731 US Highway 378  
Edgefield, SC  
Permit #07960

### SHEET TITLE:

Figure 1  
GAC Installation  
Schematic

EMERALD, INC.  
Sumter, SC

# Gordon Residence GAC Installation



## GAC Information

GAC Type - Pentair 5600 SE

Controller Serial - 1

### PROJECT:

378 Truck Stop  
731 US Highway 378  
Edgefield, SC  
Permit #07960

### SHEET TITLE:

Figure 2  
GAC Installation  
Schematic

EMERALD, INC.  
Sumter, SC

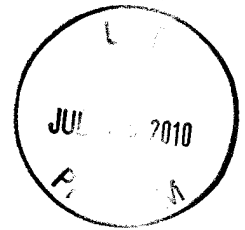


WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

13504 South Point Boulevard, Unit F, Charlotte, NC 28273 tel 704.583.2711 fax 704.583.2744 www.ecsconsult.com

July 13, 2010  
ECS Project No. 14-214210  
UST Permit No. 07960

Ms. Cathleen Ridgley  
South Carolina Department of Health  
and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201-1708



Re: Disposal Manifest  
378 Truck Stop  
731 Highway 378  
Edgefield, South Carolina  
Edgefield County



Dear Ms. Ridgley:

Please find enclosed a copy of the Non-Hazardous Waste Disposal Manifest from the May 2010 Tier I assessment activities. We apologize for the delay in providing the manifest.

If you have any questions or require additional information, please contact the undersigned at (704) 583-2711, or at [cdupuis@ecsconsult.com](mailto:cdupuis@ecsconsult.com).

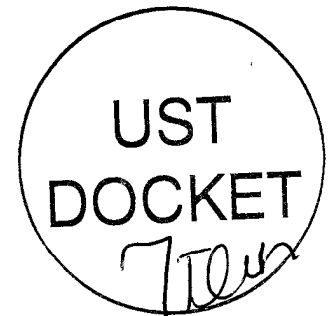
Sincerely,  
**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Christine E. Dupuis  
Project Manager

Attachment

cc: Wilkerson Fuel Company, Inc., PO Box 2835, Rock Hill, SC 29732

F:\Projects\14-214210 378 Truck Stop\Tier I\Disposal Manifest Letter 7-13-10.docx



Printed on recycled, carbon neutral paper

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: **W000000000** 2. Part of: **1** 3. Emergency Contact: **704-383-2711** 4. Waste Tracking Number: **32466**

5. Generator's Name and Mailing Address: **Wideman Plant Company, Inc. PO Box 2885 Rock Hill, SC 29732** Generator's Site Address: **731 Highway 378 Edgewood, SC**

6. Generator's Phone: **704-383-2711 ECS - Christine Dupuis**

7. Transporter 1 Company Name: **A&D Environmental Services (SC), LLC** U.S. EPA ID Number: **SC-D60708331**

8. Designated Facility Name and Site Address: **VLS Recovery 383 South Main Street Mauldin, SC 29662** U.S. EPA ID Number: **SC-D000702488**

9. Waste Shipping Name and Description:

10. Containers No.	10. Containers Type	11. Total Quantity	12. LHM Wt/Vol	13. Special Handling Instructions and Additional Information	
				Project #	PO #
1	DM	200	P	A&D (SC) Job # 10234	Project # 14-214210
2	DM	5100	P		

14. 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.

15. Generator's Signature: *[Signature]* Date: *[Date]*

16. Transporter Signature: *[Signature]* Date: *[Date]*

17. Discrepancy:  Quantity  Type  Residue  Partial Rejection  Full Rejection

18. Designated Facility Owner or Operator: **VLS Recovery** RECEIVED LOAD ON *[Date]*

19. Designated Facility Owner or Operator: **Cam Ramsey** SIGNATURE **Cam Ramsey** DATE **7/8/10**

158-SLC-O 8 10488 (Rev. 8/05)

GENERATOR

TRANSPORTER

DESIGNATED FACILITY

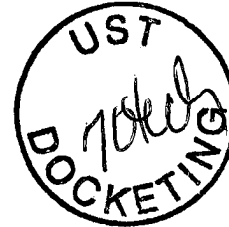
GENERATOR'S/SHIPPER'S INITIAL COPY



Catherine B. Templeton, Director

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

JUN 10 2013



MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

Re: QAPP Contractor Addendum Directive  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release reported October 3, 1974  
Assessment Report received March 11, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report. The report indicates the presence of chemicals of concern in the groundwater.

To determine what risk the referenced release may pose to the environment and public health, and in accordance with Section 280.65 of the South Carolina Underground Storage Tank Control Regulations, implementation of the following scope of work is necessary. One four-inch diameter recovery well should be installed adjacent to monitoring well MW-1. Following well installation, one 12-hour aggressive fluid and vapor recovery (AFVR) event should be conducted on the newly installed recovery well. Thirty days after the completion of the AFVR event, the entire monitoring well network and all water supply wells should be sampled and the samples analyzed for BTEX, naphthalene, MtBE, the oxygenates, 1,2-DCA, and EDB. This entire scope of work should be conducted in accordance with the UST Quality Assurance Program Plan (QAPP) and must be conducted in compliance with all applicable regulations. A copy of the Agency's QAPP for the Underground Storage Tank Division is available at <http://www.scdhec.gov/environment/lwm/usthome/Qapp.htm>.

**Please have your contractor complete and submit the QAPP Contractor Addendum and Cost Agreement within thirty days of the date of this letter.** Every component may not be necessary to complete the above scope of work. The State Underground Petroleum Environmental Response Bank (SUPERB) Account allowable cost for each component is included on the Assessment Component Cost Agreement Form. **Please note that technical and financial preapproval from the Agency must be issued before work begins.**

On all correspondence regarding this site, please reference UST Permit #07960. If you have questions or need additional information, feel free to call me at (803) 898-0610.

Sincerely,

A handwritten signature in black ink that reads "Cathleen Ridgley". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

cc: ECS, Inc., PO Box 3528, Fort Mill, SC 29708  
Technical File



**Appendix B: Contractor Addendum**

**Section A: Project Management**

**A1 Title and Approval Page**

Quality Assurance Project Plan  
Addendum to the SC DHEC UST Programmatic QAPP  
For  
378 Truck Stop; UST Permit #07960

731 Highway 378, Edgefield, SC

Prepared by:  
Brett G. Schaefer, PE  
Environmental Compliance Services, Inc.  
13504 South Point Blvd, Ste F  
Charlotte, NC 28273

Date: June 13, 2013  
Certified UST Site Rehabilitation Contractor #358  
Environmental Compliance Services, Inc.

**Approvals:**

Cathleen Ridgley \_\_\_\_\_ Date \_\_\_\_\_  
SC DHEC Project Manager Signature

Brett G. Schaefer, PE Brett G. Schaefer Date 6/12/13  
Contractor Project Manager Signature

Kurt Blevins Kurt Blevins Date 6/17/13  
Site Rehabilitation Contractor Signature

Craig L. Kennedy, PG Craig L. Kennedy Date 6/17/2013  
Project Verifier/QA Manager Signature

For Jeff Graham Jeff Graham Date 06/17/2013  
Pace Laboratory Director Signature



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Site Name: 378 Truck Stop  
 Permit #: 07960  
 Page: 4

ECS Project Number: 14-214210  
 Date: 6/13/13  
 QAPP Addendum Revision: 00

**A3 Distribution List**

<b>Name</b>	<b>Title</b>	<b>Organization/Address</b>	<b>Telephone Number</b>	<b>Fax Number</b>	<b>Email Address</b>
Cathleen Ridgley	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-896-6633	803-896-6245	ridglect@dhec.sc.gov
Kurt Blevins	Site Rehabilitation Contractor	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	kblevins@ecsconsult.com
Brett G. Schaefer, PE	Contractor Project Manager	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	bschaefer@ecsconsult.com
Jeff Graham	Laboratory Director	Pace Analytical Services 9800 Kinsey Ave Suite 100 Huntersville, NC 28078	704-875-9092	704-875-9091	jeff.graham@pacelabs.com
Craig L. Kennedy, PG	Project Verifier/QA Manager	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	ckennedy@ecsconsult.com
Steve Taylor	Well Services/Driller	Geologic Exploration Inc. 176 Commerce Blvd Statesville, NC 28625	800-752-8853		staylor@gexnc.com

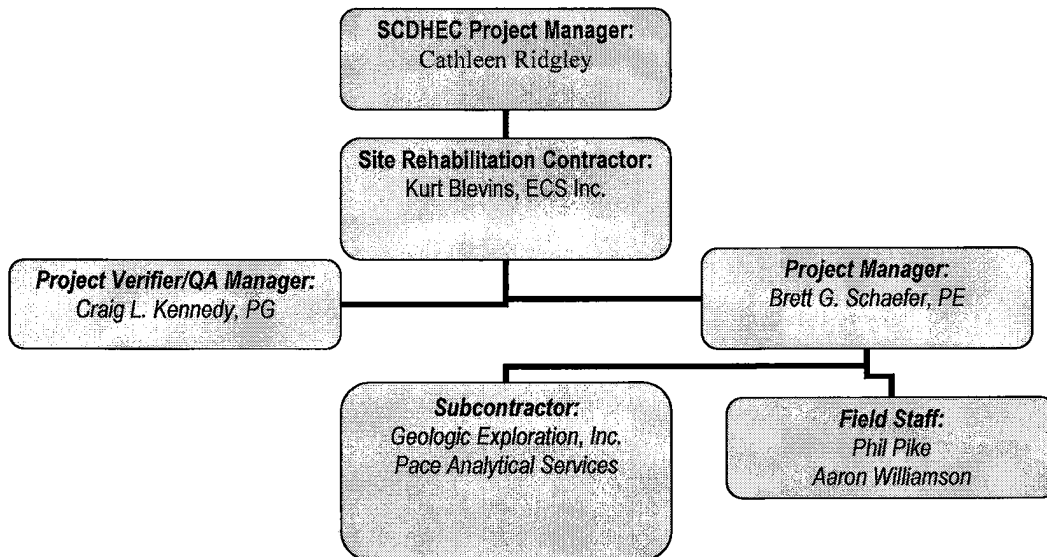
**Table 1A Addendum Distribution List**

**A4 Project Organization**

<b>Role from the UST Master QAPP</b>	<b>Person in this Role for Project</b>	<b>Organization/Address</b>	<b>Telephone Number</b>	<b>Fax Number</b>	<b>Email Address</b>
Project Manager	Cathleen Ridgley	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-898-0610	803-898-0673	ridglect@dhec.sc.gov
Site Rehabilitation Contractor	Kurt Blevins	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	kblevins@ecsconsult.com
Contractor Project Manager	Brett G. Schaefer, PE	ECS Inc. PO Box 3528 Fort Mill, SC 29708	800-627-0493	704-583-2744	bschaefer@ecsconsult.com
Well Services/Driller	Steve Taylor	Geologic Exploration Inc. 176 Commerce Blvd Statesville, NC 28625	800-752-8853	800-752-8853	staylor@gexnc.com
Analytical Laboratory Director	Jeff Graham	Pace Analytical Services 9800 Kincey Ave Suite 100 Huntersville, NC 28078	704-875-9092	704-875-9091	jeff.graham@pacelabs.com
Project Verifier/QA Manager	Craig L. Kennedy, PG	ECS Inc. PO Box 3528 Fort Mill, SC 29708	904-401-7902	704-583-2744	ckennedy@ecsconsult.com

**Table 2A Addendum Role Identification and Contact Information**

**Figure 1A Organizational Chart:**



Site Name: 378 Truck Stop  
Permit #: 07960  
Page: 6

ECS Project Number: 14-214210  
Date: 6/13/13  
QAPP Addendum Revision: 00

## **Definitions of Project Roles**

### Site Rehabilitation Contractor

Kurt Blevins is the local Branch Manager of ECS Inc and will be responsible for overseeing adherence to the site specific QAPP during all phases of work. The Site Rehabilitation Contractor is responsible for maintaining the original, approved QAPP.

### Project QA Officer

The project QA Officer (Craig L. Kennedy, PG) provides review of field work, documentation of calibration for field instruments, lab data, and technical review of reports produced utilizing this data. The QA Officer will independently review data generated from this project and determine if the data meets QA/QC criteria as set forth in the SCDHEC UST Programmatic QAPP.

### Project Manager

The Project Manager (Brett G. Schaefer, PE) will be responsible for work conducted during this scope of work and the primary point of contact. His duties will include development of the site specific QAPP, supervising field work when necessary, documenting and QA failures, determining corrective actions to QA failures, and preparing reports for submission to SCDHEC.

### Field Staff

The contractor field staff will perform sampling and field activities per the QAPP document under the direction of the Project Manager. Field staff will be responsible for collection and sampling of related data and calibration of field instruments. The Project Manager in certain situations may also be a member of the Field Staff.

## **A5 Problem Definition/Background**

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

According to SCDHEC records, Tier 2 was previously completed at this location in December 2010. Results from the Tier 2 indicated contamination above RBSLs for this site. USTs no longer exist on site. The purpose of the RW installation, 12 hr AFVR and GW sample event is to remove free product in MW-1 and to determine aquifer contaminant conditions throughout the site.

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

Yes, UST Area.

## **A6 Project/Task Description**

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

To determine what risk the referenced release may pose to the environment and public health a recovery well installation event, 12 hr AFVR event and a comprehensive groundwater sampling event is necessary. In addition to the referenced activities the inclusion of WSW-X in the groundwater sampling event shall occur. One 4-inch recovery well shall be installed adjacent to MW-1 prior to the 12 hr AFVR event. Thirty days after the AFVR event a comprehensive groundwater sampling event will be performed.-

- 2. The work will begin within Approximately One Month after cost approval and the MW install and comprehensive groundwater sampling events (including report) should be complete within approximately 90 days (depending on due date) after cost approval receipt by ECS, Inc.**

- 3. Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.**

Potential issues may arise from inclement weather, access issues, unpredicted site or equipment problems or schedule conflicts.

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

Detail the geographical area that is to be part of the project. Maps should be included to show not only the topography and the geographical area of the State, but also to show more detail of the site itself including property lines.

Previously there were Tier II assessment activities conducted at the former 378 Truck Stop facility (UST permit number 07960) located at 731 Highway 378 in Edgefield, South Carolina (Figure 1). Activities were conducted in accordance with the South Carolina Department of Health and Environmental Control (SCDHEC) directive dated August 16, 2010, which included cost agreement number 39645.

The site was not in use at the time of Tier 2 assessment. An abandoned building was present onsite during ECS's visits associated with the Tier 2 assessment activities. A concrete slab was located directly to the east of, and abutting, the onsite building.

A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. Reportedly, one 550-gallon diesel, one 1,000-gallon gasoline, and one 2,000-gallon gasoline underground storage tanks (USTs) and their associated piping and dispensers were removed from the site on January 1, 1987. The site did not contain USTs at the time of the Tier 2 assessment.

The sedimentary formations of the Coastal Plain range in age from Late Cretaceous to Recent. They consist, for the most part, of unconsolidated sand, clay, gravel, marl, and limestone which have been deposited on a surface of granite, schist, and gneiss similar to, and a continuation of, the rocks underlying the adjoining Piedmont province. Some coquinas have been silicified to form so-called buhrstones and some clays hardened into siltstones. Considered en masse, the formations of the Coastal Plain may be classified as having a monoclinical or aclinal structure, and they rest on rocks of a much older crystalline complex. The unconsolidated rocks occur as wedges of sand, clay, marl, and limestone. Underlying the unconsolidated sediments are "crystalline" rocks consisting of granite, gneiss, schist, and a series of volcanics. Fault troughs or grabens were formed in these pre-Mesozoic rocks during Triassic time, into which were deposited ferruginous and carbonaceous sands and clays. These sediments were subsequently injected by diabase dikes and sills.

See attached **Figure 1** for topographic information and **Figure 2** for site features.

## A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Project Manager	Brett G. Schaefer, PE	40 Hr HAZWOPER & Refresher	40 Hr: 2003 Refresher: January 2013	PE	27700
Project Verifier/ QA Manager	Craig L. Kennedy, PG	40 Hr HAZWOPER & Refresher	40 Hr: 1995 Refresher: January 2013	PG	2425
Field Staff	Phil Pike	40 Hr HAZWOPER & Refresher	40 Hr: 1990 Refresher: January 2013	-	-
Field Staff	Aaron Williamson	40 Hr HAZWOPER & Refresher	40 Hr: 2009 Refresher: January 2013	-	-
Pace Lab Manager	Jeff Graham	BS Chemistry	May 1984	Lab Certification	SC 9900601

Table 3A Required Training and Licenses

**Kurt Blevins** of **ECS, Inc.** is responsible for ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: **588 Silver St, Agawam, MA.**

Title/Job	Name	Training Required	Date training received	Type of License	License Number
Well Driller	Jonathan Burr	Continuing Ed.		Well Driller	1740
Well Driller	Vincent Federle	Continuing Ed.		Well Driller	1930
Well Driller	Mark Gettys	Continuing Ed.		Well Driller	1086
Well Driller	Nicholas Hayes	Continuing Ed.		Well Driller	1983
Well Driller	James Hess	Continuing Ed.		Well Driller	1929
Well Driller	Jason Mantak	Continuing Ed.		Well Driller	1494
Well Driller	Michael McConahey	Continuing Ed.		Well Driller	1276
Well Driller	Daniel Summers	Continuing Ed.		Well Driller	1430
Well Driller	Jerry Watkins	Continuing Ed.		Well Driller	1979

**Steve Taylor** of **Geologic Exploration Inc.** is responsible to ensuring that personnel participating in this project receive the proper training. All training records will be stored in the following location: **176 Commerce Blvd, Statesville, NC 28625.**

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

Site Name: 378 Truck Stop  
Permit #: 07960  
Page: 10

ECS Project Number: 14-214210  
Date: 6/13/13  
QAPP Addendum Revision: 00

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

**Commercial Lab(s)**

**Full Name of the Laboratory: Pace Analytical Services, Inc.-Huntersville**

**Name of Lab Director: Jeff Graham**

**SC DHEC Certification Number: 9900601**

**Parameters this Lab will analyze for this project:**

Groundwater: EPA Method 8260B: BTEX, Naphthalene, MTBE, 1,2-DCA, 8 Oxygenates;  
EPA 8011: EDB

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



## A9 Documents and Records

**Personnel will receive the most current version of the QAPP Addendum via:  
 (Check all that apply)**

US Mail     Courier     Hand delivered

Other (please specify): Email if accepted by SCDHEC Project Manager

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Laboratory Instrument Raw Data	Target software	Electronic	To Disc –offsite storage for 5 yrs	Yes
Laboratory Final Reports	LIMS	Electronic	Tape backup – offsite storage for 5 years	Yes
Field Measurements	ECS, Inc.	Hard Copy: Field Book Electronic: PDF File	Hard Copy & PDF File: ≥5yrs	Yes
Well Construction Records	Geologic Exploration, Inc.	Hard Copy	GEX Storage Facility: ≥5yrs	Yes
Well Abandonment Records	Geologic Exploration, Inc.	Hard Copy	GEX Storage Facility: ≥5yrs	Yes
Waste Manifests	Transporter/Disposal Facility	Hard Copy & Electronic Copy	Transporter/Disposal Facility: ≥5yrs	Yes
GW Sampling Report	ECS, Inc.	Hard Copy & Electronic	≥5yrs	Yes

**Table 4A Record Identification, Storage, and Disposal**

## Section B Measurement/Data Acquisition

### B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
IGWA	-	-	Not Applicable For This Project
Tier I Assessment & Report	-	-	Not Applicable For This Project
Tier II Assessment	-	-	Not Applicable For This Project
RW Installation	Within approx. 30 Days of CA receipt	Within approx. 90 Days after receipt of CA	End Date depends on Due Date provided by SCDHEC Project Manager
AFVR	Within approx. 10-15 Days of RW Installation event	Within approx. 90 Days after receipt of CA	End Date depends on Due Date provided by SCDHEC Project Manager
Monitoring Well Sampling Event	Min. 30 days after AFVR event	Within approx. 90 Days after receipt of CA	End Date depends on Due Date provided by SCDHEC Project Manager
GW Monitoring Report	Approximately 10-15 days after sampling event	Within approx. 90 Days after receipt of CA	End Date depends on Due Date provided by SCDHEC Project Manager

Table 5A Sampling Activities

### B2 Sampling Methods

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

**Estimate the number of samples of each matrix that are expected to be collected:**

Soil \_\_\_\_\_ 0 \_\_\_\_\_

Ground Water from monitoring wells \_\_\_\_\_ 42 \_\_\_\_\_

From Drinking/Irrigation water wells \_\_\_\_\_ 18 \_\_\_\_\_

From surface water features \_\_\_\_\_ 0 \_\_\_\_\_

Total number of Water samples \_\_\_\_\_ 71 (5-Trip & 3-Field Blanks and 3-Duplicates) \_\_\_\_\_

Please refer to A6 Section 1 and Figure 2 for well locations to be sampled.

The samples will be (check as many as apply):  Homogenized  Split

Site Name: 378 Truck Stop  
Permit #: 07960  
Page: 13

ECS Project Number: 14-214210  
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***For the sample matrices indicated above, please describe how samples will be collected and the equipment needed.***

Please reference ECS SOP 4.00 General Sampling Procedures for Aqueous & Solid Matrices and ECS SOP 8.10 Groundwater Sample Collection Procedures Using Bailers or Pumps.

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

Groundwater samples will be collected using disposable bailers. Nitrile gloves will be worn by field staff and changed between tasks and locations. Sampling equipment and gloves will be disposed as solid waste at a municipal facility.

Soil samples shall be collected and jarred while wearing nitrile gloves. Sterile soil sampling jars shall be made of glass and provided by the subcontracted laboratory.

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

Groundwater water quality readings will be collected using a multi-parameter water quality meter (as discussed in Section B-6). The water quality meter and the Heron probe will be cleaned between sample points with a solution ofalconox and deionized water and rinsed with deionized water. Please reference ECS SOP 10.00 Decontamination.

Decontamination water will be containerized with purge water in properly labeled; DOT approved 55-gallon drums and disposed as non-hazardous waste at an approved facility.

Investigative Derived Wastes shall be placed in a 55 gallon drum, labeled with the proper labeling (Non-hazardous or Hazardous) following RCRA regulations and left onsite to be picked up by A&D Environmental Services.

All monitoring wells will be installed using an auger rig. Augers will be decontaminated between well installations with a solution ofalconox and deionized water and rinsed with deionized water. Soil samples will be collected using a split spoon. Samples will be jarred and submitted for analysis.

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

The following drilling equipment shall be utilize and maintained by Geologic Exploration Inc. for field screening and monitoring well installation purposes: Geoprobe 7822DT, Geoprobe 7822DT, Geoprobe 6620DT, Diedrich D-120 (truck mounted), DrillMax 2400, Mobil B-58 (truck mounted), Diedrich D-120 (atv), Drilltech D25KW.

Investigative Derived Wastes (soil & water) shall be received by A&D Environmental Services.

Subsequent surveying activities shall be performed by ECS personnel.

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The samples shall be delivered to the Pace lab by the subcontracted laboratory's courier service. Subcontracted lab samples will be picked up by the subcontracted lab's courier service. ECS Inc, is not responsible for delivery of samples between contracted laboratories.

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

<b>Failure</b>	<b>Response</b>	<b>Documentation</b>	<b>Individual Responsible</b>
Property & well location access	Call property owner/acquire SCDOT right of way permit access	Document in report or contact SCDHEC PM for assistance	Brett Schaefer
Drilling Equipment failure	Contact Steve Taylor	Note problem schedule date to remobilize to site.	Phil Pike
Horiba Water Quality Meter Fails	Use Back up meter	Change serial number on sampling sheets	Phil Pike
Purge Pump Failure	Use Hand bailing Method	Sampling sheet & Report	Phil Pike
Water Level Meter Fails	Use Back up meter	Change serial number on sampling sheets	Phil Pike

**Table 6A Field Corrective Action**

### **B3 Sample Handling and Custody**

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

Samples shall be submitted to the lab in the following procedure:

- 1) Samples shall be brought back to the office and kept cold in a sample storage refrigerator until they are picked up the following day by the laboratory's courier service.

Chain of Custody procedures shall be properly followed for each delivery scenario.

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

Samples shall be stored in a secured sample storage refrigerator until released to the laboratory courier service. The refrigerator will ensure a 4°C temperature is maintained and will be packed in a manner to prevent damage to the sample containers.

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

The procedures in the most recent revision of SOP S-CAR-C-001, Sample Management are used. The laboratory personnel will open the cooler and verify the temperature of the samples by taking the temperature of the temperature blank. If there is no temperature blank in the cooler, measure the temperature of a representative sample bottles using the infrared (IR) thermometer gun.

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

The procedures in the most recent revision of SOP S-CAR-C-001, Sample Management are used. Once logged in and labeled, samples are place in the appropriate storage areas. Specific temperature requirements are outlined in the analytical methods, but general guidelines are outlined below.

Short hold samples are placed in the short hold storage area or delivered directly to the laboratory.

#### Volatiles Analyses

Aqueous samples are stored by receiving date or by project number in a segregated volatiles cooler. Associated trip blanks are stored with the samples.

Soil and other solid samples received preserved in methanol are stored by receiving date or by project number in a segregated volatiles cooler. Associated trip blanks are stored with the samples.

Soil and other solid samples received preserved with a stir bar, or deionized water and a stir bar, are stored by receiving date or by project number in a segregated volatiles freezer. Associated trip blanks are stored with samples.

Soil and other solid samples received in 4oz containers or similar bottleware must be preserved within 48 hours. In order to preserve these samples, it is necessary to collect a 5g aliquot of the sample and transfer it to a 40mL vial. One of the following preservation options must be utilized:

The 5g aliquot is preserved with a stir bar, 5mL of deionized water and a stir bar, or 5mL of sodium bisulfate and a stir bar and stored in a freezer until analysis, or

Within 48 hours of collection in the field, the 5g aliquot must be immediately extracted with 5mL of methanol and stored in a segregated volatiles cooler until analysis, or

Within 48 hours of collection in the field, the 5g aliquot can be preserved with 10mL of deionized water and a stir bar, stored in a segregated volatiles cooler and analyzed within 48 hours of collection.

#### General Chemistry and Semi-volatile Analyses

Waters and other liquid samples are staged by receiving date or by project number on the shelves in the appropriate sample storage cooler.

Soils and other solid samples are staged by receiving date or by project number on the shelves in the appropriate sample storage cooler.

#### Metals

Solids and Liquids: These samples are staged by receiving date or by project number on designated shelving in the laboratory or appropriate designated area. These samples may be stored at ambient temperature unless Mercury or Hexavalent Chromium analysis is needed. If Mercury or Hexavalent Chromium analysis will be performed, the samples are staged by receiving date or by project number in the appropriate sample storage cooler. Samples requiring low level mercury analysis by Method 1631 are taken to the clean room for preservation and ambient storage.

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

Laboratory Chain of Custody procedures are outlined in the most recent revision of SOP S-CAR-C-001, Sample Management.

A Chain of Custody shall be completed according to the attached Instructions for Completing a CoC. Samples shall be disposed of using proper procedures by laboratory personnel. ECS, Inc. is not responsible for laboratory sample disposal.

Please reference Pace's laboratory Chain of Custodies previously submitted to SCDHEC.

## B4 Analytical Methods

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

Parameter	SOP ID*	Method Referenced	Equipment	Comments
8260: BTEX, M, N, 1,2 DCA	S-CAR-0-023	8260B	Purge and Trap Mass Spectrometer System	
8011: EDB	S-CAR-O-020	8011	GC ECD	
8270	S-CAR-O-015	8270D	Direct Inject Mass Spectrometer System	Not Required for this SOW
8270 SIM PAH	S-CAR-O-052	8270D	Direct Inject Mass Spectrometer System	
Lead	S-ASV-I-043	EPA 6010C	ICP Varian ICP Thermo Elemental	
RCRA Metals	S-ASV-I-043 S-ASV-M-020	6010C 245.1 7470A 7471B	ICP, Mercury Analyzer	Not Required for this SOW
Nitrate	S-ASV-021	353.2	Flow Injection Analysis Lachat 8000	Not Required for this SOW
Sulfate	S-ASV-058	300.0	IC Compact Filtration Processor	Not Required for this SOW
Methane				Not Required for this SOW
TPH-DRO	sub			
TOC	sub			
Grain Size	S-5	ASTM D422	Sieves Oven Scale	
Hydrometer	S-6	ASTM D422	Sieves Oven Scale 1000mL Cylinder Hydrometer Thermometer	

Table 7A Analytical SOPs and Referenced Methods

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



Abbreviation	Lab Identification of this SOP	Full Name of the SOP
S-CAR-O-023	S-CAR-O-023-rev.08	Determination of Volatile Organic Compounds by GC/MS
S-CAR-O-020	S-CAR-O-020-rev.05	Determination of EDB, DBCP and TCP in Water by Microextraction
S-CAR-O-015	S-CAR-O-015-rev.05	Determination of Semi-Volatile Organic Compounds in Aqueous, Solid or Waste Samples by GC/MS
S-CAR-O-052	S-CAR-O-052-rev.2	Determination of Semivolatile Organics by GC/MS-SIM, Selective Ion Monitoring
S-ASV-I-043	S-ASV-I-043-Rev.02	DETERMINATION OF METALS BY INDUCTIVELY COUPLED PLASMA (ICP) SPECTROSCOPY BY SW-846-6010C
S-ASV-I-58	S-ASV-I-58-Rev.00	Ion Chromatography
S-ASV-I-021	S-ASV-I-021-Rev.01	The Determination of Nitrate-Nitrite Nitrogen by Automated Colorimetry
S-ASV-M-020	S-ASV-M-020-Rev.03	Mercury by Cold Vapor for Waters and Solids
S-5	Grain Size	S-5 Grain Size ASTM D422
S-6	Hydrometer	S-5 Hydrometer ASTM D422

**Table 8A SOP Abbreviation Key**

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Quality Control	Failure	Response	Documented Where?	Individual Responsible
Equipment check	Equipment failure	Contact Steve Taylor	Note problem, schedule date to remobilize to site.	Drilling supervisor
Method Blank, one per batch of 20 samples	If hits in Method Blank	Samples with hits above reporting limit are reextracted or reanalyzed. Samples with hits less than reporting limit are reported and the method blank is qualified. Samples with hits more than 10x the hit in the MB maybe footnoted with a B-flag	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Method Blank, one per batch of 20 samples	If Surrogates outside of control limits	All samples reextracted or reanalyzed if surrogate recovery is below control limits. Samples are reported and MB is footnoted if surrogate recovery is above control limits	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Laboratory Control Sample, one per batch of 20 samples	For any analytes outside of control limits or if the number of analytes outside control limits is over allowable number of exceedances.	If LCS analyte recoveries are above control limits, samples with a hit for the failing analyte above the reporting limit are reextracted or analyzed. If LCS analyte recoveries are below control limits, all samples are reextracted or reanalyzed. If LCS analyte recoveries are above control limits, samples without a hit for the failing analyte above the reporting limit are footnoted and reported. Samples may be reported if there is an acceptable matrix spike (where allowable) or laboratory control sample duplicate associated and the LCS is footnoted	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Laboratory Control Sample Duplicate, when needed	If RPD outside control limits	Samples are reported and LCSD is footnoted	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Laboratory Control Sample Duplicate, when needed	For any analytes outside of control limits or if the number of analytes outside control limits is over allowable number of exceedance.	Corrective actions are the same as Laboratory Control Sample. Samples are reported if LCS is acceptable and LCSD is footnoted	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor

Quality Control	Failure	Response	Documented Where?	Individual Responsible
Matrix Spike, one per batch of 20 samples	For any analytes outside of control limits or if the number of analytes outside control limits is over allowable number of exceedance.	Matrix spike is footnoted and samples are reported	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Matrix Spike Duplicate, when required	RPD outside control limits	Matrix spike duplicate is footnoted and samples are reported	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Matrix Spike Duplicate, when required	For any analytes outside of control limits or if the number of analytes outside control limits is over allowable number of exceedance.	Matrix spike duplicate is footnoted and samples are reported	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
Surrogates, all samples	If Surrogates outside control limits	If surrogate recovery is high and samples are non-detected samples are reported with qualification. If surrogate recoveries are low samples are re-extracted or reanalyzed.	Batch data, LIMS, Run logs.	Analyst, Peer Review, Supervisor
All Samples	Lost Samples	SCDHEC will be notified and samples will need to be collected again for each lost sample.	Tier I report	ECS Project Manager
All Samples	Samples out of Hold Time	SCDHEC will be notified and samples will need to be collected again.	Tier I report	ECS Project Manager
All Samples	Broken vials or air bubbles in vials	SCDHEC will be notified and samples will need to be collected again.	Tier I report	ECS Project Manager

Table 9A Corrective Action Procedures

3. Identify sample disposal procedures.

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
-	Decon water	As generated	55 gal drum onsite	See B2 Discussion
-	Soil	As generated	55 gal drum onsite	See B2 Discussion
All	Soil and Water	Monthly	Veolia Technical Solutions	All laboratory samples are disposed according to S-CHR-S-002, Waste Handling and Management

4. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

Not Applicable

**B5 Quality Control Requirements:**

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

**B6 Field Instrument and Equipment Testing, Inspection and Maintenance**

1. Identify all fields and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
In-Field PID Instrument	MiniRae 2000 PGM 7600	As recommended in attached MiniRae O&M Manual Doc #011-4001-000 pp 4-5 through 4-10	Periodic	Manufacturer/Rental Equipment Supplier	Phil Pike Aaron Williamson
In-Field Groundwater Quality Instrument	Horiba Y2FAH6H3	As recommended in attached Horiba W-22XD.23XD Operation Manual pp 28-32	Periodic	Manufacturer/Rental Equipment Supplier	Phil Pike Aaron Williamson
Volatiles Mass Spec	ALL	Change traps, clean ion source, replace filaments	Periodic	Laboratory	MSV Analyst
Semivolatile Mass Specc	ALL	Injection port maintenance, ion source maintenance, column replacement	Periodic	Laboratory	MSSV Analyst
Groundwater Level Indicator	Heron WLI 11614	As recommended in attached Heron Instrument O&M Manual	Periodic	Manufacturer/Rental Equipment Supplier	Phil Pike Aaron Williamson
Interface Probe	1220056491	As recommended in attached Heron Interface O&M Manual	Periodic	Manufacturer/Rental Equipment Supplier	Phil Pike Aaron Williamson
ECD GC	ALL	Injection port maintenance, column replacement	Periodic	Laboratory	GC Analyst
MetrohmIC	ALL	Replace autosampler filter, tubing, line filter, sample Line and Waste Line, as needed. Clean Pump roller, Check Reagent levels, flow rate, waste line.	Periodic	Laboratory	IC Analyst
ICP	ALL	Clean Sample introduction system , autosampler, torch,	Periodic	Laboratory	ICP Analyst

		Change spray chamber, torch tubing, tubing			
Cetac Mercury Analyzer	ALL	Clean GLS, Change Pump tubing, Nafion Dryer, Lamp	Periodic	Laboratory	Mercury Analyst
Flow Injection Analysis – Lachat 8000	ALL	Clean Rods, Injection Valves, Manifolds, Replace tubing, lamps, other as needed	Periodic	Laboratory	Nitrate Analyst

**Table 11A Instrument and Equipment Maintenance**

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this.

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
In-Field PID Instrument MiniRae 2000 PGM 7600	Daily prior to use	Calibration as discussed in attached MiniRae O&M Manual Doc #011-4001-000 pp 4-5 through 4-10	Phil Pike Aaron Williamson	Recalibrate or instrument maintenance
In-Field Groundwater Quality Instrument Horiba Y2FAH6H3	Daily prior to use	Calibration as discussed attached in Horiba W-22XD.23XD Operation Manual pp 28-32	Phil Pike Aaron Williamson	Recalibrate or instrument maintenance
Groundwater Level Indicator Heron WLI 11614	Daily prior to use	Calibration as discussed in attached Heron Instrument O&M Manual	Phil Pike Aaron Williamson	Recalibrate or instrument maintenance
Interface Probe Heron 1220056491	Daily prior to use	Calibration as discussed in attached Heron Interface O&M Manual	Phil Pike Aaron Williamson	Recalibrate or instrument maintenance
Volatiles Mass Spec	Daily calibration check	Method Requirements	MSV Analyst	Recalibration or instrument maintenance
Semi volatiles Mass Spec	Daily calibration check	Method Requirements	MSSV Analyst	Recalibration or instrument maintenance
ECD GC	Daily calibration check	Method Requirements	GC Analyst	Recalibration or instrument maintenance
Metrohm IC	Daily calibration check	Method Requirements	Nitrate Analyst	Recalibration or instrument maintenance
ICP	Daily calibration check	Method Requirements	ICP Analyst	Recalibration or instrument

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				maintenance
Cetac Mercury Analyzer	Daily calibration check	Method Requirements	Mercury Analyst	Recalibration or instrument maintenance
Flow Injection Analysis – Lachat 8000	Daily calibration check Method Requirements	Method Requirements	IC Analyst	Recalibration or instrument maintenance

**Table 12A Instrument and Equipment Inspection**

### B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
In-Field PtD/FID Instrument	Operator's Manual and/or Rental Equipment Supplier	Daily prior to use	Operator's Manual and/or Rental Equipment Supplier	Operator's Manual and/or Rental Equipment Supplier	Phil Pike  Aaron Williamson	MiniRae O&M Manual Doc #011-4001-000 pp 4-5 through 4-10
In-Field Groundwater Quality Instrument	Operator's Manual and/or Rental Equipment Supplier	Daily prior to use	Operator's Manual and/or Rental Equipment Supplier	Operator's Manual and/or Rental Equipment Supplier	Phil Pike  Aaron Williamson	Horiba W-22XD.23XD Operation Manual pp 28-32
Groundwater Level Indicator	Operator's Manual and/or Rental Equipment Supplier	Daily prior to use	Operator's Manual and/or Rental Equipment Supplier	Operator's Manual and/or Rental Equipment Supplier	Phil Pike  Aaron Williamson	See attached Heron Instrument O&M Manual
Interface Probe	Operator's Manual and/or Rental Equipment Supplier	Daily prior to use	Operator's Manual and/or Rental Equipment Supplier	Operator's Manual and/or Rental Equipment Supplier	Phil Pike  Aaron Williamson	See attached Heron Interface O&M Manual
Volatiles Mass Spec	5 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst	S-CAR-0-023
Semi volatile Mass Spec	5 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst	S-CAR-0-015 S-CAR-0-052
GC ECD	5 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst	S-CAR-0-020
Metrohm IC	3 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst	S-ASV-058
ICP	3 calibration standards for all	When indicated by daily calibration	Method Criteria	Detailed in SOP	ICP Analyst	S-ASV-043

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
	compounds	verification standard				
Cetac Mercury Analyzer	3 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst	S-ASV-M-020
Lacaht QuickChem 8000	3 calibration standards for all compounds	When indicated by daily calibration verification standard	Method Criteria	Detailed in SOP	Nitrate Analyst	S-ASV-I-021
Sieve	S-5	6 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Grain Size
Ovens	S-4	4 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Ovens
Scales	S-17	12 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Electronic Scales
Hydrometer	S-6	24 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Hydrometer
Hydrometer Solution	S-7	monthly	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Sodium Hexametaphosphate
Thermometer	S-21	12 months	Method Criteria	Detailed in SOP	Joshua Slusarczyk	Digital Thermometers

**Table 13A Instrument Calibration Criteria and Corrective Action**

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



**B8 Inspection/Acceptance Requirements for Supplies and Consumables**

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
Span gas for PID	Liquid Technology Corp.	Attached pressure gauge reads what sticker on span gas can details.	Cool dry cabinet	Phil Pike Aaron Williamson
Leather Gloves	Home Depot	New & Undamaged	Cool dry cabinet	Phil Pike Aaron Williamson
Nitrile Gloves	Enviro-Equipment	New & Undamaged	Sealed boxes	Phil Pike Aaron Williamson
Laboratory Chemicals	Fisher, VWR,	Certificates of analysis and laboratory testing	Laboratory storage	Receiving and laboratory personnel
Laboratory standards	O2Si, Restek, Fisher, VWR, Inorganic Ventures, CPI	Certificates of analysis and laboratory verifications	Vendor specific storage conditions	Laboratory Analysts
Sample Containers	Daniels Scientific, Fisher, O2Si	Certificates of analysis and laboratory testing	Bottle storage area	Sample receiving personnel
Disposable Bailers	GeoTech	New & Undamaged	Individually wrapped in sterile plastic	Phil Pike Aaron Williamson
Twine	Home Depot	Sealed in plastic	Sealed in plastic and isolated from contaminant sources	Phil Pike Aaron Williamson
Calibration Standards for field equipment	Hanna Instruments	Sealed in plastic bottles	Cool dry cabinet	Phil Pike Aaron Williamson

**Table 14A List of Consumables and Acceptance Criteria**

**B9 Data Acquisition Requirements (Non-Direct Measurements)**

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments
Previously Submitted UST Closure Report, Tax Map, Topographic Maps	Historic GW depth/GW Quality & values	Establishes the DTW; Establishes materials needed.	Documents provided by SCDHEC will be considered an acceptable data source.
-	-	-	-
-	-	-	-

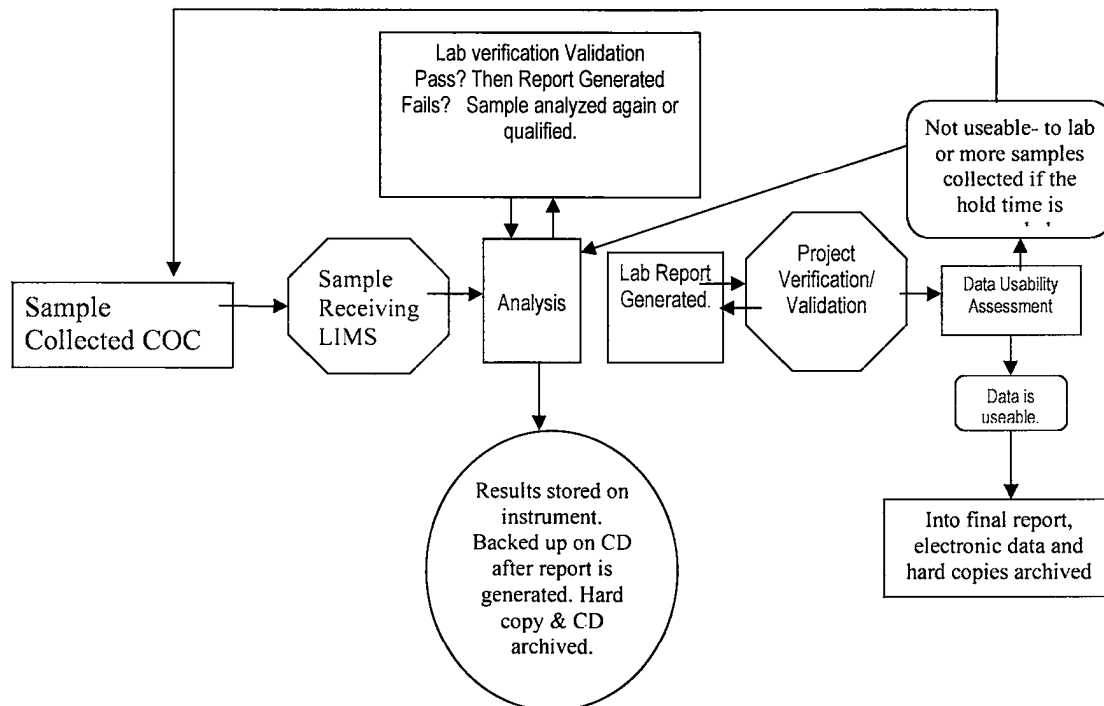
Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed.

Samples shall be picked up at ECS, Inc. and brought to the lab by the subcontracted laboratory's courier service. There are no other support facilities required for this scope of work.

**B10 Data Management**

1. Describe the data management scheme from field to final use and storage.



2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

Each laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Management Department oversees adherence to and review of these programs.

Field notes are recorded in bound, water resistant log books using indelible ink. Pages are dated at the start of the field day, and the name or initials of the field staff, weather, and required activities for the day are recorded. Chain-of-custody documentation information is recorded on field sheets which accompany samples to the lab. Data collected in the field is also entered into a limited access database.

Project related computer files are stored on a restricted access network server. Information is backed-up daily. Logbooks are scanned into the network server.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software included audit trails which are reviewed periodically under each Laboratory's Quality Systems Program. Laboratory data systems are backed up daily and able to be restored in the event of a system failure. These procedures are documented in laboratory SOPs S-ALL-IT-001, System Security and Integrity and S-ALL-IT-002, Server Backup. The IT System Manager is responsible for these systems and procedures.

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Hard copies will remain in the office for a minimum of 5 years. The electronic copies will be maintained for a minimum 5 years.

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Management Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager and the Corporate IT Department.

## **Section C Assessment and Oversight**

### **C2 Assessment and Response Actions**

- 1. The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?*

The contractor's project manager will supervise field personnel during sampling activities to ensure samples are collected according to the requirements of the QAPP. The contractor's project manager shall provide the oversight and will have the authority to stop work when necessary. The contractor's project manager will check to ensure compliance with the contractor's detailed in the QAPP Addendum.

- 2. The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

Contractor may request an Independent Audit based on document review or complaints.

The laboratories participate in annual Proficiency Testing through an approved vendor, Environmental Resources Associates. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification. Each laboratory will notify ECS Inc. of any problems and if the previous data is suspect.

The ECS, Inc. project manager will have the authority to stop work when necessary.

### **C2 Reports to Management**

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

## **Section D Data Validation and Usability**

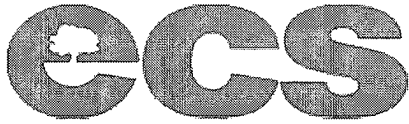
See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

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## **QAPP APPENDIX B ATTACHMENTS**

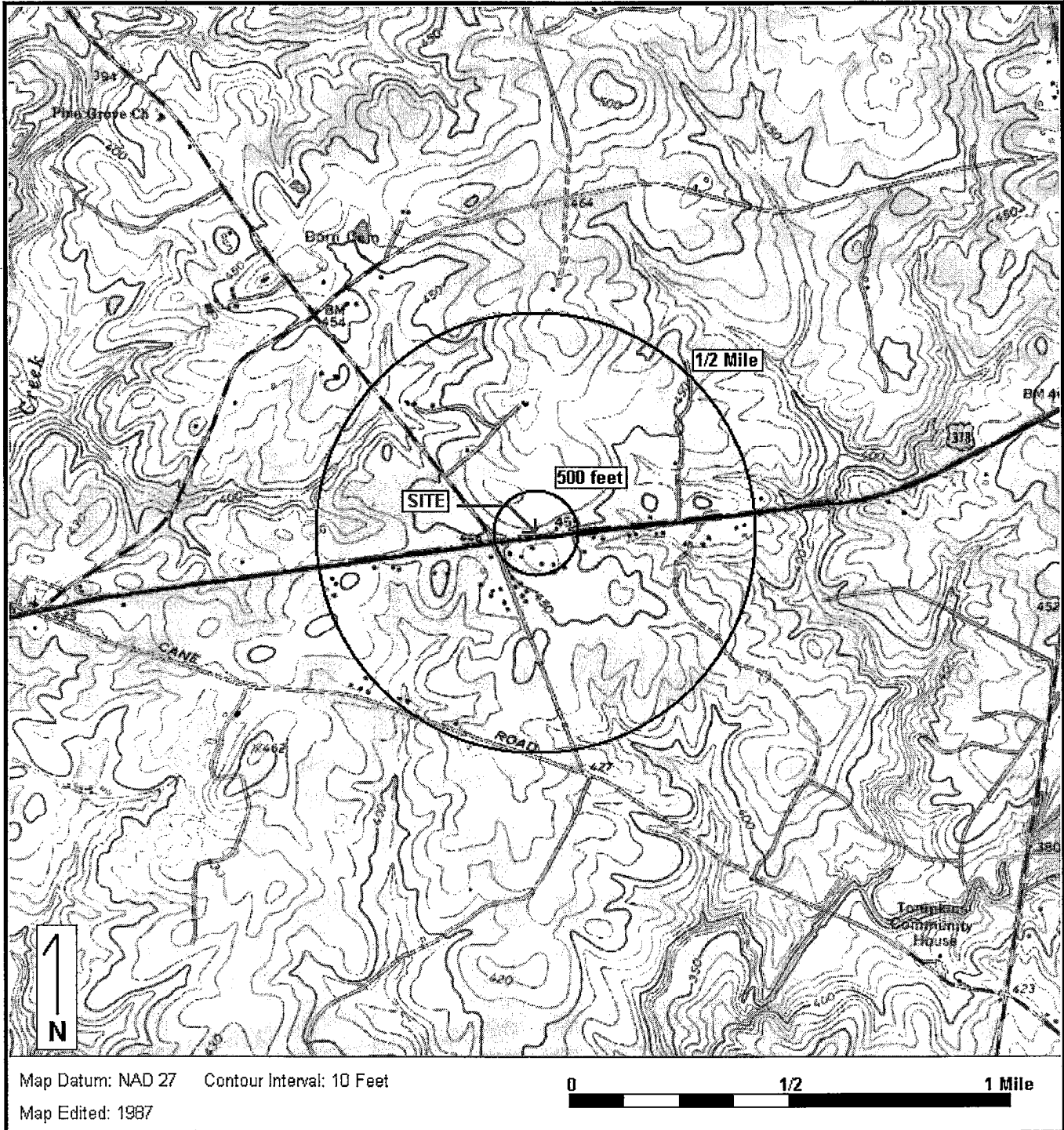
Figures, Cost Proposal



Environmental Compliance Services, Inc.  
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Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

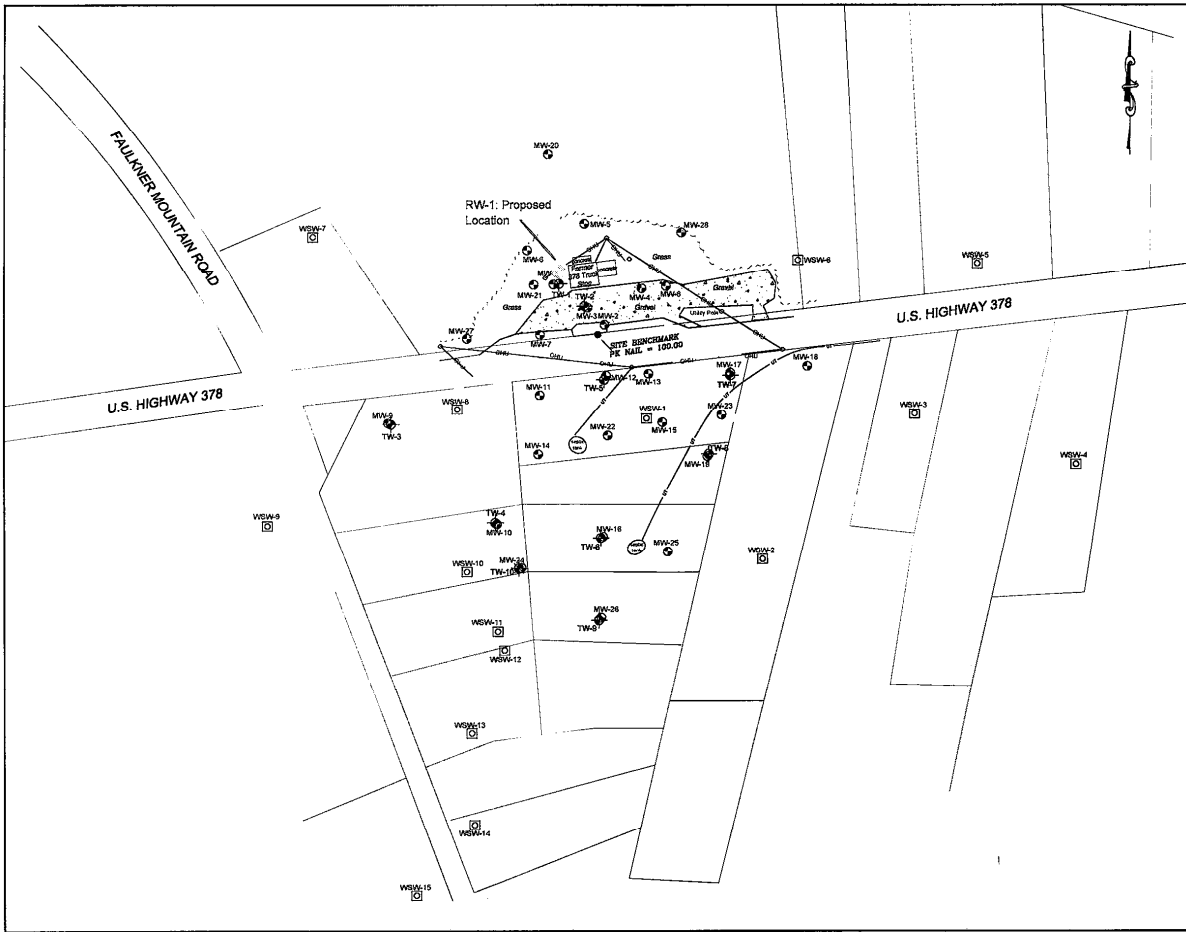
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Undergruond Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊗ Abandoned Telescoping Monitoring Well
- Water Supply Well
- MW-1 Well I.D.

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1304 SOUTH POINT BLVD. UNIT 7  
 CHARLOTTE, NORTH CAROLINA 28278  
 TEL. (704) 583-2711 FAX (704) 583-2744

PROJECT: **378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

TITLE: **Site Plan**

CLIENT: **Wilkerson Fuel Company, Inc.**

GRAPHIC SCALE: 0 25 50 75 100  
 FEET

COMPUTER DRAFTER	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
	CD	CD	CD	CD
	SCALE	DATE	JOB NO.	FIGURE NO.
	1"=150'	10/10/11	14-214210	2



**ASSESSMENT COMPONENT COST AGREEMENT  
SOUTH CAROLINA**

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

**Facility Name:** 378 Truck Stop

**UST Permit #:** 07960

**Cost Agreement #:** \_\_\_\_\_

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>1. Plan*</b>				
B. Tax Map		x	\$50.00	\$0.00
C. Tier II or Comp. Plan /QAPP Appendix B	1	x	\$525.00	\$525.00
<b>2. Receptor Survey *</b>		x	\$500.00	\$0.00
<b>3. Survey (500 x 500 feet)</b>				
A. Comprehensive Survey		x	\$1,000.00	\$0.00
B. Subsurface Geophysical Survey				
1. < 10 meters below grade		x	\$2,750.00	\$0.00
2. > 10 meters below grade		x	\$3,250.00	\$0.00
C. Geophysical UST or Drum Survey		x	\$1,125.00	\$0.00
<b>4. Mob/Demob (Each)</b>				
A. Equipment	2	x	\$575.00	\$1,150.00
B. Personnel	4	x	\$290.00	\$1,160.00
C. Adverse Terrain Vehicle to install wells		x	\$575.00	\$0.00
<b>5. Soil Borings (hand auger)* (Feet)</b>		feet x	\$14.00	\$0.00
<b>6. Soil Borings (drilled) &amp; Field Screening *</b>				
Rate includes collection of water sample or soil sample, and lab or other analyses				
A. Standard		feet x	\$17.00	\$0.00
C. Fractured Rock		feet x	\$27.50	\$0.00
<b>7. Soil Leachability Model (Each)</b>		each x	\$200.00	\$0.00
<b>8. Abandonment* (per foot)</b>				
A. 2" diameter or less		feet x	\$5.00	\$0.00
B. Greater than 2" to 6" diameter		feet x	\$5.50	\$0.00
C. Dug/Bored well (up to 6 foot diameter)		feet x	\$18.00	\$0.00
<b>9. Well Installation* (per foot)</b>				
A. Water Table (hand augered)		feet x	\$20.00	\$0.00
B. Water Table (drill rig)		feet x	\$38.00	\$0.00
C. Telescoping/ Pit Cased		feet x	\$58.00	\$0.00
D. Rock Drilling		feet x	\$58.00	\$0.00
E. 2" Rock Coring		feet x	\$45.00	\$0.00
G. Rock Multi-sampling ports/screens		feet x	\$47.20	\$0.00
H. Recovery Well (4 inch diameter)	42	each x	\$45.00	\$1,890.00
I. Pushed Pre-packed screen (1.25 diameter)		each x	\$18.50	\$0.00
J. Rotosonic (2 inch diameter)		each x	\$45.00	\$0.00
<b>10. Groundwater Sample Collection / Gauge Depth to Water or Product (Each)</b>				
A. Groundwater Purge	42	wells x	\$55.00	\$2,310.00
B. Air or Vapors		samples x	\$90.00	\$0.00
C. Water Supply	18	samples x	\$30.00	\$540.00
D. Groundwater No Purge or Duplicate	8	samples x	\$35.00	\$280.00
E. Gauge Well only		per well x	\$20.00	\$0.00
F. Sample Below Product		wells x	\$50.00	\$0.00
G. Pasive Diffusion Bag		each x	\$40.00	\$0.00
H. Field Blank	3	each x	\$5.00	\$15.00



<b>11. Laboratory Analyses-Groundwater (Each Sample)</b>					
A1. BTEX+Naphth.+ Oxyg's+ 1,2 DCA + Ethanol	74	samples x	\$100.00		\$7,400.00
AA. Lead, Filtered		samples x	\$46.00		\$0.00
B1. Rush EPA Method 8260B (All of item A.)		samples x	\$143.00		\$0.00
C1. Trimethyl, Butyl, and Isopropyl Benzenes		samples x	\$40.00		\$0.00
D. PAH's		samples x	\$120.00		\$0.00
E. Lead, Unfiltered		samples x	\$20.00		\$0.00
F. EDB by EPA 8011	74	samples x	\$55.00		\$4,070.00
FF. EDB by EPA Method 8011 Rush		samples x	\$75.00		\$0.00
G. 8 RCRA Metals		samples x	\$140.00		\$0.00
H. TPH (9070)		samples x	\$55.00		\$0.00
I. pH		samples x	\$10.00		\$0.00
J. BOD		samples x	\$40.00		\$0.00
P1. Ethanol		samples x	\$21.50		\$0.00
<b>11. Analyses-Soil (Each Sample)</b>					
Q. BTEX + Naphth.		samples x	\$100.00		\$0.00
R. PAH's		samples x	\$120.00		\$0.00
S. 8 RCRA Metals		samples x	\$150.00		\$0.00
T. Oil & Grease (9071)		samples x	\$60.00		\$0.00
U. TPH-DRO (3550B/8015B)		samples x	\$65.00		\$0.00
V. TPH- GRO (5030B/8015B)		samples x	\$65.00		\$0.00
W. Grain size/hydrometer		samples x	\$99.00		\$0.00
X. Total Organic Carbon		samples x	\$35.00		\$0.00
<b>11. Analyses-Air (Each Sample)</b>					
Y. BTEX + Naphthalene		samples x	\$247.50		\$0.00
<b>11. Analyses-Free Phase Product (Each Sample)</b>					
Z. Hydrocarbon Fuel Identification		samples x	\$620.00		\$0.00
<b>12. Aquifer Characterization*</b>					
A. Pumping Test		hours x	\$120.00		\$0.00
B. Slug Test*		tests x	\$150.00		\$0.00
C. Fractured Rock		tests x	\$500.00		\$0.00
<b>13. Free Product Recovery Rate Test* (Each)</b>					
		tests x	\$120.00		\$0.00
<b>14. Fate/Transport Modeling</b>					
A. Mathematical Model		each x	\$300.00		\$0.00
B. Computer Model		each x	\$500.00		\$0.00
<b>15. Risk Evaluation</b>					
A. Tier I Risk Evaluation		x	\$300.00		\$0.00
B. Tier II Risk Evaluation		x	\$500.00		\$0.00
<b>16. Subsequent Survey*</b>					
	1	x	\$300.00		\$300.00
<b>17. Disposal* (gallons or tons)</b>					
A. Wastewater	4500	gallons x	\$0.80		\$3,600.00
B1. Free Product		gallons x	\$0.85		\$0.00
C. Soil Treatment/Disposal	5	tons x	\$72.50		\$362.50
D. Drilling fluids		gallons x	\$0.80		\$0.00
<b>18. Miscellaneous (attach receipts)</b>					
		x			\$0.00
		x			\$0.00
		x			\$0.00
<b>20. Tier I Assessment (Use DHEC 3665 form)</b>					
		x			\$0.00
<b>21. IGWA (Use DHEC 3666 form)</b>					
		x			\$0.00
<b>22. Corrective Action (Use DHEC 3667 form)</b>					
		x			\$0.00

<b>23. Aggressive Fluid &amp; Vapor Recovery (AFVR)</b>				
A. 8-hour Event*	1	each x	\$3,000.00	\$3,000.00
B. AFVR per-hour Continuance	4	per hour x	\$204.00	\$816.00
C. Off-gas treatment per-hour Continuance	12	per hour x	\$35.00	\$420.00
<b>24. Granulated Activated Carbon (GAC) filter system installation &amp; service:</b>				
A. New GAC System Installation*		each x	\$2,500.00	\$0.00
B1. Refurbished GAC Sys. Install*		each x	\$1,180.00	\$0.00
C. Filter replacement/removal*		each x	\$450.00	\$0.00
D1. GAC System removal, cleaning, & refurbishment*		each x	\$720.00	\$0.00
E. GAC System housing		each x	\$450.00	\$0.00
F. In-line particulate filter		each x	\$150.00	\$0.00
G. Additional piping & fittings		feet x	\$4.00	\$0.00
<b>25. Well Repair</b>				
A. Additional Copies of the Report Delivered		each x	\$32.50	\$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
F. Replace well cover bolts		each x	\$10.00	\$0.00
G. Replace locking well cap & lock		each x	\$15.00	\$0.00
H. Replace/Repair stick-up		each x	\$137.50	\$0.00
I. Convert Flush-mount to Stick-up		each x	\$175.00	\$0.00
J. Convert Stick-up to Flush-mount		each x	\$125.00	\$0.00
K. Replace missing/illegible well ID plate		each x	\$22.50	\$0.00
<b>Report Prep &amp; Project Management</b>	15%	x	\$27,838.50	\$4,175.78
<b>TOTAL</b>				<b>\$32,014.28</b>

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



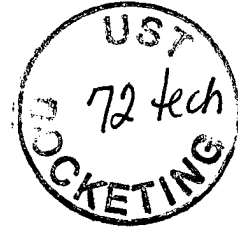
Catherine B. Templeton, Director

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

**CERTIFIED MAIL:91 7108 2133 3934 4767 3917**

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

**MAR 09 2013**



Re: Corrective Action Options-Second Attempt  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Assessment Report received March 11, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report submitted by Environmental Compliance Services, Inc. on your behalf. The report indicates that active corrective action is necessary at the site to mitigate petroleum impact and ensure that there is no detrimental exposure to human health or the environment.

Funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account will soon be available for active corrective action. The selected technology must reduce the petroleum chemicals of concern (CoC) concentrations to site-specific target levels (SSTLs) determined by the Division.

The SUPERB Site Rehabilitation and Fund Access Regulations R.61-98 require the UST owner/operator to develop and implement a reasonable, cost-effective corrective action to be performed by an Agency-certified site rehabilitation contractor. As the owner/operator you are the responsible party for the release reported on October 3, 1974. You may choose one of two options as to how to proceed with this requirement: state lead or owner/operator lead.

State Lead Option:

- If you choose the state lead option, the Division will procure a certified site rehabilitation contractor to perform corrective action on your behalf. The Agency will enter into an enforceable contract with the awarded contractor. As long as you do not interfere with or prohibit the work at your site, DHEC will not hold you responsible for the failure of the state selected contractor to meet the terms of the contract. To utilize the state lead option, please sign and return the applicable Permission and Right-of-Entry forms within 15 days of the date of this letter.

Owner/Operator Lead Option:

- If you select the owner/operator lead option, you will be required to select a contractor to perform the corrective action. In order to assist you in determining the clean-up technology, time frame, clean-up levels, and associated costs, the Division will prepare a technical specification package and provide you copies to send to contractors of your choice. In addition, the Division will announce the request for solicitations in the South Carolina Business Opportunities, a bi-weekly state government publication, to ensure that an adequate solicitation response is obtained so that a fair and competitive price can be established. This announcement will clearly indicate that you will select the contractor to implement the corrective action.
- Compensation to the contractor will be from the SUPERB Account, but you may have the obligation to pay your selected contractor for any costs not approved by the Agency.
- The Division strongly suggests that a written contract between you and the selected contractor be developed following the completion of the solicitation process. The parties to this contract would be you and the contractor you choose; the Agency would not be a party to this contract. The Division's function would be to monitor and ensure progress of corrective action activities.
- If the contractor you select does not or cannot complete the required activities, you will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount. No additional funding from the SUPERB Account may be allowed. Under R.61-92, Part 280: Underground Storage Tank Control Regulations, you as the owner/operator are ultimately responsible to the Agency for the actions of your contractor. The Agency will pursue enforcement actions against you if the contractor you select does not make satisfactory progress towards achieving established corrective actions goals. To utilize the owner/operator lead option, please sign and return the enclosed Active Corrective Action Options Form within 15 days of the date of this letter.

On all correspondence or inquiries regarding this project, please reference UST Permit # 07960. If you have any questions, please contact me at (803) 898-0610 or [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section

Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Permission/Right-of-Entry forms  
Active Corrective Action Options form

cc: Environmental Compliance Services, P O Box 3528, Fort Mill, SC 29708 (w/o enc)  
Technical file (w/o enc)

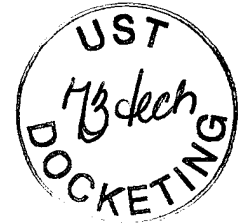


Catherine B. Templeton, Director

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

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

JUL 09 2013



Re: **Assessment Directive**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960; Cost Agreement # 46077; MWA # UMW-25155  
Release reported October 3, 1974  
Assessment Report received March 11, 2013  
QAPP Contractor Addendum and Associated Cost Agreement received June 20, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced addendum submitted on your behalf by Environmental Compliance Services, Inc. The previous assessment work for this release indicates that petroleum Chemicals of Concern (CoC) are present in the groundwater at concentrations that exceed risk-based screening levels (RBSLs). In order to determine the extent of the CoC, additional assessment is necessary. All work should be conducted in accordance with the UST Quality Assurance Program Plan (QAPP) Revision 2.0 and must be conducted in compliance with all applicable regulations. A copy of the Agency QAPP for the UST Management Division is available at <http://www.scdhec.gov/environment/lwm/usthome/Qapp.htm>.

Assessment activities at the site should begin immediately upon receipt of this letter. Cost agreement # 46077 has been approved for the amount shown on the enclosed cost agreement form for the following scope of work. One four-inch diameter recovery well should be installed adjacent to monitoring well MW-1. Following well installation, one 12-hour aggressive fluid and vapor recovery (AFVR) event should be conducted on the newly installed recovery well. Thirty days after the completion of the AFVR event, the entire monitoring well network and all water supply wells should be sampled and the samples analyzed for BTEX, naphthalene, MtBE, the oxygenates, 1,2-DCA, and EDB. Analyses should be in accordance with Appendix E of the QAPP to include duplicate samples, field and trip blanks.

In accordance with the QAPP, a weekly status report of the project should be provided via e-mail. If any quality assurance problems arise, your contractor must contact the Division within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

**The Assessment Report, contractor checklist (Appendix K), and invoice are due within 90 days from the date of this letter.** The report submitted at the completion of these activities should include the required information outlined in the QAPP. Please note that all applicable South Carolina certification requirements apply to the services and report preparation. All site rehabilitation activities must be performed and submitted by a South Carolina Certified Underground Storage Tank Site Rehabilitation Contractor.

Environmental Compliance Services can submit an invoice for direct payment from State Underground Petroleum Environmental Response Bank (SUPERB) Account for pre-approved costs. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. Please note that applicable South Carolina certification requirements regarding laboratory services, well installation, and report preparation must be satisfied. If the invoice is 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.

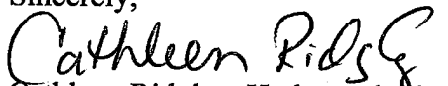
Please note that Sections 44-2-110(4) and 44-2-130 of the SUPERB Statute state that no costs will be allowed unless prior approval from the Agency is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Agency for the cost to be paid. The Agency 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, the Agency 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.

Please note, if unnecessary dilutions are completed resulting in reporting limits of individual CoC in excess of RBSLs, the data cannot be used. In those cases, the Division may deny payment for any non-detect analysis where the reporting limit exceeds the RBSL. The UST Management Division encourages the use of 'J' values as necessary so the appropriate action can be determined for a release.

The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. The transport and disposal must be conducted in accordance with the QAPP. If the CoC concentrations based on laboratory analysis are below 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 #07960. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0610, by fax at (803) 898-0673, or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

  
Cathleen Ridgley, Hydrogeologist

Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Approved Cost Agreement  
Monitoring Well Approval UMW-25155  
QAPP Addendum Signature Page

cc: Environmental Compliance Services, Inc., P O Box 3528, Fort Mill, SC 29708 (with enc)  
Technical File (with enc)



Catherine B. Templeton, Director

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

### Monitoring Well Approval

**Approval is hereby granted to:** Environmental Compliance Services, Inc.  
**(On behalf of):** Wilkerson Fuel Company, Inc.  
**Facility:** Former 378 Truck Stop, 731 Hwy 378, Edgefield, SC  
**UST Permit Number:** 07960  
**County:** Edgefield

This approval is for the installation of one four-inch diameter recovery well. The recovery well is to be installed in the approved location. Recovery wells are to be installed following the South Carolina Well Standards, R.61-71, and the applicable guidance documents.

**Please note that R.61-71 requires the following:**

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the Agency shall be completed and submitted to the Agency within 30 days after well completion or abandonment unless another schedule has been approved by the Agency. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Agency within 30 days of receipt of laboratory results unless another schedule has been approved by the Agency as required by R.61-71.H.1.d.
5. If any of the information provided to the Agency changes, notification to the project manager (tel: 803-898-0610 or e-mail: [ridglect@dhec.sc.gov](mailto:ridglect@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:** July 8, 2013

**Approval #:** UMW-25155

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section

Underground Storage Tank Management Division  
Bureau of Land and Waste Management

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

2600 Bull Street • Columbia, SC 29201 • Phone: (803) 898-3432 • [www.scdhec.gov](http://www.scdhec.gov)

**Section A: Project Management**

**A1 Title and Approval Page**

Quality Assurance Project Plan  
Addendum to the SC DHEC UST Programmatic QAPP  
For  
378 Truck Stop; UST Permit #07960

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731 Highway 378, Edgefield, SC

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Prepared by:  
Brett G. Schaefer, PE  
Environmental Compliance Services, Inc.  
13504 South Point Blvd, Ste F  
Charlotte, NC 28273

---

Date: June 13, 2013  
Certified UST Site Rehabilitation Contractor #358  
Environmental Compliance Services, Inc.

---

Approvals:

Cathleen Ridgley Cathleen Ridgley Date 7/18/13  
SC DHEC Project Manager Signature

Brett G. Schaefer, PE Brett G. Schaefer Date 6/12/13  
Contractor Project Manager Signature

Kurt Blevins Kurt Blevins Date 6/17/13  
Site Rehabilitation Contractor Signature

Craig L. Kennedy, PG Craig L. Kennedy Date 6/17/2013  
Project Verifier/QA Manager Signature

For Jeff Graham Jeff Graham Date 06/17/2013  
Pace Laboratory Director Signature



# Approved Cost Agreement 46077

Facility: 07960 378 TRUCK STOP

RIDGLECT

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		C TIER II/COMP. PLAN/QAPP APP B	1.0000	525.00	525.00
04 MOB/DEMOB		A EQUIPMENT	2.0000	575.00	1,150.00
		B PERSONNEL	4.0000	290.00	1,160.00
09 WELL INSTALLATION		H RECOVERY WELL (4 INCH DIA)	42.0000	45.00	1,890.00
10 SAMPLE COLLECTION		A GROUND WATER	42.0000	55.00	2,310.00
		C WATER SUPPLY	18.0000	30.00	540.00
		D GROUNDWATER NO-PURGE	8.0000	35.00	280.00
		H FIELD BLANK	3.0000	5.00	15.00
11 ANALYSES	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	74.0000	100.00	7,400.00
		F EDB	74.0000	55.00	4,070.00
16 SUBSEQUENT SURVEY		SUBSEQUENT SURVEY	1.0000	300.00	300.00
17 DISPOSAL		A WASTEWATER	4,500.0000	0.80	3,600.00
		C SOIL (TREATMENT/DISPOSAL)	5.0000	72.50	362.50
19 RPT/PROJECT MNGT & COORDINATIO		PCT PERCENT	0.1500	27,838.50	4,175.78
23 EFR		A 8 HOUR EVENT	1.0000	3,000.00	3,000.00
		B ADDITIONAL HOUR	4.0000	204.00	816.00
		C OFF GAS TREATMENT	12.0000	35.00	420.00
<b>Total Amount</b>					<b>32,014.28</b>



Catherine B. Templeton, Director

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



**CERTIFIED:91 7199 9991 7030 0479 9986**

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

**JUL 31 2013**

Re: **Notice of Alleged Violation**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
ACA Options Form sent April 8, 2013  
ACA Options Form Second Attempt sent certified July 9, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control directed you to select either the state-lead or owner/operator option for active corrective action (ACA) in April and July 2013. To date the required form has not been received. In accordance with Section 280.65 of the South Carolina Underground Storage Tank Regulations, ACA must be conducted as chemicals of concern are above the risk-based-screening levels and site specific target levels for the site.

**Please sign and submit either the Owner/Operator ACA Options or the appropriate state-lead ACA Options form within 15 days from the date of this letter. Should you not submit the form on or before August 15, 2013, this office will be forced to initiate enforcement action.**

On all correspondence concerning this site, please reference UST Permit #07960. If there are any questions concerning this project, please contact me at (803) 898-0610. I can also be reached by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov) or by fax at (803) 898-0673.

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Copies of ACA Options Letters sent

cc: Environmental Compliance Services, Inc., P O Box 3528, Fort Mill, SC 29708  
Technical file



Catherine B. Templeton, Director

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

**CERTIFIED MAIL:91 7108 2133 3934 4767 3917**

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

**MAR 09 2013**



**Re: Corrective Action Options-Second Attempt  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Assessment Report received March 11, 2013  
Edgefield County**

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report submitted by Environmental Compliance Services, Inc. on your behalf. The report indicates that active corrective action is necessary at the site to mitigate petroleum impact and ensure that there is no detrimental exposure to human health or the environment.

Funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account will soon be available for active corrective action. The selected technology must reduce the petroleum chemicals of concern (CoC) concentrations to site-specific target levels (SSTLs) determined by the Division.

The SUPERB Site Rehabilitation and Fund Access Regulations R.61-98 require the UST owner/operator to develop and implement a reasonable, cost-effective corrective action to be performed by an Agency-certified site rehabilitation contractor. As the owner/operator you are the responsible party for the release reported on October 3, 1974. You may choose one of two options as to how to proceed with this requirement: state lead or owner/operator lead.

State Lead Option:

- If you choose the state lead option, the Division will procure a certified site rehabilitation contractor to perform corrective action on your behalf. The Agency will enter into an enforceable contract with the awarded contractor. As long as you do not interfere with or prohibit the work at your site, DHEC will not hold you responsible for the failure of the state selected contractor to meet the terms of the contract. To utilize the state lead option, please sign and return the applicable Permission and Right-of-Entry forms within 15 days of the date of this letter.

**Owner/Operator Lead Option:**

- If you select the owner/operator lead option, you will be required to select a contractor to perform the corrective action. In order to assist you in determining the clean-up technology, time frame, clean-up levels, and associated costs, the Division will prepare a technical specification package and provide you copies to send to contractors of your choice. In addition, the Division will announce the request for solicitations in the South Carolina Business Opportunities, a bi-weekly state government publication, to ensure that an adequate solicitation response is obtained so that a fair and competitive price can be established. This announcement will clearly indicate that you will select the contractor to implement the corrective action.
- Compensation to the contractor will be from the SUPERB Account, but you may have the obligation to pay your selected contractor for any costs not approved by the Agency.
- The Division strongly suggests that a written contract between you and the selected contractor be developed following the completion of the solicitation process. The parties to this contract would be you and the contractor you choose; the Agency would not be a party to this contract. The Division's function would be to monitor and ensure progress of corrective action activities.
- If the contractor you select does not or cannot complete the required activities, you will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount. No additional funding from the SUPERB Account may be allowed. Under R.61-92, Part 280: Underground Storage Tank Control Regulations, you as the owner/operator are ultimately responsible to the Agency for the actions of your contractor. The Agency will pursue enforcement actions against you if the contractor you select does not make satisfactory progress towards achieving established corrective actions goals. To utilize the owner/operator lead option, please sign and return the enclosed Active Corrective Action Options Form within 15 days of the date of this letter.

On all correspondence or inquiries regarding this project, please reference UST Permit # 07960. If you have any questions, please contact me at (803) 898-0610 or [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section

Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Permission/Right-of-Entry forms  
Active Corrective Action Options form

cc: Environmental Compliance Services, P O Box 3528, Fort Mill, SC 29708 (w/o enc)  
Technical file (w/o enc)



Catherine B. Templeton, Director

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

APR 08 2013

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835



Re: **Corrective Action Options**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Assessment Report received March 11, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report submitted by Environmental Compliance Services, Inc. on your behalf. The report indicates that active corrective action is necessary at the site to mitigate petroleum impact and ensure that there is no detrimental exposure to human health or the environment.

Funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account will soon be available for active corrective action. The selected technology must reduce free product and petroleum chemicals of concern (CoC) concentrations to site-specific target levels (SSTLs) determined by the Division.

The SUPERB Site Rehabilitation and Fund Access Regulations R.61-98 require the UST owner/operator to develop and implement a reasonable, cost-effective corrective action to be performed by a Agency-certified site rehabilitation contractor. As the owner/operator for the release reported on October 3, 1974, you may choose one of two options as to how to proceed with this requirement: state lead or owner/operator lead.

**State Lead Option:**

- If you choose the state lead option, the Division will procure a certified site rehabilitation contractor to perform corrective action on your behalf. The Agency will enter into an enforceable contract with the awarded contractor. As long as you do not interfere with or prohibit the work at your site, you will not be responsible in the event the state selected contractor does not perform appropriately or does not make satisfactory progress towards achieving the established corrective action goals. To utilize the state lead option, please sign and return the applicable Permission and Right-of-Entry forms within 15 days of the date of this letter.

**Owner/Operator Lead Option:**

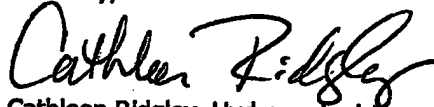
- If you select the owner/operator lead option, you will be required to select a contractor to perform the corrective action. In order to assist you in determining the clean-up technology, time frame, clean-up levels, and associated costs, the Division will prepare a technical specification package and provide you copies to send to contractors of your choice. In addition, the Division will announce the request for solicitations in the South Carolina Business Opportunities, a bi-weekly state government publication, to ensure that an adequate solicitation

response is obtained so that a fair and competitive price can be established. This announcement will clearly indicate that you will select the contractor to implement the corrective action.

- Compensation to the contractor will be from the SUPERB Account, but you may have the obligation to pay your selected contractor for any costs not approved by the Agency.
- The Division strongly suggests that a written contract between you and the selected contractor be developed following the completion of the solicitation process. The parties to this contract would be you and the contractor you choose; the Agency would not be a party to this contract. The Division's function would be to monitor and ensure progress of corrective action activities.
- If the contractor you select does not or cannot complete the required activities, you will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount. No additional funding from the SUPERB Account may be allowed. Under R.61-92, Part 280: Underground Storage Tank Control Regulations, you as the owner/operator are ultimately responsible to the Agency for the actions of your contractor. The Agency will pursue enforcement actions against you if the contractor you select does not make satisfactory progress towards achieving established corrective actions goals. To utilize the owner/operator lead option, please sign and return the enclosed Active Corrective Action Options Form within 15 days of the date of this letter.

On all correspondence or inquiries regarding this project, please reference UST Permit #07960. If you have any questions, please contact me at (803) 896-6633 or by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Permission/Right-of-Entry forms  
Active Corrective Action Options form

cc: Technical file (w/o enc)

**PERMISSION FORM**  
**UNDERGROUND STORAGE TANK OWNER**

UST Permit # 07960

**If you are the owner of the former or existing underground storage tanks for the release reported on October 3, 1974 or are designated as their authorized representative, but do not own the property, please complete this form.**

I, \_\_\_\_\_ certify that I am the legal owner of the former and existing underground storage tanks located at the facility identified below and for the release reported on October 3, 1974 or serve as the authorized representative for the UST owner. I grant permission to the South Carolina Department of Health and Environmental Control (Agency) to secure on my behalf services of a contractor to conduct assessment and corrective action activities, as required. The contractor will be designated as my contractor for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that the Agency or its contractor will be responsible for obtaining right-of-entry from the property owner and notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility \_\_\_\_\_ Phone # \_\_\_\_\_

Street Address of Facility \_\_\_\_\_

Town, City, District, Suburb \_\_\_\_\_

Name of nearest intersecting street, road, highway, alley \_\_\_\_\_

\_\_\_\_\_ Is this facility within the city limits? (yes or no) \_\_\_\_\_

Does a public water or sewer utility service this facility? (yes or no) \_\_\_\_\_, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines \_\_\_\_\_, phone number \_\_\_\_\_

NAME of UST owner (Please Print): \_\_\_\_\_

Phone Number (home) \_\_\_\_\_ (work) \_\_\_\_\_

Signature of UST Owner: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year

ACTIVE CORRECTIVE ACTION  
OPTIONS FORM

UST PERMIT # 07960

I, \_\_\_\_\_, certify that I am the legal owner on record for the underground storage tanks at the facility identified below for the release reported on October 3, 1974 or serve as the authorized representative for the owner. I wish to secure price quotations for corrective action activities as required by the Agency, and to select my own corrective action contractor after price quotation results are received. I understand that the Agency will also advertise for price quotations in the South Carolina Business Opportunities and provide the results to me. **I understand compensation to the contractor will be from the SUPERB Account, but I may have the obligation to pay the contractor for any costs not approved by the Agency. I understand that if the contractor I select does not or cannot complete the required activities, I will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount and that no additional funding from the SUPERB Account may be allowed. I also understand that the Agency will pursue enforcement actions against me if the contractor I select does not make satisfactory progress towards achieving established corrective actions goals.**

NAME of UST owner or authorized representative (Please Print): \_\_\_\_\_

Phone Number (home) \_\_\_\_\_ (work) \_\_\_\_\_

Signature of UST Owner: \_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_



**GROUNDWATER SAMPLING AND AFVR REPORT**

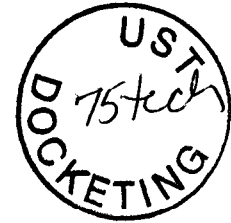
**378 TRUCK STOP  
731 HWY 378  
EDGEFIELD, SOUTH CAROLINA  
EDGEFIELD COUNTY**

**UST PERMIT NO. 07960  
ECS PROJECT NO. 14-214210**



Prepared For:


Wilkerson Fuel Company  
PO box 2835  
Rock Hill, South Carolina 29732

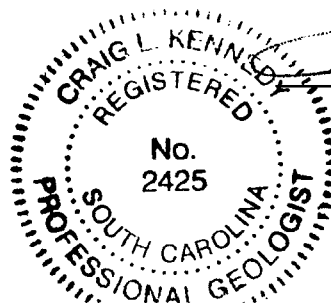


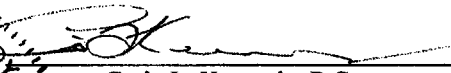
Prepared By:

Environmental Compliance Services, Inc.  
Post Office Box 3528  
Fort Mill, South Carolina 28273-3528

October, 2013

  
Noelle France  
Project Manager



  
Craig L. Kennedy, P.G.  
SC Registration No. 2425

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## 1.0 INTRODUCTION

This report presents the results of the recovery well installation and comprehensive groundwater sampling activities conducted at the 378 Truck Stop site between August 20, and October 2, 2013. These activities were conducted in accordance with the Underground Storage Tank (UST) Quality Assurance Program Plan (QAPP) Revision 1.0, and Cost Agreement Number 46077 as approved by the South Carolina Department of Health and Environmental Control (SCDHEC) in correspondence dated July 9, 2013.

### 1.1 SITE INFORMATION

**UST Facility Name:** 378 Truck Stop  
**UST Permit Number:** 07960  
**Facility Address:** 731 Hwy 378  
Edgefield, South Carolina  
**Telephone Number:** Unknown

### 1.2 UST OWNER/OPERATOR

**Name:** Wilkerson Fuel Company  
**Address:** PO Box 2835  
Rock Hill, South Carolina  
**Telephone Number:** (803) 324-4080

### 1.3 PROPERTY OWNER INFORMATION

**Name:** Gail and Barbara Whitmer  
**Address:** 1226 Hwy 378 East  
Edgefield, South Carolina 29824  
**Telephone Number:** Unknown

### 1.4 DHEC CERTIFIED UST SITE REHABILITATION CONTRACTOR INFORMATION

**Name:** Environmental Compliance Services, Inc.  
**Address:** Post Office Box 3528  
Fort Mill, South Carolina 29708  
**Telephone Number:** (800) 627-0493  
**Certification Number:** 358

### 1.5 CERTIFIED LABORATORY INFORMATION

**Company Name:** Pace Analytical Services, Inc.  
**Address:** 9800 Kincey Avenue, Suite 100  
Huntersville, North Carolina 28078  
**SC Certification:** 99006001

## 1.6 SITE HISTORY

**UST Permit:** 07960  
**Site Name:** 378 Truck Stop  
**Date Release Reported to SCDHEC:** Report: October 3, 1979; Confirmed: July 8, 1996  
**Estimated Quantity of Product Released:** Not reported  
**Cause of Release:** UST system  
**SC RBCA Classification Code:** 2BB

### UST Permit 02548

UST #	Size	Product	Date Installed	Currently in Use	Date Closed
1	550	Diesel	Unknown	No (removed)	1/1/1987
2	1,000	Gasoline	Unknown	No (removed)	1/1/1987
3	2,000	Gasoline	Unknown	No (removed)	1/1/1987

The site was not in use at the time of this assessment. An abandoned building was present onsite during our visits associated with the additional assessment activities. A concrete slab was located directly to the east of, and abutting, the onsite building. A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. Reportedly, one 550-gallon diesel, one 1,000-gallon gasoline, and one 2,000-gallon gasoline underground storage tanks (USTs) and their associated piping and dispensers were removed from the site on January 1, 1987. The site did not contain USTs at the time of this assessment. A Site Locus Map showing surrounding properties has been included as **Figure 1**. A Site Plan has been included as **Figure 2**.

## 1.7 REGIONAL GEOLOGY/HYDROGEOLOGY

The area was located in the Carolina Terrane of the Piedmont Physiographic Province. The Carolina Terrane consisted of upper Precambrian to Cambrian greenschist facies metasedimentary and metavolcanic rocks intruded by numerous granitic and gabbroic plutons ranging in age from 265 to 650 million years. A mantle of residual soil and saprolite has been reported to typically overlie the crystalline rocks of the Carolina Terrane. The thickness of the mantle has ranged from approximately six to 60 feet, although it apparently has been absent in places and thicker than 60 feet in others. The surface layers reported to be composed chiefly of sandy clay. The clay content of most saprolites typically ranges from 10 to 25 percent, with some containing as little as three percent and others as much as 70%.

The mantle that covers the underlying fractured bedrock in most places has provided an intergranular medium through which recharge into, and discharge of water from, the fractured rocks commonly occur. As a result, groundwater flow has been reported to occur within a composite two-media system. The top of the system has been the water table surface, which has been typically located within the saprolite. The fractured bedrock is expected to generally grade downward into unfractured rock below a depth of approximately 300 feet. The base of the groundwater system is therefore indistinct.

## **2.0 RECEPTOR SURVEY & SITE DATA**

### **2.1 RECEPTOR SURVEY**

A receptor survey was conducted within a 1,000 foot radius of the subject site during the May 2010 Tier I assessment activities. The 378 Truck Stop site was located in a predominantly residential area in Edgefield County. Properties directly surrounding the site were open fields. Nearby properties were mainly open fields and residences. A volunteer fire department station was located on the corner of Highway 378 and Faulkner Mountain Road.

Municipal water was not provided to the area. Multiple private water supply wells were identified during the Tier I receptor survey and were subsequently plotted on a site vicinity map. A comprehensive survey which included the private water supply wells, conducted during Tier II assessment activities, resulted in multiple changes to the site vicinity map.

### **2.2 SITE GEOLOGY**

The project area was underlain at shallow depths by light brown silt and silty clay. Rock and partially weathered rock were encountered below the silt and clay at varying depths throughout the study area. Partially weathered rock was first encountered at depths ranging from approximately 26 feet (07960-MW18 and 07960-MW27) to 50 feet (07690-TW9) across the subject area. Overall, partially weathered rock was first encountered at or below a depth of 30 feet below grade onsite and in locations south of the site. Partially weathered rock was first encountered at more shallow depths in locations west, southwest, and southeast of the site. Rock was first encountered at depths ranging from approximately 30 feet (07960-MW8) to 68 feet (07690-TW3) across the subject area. The depths to rock observed during shallow monitoring well installation varied from approximately 30 feet to 39 feet below grade. Overall, rock was encountered a bit deeper onsite and south of the site as compared to other areas (north, east, west, southwest, and southeast). Depths to rock were observed at shallower depths (between 32 feet and 35 feet below grade) during telescoping well installation in areas southwest and southeast of the site, as compared to telescoping wells installed onsite and in areas south of the site. The largest discrepancy was observed at telescoping well 07690-TW3, located southwest of the site, where rock was not encountered until a depth of 68 feet below grade.

The percentages of gravel, sand, and silt/clay in a soil sample collected during Tier I well installation activities from monitoring well 07960-MW3 at a depth of 40 feet below grade were 10.0%, 39.8%, and 50.1%, respectively. The percentages of gravel, sand, silt, and clay in a soil sample collected during Tier II well installation activities from 07960-MW12 at a depth of 30 feet below grade were 4.1%, 27.5%, 50.7%, and 17.7%, respectively. A soil sample was proposed for collection during installation of monitoring well 07690-TW5 at a depth within the well's screened interval. This sample was subsequently collected at a depth of 55 feet below grade. Following discussions with SCDHEC, the sample was not submitted for laboratory grain size analysis, as this sample consisted mainly of pulverized rock particles from the well drilling process.

### 3.0 ASSESSMENT INFORMATION

The SCDHEC directive for this assessment included the installation of recovery well 07960-RW2, and the completion of a comprehensive groundwater sampling event to monitor the migration of Chemicals of Concern (CoC) in groundwater.

#### 3.1 WELL INSTALLATION

On August 20, 2013, ECS was on site to install 4" recovery well 07960-RW1. Recovery well 07960-RW1 was installed to a depth of 29 feet below grade with 15 foot screen length. Well Construction Records and boring logs have been included in **Appendix D** and **Appendix E**, respectively.

#### 3.2 AFVR EVENT

An AFVR event was performed at the site by A&D Environmental Services and ECS. The purpose of the events was to remove residual free phase product and to reduce concentrations of chemicals of concern from the aquifer. The cost agreement requested one AFVR event to be performed on recovery well 07960-RW1. No free product was detected in 07960- RW1 during the AFVR event.

The AFVR event consisted of a vacuum truck extracting fluids from recovery well 07960-RW1 for twelve hours. Measurements of vacuum, air velocities, temperature, and off-gas concentration readings were collected at 15-minute intervals during the first two hours and at 30-minute intervals during the remainder of the event.

The AFVR event was performed for twelve hours on August 29, 2013. The AFVR stinger was installed in recovery well 07960-RMW1 to a depth of 15.10 ft below top of casing (TOC). Monitoring wells 07960-MW1, 07960-MW3, 07960-MW7 and 07960-MW21 were used as observation wells. The initial depth to water readings were 17.66 ft, 20.41 ft, 23.50 ft, and 21.71 ft below TOC for 07960-MW1, 07960-MW3, 07960-MW7, and 07960-MW21, respectively. Free product was not detected in any of the observation wells.

Immediately following the end of the AFVR the depth to water in the wells were 18.90 ft (07960-MW1), 19.49 ft (07960-MW3), 18.80 ft (07960-MW7), and 19.55 ft (07960-MW21). Depth to water measurements collected 20 minutes after the AFVR event were 18.80 ft (07960-MW1), 18.49 ft (07960-MW3), 18.42 ft (07960-MW7), and 19.50 ft (07960-MW21).

The vacuum readings averaged 24 inches of mercury at recovery well 07960-RW1 over the course of the event. The air velocity rates averaged 3,246 ft/minute from the discharge stack over the course of the event. The organic vapor concentrations recovered from recovery well 07960-RW1 was measured at the discharge stack using the Bacharach TLV Sniffer, and averaged 12 parts per million (ppm) during the event. The exhaust stack gas temperatures averaged 210.5 degrees Fahrenheit.

The total estimated amount of petroleum products removed as a vapor, based on twelve hours of FID measurements and using a conversion factory of 1.02 for benzene, was 0.13 pounds (0.350 gallons). Previous emission calculations included using the number of carbon atoms in the calibration gas for the

FID; however, it has been determined that using the manufacturer's conversion factor to convert the FID readings into gas concentrations for benzene results in a more representative estimate of the amount of petroleum products removed as a vapor.

Approximately 212 gallons of liquid were removed from recovery well 07960- RW1 during the August 29, 2013 AFVR event. Upon inspection of the 212 gallons of liquid, no product was observed in the vacuum truck tank. Field data sheets and emissions calculations for the August 29, 2013 AFVR event are included in **Appendix F**. The disposal manifest for the AFVR event is included in **Appendix G**.

### 3.3 GROUNDWATER SAMPLING ACTIVITIES

#### 3.3.1 Well Gauging

Forty monitoring wells (07960-MW1 through 07960-MW31, and 07960-TW1 through TW9) were gauged for depths to groundwater, depth to free product and total well depths on September 30, 2013. Monitoring well 07960-MW1 was reported to contain 0.04 feet product.

The groundwater elevations in the shallow monitoring wells, relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 71.83 feet (07960-MW9) to 78.20 feet (07960-MW17). The groundwater elevations in the intermediate depth telescoping monitoring wells, relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 78.93 feet (07960-TW7) to 68.93 feet (07960-TW8).

The groundwater elevations in the deep telescoping monitoring wells, relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 72.55 feet (07960-TW9) to 77.70 feet (07960-TW2).

Based on these data, the shallow groundwater flow direction was generally toward the west-southwest direction. The average horizontal hydraulic gradient for the shallow monitoring well network was approximately 0.0182 ft/ft.

The groundwater flow direction in the intermediate depth wells was generally north to south. The average horizontal hydraulic gradient for the intermediate depth monitoring well network was approximately 0.0815 ft/ft.

The average horizontal hydraulic gradient for the deep monitoring well network was approximately 0.0149 ft/ft. The groundwater flow direction for the deep telescoping wells is northeast to southwest.

Historical Groundwater Elevation Data is presented in **Table 2**. Groundwater Elevation Maps based on the September and October, 2013 data have been included as **Figure 5A**, **Figure 5B** and **Figure 5C**.



### 3.3.2 Well Sampling

Thirty shallow monitoring wells (07960-MW2 through 07960-MW31) and nine telescoping monitoring wells (07960-TW1 through 07960-TW9), were sampled on September 30, and October 1, 2013. Well numbers; 07960-MW2, 07960-MW12, 07960-MW18, 07960-MW21, 07960-MW25, 07960-MW26 and wells 07960-MW28 through 07960-MW31, and 07960-TW1 through 07960-TW9, were purged prior to sampling.

Free product was detected in monitoring wells 07960-MW1 September-October 2013 groundwater sampling event. Water supply wells WSW-1 (pre & post GAC), WSW-2 through WSW-7, WSW-8 (pre & post GAC), WSW-9 through WSW-11, and WSW-13 through WSW-15 were sampled during the September-October, 2013 sampling event. Water supply well WSW-X was not sampled as access could not be attained due to a locked access door and the outside spigot was not functioning.

Groundwater samples (except for the water supply wells) were collected using a disposable bailer. Groundwater samples collected were containerized in laboratory-prepared glass bottles, packed on ice, and transported to Pace Analytical Services, Inc. (Huntersville, NC), a South Carolina certified laboratory. Standard chain-of-custody procedures were maintained, as documented in **Appendix B**.

Three duplicate samples identified as Duplicate-1, Duplicate-2 and Duplicate-3 were collected from 07960-MW3, 07960-MW31, and 07960-MW22, within 5 minutes of the initial groundwater sample collection, respectively. The duplicate samples were assigned a unique identification name with no time listed on the chain of custody to avoid potential laboratory analytical bias. The duplicate samples were identified in the field book. One field blank was also collected during well sampling for quality assurance and quality control. Three trip blanks (one set per cooler) were included for quality assurance and quality control.

Sixty four water samples 30 shallow groundwater monitoring wells, 17 water supply wells, 9 telescoping wells, 3 duplicates, 1 field blank, and 3 trip blanks) were analyzed for benzene, toluene, ethylbenzene, and total xylenes (collectively referred to as BTEX compounds), naphthalene, methyl tert-butyl ether (MTBE), 1,2-DCA and oxygenates by EPA Method 8260 and EDB by EPA Method 8011.

### 3.3.3 Groundwater Quality

Groundwater samples collected from monitoring wells 07960-MW2, 07960- MW3, 07960-MW7, 07960-MW12, 07960-MW13, 07960-MW16, 07960-MW22, 07960-MW29 through 07960-MW31, 07960-TW1, Duplicate-1, Duplicate-2, and Duplicate-3 were reported to contain one or more chemicals of concern above their respective RBSLs.

Monitoring wells 07960-MW3, 07960-MW7, 07960-MW11, 07960-MW13, MW-39 and 07960-TW1 were reported to contain one or more fuel oxygenates above their respective RBSLs.

Chemicals of Concern were not detected in the field blank or the trip blank samples.

Historical Groundwater Analytical Data for CoC and the eight oxygenates is presented in **Table 3A** and **Table 3B**. Groundwater Quality Maps based on the October 2013 analytical data are included as **Figure 4A, 4B, 4C, and 4D**. The laboratory report for groundwater samples is included in **Appendix B**. Groundwater Sampling Field Data Sheets have been included in **Appendix B**.

## 3.4 INVESTIGATIVE DERIVED WASTE

Investigative derived waste (IDW) generated during the recovery well installation and groundwater sampling activities was placed in four 55-gallon drum purge water drums and four soil drums for disposal by a licensed facility. Liquids produced during the AFVR event were disposed of by A&D Environmental Services. Copies of the disposal manifests are included in **Appendix G**.

## **4.0 CONCLUSIONS AND RECOMMENDATIONS**

### **4.1 CONCLUSIONS**

- On August 20, 2013, ECS was on site to install recovery well 07960-RW1. Recovery well 07960-RW1 was installed to a depth of 29 feet below grade with 15 foot screen length.
- ECS returned to the site on August 29, 2013 to perform an AFVR event. During the AFVR event, the total estimated amount of petroleum products removed as a vapor, based on twelve hours of FID measurements and using a conversion factor of 1.02 for benzene, was 0.13 pounds (0.350 gallons). Approximately 212 gallons of liquid were recovered during the twelve hour AFVR event.
- ECS returned to the site to perform a comprehensive groundwater sampling event on September 30, 2013.
- Free product was detected in monitoring well 07960-MW1 at a thickness of 0.04 feet.
- Based on the September-October 2013 groundwater level measurements, shallow groundwater appears to flow towards the west-southwest direction, intermediate groundwater flows approximately north to south, and the deep groundwater appears to flow toward the northeast to southwest.
- Groundwater samples collected from monitoring wells 07960-MW2, 07960-MW3, 07960-MW7, 07960-MW11, 07960-MW12 07960-MW13, 07960-MW16, 07960-MW22 07960-MW29 through 07960-MW31, and 07960-TW1, were reported to contain one or more petroleum constituents above their respective RBSLs.
- The distribution of dissolved-phase petroleum hydrocarbons in groundwater appear defined in the vertical and horizontal directions based on the October 2013 analytical data.

### **4.2 RECOMMENDATIONS**

- It is recommended that an additional AFVR event be performed on monitoring well 07960-MW1 due to the continuing presence of free phase petroleum product.
- A comprehensive groundwater monitoring event should be performed after the AFVR events to establish distribution trends and natural attenuation parameters, if monitored natural attenuation should be considered.

## 5.0 LIMITATIONS

This report has been prepared for the exclusive use of Wilkerson Fuel Company for specific application to the referenced site in Aiken County, South Carolina. The assessment was conducted based on the scope of work and level of effort desired by the SCDHEC and with resources adequate only for that scope of work. Our findings have been developed in accordance with generally accepted standards of geology and hydrogeology practices in the State of South Carolina, available information, and our professional judgment. No other warranty is expressed or implied.

The data that are presented in this report are indicative of conditions that existed at the precise locations sampled and at the time the samples were collected. Additionally, the data obtained from samples would be interpreted as being meaningful with respect to parameters indicated in the laboratory report. No additional information can logically be inferred from these data.

Certain data contained in this report were not obtained under the supervision of ECS. Although the accuracy of these data cannot be verified, for the purposes of this report, ECS assumes that they are correct.

## **TABLES**

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TABLE 2  
SUMMARY OF GROUNDWATER ELEVATION DATA <sup>1</sup>  
378 TRUCK STOP

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Groundwater (ft)	Free Product Thickness (ft)	Groundwater Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW1	5/25/10 <sup>3</sup>	101.85	15.33	15.37	0.04	86.51	unknown	unknown
	10/18/10 <sup>4</sup>	101.98	26.50	26.54	0.04	75.47		
	4/19/11		--	21.70	--	80.28		
	8/29/11		--	31.17	--	70.81		
	2/12/13		28.12	28.21	0.09	73.84		
	9/30/2013		23.10	23.14	0.04	78.87		
07960-MW2	5/25/10		101.02	--	16.82	--	84.20	41.72
	10/18/10	100.99	--	27.10	--	73.89		
	4/19/11		--	23.34	--	77.68		
	8/29/11		--	30.91	--	70.08		
	2/12/13		--	31.33	--	69.66		
	9/30/2013		--	24.02	--	76.97		
07960-MW3	5/25/10		101.46	--	17.28	--	84.18	40
	10/18/10	101.54	--	27.58	--	73.96		
	4/19/11		--	23.78	--	77.76		
	8/29/11		--	31.38	--	70.16		
	2/12/13		--	31.79	--	69.75		
	9/30/2013		--	24.51	--	77.03		
07960-MW4	5/25/10		100.50	--	16.35	--	84.15	40
	10/18/10	100.48	--	26.20	--	74.28		
	4/19/11		--	22.12	--	78.36		
	8/29/11		--	29.92	--	70.56		
	2/12/13		--	30.00	--	70.48		
	9/30/2013		--	23.09	--	77.39		
07960-MW5	5/25/10		104.21	--	27.30	--	76.91	40
	10/18/10	104.18	--	30.24	--	73.94		
	4/19/11		--	27.63	--	76.55		
	8/29/11		--	34.18	--	70.00		
	2/12/13		--	36.02	--	68.16		
	9/30/2013		--	27.51	--	76.67		
07960-MW6	10/18/10		102.25	--	28.01	--	74.24	35.05
	4/19/11	--		23.06	--	79.19		
	8/29/11	--		32.01	--	70.24		
	2/12/13	--		30.98	--	71.27		
	9/30/2013	--		24.52	--	77.73		
07960-MW7	10/18/10	99.72	--	25.10	--	74.62	34.92	19.92-34.92
	4/19/11		--	21.04	--	78.68		
	8/29/11		--	25.83	--	73.89		
	2/12/13		--	28.60	--	71.12		
	9/30/2013		--	20.10	--	79.62		

TABLE 2  
SUMMARY OF GROUNDWATER ELEVATION DATA <sup>1</sup>  
378 TRUCK STOP

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Groundwater (ft)	Free Product Thickness (ft)	Groundwater Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW8	10/18/10	99.92	--	25.45	--	74.47	35.08	20.08-35.08
	4/19/11		--	22.51	--	77.41		
	8/29/11		--	28.62	--	71.30		
	2/12/13		--	29.52	--	70.40		
	9/30/2013		--	24.74	--	75.18		
07960-MW9	10/18/10	94.83	--	30.31	--	64.52	35.17	20.17-35.17
	4/19/11		--	24.13	--	70.70		
	8/29/11		--	28.08	--	66.75		
	2/12/13		--	30.51	--	64.32		
	9/30/2013		--	23.00	--	71.83		
07960-MW10	10/18/10	99.12	--	29.73	--	69.39	40.16	25.16-40.16
	4/19/11		--	26.18	--	72.94		
	8/29/11		--	31.51	--	67.61		
	2/12/13		--	27.25	--	71.87		
	9/30/2013		--	25.38	--	73.74		
07960-MW11	10/18/10	102.61	--	28.75	--	73.86	35.23	20.23-35.23
	4/19/11		--	25.59	--	77.02		
	8/29/11		--	32.42	--	70.19		
	2/12/13		--	33.99	--	68.62		
	9/30/2013		--	25.10	--	77.51		
07960-MW12	10/18/10	103.46	--	29.63	--	73.83	34.99	19.99-34.99
	4/19/11		--	26.11	--	77.35		
	8/29/11		--	33.56	--	69.90		
	2/12/13		--	Dry	--	Dry		
	9/30/2013		--	26.25	--	77.21		
07960-MW13	10/18/10	101.48	--	27.63	--	73.85	40.19	25.19-40.19
	4/19/11		--	23.50	--	77.98		
	8/29/11		--	31.34	--	70.14		
	2/12/13		--	31.69	--	69.79		
	9/30/2013		--	24.74	--	76.74		
07960-MW14	10/18/10	103.48	--	29.99	--	73.49	39.74	24.74-39.74
	4/19/11		--	28.52	--	74.96		
	8/29/11		--	34.59	--	68.89		
	2/12/13		--	35.07	--	68.41		
	9/30/2013		--	27.01	--	76.47		
07960-MW15	10/18/10	103.16	--	30.32	--	72.84	40.13	25.13-40.13
	4/19/11		--	25.18	--	77.98		
	8/29/11		--	33.50	--	69.66		
	2/12/13		--	33.42	--	69.74		
	9/30/2013		--	26.85	--	76.31		

TABLE 2  
SUMMARY OF GROUNDWATER ELEVATION DATA <sup>1</sup>  
378 TRUCK STOP

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW-16	10/18/10	101.32	--	30.79	--	70.53	40.11	25.11-40.11
	4/19/11		--	24.59	--	76.73		
	8/29/11		--	32.68	--	68.64		
	2/12/13		--	33.56	--	67.76		
	9/30/2013		--	25.31	--	76.01		
07960-MW17	10/18/10	98.40	--	23.74	--	74.66	35.02	20.02-35.02
	4/19/11		--	18.20	--	80.20		
	8/29/11		--	28.55	--	69.85		
	2/12/13		--	19.25	--	79.15		
	9/30/2013		--	20.20	--	78.20		
07960-MW18	10/18/10	95.05	--	22.02	--	73.03	35.67	20.67-35.67
	4/19/11		--	15.71	--	79.34		
	8/29/11		--	23.00	--	72.05		
	2/12/13		--	23.23	--	71.82		
	9/30/2013		--	18.25	--	76.80		
07960-MW19	10/18/10	101.07	--	27.62	--	73.45	38.57	23.57-38.57
	4/19/11		--	21.63	--	79.44		
	8/29/11		--	30.56	--	70.51		
	2/12/13		--	32.05	--	69.02		
	9/30/2013		--	24.35	--	76.72		
07960-MW20	12/6/10	110.52	--	41.77	--	68.75	45.05	30.05-45.05
	4/19/11		--	37.72	--	72.80		
	8/29/11		--	41.27	--	69.25		
	2/12/13		--	Dry	--	Dry		
	9/30/2013		--	35.84	--	74.68		
07960-MW21	12/6/10	101.70	--	32.66	--	69.04	40.16	25.16-40.16
	4/19/11		--	24.19	--	77.51		
	8/29/11		--	38.77	--	62.93		
	2/12/13		--	32.00	--	69.70		
	9/30/2013		--	22.41	--	79.29		
07960-MW22	12/6/10	105.13	--	34.95	--	70.18	40.09	25.09-40.09
	4/19/11		--	28.56	--	76.57		
	8/29/11		--	35.88	--	69.25		
	2/12/13		37.61	37.98	0.37	67.43		
	9/30/2013		--	29.18	--	75.95		
07960-MW23	12/6/10	100.01	--	29.26	--	70.75	37.24	22.24-37.24
	4/19/11		--	19.69	--	80.32		
	8/29/11		--	29.01	--	71.00		
	2/12/13		--	26.28	--	73.73		
	9/30/2013		--	22.83	--	77.18		
07960-MW24	12/6/10	99.08	--	32.25	--	66.83	40.13	25.13-40.13
	4/19/11		--	25.58	--	73.50		
	8/29/11		--	31.62	--	67.46		
	2/12/13		--	33.17	--	65.91		
	9/30/2013		--	26.53	--	72.55		



**TABLE 2**  
**SUMMARY OF GROUNDWATER ELEVATION DATA <sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Groundwater (ft)	Free Product Thickness (ft)	Groundwater Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW25	12/6/10	101.54	--	32.00	--	69.54	39.98	24.98-39.98
	4/19/11		--	23.44	--	78.10		
	8/29/11		--	32.18	--	69.36		
	2/12/13		--	33.28	--	68.26		
	9/30/2013		--	24.58	--	76.96		
07960-MW26	12/6/10	97.25	--	29.08	--	68.17	38.74	23.74-38.74
	4/19/11		--	21.07	--	76.18		
	8/29/11		--	29.08	--	68.17		
	2/12/13		--	30.29	--	66.96		
	9/30/2013		--	21.84	--	75.41		
07960-MW27	12/6/10	97.20	--	28.48	--	68.72	35.10	20.10-35.10
	4/19/11		--	24.42	--	72.78		
	8/29/11		--	29.24	--	67.96		
	2/12/13		--	30.27	--	66.93		
	9/30/2013		--	22.87	--	74.33		
07960-MW28	12/6/10	101.29	--	33.39	--	67.90	40.03	25.03-40.03
	4/19/11		--	20.91	--	80.38		
	8/29/11		--	29.92	--	71.37		
	2/12/13		--	28.86	--	72.43		
	9/30/2013		--	24.65	--	76.64		
07960-MW29	2/12/13	101.08	--	32.04	--	69.04	40.15	25.15-40.15
	9/30/2013		--	23.99	--	77.09		
07960-MW30	2/12/13	104.62	--	36.20	--	68.42	45.05	30.05-45.05
	9/30/2013		--	28.51	--	76.11		
07960-MW31	2/12/13	103.20	--	35.31	--	67.89	43.96	28.96-43.96
	9/30/2013		--	27.30	--	75.90		
07960-TW1	10/18/10	101.83	--	28.44	--	73.39	63.27	58.27-63.27
	4/19/11		--	25.53	--	76.30		
	8/29/11		--	32.26	--	69.57		
	2/12/13		--	33.22	--	68.61		
	9/30/2013		--	25.66	--	76.17		
07960-TW2	10/18/10	101.97	--	29.57	--	72.40	80.23	75.23-80.23
	4/19/11		--	23.83	--	78.14		
	8/29/11		--	31.62	--	70.35		
	2/12/13		--	33.22	--	68.75		
	9/30/2013		--	24.27	--	77.70		

**TABLE 2**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Groundwater (ft)	Free Product Thickness (ft)	Groundwater Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-TW-3	10/18/10	95.33	--	25.39	--	69.94	80.62	75.62-80.62
	4/19/11		--	23.83	--	71.50		
	8/29/11		--	27.78	--	67.55		
	2/12/13		--	29.97	--	65.36		
	9/30/2013		--	22.78	--	72.55		
07960-TW-4	10/18/10	99.23	--	43.13	--	56.10	68.56	63.56-68.56
	4/19/11		--	27.11	--	72.12		
	8/29/11		--	31.09	--	68.14		
	2/12/13		--	32.81	--	66.42		
	9/30/2013		--	23.15	--	75.78		
07960-TW-5	10/18/10	103.62	--	29.69	--	73.93	58.38	53.38-58.38
	4/19/11		--	25.96	--	77.66		
	8/29/11		--	33.09	--	70.53		
	2/12/13		--	34.60	--	69.02		
	9/30/2013		--	26.42	--	77.20		
07960-TW-6	10/18/10	101.29	--	31.22	--	70.07	58.55	53.55-58.55
	4/19/11		--	25.25	--	76.04		
	8/29/11		--	33.00	--	68.29		
	2/12/13		--	33.80	--	67.49		
	9/30/2013		--	26.72	--	74.57		
07960-TW-7	10/18/10	98.13	--	50.90	--	47.23	58.94	53.94-58.94
	4/19/11		--	16.83	--	81.30		
	8/29/11		--	36.98	--	61.15		
	2/12/13		--	37.54	--	60.59		
	9/30/2013		--	19.20	--	78.93		
07960-TW-8	10/18/10	101.03	--	28.18	--	72.85	58.53	53.53-58.53
	4/19/11		--	22.19	--	78.84		
	8/29/11		--	41.54	--	59.49		
	2/12/13		--	42.13	--	58.90		
	9/30/2013		--	32.10	--	68.93		
07960-TW-9	12/6/10	96.92	--	28.96	--	67.96	80.12	75.12-80.12
	4/19/11		--	21.14	--	75.78		
	8/29/11		--	28.94	--	67.98		
	2/12/13		--	30.22	--	66.70		
	9/30/2013		--	22.59	--	74.33		

Notes:

1. Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.
2. Groundwater elevations adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.
3. May 2010 survey data collected by Environmental Compliance Services, Inc. during Tier I assessment activities.
4. Subsequent October and December 2010 survey data provided by Pittman Professional Land Surveying.
5. 07960-MW-20 installed with a 3 ft stickup riser.

TABLE 3A  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
CHEMICALS OF CONCERN  
378 TRUCK STOP

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
07960 - MW1	5/25/10	Free Product								
	10/18/10	Free Product								
	4/19/11	456	210	1,010	4,700	<50.0	277	<50.0	1.2	NR
	8/29/11	1,130	317	941	3,779	<50	225	82	1.3	NR
	2/13/13	Free Product								
	9/30/2013	Free Product								
07960 - MW2	5/25/10	109 <sup>2</sup>	<5.0 <sup>3</sup>	114	312	5.0	50.6	NR <sup>1</sup>	0.035	NR
	10/19/10	1.7 J <sup>5</sup>	<5.0	<5.0	2.9 J	5.0	<5.0	24.8	0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	28.5	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	26.1	0.019	NR
	2/13/13	6.7	<5.0	5.0	13.1	<5.0	<5.0	28.8	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	5.0	<5.0	26.7	<0.020	NR
07960 - MW3	5/25/10	239	139	815	4,800	<5.0	285	126	0.099	28.9
	10/18/10	6,820	343	981	6,260	3.4 J	449	561	0.31	NR
	4/19/11	7,300	253	921	5,060	250	342	542	0.30	NR
	8/29/11	7,000	572	1,170	6,710	250	371	438	0.033	NR
	2/13/13	6,860	366	660	3,256	250	349	586	0.40	NR
	10/1/2013	8,400	784	1,540	6,080	<250	498	568	0.80	NR
07960 - MW4	5/25/10	2.9 J	<5.0	1.4 J	<15.0	<5.0	12.7	3.5 J	0.020	62.8
	10/18/10	5.7	<5.0	<5.0	<15.0	3.0 J	3.7 J	4.8 J	<0.020	NR
	4/20/11	16.4	<5.0	6.0	14.0	<5.0	9.3	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW5	5/25/10	3.6 J	1.8 J	4.0 J	22.3	<5.0	<5.0	4.8 J	<0.020	11.8
	10/18/10	102	<5.0	4.1 J	135.9	3.2 J	43.5	6.6	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW6	10/19/10	<5.0	<5.0	<5.0	<15.0	3.0 J	<5.0	3.5 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	5.0	<5.0	5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW7	10/19/10	12.9	4.6 J	3.2 J	34.2 J	<5.0	<5.0	4.6 J	0.40	<5.0
	4/20/11	794	108	410	2,536	<5.0	116	66.6	6.9	NR
	8/29/11	275	<10.0	42.6	178.8	<10.0	30.7	26	0.58	NR
	2/13/13	186	<10.0	23.4	<30.0	<10.0	<10.0	11	0.028	NR
	10/1/2013	2,100	32	652	4,120	<10.0	328	123	7.6	NR
07960 - MW8	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	4.0 J	<5.0	2.2 J	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR

TABLE 3A  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
CHEMICALS OF CONCERN  
378 TRUCK STOP

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
07960 - MW9	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.019	NR
07960 - MW10	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW11	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	1.3 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	7.9	<5.0	<5.0	<15.0	<5.0	<5.0	2.8 J	<0.019	NR
	2/13/13	14.2	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	16.2	<5.0	<5.0	<10.0	<5.0	2.1 J	3.0 J	<0.020	NR
07960 - MW12	10/19/10	387	1,210	120	2,650	<5.0	187	24.7	4.8	<5.0
	4/20/11	1,360	987	462	1,650	50.0	91.3	75.7	6.0	NR
	8/29/11	429	26.9	8.3 J	18.3 J	<12.5	5.2 J	126	2.5	NR
	2/13/13	DRY								
	10/1/2013	2,020	169	193	840	<20.0	139	94.2	1.3	NR
07960 - MW13	10/19/10	333	109	58.3	282	<10.0	10.1	61.9	0.022	<5.0
	4/20/11	376	46.8	31.2	394	<12.5	11.7 J	57.0	0.074	NR
	8/29/11	65.5	11.7	9.2	34.2	<5.0	<5.0	41.7	0.033	NR
	2/13/13	376	28.7	33.5	330.7	<5.0	12.3	34.3	<0.020	NR
	10/1/2013	533	25.1	22.8	139	<10.0	53.3	38.9	<0.020	NR
07960 - MW14	10/19/10	<5.0	<5.0	2.5 J	9.5 J	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	2.8 J	<5.0	3.4 J	5.8 J	<5.0	22	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	3.3 J	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW15	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.0 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW16	10/19/10	246	26.1	14.3	229.2	<5.0	<5.0	2.5 J	<0.020	<5.0
	4/19/11	158	8.5	2.5 J	96.2	<5.0	5.8	<5.0	<0.020	NR
	8/29/11	NR	NR	NR	NR	NR	NR	NR	<0.019	NR
	2/13/13	51.6	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	24.5	<5.0	<5.0	10.2	<5.0	6.6	<5.0	<0.020	NR
07960 - MW17	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	4.3 J
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	9/30/2013	<5.0	<5.0	<5.0	10.0	<5.0	<5.0	<5.0	<0.020	NR

TABLE 3A  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
CHEMICALS OF CONCERN  
378 TRUCK STOP

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)	
07960 - MW18	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0	
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR	
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR	
	9/30/13	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR	
07960 - MW-19	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0	
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.021	NR	
	9/30/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR	
07960 - MW20	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0	
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/13	DRY									
07960 - MW21	10/1/13	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR	
	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0	
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
07960 - MW22	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR	
	12/6/10	11,900	29,500	1,800	11,400	<100	522	463	122	15.3	
	4/20/11	8,690	20,600	1,870	11,070	<1,250	<1,250	<1,250	119	NR	
	8/29/11	3,630	23,500	3,530	20,200	<1,000	859 J	<1,000	188	NR	
07960 - MW23	2/13/13	Free Product									
	10/1/13	10,900	30,500	2,640	20,800	<1,000	1,270	420J	109	NR	
	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0	
07960 - MW24	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	9/30/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR	
	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	6.7	<0.020	<5.0	
07960 - MW25	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	4.1 J	<0.020	NR	
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.5 J	<0.019	NR	
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR	
07960 - MW25	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0	
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR	

TABLE 3A  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
CHEMICALS OF CONCERN  
378 TRUCK STOP

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
07960 - MW26	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW27	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	6.4	<0.020	5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.6 J	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	2.3 J	<5.0	<0.020	NR
07960 - MW28	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW29	2/13/13	21.4	5.0	20.8	63.4	<5.0	<5.0	16.7	0.052	NR
	10/1/13	65.1	<5.0	16.2	54.0	<5.0	10.4	20.5	<0.020	NR
07960 - MW30	2/13/13	527	17.7	12.2	270	<5.0	8.3	21.7	<0.020	NR
	10/1/2013	602	<25.0	24.2 J	99.3	<25.0	46.8	37.7	0.11	NR
07960 - MW31	2/13/13	24.5	26.2	14.7	109.6	<5.0	<5.0	51.4	<0.020	NR
	10/1/2013	321	54.8	60.4	194.0	<5.0	48.4	45.6	<0.020	NR
07960 - TW1	10/18/10	<5.0	5.0	5.0	<15.0	5.7	<5.0	64.2	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	5.0	<5.0	48.9	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	6.4	<5.0	48.4	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	5.1	<5.0	52.4	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	6.6	<5.0	76.1	<0.020	NR
07960 - TW2	10/19/10	<5.0	3.4 J	<5.0	2.8 J	<5.0	<5.0	4.2 J	<0.020	<5.0
	4/19/11	<5.0	1.6 J	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	18.7	<5.0	<5.0	<5.0	<0.019	NR
	10/1/2013	<5.0	46.6	<5.0	<10.0	<5.0	<5.0	1.0 J	<0.020	NR
07960 - TW3	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	5.0	<15.0	5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	5.0	5.0	15.0	5.0	5.0	5.0	<0.020	NR
	2/13/13	<5.0	6.5	5.0	<15.0	5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	48.8	<5.0	<10.0	<5.0	5.0	<5.0	<0.020	NR

TABLE 3A  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
CHEMICALS OF CONCERN  
378 TRUCK STOP

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
07960 - TW4	10/19/10	<5.0	<5.0	<5.0	<15.0	2.9 J	<5.0	<5.0	<0.019	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	34.9	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	10/1/2013	<5.0	14.7	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW5	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	1.7 J	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	109	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW6	10/19/10	1.5 J	<5.0	<5.0	<15.0	<5.0	<5.0	5.1	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.6 J	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	8.9	<0.019	NR
	2/13/13	<5.0	33.3	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<5.0	7.3	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW7	10/19/10	<5.0	1.9 J	<5.0	5.6 J	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	9/30/13	<5.0	12.5	<5.0	<10.0	<5.0	<5.0	<5.0	0.020	NR
07960 - TW8	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<5.0	5.4	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW9	12/6/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW10	12/2/10	<5.0	<5.0	<5.0	<15.0	<5.0	2.9 J	<5.0	<0.020	NR
WSW-1	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.1 J	<0.020	NR

**TABLE 3A**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
WSW-1 pre GAC <sup>2</sup>	11/18/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.5 J	<0.019	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	2.4	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	3.1	<0.020	NR
WSW-1 post GAC	11/18/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-2	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/20/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	Not Sampled								
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-3	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	5/3/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-4	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-5	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	Well pump not operational, could not collect sample								
	8/29/11	Not Sampled								
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
WSW-6	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.88 J	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-7	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.019	NR
WSW-8	10/19/10	<5.0	<5.0	<5.0	<15.0	3.6 J	<5.0	9.2	<0.020	NR
WSW-8 pre GAC <sup>2</sup>	11/12/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	7.5	<0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.9 J	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	1.6	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/13	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-8 post GAC	11/12/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
WSW-9	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR



TABLE 3A  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
CHEMICALS OF CONCERN  
378 TRUCK STOP

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
WSW-10	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/11	1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.45 J	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
	9/30/2013	1.0	<1.0	<1.0	<2.0	<1.0	<1.0	0.60 J	<0.020	NR
WSW-11	10/19/10	5.0	<5.0	<5.0	<15.0	5.0	5.0	<5.0	0.020	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	5.0	0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	<1.0	1.0	0.45 J	0.019	NR
	2/13/13	5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
	9/30/2013	1.0	<1.0	<1.0	<2.0	<1.0	1.0	0.83 J	<0.020	NR
WSW-12	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
	4/21/11	Well pump not operational, could not collect sample								
	8/29/11	Well pump not operational, could not collect sample								
	2/13/13	Well pump not operational, could not collect sample								
WSW-13	9/30/2013	1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.020	NR
	10/19/10	<5.0	<5.0	<5.0	15.0	3.2 J	<5.0	<5.0	0.020	NR
	4/21/11	5.0	5.0	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
	8/29/11	1.0	1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
WSW-14	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.020	NR
	10/19/10	<5.0	<5.0	<5.0	<15.0	4.0 J	<5.0	<5.0	0.020	NR
	4/21/11	5.0	<5.0	<5.0	<15.0	5.0	<5.0	<5.0	0.020	NR
	8/29/11	1.0	<1.0	<1.0	<3.0	1.3	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
WSW-15	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	0.020	NR
	10/19/10	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/11	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/11	<1.0	<1.0	<1.0	<3.0	1.0	<1.0	<1.0	<0.020	NR
	2/13/13	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
WSW-X	2/13/13	Well House Secured & Locked with Padlock								
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>

Notes:

- Analyses for BTEX compounds, MTBE, naphthalene, and 1,2-DCA by EPA Method 8260B; analyses for EDB by EPA Method 8011; analyses for total lead by EPA Method 6010.
- Concentrations in bold face type exceeded the May 2001 Risk-Based Screening Level.
- Less than the reporting limit specified in the laboratory report.
- Analyses not requested.
- Estimated value below the laboratory reporting limit.
- 07960 - MW-10 did not produce enough water and was subsequently abandoned following sample collection.
- WSW-1 GAC installed on 11/18/10.
- WSW-8 GAC installed on 11/12/10.
- May 2001 Risk-Based Screening Level.

**TABLE 3B**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
07960 - MW1	10/18/10	Free Product							
	4/19/11	2,000	<100	<50.0	<1,000	<1,000	<100	<1,000	<500
	8/29/11	<2,000	<100	<50.0	<1,000	<1,000	<100	<b>2,160</b>	<500
	2/13/13	Free Product							
	10/1/2013	Free Product							
07960 - MW2	10/19/10	<200 <sup>2</sup>	<10.0	<5.0	<100	254	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	336	<10.0	96.2 J	<50.0
	8/29/11	<200	<10.0	<5.0	<100	386	<10.0	87.1 J	<50.0
	2/13/13	<200	<10.0	<5.0	<100	307	<10.0	132	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	422	<10.0	202	<50.0
07960 - MW3	10/18/10	<200	<10.0	55.7	<100	773	<10.0	<b>12,900</b> <sup>3</sup>	<50.0
	4/19/11	<10,000	<500	<250	<5,000	<5,000	<500	<b>13,800</b>	<2,500
	8/29/11	<10,000	<500	<250	<5,000	<5,000	<500	<b>10,300</b>	<2,500
	2/13/13	<10,000	<500	<250	<5,000	<5,000	<500	<b>13,200</b>	<2,500
	10/1/13	<10,000	<500	<250	<5,000	<5,000	<500	<b>15,500</b>	<2,500
07960 - MW4	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	199	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	141	<50.0
07960 - MW5	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	168	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW6	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	131	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW7	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>2,650</b>	<50.0
	8/29/11	<400	<20.0	<10.0	<200	225	<20.0	<b>672</b>	<100
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<400	<20.0	<10.0	<10.0	<200	<20.0	<b>6,780</b>	<100
07960 - MW8	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<b>244</b>	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

TABLE 3B  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
EIGHT OXYGENATES  
378 TRUCK STOP

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)	
07960 - MW9	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW10	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW11	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	266	<50.0	
07960 - MW12	10/19/10	<200	<10.0	<5.0	<100	83.0 J <sup>1</sup>	<10.0	267	<50.0	
	4/20/11	<2,000	<100	<50.0	<1,000	<1,000	<100	<1,000	<500	
	8/29/11	<500	<25.0	4.8 J	<250	<250	<25.0	615	<125	
	2/13/13	Dry								
	10/1/13	<800	<40.0	<20.0	<400	945	<40.0	1,440	<200	
07960 - MW13	10/19/10	<400	<20.0	<10.0	<200	<200	<20.0	1,260	<100	
	4/20/11	<500	<25.0	<12.5	<250	<250	<25.0	1,210	<125	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	1,040	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	340	<50.0	
	10/1/13	<400	<20.0	<10.0	<200	147J	<20.0	1,260	<100	
07960 - MW14	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW15	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW16	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	360	<50.0	
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	321	<50.0	
	8/29/11	Not Requested								
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	

TABLE 3B  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
EIGHT OXYGENATES  
378 TRUCK STOP

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)	
07960 - MW17	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW18	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW19	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW20	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	Dry								
	10/11/03	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW21	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	368	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW22	12/6/10	<4,000	<200	<100	<2,000	<2,000	<200	9,730	<1,000	
	4/20/11	<50,000	<2,500	<1,250	<25,000	<25,000	<2,500	<25,000	<12,500	
	8/29/11	<40,000	<2,000	<1,000	<20,000	<20,000	<2,000	<20,000	<10,000	
	2/13/13	Free Product								
	10/1/13	<40,000	<2,000	<1,000	<20,000	<20,000	<2,000	<20,000	<10,000	
07960 - MW23	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW24	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	

TABLE 3B  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
EIGHT OXYGENATES  
378 TRUCK STOP

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
07960 - MW25	12/6/10	<200	10.0	<5.0	<100	<100	<10.0	<100	50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	5.0	100	<100	<10.0	136	<50.0
07960 - MW26	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW27	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW28	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW29	2/13/13	<200	<10.0	<5.0	<100	347	<10.0	3,630	<50.0
	10/1/13	<200	<10.0	<5.0	<100	408	<10.0	3,620	<50.0
07960 - MW30	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<1,000	<50.0	<25.0	<500	618	<50.0	1,880	<250
07960 - MW31	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	69.8J	<10.0	509	<50.0
07960 - TW1	10/18/10	<200	<10.0	<5.0	<100	<100	<10.0	1,180	<50.0
	4/19/11	<200	<10.0	1.8J	<100	<100	<10.0	1,000	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	871	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	899	<50.0
	10/1/13	<200	<10.0	2.3J	<100	111	<10.0	1,040	<50.0
07960 - TW2	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	95.4J	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	184	<50.0
07960 - TW3	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	135	<50.0
07960 - TW4	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 3B**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
07960 - TW5	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	10.0	5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	368	<50.0
	2/13/13	<200	10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - TW6	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	10.0	5.0	<100	<100	<10.0	<100	<50.0
07960 - TW7	10/19/10	<200	10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - TW8	10/19/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - TW9	12/6/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - TW10	12/2/10	<200	10.0	<5.0	<100	<100	<10.0	<100	<50.0
	12/2/10	Abandoned							
WSW-1 pre GAC <sup>6</sup>	11/18/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	8.3 J	<10.0	<100	<50.0
	2/13/13	<200	10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	<100	39.2J	<10.0	145	<50.0
WSW-1 post GAC	11/18/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	<100	34.5J	<10.0	<100	<50.0
WSW-2	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	Not Sampled							
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

TABLE 3B  
SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
EIGHT OXYGENATES  
378 TRUCK STOP

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
WSW-3	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	5/3/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	<100	29.3J	<10.0	<100	<50.0
WSW-4	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<1.0	<100	31.5J	<10.0	<100	<50.0
WSW-5	12/8/10	Not sampled for oxygenates. Well pump electric disconnected.							
	4/21/11	Well pump not operational. could not collect sample							
	8/29/11	Not Sampled							
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<1.0	<100	30.2J	<10.0	<100	<50.0
WSW-6	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/13	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
WSW-7	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
WSW-8 pre GAC <sup>2</sup>	11/12/10	<200	<10.0	<5.0	<100	<100	<10.0	262	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<200	<1.0	<100	<100	<10.0	142	<50.0
WSW-8 post GAC	11/12/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	<100	<100	<10.0	132	<50.0
WSW-9	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
WSW-10	12/8/10	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0

**TABLE 3B**  
**SUMMARY OF GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
WSW-11	12/8/10	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	100	<100	<10.0	<100	<50.0
WSW-12	12/8/10	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	4/21/11	Well pump not operational, could not collect sample							
	8/29/11	Well pump not operational, could not collect sample							
	2/13/13	Well pump not operational, could not collect sample							
	9/30/13	<200	<10.0	<1.0	100	<100	<10.0	<100	<50.0
WSW-13	12/8/10	Not sampled for oxygenates. Sampled by SCDHEC on 11/4/10.							
	4/21/11	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	100	29.6J	<10.0	<100	<50.0
WSW-14	12/8/10	Not sampled for oxygenates. Sampled by SCDHEC on 11/4/10.							
	4/21/11	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	100	30.7J	<10.0	<100	<50.0
WSW-15	12/8/10	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	4/21/11	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	8/29/11	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	2/13/13	<200	<10.0	<5.0	100	<100	<10.0	<100	<50.0
	9/30/13	<200	<10.0	<1.0	100	30.0J	<10.0	<100	<50.0
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>

Notes:

1. Analyses for eight oxygenates by EPA Method 8260B.
2. Less than the reporting limit specified in the laboratory report.
3. Concentrations in bold face exceed the 2008 SCDHEC Action Level.
4. Estimated value below the laboratory reporting limit.
5. 07960 - TW-10 did not produce enough water and was subsequently abandoned following sample collection.
6. WSW-1 GAC installed on 11/18/10.
7. WSW-8 GAC installed on 11/12/10.
8. Action Levels based on SCDHEC Revision 1 dated 8/22/08.



## FIGURES

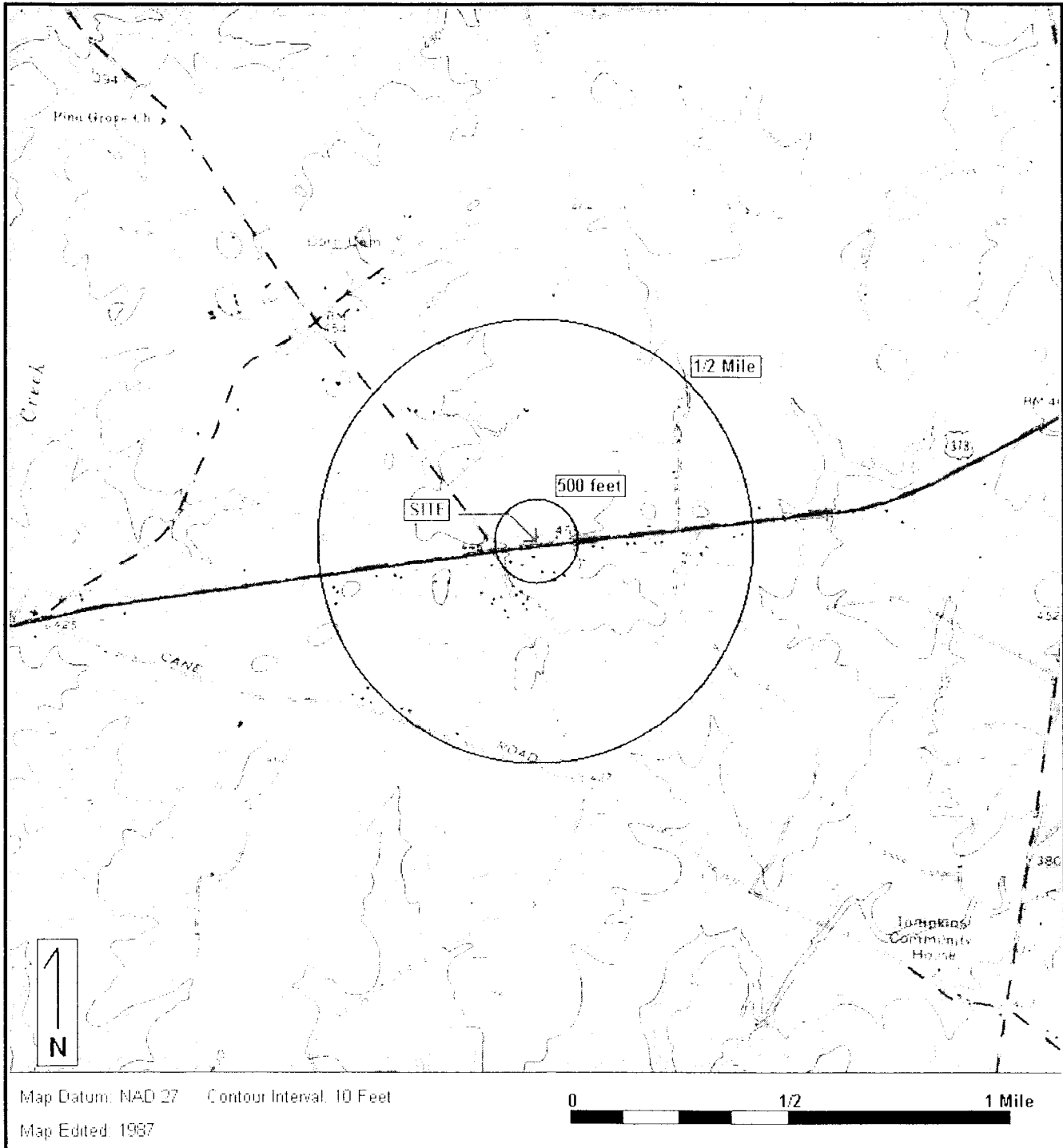
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Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

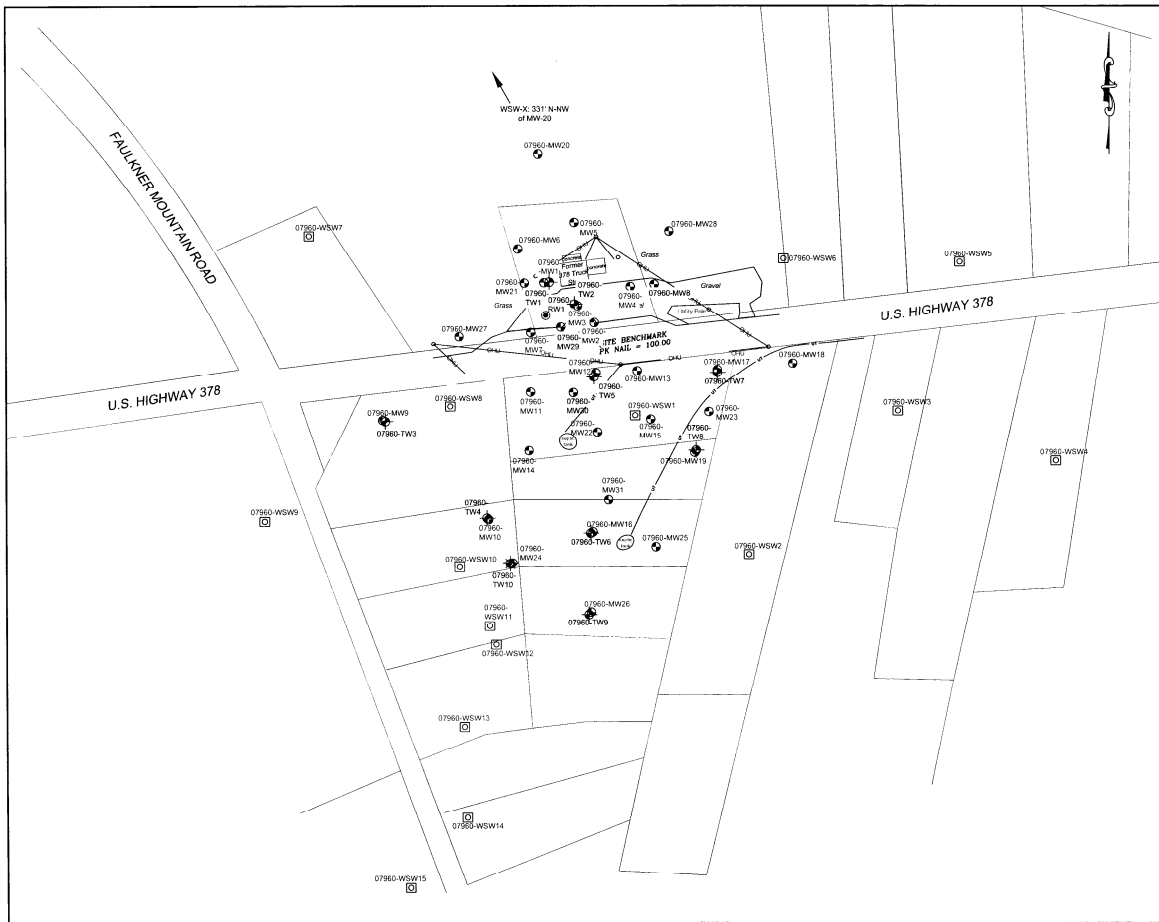
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas



- Legend**
- Approximate Property Line
  - Overhead Electric Line
  - Underground Telephone Line
  - Utility Pole
  - Shallow (Water Table) Monitoring Well
  - ⊕ Telescoping Monitoring Well
  - ⊗ Abandoned Telescoping Monitoring Well
  - Water Supply Well
  - MW-1 Well I.D.
  - Recovery Well

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13504 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)583-2711 FAX: (704)583-2744

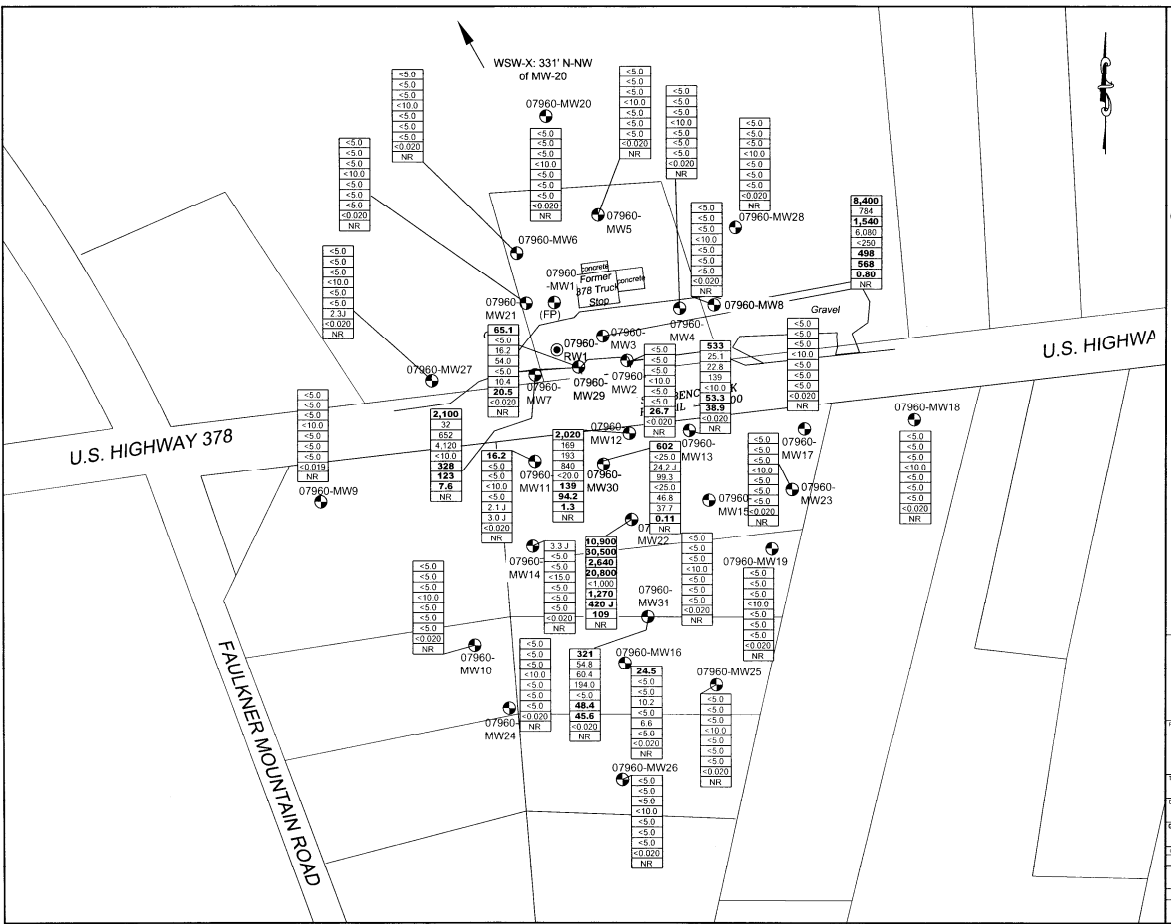
**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**TITLE:**  
 Site Plan

**CLIENT:**  
 Wilkerson Fuel Company, Inc.

**GRAPHIC SCALE:** 1" = 150'

DESIGNED BY	CHECKED BY	APPROVED BY
KD	KD	NF
SCALE	DATE	JOB NO.
1"=150'	10/17/13	14-214210



### Legend

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Recovery Well
- Shallow (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well

**07960-MW1 Well I.D.**

5	Benzene
1,000	Toluene
700	Ethylbenzene
10,000	Xylenes
40	MIBK
25	Naphthalene
5	1,2-DCA
0.05	EDB
15	Lead

(FP) Free Product

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

All concentrations are measured in micrograms per liter (µg/L).

Groundwater samples collected on 9/30/13 & 10/4/2013.

Above concentrations represent May 2001 Risk-Based Screening Levels. Concentrations in bold face type exceeded the RBSL.

J - Estimated value between the method detection limit and the laboratory reporting limit.

<math><1.0</math> - Less than the reporting limit specified in the laboratory report.

NR - Not Requested.

NS - Not Sampled.

**ecs**

WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 1354 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)983-2711 FAX: (704)983-2744

PROJECT: **378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

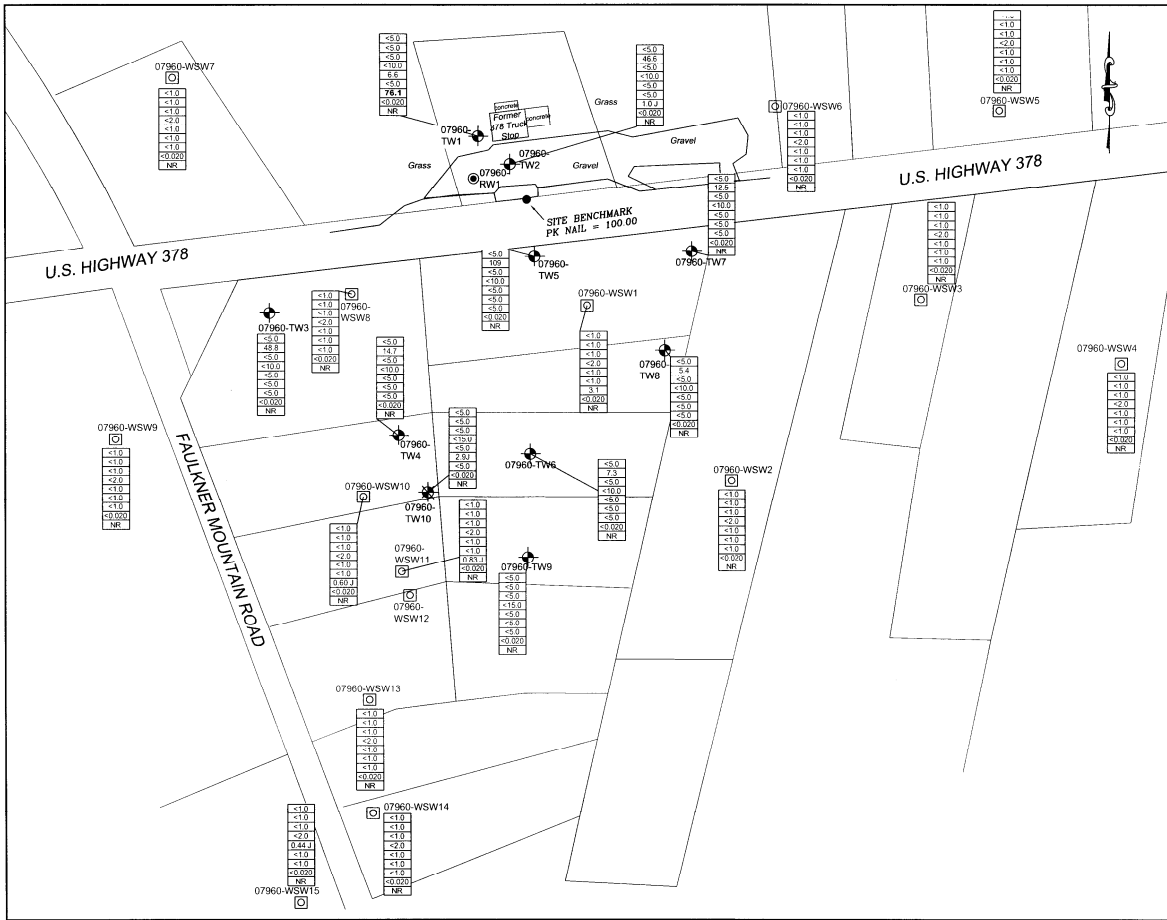
TITLE: **Groundwater Quality Map -CoC Shallow Wells**

CLIENT: **Wilkerson Fuel Company, Inc.**

GRAPHIC SCALE: 1"=150'

COMPILED BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
KD	KD	NF	NF

SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1"=150'	10/11/13	14-214210	4A



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Recovery Well
- Shallow (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well
- 07960-MW1 Well I.D.

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

All concentrations are measured in micrograms per liter (µg/L).

Groundwater samples collected on 9/30/13 & 10/4/2013.

Above concentrations represent May 2001 Risk-Based Screening Levels; Concentrations in bold face type exceeded the RBSL.

J - Estimated value between the method detection limit and the laboratory reporting limit.

<1.0 - Less than the reporting limit specified in the laboratory report.

NR - Not Requested.

NS - Not Sampled.

WSW-1 and WSW-8 data represent pre-treatment concentrations.

**ecs**

WHRRF BUSINESS AND THE ENVIRONMENT CONERGE  
1258 SOUTH POINT BLVD UNIT F  
CHARLOTTE, NORTH CAROLINA 28273  
TEL: (704)583-2711 FAX: (704)583-2744

**378 Truck Stop**  
731 Highway 378  
Edgefield, SC

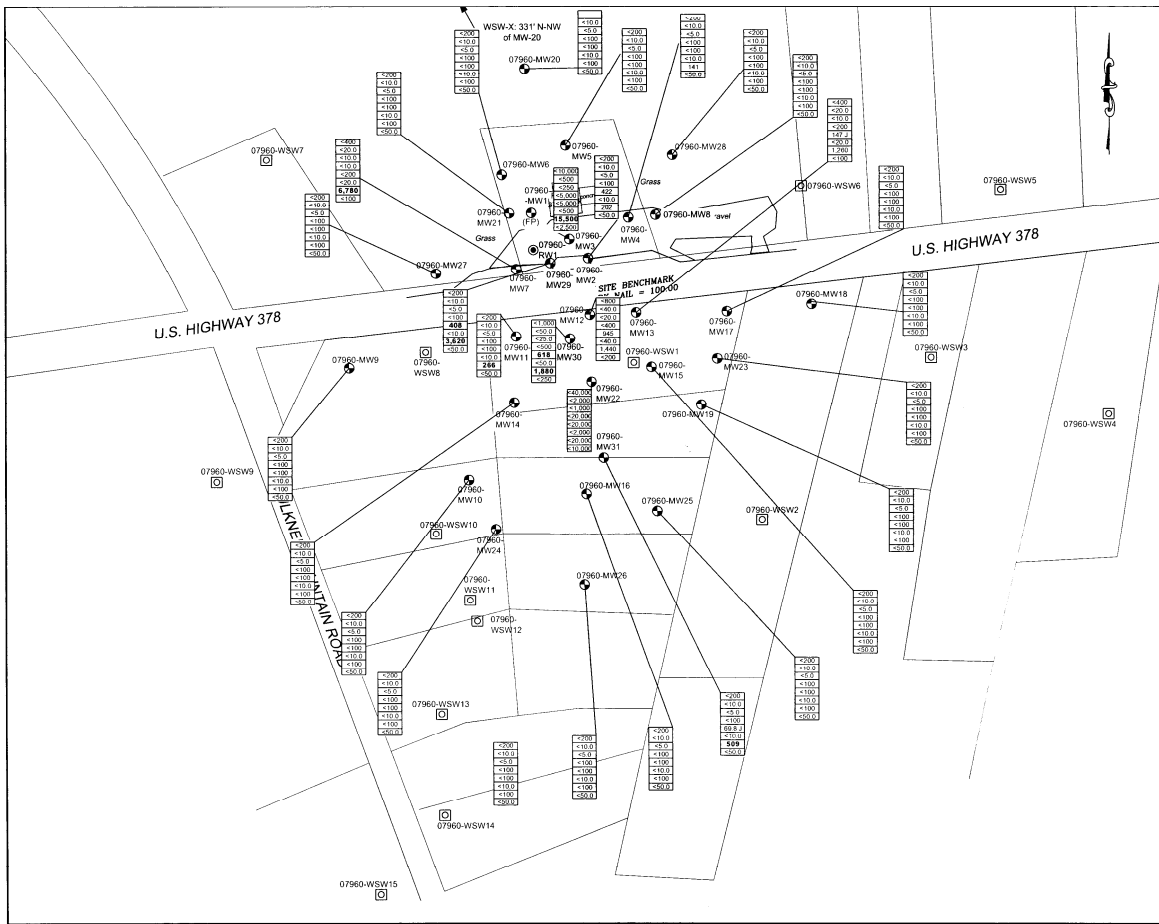
**Groundwater Quality Map - CoC Telescoping and Water Supply Wells**

**Wilkerson Fuel Company, Inc.**

GRAPHIC SCALE: 1" = 100'

DESIGNED BY	DESIGNED BY	CHECKED BY	APPROVED BY
KD	KD	NF	NF

SCALE: 1"=100' DATE: 10/11/13 JOB NO.: 14-214210 FIGURE NO.: 4B



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Recovery Well
- Shallow (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well

**7960-MW1 Well I.D.**

10,000	Ethanol
47	Ethyl tert-Butyl Ether (ETBE)
150	Di-isopropyl Ether (DIPE)
NA	3,3-Dimethyl-1-Butanol
1,400	Tertiary Butyl Alcohol (TBA)
128	tert-Amyl Methyl Ether (TAME)
240	tert-Amyl Alcohol (TAA)
NA	tert-Butyl Formate (TBF)

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

All concentrations are measured in micrograms per liter (ug/L).

Groundwater samples collected in April and May 2011.

Above concentrations represent 2008 SCDHEC Action Levels; Concentrations in bold face type exceeded the Action Level.

J - Estimated Value between the method detection limit and the reporting limit.

<1.0 - Less than the reporting limit specified in the laboratory report.

NS - Not Sampled

WSW-1 and WSW-8 data represent pre-treatment concentrations.

**ecs**

WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13504 SOUTH POINT BLVD, UNIT 1  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)883-2711 FAX: (704)883-2744

**370 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**Groundwater Quality Map - Oxygenates Shallow Wells**

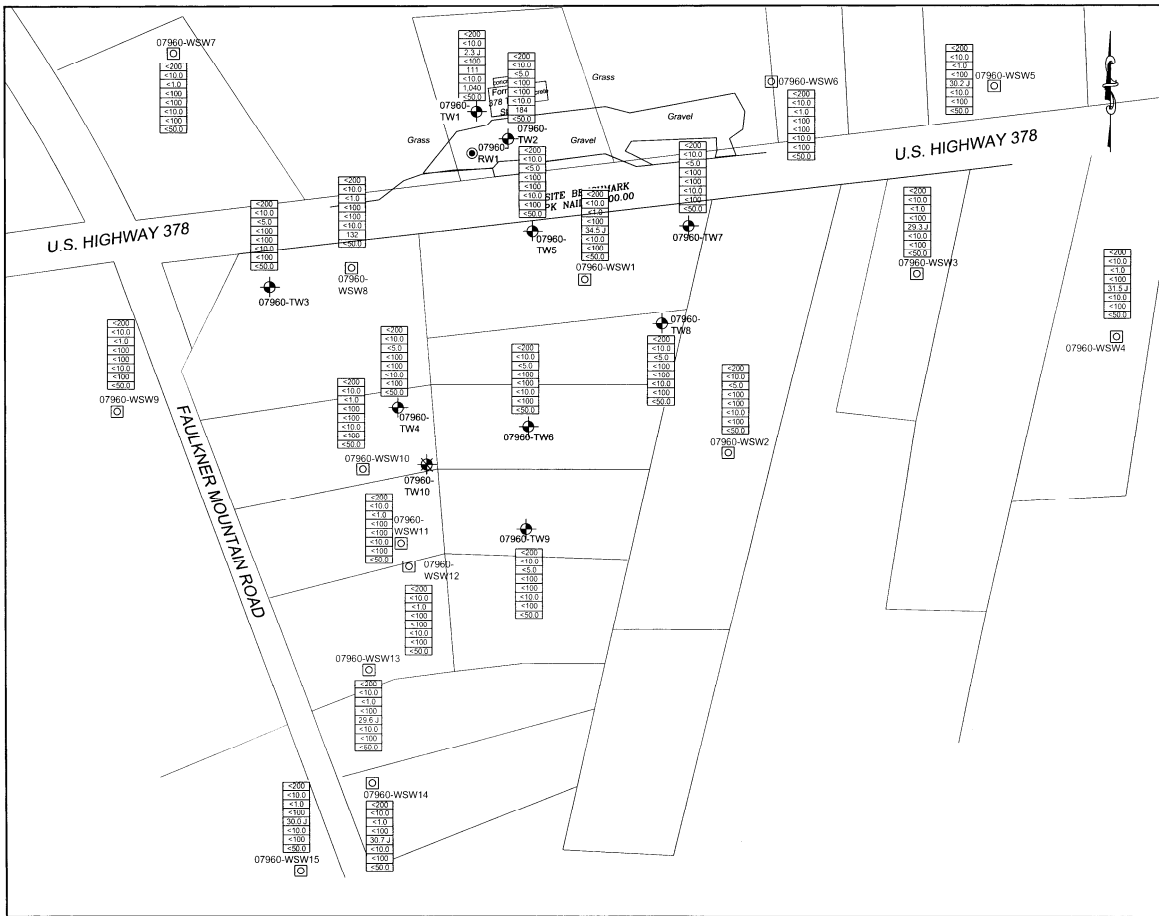
**Wilkerson Fuel Company, Inc.**

**GRAPHIC SCALE**

0 50 100

DESIGNED BY: **KD** CHECKED BY: **NF** APPROVED BY: **NF**

SCALE: **1"=100'** DATE: **10/14/13** JOB NO: **14-214210** FIGURE NO: **4C**



### Legend

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Recovery Well
- Shutoff (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well

07960-MW1 Well I.D.

10,000	Ethanol
47	Ethyl tert-Butyl Ether (ETBE)
150	Diisopropyl Ether (DIPE)
NA	3,3-Dimethyl-1-Butanol
1,400	Tertiary Butyl Alcohol (TBA)
128	tert-Amyl Methyl Ether (TAME)
240	tert-Amyl Alcohol (tAA)
NA	tert-Butyl Formate (TBF)

(FP) Free Product

### General Notes:

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

All concentrations are measured in micrograms per liter (µg/L).

Groundwater samples collected in 9/30/13 & 10/1/13.

Above concentrations represent 2008 SCDHEC Action Levels; Concentrations in bold face type exceeded the Action Level.

J - Estimated Value between the method detection limit and the reporting limit.

<1.0 - Less than the reporting limit specified in the laboratory report.

NS - Not Sampled

WSW-1 and WSW-8 data represent pre-treatment concentrations.

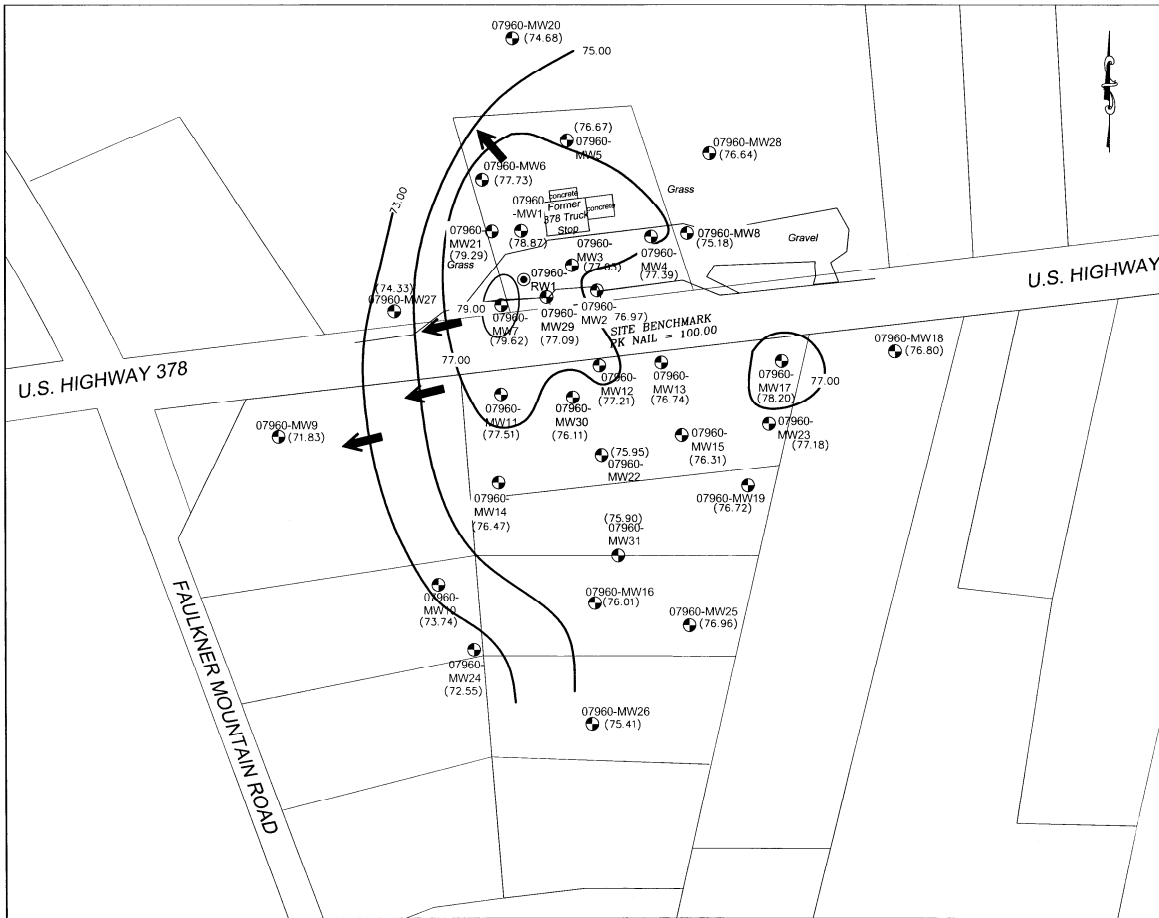
**WHERE BUSINESS AND THE ENVIRONMENT CONVERGE**  
 13504 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL (704)583-2711 FAX (704)583-2744

**378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**Groundwater Quality Map - Organics Deep and Water Supply Wells**

**Client:** Wilkerson Fuel Company, Inc.

DATE:	NOV 20 2013	SCALE:	1"=150'
DRAWN BY:	RD	DESIGNED BY:	RD
CHECKED BY:	RD	APPROVED BY:	RD
DATE:	10/14/13	JOB NO:	14-214210
FIGURE NO:	4D		



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- ⊕ Utility Pole
- ⊙ Recovery Well
- ⊙ Shallow (Water Table) Monitoring Well
- ⊙ Telescoping Monitoring Well
- ⊙ Abandoned Telescoping Monitoring Well
- ⊙ Water Supply Well
- ⊙ 07960-MW1 Well I.D. Groundwater Elevation (73.71)
- Water Table Contour (Dashed where inferred)
- Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made on 9/30/13 & 10/1/13.

Water table contours and flow directions assume homogeneous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13501 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704) 883-2711 FAX: (704) 883-2744

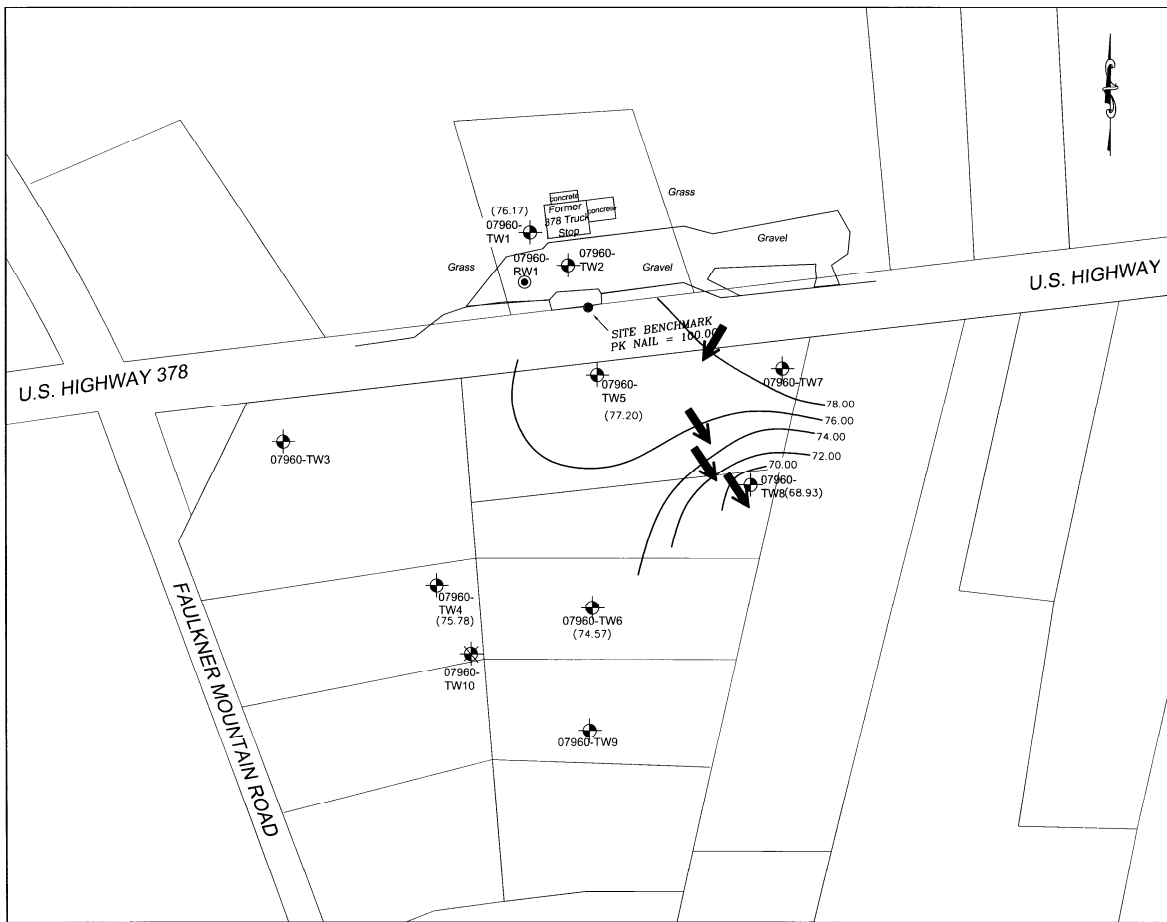
**378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**Groundwater Elevation Map - Shallow Wells**  
 Wilkerson Fuel Company, Inc.

GRAPHIC SCALE: 0 25 50 75 100

DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
KD	KD	NF	NF
SCALE	DATE	JOB NO.	FIGURE NO.
1"=100'	10/15/13	14-214210	5A





**Legend**

- Approximate Property Line
- OHU — Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- ⊙ Recovery Well
- ⊕ Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊕ Abandoned Telescoping Monitoring Well
- ⊕ Water Supply Well
- ⊕ 07960-MW1 Well I.D.
- (73.71) Groundwater Elevation
- 90.00 Water Table Contour (Dashed where inferred)
- Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made on 9/30/13 & 10/1/13.

Water table contours and flow directions assume homogeneous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 12204 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL (704)553-2711 FAX (704)563-2744

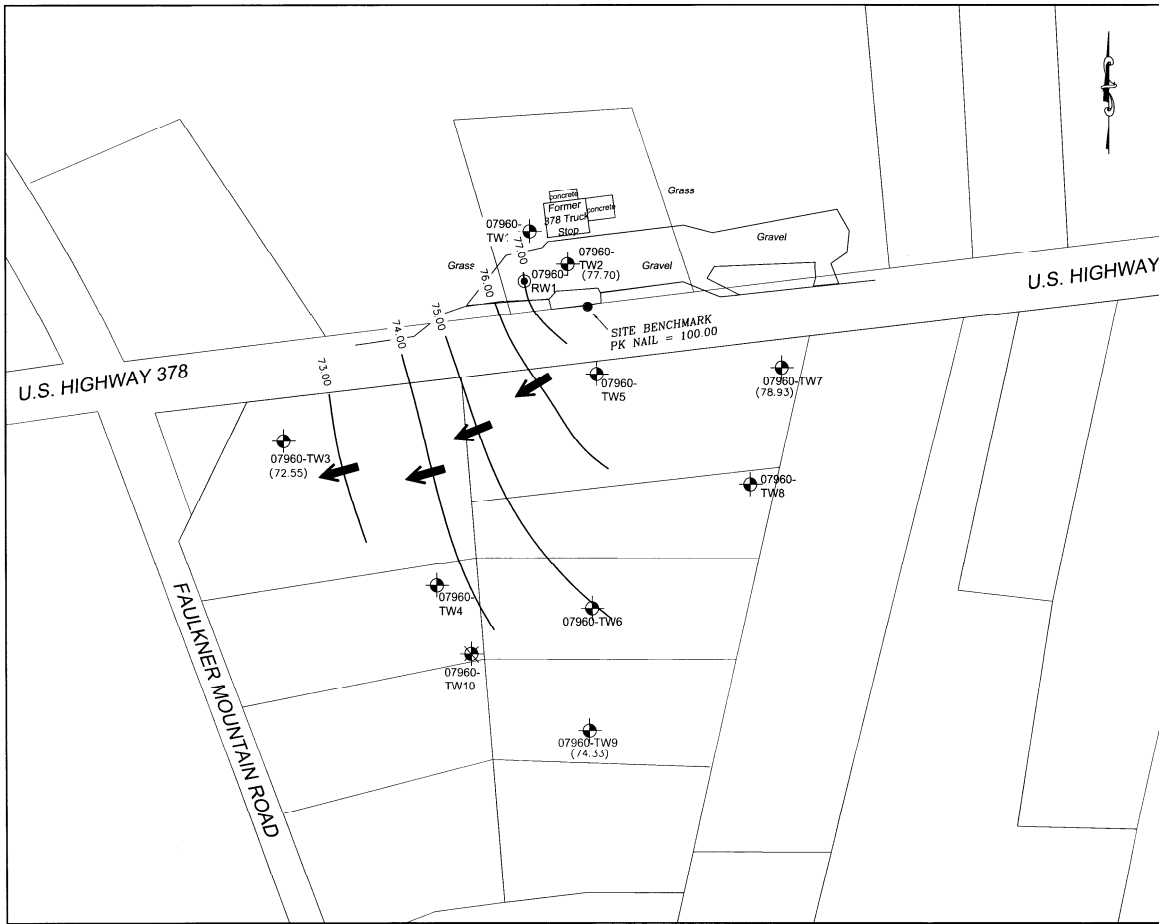
**378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**PROJECT**  
 Groundwater Elevation Map - Intermediate Wells

**CLIENT**  
 Wilkerson Fuel Company, Inc.

**DRAWN SCALE**  
 1"=100'

DESIGNED BY	CHECKED BY	APPROVED BY
KD	NF	NF
SCALE	DATE	JOB NO.
1"=100'	10/15/13	14-214210
		FIGURE NO.
		5B



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Recovery Well
- Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊗ Abandoned Telescoping Monitoring Well
- Water Supply Well

07960-MW1 Well I.D.

(73.71) Groundwater Elevation

90.00 Water Table Contour (Dashed where inferred)

→ Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made on 9/30/13 & 10/1/13.

Water table contours and flow directions assume homogeneous, isotropic, aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.

**ecs**

WHS&E PLANNING AND THE ENVIRONMENT CORPORATION  
 7254 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL (704)583-2711 FAX (704)583-2744

**378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**Groundwater Elevation Map - Deep Wells**  
 CLIENT: **Wilkerson Fuel Company, Inc.**

GRAPHIC SCALE: 1" = 100'

COMPUTER CAPSULE: CASDLE

DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
KJD	KJD	NF	NF
SCALE	DATE	JOB NO.	FIGURE NO.
1"=100'	10/15/13	14-214210	5C

**APPENDIX B**

---

Sampling Logs and Laboratory Reports

# GAUGE REPORT

Environmental Compliance Services, Inc.  
13504 South Point Blvd., Unit F  
Charlotte, North Carolina 28273

Project Name 378 Truck Stop Location Edgedfield, SC

Project No. 14-214210 UST Permit # 07960 Date 9/30/2013

Measured By A. Williamson Weather Sunny,80

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
07960-MW-1	23.10	23.14	0.04	----	----	----
07960-MW-2	----	24.02	----	----	42.38	14.95
07960-MW-3	----	24.51	----	----	39.97	----
07960-MW-4	----	23.09	----	----	39.69	----
07960-MW-5	----	27.51	----	----	29.75	----
07960-MW-6	----	24.52	----	----	35.10	----
07960-MW-7	----	20.10	----	----	34.99	----
07960-MW-8	----	24.74	----	----	34.14	----
07960-MW-9	----	23.00	----	----	35.24	----
07960-MW-10	----	25.38	----	----	40.22	----
07960-MW-11	----	25.10	----	----	35.30	----
07960-MW-12	----	26.25	----	----	35.00	----
07960-MW-13	----	24.74	----	----	40.24	9.08
07960-MW-14	----	27.81	----	----	39.80	----
07960-MW-15	----	26.85	----	----	40.18	----
07960-MW-16	----	25.31	----	----	40.16	----
07960-MW-17	----	20.20	----	----	35.06	----
07960-MW-18	----	18.25	----	----	35.73	9.55
07960-MW-19	----	24.35	----	----	38.62	----
07960-MW-20	----	35.84	----	----	45.10	----
07960-MW-21	----	22.41	----	----	40.20	6.80
07960-MW-22	----	29.18	----	----	40.20	----
07960-MW-23	----	22.83	----	----	37.27	----
07960-MW-24	----	26.53	----	----	40.06	----

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>09/30/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: _____</p> <p>Calibration Measurement Results</p> <p>pH 4.0 = _____ Conductivity 4.49 = _____</p> <p>Turbidity 0.0 = _____ Dissolved Oxygen 8.52 = _____</p> <p style="text-align: center;">Chain of Custody</p> <p>ECS Office _____</p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>07960-MW-1</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143 \cdot (D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>Unknown</u> ft. to <u>Unknown</u> ft.</p> <p>Total Well Depth (TWD) _____ ft.</p> <p>Depth to GW(DGW) <u>23.14</u> ft.</p> <p>Depth to FP (Free product) <u>23.10</u> ft.</p> <p>FP Thickness <u>0.04</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling _____ gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Time (military)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>pH (s.u.)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>O.R.P. (mV)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Temperature (°C)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Turbidity (NTU)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>			Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)									Time (military)									pH (s.u.)									O.R.P. (mV)									Temperature (°C)									Specific Cond. (mS/cm)									Dissolved Oxygen (mg/L)									Turbidity (NTU)								
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-2</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>Unknown</u> ft. to <u>Unknown</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>42.38</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>24.02</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>18.36</u> ft.	
pH 4.0 = <u>4.01 @ 24°C</u>	Conductivity 4.49 = <u>4.57</u>	1Csg. Vol. (LWC*C)= <u>18.36</u> X <u>0.163</u> = <u>2.99</u> gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>8.26</u>	3Csg. Volume = 3x <u>2.99</u> = <u>8.98</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>14.95</u> gal.	
A. Williamson <u>10/1/13 19:30</u>	ECS Office <u>10/1/13 19:30</u>	Well Yield <u>Low</u> _____ <u>Medium</u> _____ <u>High</u> <input checked="" type="checkbox"/>	
Relinquished by <u>ECS Office</u>	Date/Time <u>10/2/13 13:40</u>		
Relinquished by _____	Date/Time _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.99	2.99	2.99	2.99	2.99		0.00
Time (military)	13:43	13:49	13:55	14:01	14:06	14:11		14:13
pH (s.u.)	7.14	7.15	7.21	7.21	7.20	7.22		7.16
O.R.P. (mV)	-76	-73	-62	-55	-51	-53		-47
Temperature (°C)	22.05	21.25	21.43	21.11	21.07	21.23		21.00
Specific Cond. (mS/cm)	0.546	0.546	0.535	0.530	0.532	0.527		0.531
Dissolved Oxygen (mg/L)	0.81	1.01	1.15	1.48	1.43	1.87		1.04
Turbidity (NTU)	>999	>999	131.0	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-3</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>10</u> ft. to <u>40</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>39.97</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>24.51</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>15.46</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= <u>15.46</u> X <u>0.163</u> = <u>2.52</u> gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = 3x <u>2.52</u> = <u>7.56</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield <u>Low</u> _____ <u>Medium</u> _____ <u>High</u> _____	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								9:30
pH (s.u.)								7.16
O.R.P. (mV)								-7
Temperature (°C)								19.77
Specific Cond. (mS/cm)								0.653
Dissolved Oxygen (mg/L)								0.65
Turbidity (NTU)								8.7

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-4</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>10</u> ft. to <u>40</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>39.69</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>23.09</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>16.60</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u>	Conductivity 4.49 = <u>4.37</u>	1Csg. Vol. (LWC*C)= $\frac{16.60}{1} \times \frac{0.163}{1} = \underline{2.71}$ gal.	
Turbidity 0.0 = <u>0.1</u>	Dissolved Oxygen 8.52 = <u>8.59</u>	3Csg. Volume = $3 \times \frac{2.71}{1} = \underline{8.12}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:30
pH (s.u.)								6.67
O.R.P. (mV)								32
Temperature (°C)								22.2
Specific Cond. (mS/cm)								0.559
Dissolved Oxygen (mg/L)								8.94
Turbidity (NTU)								22.5

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.



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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-5</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20</u> ft. to <u>40</u> ft.	Total Well Depth (TWD) <u>29.75</u> ft.
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>	Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>	Depth to GW(DGW) <u>27.51</u> ft.	Depth to FP (Free product) <u>----</u> ft.
Quality Assurance:		FP Thickness <u>----</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>2.24</u> ft.
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		1Csg. Vol. (LWC*C)= <u>2.24</u> X <u>0.163</u> = <u>0.37</u> gal.	
Calibration Measurement Results		3Csg. Volume = 3x <u>0.37</u> = <u>1.10</u> gals.(Std. Purge Vol)	
pH 4.0 = <u>4.00 @ 19°C</u>	Conductivity 4.49 = <u>4.37</u>	Total Vol. of Water Purged Before Sampling <u>----</u> gal.	
Turbidity 0.0 = <u>0.1</u>	Dissolved Oxygen 8.52 = <u>8.59</u>	Well Yield <u>Low</u> _____ <u>Medium</u> _____ <u>High</u> _____	
Chain of Custody			
<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								15:50
pH (s.u.)								6.00
O.R.P. (mV)								119
Temperature (°C)								19.34
Specific Cond. (mS/cm)								0.897
Dissolved Oxygen (mg/L)								1.54
Turbidity (NTU)								90.6

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>10/01/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p><u>Chain of Custody</u></p> <p>A. Williamson <u>10/1/13 19:30</u> ECS Office <u>10/1/13 19:30</u></p> <p>Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u> Received by <u>Pace</u> Date/Time <u>10/2/13 13:40</u></p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>07960-MW-6</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>20.05</u> ft. to <u>35.05</u> ft.</p> <p>Total Well Depth (TWD) <u>35.10</u> ft.</p> <p>Depth to GW(DGW) <u>24.52</u> ft.</p> <p>Depth to FP (Free product) _____ ft.</p> <p>FP Thickness _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>10.58</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>10.58</u> X <u>0.163</u> = <u>1.72</u> gal.</p> <p>3Csg. Volume = 3x <u>1.72</u> = <u>5.17</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling _____ gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td> </tr> <tr> <td>Time (military)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>15:21</td> </tr> <tr> <td>pH (s.u.)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>6.73</td> </tr> <tr> <td>O.R.P. (mV)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>65</td> </tr> <tr> <td>Temperature (°C)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>20.29</td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.270</td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2.01</td> </tr> <tr> <td>Turbidity (NTU)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>104.0</td> </tr> </tbody> </table>			Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)								0.00	Time (military)								15:21	pH (s.u.)								6.73	O.R.P. (mV)								65	Temperature (°C)								20.29	Specific Cond. (mS/cm)								0.270	Dissolved Oxygen (mg/L)								2.01	Turbidity (NTU)								104.0
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<p>Remarks <u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u></p> <p><u>Well purged dry after two well volumes.</u></p>																																																																																		

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Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>				Well # <u>07960-MW-7</u>			
Field Personnel <u>A. Williamson</u>				Well Diameter (D) <u>2.0</u> inch _____ or feet			
General Weather Conditions <u>Sunny</u>				conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163			
Ambient Air Temperature <u>80</u> F				for a 4 inch well C= 0.652 for a 6 inch well C= 1.469			
Facility Name <u>378 Truck Stop</u>		Site ID# <u>07960</u>		Screen Interval <u>19.92</u> ft. to <u>34.92</u> ft.			
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>34.99</u> ft.			
Quality Assurance: _____				Depth to GW(DGW) <u>20.10</u> ft.			
Water Quality Meter: <u>Horiba W22XD - U22</u>		Serial Number: <u>T908009</u>		Depth to FP (Free product) <u>----</u> ft.			
Calibration Measurement Results				FP Thickness <u>----</u> ft.			
pH 4.0 = <u>4.01 @ 24°C</u>		Conductivity 4.49 = <u>4.57</u>		Length of Water Column (LWC=TWD-DGW) <u>14.89</u> ft.			
Turbidity 0.0 = <u>0.0</u>		Dissolved Oxygen 8.52 = <u>8.26</u>		1Csg. Vol. (LWC*C)= <u>14.89</u> X <u>0.163</u> = <u>2.43</u> gal.			
Chain of Custody				3Csg. Volume = 3x <u>2.43</u> = <u>7.28</u> gals.(Std. Purge Vol)			
A. Williamson <u>10/1/13 19:30</u>		ECS Office <u>10/1/13 19:30</u>		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.			
Relinquished by <u>ECS Office</u>		Received by <u>Pace</u>		Well Yield <u>Low</u> <u>Medium</u> <u>High</u>			
Date/Time <u>10/2/13 13:40</u>		Date/Time <u>10/2/13 13:40</u>					
Relinquished by _____		Received by _____					
Date/Time _____		Date/Time _____					

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								13:31
pH (s.u.)								6.27
O.R.P. (mV)								38
Temperature (°C)								21.58
Specific Cond. (mS/cm)								0.177
Dissolved Oxygen (mg/L)								1.49
Turbidity (NTU)								63.8

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-8</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>20.08</u> ft. to <u>35.08</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>34.14</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>24.74</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>9.40</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= <u>9.40</u> X <u>0.163</u> = <u>1.53</u> gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = 3x <u>1.53</u> = <u>4.60</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
Phil Pike <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u>		Well Yield <u>Low</u> <u>Medium</u> <input checked="" type="checkbox"/> <u>High</u>	
Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u>		Received by <u>Pace</u> Date/Time <u>10/2/13 13:40</u>	
Relinquished by _____ Date/Time _____		Received by _____ Date/Time _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:40
pH (s.u.)								6.16
O.R.P. (mV)								104
Temperature (°C)								22.18
Specific Cond. (mS/cm)								0.826
Dissolved Oxygen (mg/L)								2.63
Turbidity (NTU)								8.8

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-9</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20.17</u> ft. to <u>35.17</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.24</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>23.00</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>12.24</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= <u>12.24</u> X <u>0.163</u> = <u>2.00</u> gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = 3x <u>2.00</u> = <u>5.99</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u>		Well Yield <u>Low</u> <u>Medium</u> <u>High</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____ Date/Time _____	Received by _____ Date/Time _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								10:50
pH (s.u.)								7.15
O.R.P. (mV)								86
Temperature (°C)								20.15
Specific Cond. (mS/cm)								0.996
Dissolved Oxygen (mg/L)								4.70
Turbidity (NTU)								20.5

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-10</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>25.16</u> ft. to <u>40.16</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.22</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>25.38</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>14.84</u> ft.	
pH 4.0 = <u>4.00 @ 19° C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= <u>14.84</u> X <u>0.163</u> = <u>2.42</u> gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = 3x <u>2.42</u> = <u>7.26</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
Phil Pike <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u>		Well Yield <u>Low</u> <u>Medium</u> <u>High</u>	
Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u>		Received by <u>Pace</u> Date/Time <u>10/2/13 13:40</u>	
Relinquished by _____ Date/Time _____		Received by _____ Date/Time _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								11:50
pH (s.u.)								8.32
O.R.P. (mV)								94
Temperature (°C)								19.06
Specific Cond. (mS/cm)								0.295
Dissolved Oxygen (mg/L)								6.00
Turbidity (NTU)								13.4

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-11</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20.23</u> ft. to <u>35.23</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.30</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>25.10</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: Horiba W22XD - U22 Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>10.20</u> ft.	
pH 4.0 = <u>4.01 @ 24°C</u>	Conductivity 4.49 = <u>4.57</u>	1Csg. Vol. (LWC*C)= <u>10.20</u> X <u>0.163</u> = <u>1.66</u> gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>8.26</u>	3Csg. Volume = 3x <u>1.66</u> = <u>4.99</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>A. Williamson</u> <u>10/1/13 19:30</u>	<u>ECS Office</u> <u>10/1/13 19:30</u>	Well Yield <u>Low</u> <u>Medium</u> <u>High</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								12:41
pH (s.u.)								7.20
O.R.P. (mV)								-36
Temperature (°C)								19.79
Specific Cond. (mS/cm)								0.926
Dissolved Oxygen (mg/L)								2.44
Turbidity (NTU)								10.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-12</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>19.99</u> ft. to <u>34.99</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.00</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>26.25</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>----</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield <u>Low</u> _____ <u>Medium</u> _____ <u>High</u> _____	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								12:50
pH (s.u.)								7.50
O.R.P. (mV)								-87
Temperature (°C)								20.53
Specific Cond. (mS/cm)								0.910
Dissolved Oxygen (mg/L)								1.47
Turbidity (NTU)								25.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.



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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-13</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.19</u> ft. to <u>40.19</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.24</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>24.74</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>15.50</u> ft.	
pH 4.0 = <u>4.01 @ 24°C</u>	Conductivity 4.49 = <u>4.57</u>	1Csg. Vol. (LWC*C)= <u>15.50</u> X <u>0.163</u> = <u>2.53</u> gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>8.26</u>	3Csg. Volume = 3x <u>2.53</u> = <u>7.58</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>9.08</u> gal.	
<u>A. Williamson</u>	<u>10/1/13 19:30</u>	<u>ECS Office</u>	<u>10/1/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time
		Well Yield <u>Low</u> _____ Medium _____ High <input checked="" type="checkbox"/>	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.53	2.53	2.53	1.50			0.00
Time (military)	8:04	8:09	8:14	8:20				9:45
pH (s.u.)	7.56	7.43	7.50	7.63				7.31
O.R.P. (mV)	-85	-71	-74	-96				29
Temperature (°C)	17.03	17.75	17.92	17.93				18.17
Specific Cond. (mS/cm)	1.130	1.120	1.130	1.160				1.120
Dissolved Oxygen (mg/L)	1.03	0.73	0.92	0.67				5.90
Turbidity (NTU)	66.6	>999	>999	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after 3 well volumes plus 1.5 gallons.

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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-14</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>24.74</u> ft. to <u>39.74</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>39.80</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>27.81</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>11.99</u> ft.	
pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u>		1Csg. Vol. (LWC*C)= <u>11.99</u> X <u>0.163</u> = <u>1.95</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u>		3Csg. Volume = 3x <u>1.95</u> = <u>5.86</u> gals.(Std. Purge Vol)	
Chain of Custody			
<u>A. Williamson</u>	<u>10/1/13 19:30</u>	ECS Office	<u>10/1/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time
		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
		Well Yield Low <input checked="" type="checkbox"/> Medium _____ High _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								12:53
pH (s.u.)								7.11
O.R.P. (mV)								-13
Temperature (°C)								18.6
Specific Cond. (mS/cm)								0.676
Dissolved Oxygen (mg/L)								1.12
Turbidity (NTU)								11.7

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

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### Field Data Information Sheet for Ground Water Sampling

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>07960-MW-15</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.13</u> ft. to <u>40.13</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.18</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>26.85</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>13.33</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u>	Conductivity 4.49 = <u>4.37</u>	1Csg. Vol. (LWC*C)= $\frac{13.33}{1} \times \frac{0.163}{1} = \underline{2.17}$ gal.	
Turbidity 0.0 = <u>0.1</u>	Dissolved Oxygen 8.52 = <u>8.59</u>	3Csg. Volume = $3 \times \frac{2.17}{1} = \underline{6.52}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield <u>Low</u> _____ <u>Medium</u> _____ <u>High</u> _____	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:40
pH (s.u.)								7.05
O.R.P. (mV)								120
Temperature (°C)								19.39
Specific Cond. (mS/cm)								0.648
Dissolved Oxygen (mg/L)								1.80
Turbidity (NTU)								8.2

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

### Field Data Information Sheet for Ground Water Sampling

<p>Date(mm/dd/yy) <u>09/30/13</u></p> <p>Field Personnel <u>P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u></p> <p>Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"><u>A. Williamson</u></td> <td style="width: 33%;"><u>10/1/13 19:30</u></td> <td style="width: 33%;"><u>ECS Office</u></td> <td style="width: 33%;"><u>10/1/13 19:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>10/2/13 13:40</u></td> <td><u>Pace</u></td> <td><u>10/2/13 13:40</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>10/1/13 19:30</u>	<u>ECS Office</u>	<u>10/1/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>07960-MW-16</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143 \cdot (D/2)^2</math> for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>25.11</u> ft. to <u>40.11</u> ft.</p> <p>Total Well Depth (TWD) <u>40.16</u> ft.</p> <p>Depth to GW(DGW) <u>25.31</u> ft.</p> <p>Depth to FP (Free product) <u>-----</u> ft.</p> <p>FP Thickness <u>-----</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>14.85</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>14.85</u> X <u>0.163</u> = <u>2.42</u> gal.</p> <p>3Csg. Volume = 3x <u>2.42</u> = <u>7.26</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>-----</u> gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>
<u>A. Williamson</u>	<u>10/1/13 19:30</u>	<u>ECS Office</u>	<u>10/1/13 19:30</u>														
Relinquished by	Date/Time	Received by	Date/Time														
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>														
Relinquished by	Date/Time	Received by	Date/Time														

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:40
pH (s.u.)								6.62
O.R.P. (mV)								-5
Temperature (°C)								19.02
Specific Cond. (mS/cm)								1.22
Dissolved Oxygen (mg/L)								0.90
Turbidity (NTU)								10.1

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>07960-MW-17</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \times (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>20.02</u> ft. to <u>35.02</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.06</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>20.20</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>14.86</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= $\frac{14.86}{1} \times 0.163 = 2.42$ gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = $3 \times 2.42 = 7.27$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield <u>Low</u> <u>Medium</u> <u>High</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								17:30
pH (s.u.)								7.84
O.R.P. (mV)								97
Temperature (°C)								21.52
Specific Cond. (mS/cm)								0.334
Dissolved Oxygen (mg/L)								5.68
Turbidity (NTU)								34.3

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>07960-MW-18</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>20.67</u> ft. to <u>35.67</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.73</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>18.25</u> ft.	
<u>Quality Assurance:</u>		Depth to FP (Free product) _____ ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness _____ ft.	
<u>Calibration Measurement Results</u>		Length of Water Column (LWC=TWD-DGW) <u>17.48</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= <u>17.48</u> X <u>0.163</u> = <u>2.85</u> gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = 3x <u>2.85</u> = <u>8.55</u> gals.(Std. Purge Vol)	
<u>Chain of Custody</u>		Total Vol. of Water Purged Before Sampling <u>9.55</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u>		Well Yield Low _____ Medium _____ High <u>X</u>	
Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u>	Received by _____ Date/Time _____		
Relinquished by _____ Date/Time _____	Received by _____ Date/Time _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.85	2.85	2.85	1.00			0.00
Time (military)	18:20	18:24	18:28	18:33				19:00
pH (s.u.)	7.02	6.65	6.55	6.55				6.54
O.R.P. (mV)	121	138	142	145				153
Temperature (°C)	20.34	19.44	18.86	18.41				18.35
Specific Cond. (mS/cm)	0.313	0.278	0.297	0.303				0.304
Dissolved Oxygen (mg/L)	5.06	4.24	4.28	4.65				4.70
Turbidity (NTU)	9.9	>999	>999	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after 3 well volumes plus 1 gallon.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>07960-MW-19</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>23.57</u> ft. to <u>38.57</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>38.62</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>24.35</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>14.27</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= $14.27 \times 0.163 = 2.33$ gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = $3 \times 2.33 = 6.98$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield <u>Low</u> <u>Medium</u> <u>High</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								16:10
pH (s.u.)								5.83
O.R.P. (mV)								150
Temperature (°C)								19.71
Specific Cond. (mS/cm)								0.181
Dissolved Oxygen (mg/L)								3.73
Turbidity (NTU)								943.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>10/01/13</u></p> <p>Field Personnel <u>P. Pike</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u></p> <p style="text-align: center;">Quality Assurance: Calibration Measurement Results</p> <p>pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u></p> <p>Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width:100%; border: none;"> <tr> <td style="border: none;">Phil Pike</td> <td style="border: none;"><u>10/2/13 7:30</u></td> <td style="border: none;">ECS Office</td> <td style="border: none;"><u>10/2/13 7:30</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> <tr> <td style="border: none;">ECS Office</td> <td style="border: none;"><u>10/2/13 13:40</u></td> <td style="border: none;">Pace</td> <td style="border: none;"><u>10/2/13 13:40</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> </table>	Phil Pike	<u>10/2/13 7:30</u>	ECS Office	<u>10/2/13 7:30</u>	Relinquished by	Date/Time	Received by	Date/Time	ECS Office	<u>10/2/13 13:40</u>	Pace	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>07960-MW-20</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>30.05</u> ft. to <u>45.05</u> ft.</p> <p>Total Well Depth (TWD) <u>45.10</u> ft.</p> <p>Depth to GW(DGW) <u>35.84</u> ft.</p> <p>Depth to FP (Free product) <u>-----</u> ft.</p> <p>FP Thickness <u>-----</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>-----</u> gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																							
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<p>Remarks <u>Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u></p> <p><u>Stick up manhole approximately 3 feet above ground surface.</u></p>																																																																																								



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-21</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.16</u> ft. to <u>40.16</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.20</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>22.41</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>17.79</u> ft.	
pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u>		1Csg. Vol. (LWC*C)= $\frac{17.79}{1} \times \frac{0.163}{1} = \frac{2.90}{1}$ gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u>		3Csg. Volume = $3 \times \frac{2.90}{1} = \frac{8.70}{1}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>6.80</u> gal.	
<u>A. Williamson</u> <u>10/1/13 19:30</u>	ECS Office <u>10/1/13 19:30</u>	Well Yield <u>Low</u> <u>Medium</u> <input checked="" type="checkbox"/> <u>High</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.90	2.90	1.00				0.00
Time (military)	15:02	15:07	15:12					15:37
pH (s.u.)	7.29	7.03	7.01					7.09
O.R.P. (mV)	-39	-17	11					-2
Temperature (°C)	20.09	19.55	19.37					19.69
Specific Cond. (mS/cm)	0.820	0.728	0.701					0.718
Dissolved Oxygen (mg/L)	0.96	1.01	1.04					2.47
Turbidity (NTU)	875.0	873.0	>999					>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after 2 well volumes plus 1 gallon.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-22</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.09</u> ft. to <u>40.09</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.20</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>29.18</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u>	Conductivity 4.49 = <u>4.37</u>	1Csg. Vol. (LWC*C)= $\frac{0.00}{1} \times \frac{0.163}{1} = \underline{0.00}$ gal.	
Turbidity 0.0 = <u>0.1</u>	Dissolved Oxygen 8.52 = <u>8.59</u>	3Csg. Volume = $3 \times \frac{0.00}{1} = \underline{0.00}$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield <u>Low</u> _____ <u>Medium</u> _____ <u>High</u> _____	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								13:10
pH (s.u.)								6.85
O.R.P. (mV)								-40
Temperature (°C)								20.32
Specific Cond. (mS/cm)								0.930
Dissolved Oxygen (mg/L)								0.94
Turbidity (NTU)								16.3

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>07960-MW-23</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80 F</u>		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>22.24</u> ft. to <u>37.24</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>37.27</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>22.83</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>14.44</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= $\frac{14.44}{1} \times 0.163 = 2.35$ gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = $3 \times 2.35 = 7.06$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield <u>Low</u> <u>Medium</u> <u>High</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								16:40
pH (s.u.)								NR
O.R.P. (mV)								NR
Temperature (°C)								19.43
Specific Cond. (mS/cm)								NR
Dissolved Oxygen (mg/L)								NR
Turbidity (NTU)								NR

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Water quality reading water spilled before all readings could be recorded.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>10/01/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p style="text-align: center;">Quality Assurance:</p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p style="text-align: center;">Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><u>A. Williamson</u></td> <td style="width: 33%;"><u>10/1/13 19:30</u></td> <td style="width: 33%;"><u>ECS Office</u></td> <td style="width: 33%;"><u>10/1/13 19:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>10/2/13 13:40</u></td> <td><u>Pace</u></td> <td><u>10/2/13 13:40</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>10/1/13 19:30</u>	<u>ECS Office</u>	<u>10/1/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>07960-MW-24</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>25.13</u> ft. to <u>40.13</u> ft.</p> <p>Total Well Depth (TWD) <u>40.06</u> ft.</p> <p>Depth to GW(DGW) <u>26.53</u> ft.</p> <p>Depth to FP (Free product) _____ ft.</p> <p>FP Thickness _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>13.53</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>13.53</u> X <u>0.163</u> = <u>2.21</u> gal.</p> <p>3Csg. Volume = 3x <u>2.21</u> = <u>6.62</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling _____ gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																	
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South Carolina Department of Health and Environmental Control  
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>10/01/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>  <small>Quality Assurance: Calibration Measurement Results</small></p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><u>A. Williamson</u></td> <td style="width: 33%;"><u>10/1/13 19:30</u></td> <td style="width: 33%;"><u>ECS Office</u></td> <td style="width: 33%;"><u>10/1/13 19:30</u></td> </tr> <tr> <td><u>Relinquished by</u></td> <td><u>Date/Time</u></td> <td><u>Received by</u></td> <td><u>Date/Time</u></td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>10/2/13 13:40</u></td> <td><u>Pace</u></td> <td><u>10/2/13 13:40</u></td> </tr> <tr> <td><u>Relinquished by</u></td> <td><u>Date/Time</u></td> <td><u>Received by</u></td> <td><u>Date/Time</u></td> </tr> </table>	<u>A. Williamson</u>	<u>10/1/13 19:30</u>	<u>ECS Office</u>	<u>10/1/13 19:30</u>	<u>Relinquished by</u>	<u>Date/Time</u>	<u>Received by</u>	<u>Date/Time</u>	<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>	<u>Relinquished by</u>	<u>Date/Time</u>	<u>Received by</u>	<u>Date/Time</u>	<p>Well # <u>07960-MW-25</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u>  for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>24.98</u> ft. to <u>39.98</u> ft.</p> <p>Total Well Depth (TWD) <u>40.05</u> ft.</p> <p>Depth to GW(DGW) <u>24.58</u> ft.</p> <p>Depth to FP (Free product) _____ ft.</p> <p>FP Thickness _____ ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>15.47</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>15.47</u> X <u>0.163</u> = <u>2.52</u> gal.</p> <p>3Csg. Volume = 3x <u>2.52</u> = <u>7.56</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>5.04</u> gal.</p> <p>Well Yield Low <input checked="" type="checkbox"/> Medium _____ High _____</p>																																																																	
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>10/01/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <p><u>A. Williamson</u> <u>10/1/13 19:30</u> ECS Office <u>10/1/13 19:30</u></p> <p>Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u> Received by <u>Pace</u> Date/Time <u>10/2/13 13:40</u></p> <p>Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>07960-MW-26</u></p> <p>Well Diameter (D) <u>2.0</u> inch _____ or feet</p> <p>conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>23.74</u> ft. to <u>38.74</u> ft.</p> <p>Total Well Depth (TWD) <u>38.77</u> ft.</p> <p>Depth to GW(DGW) <u>21.84</u> ft.</p> <p>Depth to FP (Free product) <u>0.00</u> ft.</p> <p>FP Thickness <u>-----</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>16.93</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>16.93</u> X <u>0.163</u> = <u>2.76</u> gal.</p> <p>3Csg. Volume = 3x <u>2.76</u> = <u>8.28</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>8.28</u> gal.</p> <p>Well Yield Low _____ Medium <input checked="" type="checkbox"/> High _____</p>																																																																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td>0.00</td> <td>2.76</td> <td>2.76</td> <td>1.00</td> <td></td> <td></td> <td></td> <td>0.00</td> </tr> <tr> <td>Time (military)</td> <td>10:06</td> <td>10:10</td> <td>10:15</td> <td></td> <td></td> <td></td> <td></td> <td>11:31</td> </tr> <tr> <td>pH (s.u.)</td> <td>7.23</td> <td>7.00</td> <td>6.73</td> <td></td> <td></td> <td></td> <td></td> <td>7.18</td> </tr> <tr> <td>O.R.P. (mV)</td> <td>103</td> <td>112</td> <td>116</td> <td></td> <td></td> <td></td> <td></td> <td>115</td> </tr> <tr> <td>Temperature (°C)</td> <td>18.43</td> <td>17.96</td> <td>17.91</td> <td></td> <td></td> <td></td> <td></td> <td>18.41</td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td>0.595</td> <td>0.587</td> <td>0.574</td> <td></td> <td></td> <td></td> <td></td> <td>0.565</td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td>3.26</td> <td>3.48</td> <td>2.03</td> <td></td> <td></td> <td></td> <td></td> <td>3.51</td> </tr> <tr> <td>Turbidity (NTU)</td> <td>&gt;999</td> <td>&gt;999</td> <td>&gt;999</td> <td></td> <td></td> <td></td> <td></td> <td>364.0</td> </tr> </tbody> </table>			Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)	0.00	2.76	2.76	1.00				0.00	Time (military)	10:06	10:10	10:15					11:31	pH (s.u.)	7.23	7.00	6.73					7.18	O.R.P. (mV)	103	112	116					115	Temperature (°C)	18.43	17.96	17.91					18.41	Specific Cond. (mS/cm)	0.595	0.587	0.574					0.565	Dissolved Oxygen (mg/L)	3.26	3.48	2.03					3.51	Turbidity (NTU)	>999	>999	>999					364.0
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<p>Remarks <u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u></p> <p><u>Well purged dry after 2 well volumes plus 1 gallon.</u></p>																																																																																		

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>				Well # <u>07960-MW-27</u>			
Field Personnel <u>A. Williamson</u>				Well Diameter (D) <u>2.0</u> inch _____ or feet			
General Weather Conditions <u>Sunny</u>				conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>			
Ambient Air Temperature <u>80</u> F				Screen Interval <u>20.10</u> ft. to <u>35.10</u> ft.			
Facility Name <u>378 Truck Stop</u>		Site ID# <u>07960</u>		Total Well Depth (TWD) <u>35.14</u> ft.			
Method of Well Purging: Bailer <input checked="" type="checkbox"/>		Pump Type <u>--</u>		Depth to GW(DGW) <u>22.87</u> ft.			
Method of Sample Collection: Bailer <input checked="" type="checkbox"/>		Pump Type <u>--</u>		Depth to FP (Free product) <u>----</u> ft.			
Quality Assurance:				FP Thickness <u>----</u> ft.			
Water Quality Meter: <u>Horiba W22XD - U22</u>		Serial Number: <u>T908009</u>		Length of Water Column (LWC=TWD-DGW) <u>12.27</u> ft.			
Calibration Measurement Results				1Csg. Vol. (LWC*C)= <u>12.27</u> X <u>0.163</u> = <u>2.00</u> gal.			
pH 4.0 = <u>4.01 @ 24°C</u>		Conductivity 4.49 = <u>4.57</u>		3Csg. Volume = 3x <u>2.00</u> = <u>6.00</u> gals.(Std. Purge Vol)			
Turbidity 0.0 = <u>0.0</u>		Dissolved Oxygen 8.52 = <u>8.26</u>		Total Vol. of Water Purged Before Sampling <u>----</u> gal.			
Chain of Custody				Well Yield <u>Low</u> _____ <u>Medium</u> _____ <u>High</u> _____			
A. Williamson <u>10/1/13 19:30</u>		ECS Office <u>10/1/13 19:30</u>					
Relinquished by <u>ECS Office</u>		Received by <u>Pace</u>					
<u>10/2/13 13:40</u>		<u>10/2/13 13:40</u>					
Relinquished by _____		Received by _____					
Date/Time _____		Date/Time _____					

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								0.00
Time (military)								14:47
pH (s.u.)								6.82
O.R.P. (mV)								114
Temperature (°C)								21.48
Specific Cond. (mS/cm)								0.544
Dissolved Oxygen (mg/L)								3.29
Turbidity (NTU)								41.3

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-28</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.03</u> ft. to <u>40.03</u> ft.	Total Well Depth (TWD) <u>40.08</u> ft.
Method of Well Purging: Bailer <u>--</u> Pump Type <u>Monsoon</u>	Method of Sample Collection: Bailer <u>--</u> Pump Type <u>Monsoon</u>	Depth to GW(DGW) <u>24.65</u> ft.	Depth to FP (Free product) <u>-----</u> ft.
Quality Assurance:		FP Thickness <u>-----</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>15.43</u> ft.
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>	Calibration Measurement Results	1Csg. Vol. (LWC*C)= <u>15.43</u> X <u>0.163</u> = <u>2.52</u> gal.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>	Dissolved Oxygen 8.52 = <u>8.59</u>	3Csg. Volume = 3x <u>2.52</u> = <u>7.56</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>8.56</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>	Well Yield <u>Low</u> <u>Medium</u> <u>High</u> <u>X</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by _____		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.52	2.52	2.50	1.00			0.00
Time (military)	15:04	15:08	15:12	15:17				15:40
pH (s.u.)	6.11	5.85	5.80	6.08				6.05
O.R.P. (mV)	130	151	161	163				154
Temperature (°C)	19.92	18.84	18.73	18.69				19.51
Specific Cond. (mS/cm)	0.331	0.331	0.305	0.308				0.311
Dissolved Oxygen (mg/L)	1.25	1.17	0.95	1.01				1.63
Turbidity (NTU)	20.3	>999	>999	>999				>999

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after 3 well volumes plus 1 gallon.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-29</u>						
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet						
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>						
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>						
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>25.15</u> ft. to <u>40.15</u> ft.						
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>40.14</u> ft.						
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>23.99</u> ft.						
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.						
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		FP Thickness <u>-----</u> ft.						
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>16.15</u> ft.						
pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u>		1Csg. Vol. (LWC*C)= $\frac{16.15}{1} \times 0.163 = 2.63$ gal.						
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u>		3Csg. Volume = $3 \times 2.63 = 7.90$ gals.(Std. Purge Vol)						
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>7.90</u> gal.						
<u>A. Williamson</u> <u>10/1/13 19:30</u> ECS Office <u>10/1/13 19:30</u>		Well Yield <u>Low</u> <u>Medium</u> <u>High</u> <input checked="" type="checkbox"/>						
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>								
Relinquished by _____ Date/Time _____								
	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.63	2.63	2.63				0.00
Time (military)	13:10	13:14	13:20	13:25				14:29
pH (s.u.)	6.68	6.70	6.66	6.63				6.72
O.R.P. (mV)	34	27	55	55				44
Temperature (°C)	20.96	21.16	21.02	21.00				21.48
Specific Cond. (mS/cm)	0.373	0.390	0.332	0.332				0.345
Dissolved Oxygen (mg/L)	1.45	1.37	1.73	1.13				2.21
Turbidity (NTU)	104.0	242.0	359.0	>999				304.0
Remarks	<u>Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.</u>							

South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u> Field Personnel <u>P. Pike</u> General Weather Conditions <u>Sunny</u> Ambient Air Temperature <u>80</u> F  Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u> Method of Well Purging: Bailer <u>--</u> Pump Type <u>Monsoon</u> Method of Sample Collection: Bailer <u>--</u> Pump Type <u>Monsoon</u> Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u> Calibration Measurement Results pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u> Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>  Chain of Custody Phil Pike <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u> Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u> Received by <u>Pace</u> Date/Time <u>10/2/13 13:40</u> Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____	Well # <u>07960-MW-30</u>  Well Diameter (D) <u>2.0</u> inch _____ or feet conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469 Screen Interval <u>30.05</u> ft. to <u>45.05</u> ft. Total Well Depth (TWD) <u>45.06</u> ft. Depth to GW(DGW) <u>28.51</u> ft. Depth to FP (Free product) <u>-----</u> ft. FP Thickness <u>-----</u> ft. Length of Water Column (LWC=TWD-DGW) <u>16.55</u> ft.  1Csg. Vol. (LWC*C)= <u>16.55</u> X <u>0.163</u> = <u>2.70</u> gal. 3Csg. Volume = 3x <u>2.70</u> = <u>8.09</u> gals.(Std. Purge Vol) Total Vol. of Water Purged Before Sampling <u>8.09</u> gal. Well Yield Low _____ Medium _____ High <u>X</u>																																																																																	
<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td>0.00</td> <td>2.70</td> <td>2.70</td> <td>2.70</td> <td></td> <td></td> <td></td> <td>0.00</td> </tr> <tr> <td>Time (military)</td> <td>13:49</td> <td>13:53</td> <td>13:58</td> <td>14:03</td> <td></td> <td></td> <td></td> <td>14:10</td> </tr> <tr> <td>pH (s.u.)</td> <td>7.47</td> <td>7.18</td> <td>7.18</td> <td>7.20</td> <td></td> <td></td> <td></td> <td>7.22</td> </tr> <tr> <td>O.R.P. (mV)</td> <td>-84</td> <td>-81</td> <td>-90</td> <td>-91</td> <td></td> <td></td> <td></td> <td>-88</td> </tr> <tr> <td>Temperature (°C)</td> <td>20.45</td> <td>19.59</td> <td>19.43</td> <td>19.39</td> <td></td> <td></td> <td></td> <td>19.47</td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td>0.952</td> <td>0.980</td> <td>0.998</td> <td>0.987</td> <td></td> <td></td> <td></td> <td>0.986</td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td>1.39</td> <td>1.22</td> <td>1.19</td> <td>1.01</td> <td></td> <td></td> <td></td> <td>1.19</td> </tr> <tr> <td>Turbidity (NTU)</td> <td>20.5</td> <td>92.4</td> <td>97.7</td> <td>81.1</td> <td></td> <td></td> <td></td> <td>91.7</td> </tr> </tbody> </table>			Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)	0.00	2.70	2.70	2.70				0.00	Time (military)	13:49	13:53	13:58	14:03				14:10	pH (s.u.)	7.47	7.18	7.18	7.20				7.22	O.R.P. (mV)	-84	-81	-90	-91				-88	Temperature (°C)	20.45	19.59	19.43	19.39				19.47	Specific Cond. (mS/cm)	0.952	0.980	0.998	0.987				0.986	Dissolved Oxygen (mg/L)	1.39	1.22	1.19	1.01				1.19	Turbidity (NTU)	20.5	92.4	97.7	81.1				91.7
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-MW-31</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>28.96</u> ft. to <u>43.96</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>43.96</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>27.30</u> ft.	
Quality Assurance: _____		Depth to FP (Free product) <u>----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	FP Thickness <u>----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>16.66</u> ft.	
pH 4.0 = <u>4.01 @ 24 C</u>	Conductivity 4.49 = <u>4.57</u>	1Csg. Vol. (LWC*C)= $\frac{16.66}{2.72} \times 0.163 = 2.72$ gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>8.26</u>	3Csg. Volume = $3 \times 2.72 = 8.15$ gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>6.69</u> gal.	
<u>A. Williamson</u> <u>10/1/13 19:30</u>	ECS Office <u>10/1/13 19:30</u>	Well Yield <u>Low</u> <input type="checkbox"/> <u>Medium</u> <input checked="" type="checkbox"/> <u>High</u> <input type="checkbox"/>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.72	2.72	1.25				0.00
Time (military)	10:32	10:37	10:42					11:41
pH (s.u.)	7.39	7.43	7.34					7.22
O.R.P. (mV)	-40	-52	-40					-8
Temperature (°C)	19.37	18.66	18.52					18.41
Specific Cond. (mS/cm)	1.44	1.48	1.43					1.33
Dissolved Oxygen (mg/L)	0.75	1.04	0.19					1.37
Turbidity (NTU)	>999	537.0	>999					48.3

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after 3 well volumes plus 1.25 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-TW-1</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>58.27</u> ft. to <u>63.27</u> ft.	Total Well Depth (TWD) <u>63.64</u> ft.
Method of Well Purging: Bailer <u>--</u>	Pump Type <u>Monsoon</u>	Depth to GW(DGW) <u>25.66</u> ft.	Depth to FP (Free product) <u>-----</u> ft.
Method of Sample Collection: Bailer <u>--</u>	Pump Type <u>Monsoon</u>	FP Thickness <u>-----</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>37.98</u> ft.
Quality Assurance: Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		1Csg. Vol. (LWC*C)= <u>37.98</u> X <u>0.163</u> = <u>6.19</u> gal.	
Calibration Measurement Results		3Csg. Volume = 3x <u>6.19</u> = <u>18.57</u> gals.(Std. Purge Vol)	
pH 4.0 = <u>4.00 @ 19°C</u>	Conductivity 4.49 = <u>4.37</u>	Total Vol. of Water Purged Before Sampling <u>24.76</u> gal.	
Turbidity 0.0 = <u>0.1</u>	Dissolved Oxygen 8.52 = <u>8.59</u>	Well Yield <u>Low</u> _____ <u>Medium</u> _____ <u>High</u> <u>X</u>	
Chain of Custody			
<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	6.19	6.19	6.19	6.19			0.00
Time (military)	8:02	8:08	8:15	8:22	8:30			8:34
pH (s.u.)	7.23	7.12	7.01	6.98	6.97			6.95
O.R.P. (mV)	156	-47	-68	-66	-67			-69
Temperature (°C)	17.15	18.56	19.15	19.27	19.3			19.25
Specific Cond. (mS/cm)	0.507	0.490	0.488	0.488	0.486			0.491
Dissolved Oxygen (mg/L)	3.01	0.93	0.60	0.65	0.64			0.69
Turbidity (NTU)	34.0	66.0	26.5	27.3	26.1			13.2

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-TW-2</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>75.23</u> ft. to <u>80.23</u> ft.	Total Well Depth (TWD) <u>80.30</u> ft.
Method of Well Purging: Bailer <u>--</u>	Pump Type <u>Monsoon</u>	Depth to GW(DGW) <u>24.27</u> ft.	Depth to FP (Free product) <u>-----</u> ft.
Method of Sample Collection: Bailer <u>--</u>	Pump Type <u>Monsoon</u>	FP Thickness <u>-----</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>56.03</u> ft.
Quality Assurance: Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		1Csg. Vol. (LWC*C)= <u>56.03</u> X <u>0.163</u> = <u>9.13</u> gal.	
Calibration Measurement Results		3Csg. Volume = 3x <u>9.13</u> = <u>27.40</u> gals.(Std. Purge Vol)	
pH 4.0 = <u>4.00 @ 19°C</u>	Conductivity 4.49 = <u>4.37</u>	Total Vol. of Water Purged Before Sampling <u>10.13</u> gal.	
Turbidity 0.0 = <u>0.1</u>	Dissolved Oxygen 8.52 = <u>8.59</u>	Well Yield <u>Low</u> <input checked="" type="checkbox"/> <u>Medium</u> <input type="checkbox"/> <u>High</u> <input type="checkbox"/>	
Chain of Custody			
<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	9.13	3.00					0.00
Time (military)	9:02	9:14						9:50
pH (s.u.)	11.66	11.71						11.52
O.R.P. (mV)	-119	-81						-132
Temperature (°C)	20.07	20.22						19.98
Specific Cond. (mS/cm)	0.920	0.940						0.937
Dissolved Oxygen (mg/L)	4.85	4.96						6.14
Turbidity (NTU)	19.5	36.4						27.1

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.  
Well purged dry after one well volume plus 3 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-TW-3</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>75.62</u> ft. to <u>80.62</u> ft.	Total Well Depth (TWD) <u>80.69</u> ft.
Method of Well Purging: Bailer <input type="checkbox"/> Pump Type <u>Monsoon</u>	Method of Sample Collection: Bailer <input type="checkbox"/> Pump Type <u>Monsoon</u>	Depth to GW(DGW) <u>27.78</u> ft.	Depth to FP (Free product) <u>-----</u> ft.
Quality Assurance:		FP Thickness <u>-----</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>52.91</u> ft.
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>	Calibration Measurement Results	1Csg. Vol. (LWC*C)= <u>52.91</u> X <u>0.163</u> = <u>8.62</u> gal.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>	Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>	3Csg. Volume = 3x <u>8.62</u> = <u>25.87</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>17.24</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield <u>Low</u> <u>Medium</u> <input checked="" type="checkbox"/> <u>High</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	8.62	8.62					0.00
Time (military)	10:18	10:31	10:43					11:00
pH (s.u.)	10.73	9.42	8.73					7.31
O.R.P. (mV)	-230	-184	-80					36
Temperature (°C)	20.13	20.35	19.95					20.17
Specific Cond. (mS/cm)	0.585	0.605	0.673					0.684
Dissolved Oxygen (mg/L)	1.11	0.84	0.92					4.62
Turbidity (NTU)	11.9	33.9	785.0					873.0

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.  
Well purged dry after two well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-TW-4</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>63.56</u> ft. to <u>68.56</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>Monsoon</u>		Total Well Depth (TWD) <u>68.61</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>Monsoon</u>		Depth to GW(DGW) <u>23.45</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		Depth to FP (Free product) <u>0.00</u> ft.	
Quality Assurance: Calibration Measurement Results		FP Thickness <u>----</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		Length of Water Column (LWC=TWD-DGW) <u>45.16</u> ft.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		1Csg. Vol. (LWC*C)= <u>45.16</u> X <u>0.163</u> = <u>7.36</u> gal.	
Chain of Custody		3Csg. Volume = 3x <u>7.36</u> = <u>22.08</u> gals.(Std. Purge Vol)	
Phil Pike <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u>		Total Vol. of Water Purged Before Sampling <u>8.36</u> gal.	
Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u>		Well Yield <u>Low</u> X <u>Medium</u> <u>High</u>	
Relinquished by _____ Date/Time _____		Received by _____ Date/Time _____	
Relinquished by _____ Date/Time _____		Received by _____ Date/Time _____	

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	7.36	2.00					0.00
Time (military)	11:31	11:38						12:00
pH (s.u.)	12.64	10.70						11.29
O.R.P. (mV)	-73	-33						10
Temperature (°C)	19.07	18.90						19.23
Specific Cond. (mS/cm)	6.260	0.937						0.999
Dissolved Oxygen (mg/L)	4.22	5.11						5.49
Turbidity (NTU)	629.0	61.1						53.3

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.  
Well purged dry after one well volume plus 2 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>07960-TW-5</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>53.38</u> ft. to <u>58.38</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>Monsoon</u>		Total Well Depth (TWD) <u>58.44</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>Monsoon</u>		Depth to GW(DGW) <u>26.42</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>32.02</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C) = <u>32.02</u> X <u>0.163</u> = <u>5.22</u> gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = 3x <u>5.22</u> = <u>15.66</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>8.22</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield Low <u>X</u> Medium _____ High _____	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	5.22	3.00					0.00
Time (military)	12:40	12:46						13:30
pH (s.u.)	9.59	9.23						7.66
O.R.P. (mV)	35	44						-56
Temperature (°C)	20.81	20.54						20.89
Specific Cond. (mS/cm)	0.582	0.567						0.551
Dissolved Oxygen (mg/L)	4.76	4.14						4.91
Turbidity (NTU)	12.1	84.6						>999

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2833) with new, clean, disposable polyethylene tubing.  
Well purged dry after one well volume plus 2 gallons.



South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u> Field Personnel <u>P. Pike</u> General Weather Conditions <u>Sunny</u> Ambient Air Temperature <u>80</u> F  Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u> Method of Well Purging: Bailer <u>--</u> Pump Type <u>Monsoon</u> Method of Sample Collection: Bailer <u>--</u> Pump Type <u>Monsoon</u> Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u> Calibration Measurement Results pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u> Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>  Chain of Custody Phil Pike <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u> Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u> Received by <u>Pace</u> Date/Time <u>10/2/13 13:40</u> Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____	Well # <u>07960-TW-6</u>  Well Diameter (D) <u>2.0</u> inch _____ or feet conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469 Screen Interval <u>53.55</u> ft. to <u>58.55</u> ft. Total Well Depth (TWD) <u>58.60</u> ft. Depth to GW(DGW) <u>26.72</u> ft. Depth to FP (Free product) _____ ft. FP Thickness _____ ft. Length of Water Column (LWC=TWD-DGW) <u>31.88</u> ft.  1Csg. Vol. (LWC*C)= <u>31.88</u> X <u>0.163</u> = <u>5.20</u> gal. 3Csg. Volume = 3x <u>5.20</u> = <u>15.59</u> gals.(Std. Purge Vol) Total Vol. of Water Purged Before Sampling <u>8.20</u> gal. Well Yield Low <u>X</u> Medium _____ High _____
--	--

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	5.20	3.00					0.00
Time (military)	14:16	14:23						14:50
pH (s.u.)	7.09	6.97						7.47
O.R.P. (mV)	140	157						61
Temperature (°C)	20.89	19.43						19.79
Specific Cond. (mS/cm)	0.354	0.398						0.760
Dissolved Oxygen (mg/L)	2.64	2.11						4.58
Turbidity (NTU)	14.1	54.2						160.0

Remarks	<u>Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2847) with new, clean, disposable polyethylene tubing.</u> <u>Well purged dry after one well volume plus 3 gallons.</u>
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>07960-TW-7</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>53.94</u> ft. to <u>58.94</u> ft.	Total Well Depth (TWD) <u>59.03</u> ft.
Method of Well Purging: Bailer <u>--</u>	Pump Type <u>Monsoon</u>	Depth to GW(DGW) <u>19.20</u> ft.	Depth to FP (Free product) _____ ft.
Method of Sample Collection: Bailer <u>--</u>	Pump Type <u>Monsoon</u>	FP Thickness _____ ft.	Length of Water Column (LWC=TWD-DGW) <u>39.83</u> ft.
Quality Assurance: Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		1Csg. Vol. (LWC*C)= <u>39.83</u> X <u>0.163</u> = <u>6.49</u> gal.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		3Csg. Volume = 3x <u>6.49</u> = <u>19.48</u> gals.(Std. Purge Vol)	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		Total Vol. of Water Purged Before Sampling <u>10.49</u> gal.	
Chain of Custody		Well Yield <u>Low</u> <input checked="" type="checkbox"/> <u>Medium</u> <input type="checkbox"/> <u>High</u> <input type="checkbox"/>	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>		
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>Pace</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	6.49	4.00					0.00
Time (military)	17:08	17:15						17:50
pH (s.u.)	12.99	12.96						12.90
O.R.P. (mV)	-89	-108						-42
Temperature (°C)	20.93	20.20						20.32
Specific Cond. (mS/cm)	17.300	17.000						16.700
Dissolved Oxygen (mg/L)	6.81	6.58						7.80
Turbidity (NTU)	9.1	5.2						2.5

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2833) with new, clean, disposable polyethylene tubing.  
Well purged dry after 1 well volume plus 4 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>07960-TW-8</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>53.53</u> ft. to <u>58.53</u> ft.	Total Well Depth (TWD) <u>58.60</u> ft.
Method of Well Purging: Bailer <u>--</u>	Pump Type <u>Monsoon</u>	Depth to GW(DGW) <u>32.10</u> ft.	Depth to FP (Free product) <u>----</u> ft.
Method of Sample Collection: Bailer <u>--</u>	Pump Type <u>Monsoon</u>	FP Thickness <u>----</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>26.50</u> ft.
Quality Assurance:		1Csg. Vol. (LWC*C)= $\frac{26.50}{1} \times \frac{0.163}{1} = \underline{4.32}$ gal.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908007</u>	3Csg. Volume = $3 \times \frac{4.32}{1} = \underline{12.96}$ gals.(Std. Purge Vol)	
Calibration Measurement Results		Total Vol. of Water Purged Before Sampling <u>8.64</u> gal.	
pH 4.0 = <u>4.00 @ 19°C</u>	Conductivity 4.49 = <u>4.37</u>	Well Yield <u>Low</u> _____ <u>Medium</u> <u>X</u> <u>High</u> _____	
Turbidity 0.0 = <u>0.1</u>	Dissolved Oxygen 8.52 = <u>8.59</u>		
Chain of Custody			
<u>Phil Pike</u> <u>10/2/13 7:30</u>	ECS Office <u>10/2/13 7:30</u>		
Relinquished by <u>ECS Office</u>	Date/Time <u>10/2/13 13:40</u>		
Received by <u>Pace</u>	Date/Time <u>10/2/13 13:40</u>		
Relinquished by _____	Date/Time _____		
Received by _____	Date/Time _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	4.32	4.32					0.00
Time (military)	16:24	16:29	16:35					16:50
pH (s.u.)	12.01	12.13	12.47					12.54
O.R.P. (mV)	-4	-16	-27					-50
Temperature (°C)	20.50	19.40	19.46					19.53
Specific Cond. (mS/cm)	1.780	2.030	4.760					4.650
Dissolved Oxygen (mg/L)	6.63	6.40	5.17					6.07
Turbidity (NTU)	46.9	16.4	20.8					5.2

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2833) with new, clean, disposable polyethylene tubing.  
Well purged dry after 2 well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>07960-TW-9</u>	
Field Personnel <u>P. Pike</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>75.12</u> ft. to <u>80.12</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>Monsoon</u>		Total Well Depth (TWD) <u>80.16</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>Monsoon</u>		Depth to GW(DGW) <u>22.59</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908007</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>57.57</u> ft.	
pH 4.0 = <u>4.00 @ 19°C</u> Conductivity 4.49 = <u>4.37</u>		1Csg. Vol. (LWC*C)= <u>57.57</u> X <u>0.163</u> = <u>9.38</u> gal.	
Turbidity 0.0 = <u>0.1</u> Dissolved Oxygen 8.52 = <u>8.59</u>		3Csg. Volume = 3x <u>9.38</u> = <u>28.15</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>28.15</u> gal.	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>	Well Yield Low _____ Medium _____ High <u>X</u>	
Relinquished by <u>ECS Office</u> <u>10/2/13 13:40</u>	Received by <u>_____</u> <u>10/2/13 13:40</u>		
Relinquished by _____	Received by _____		

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	9.38	9.38	9.38				0.00
Time (military)	12:23	13:00	13:08	13:17				13:20
pH (s.u.)	6.43	6.73	6.91	6.78				6.77
O.R.P. (mV)	237	231	228	180				177
Temperature (°C)	19.64	18.51	18.50	18.56				18.51
Specific Cond. (mS/cm)	0.481	0.832	0.840	0.849				0.850
Dissolved Oxygen (mg/L)	1.54	0.99	1.70	1.03				1.05
Turbidity (NTU)	14.5	25.8	24.6	24.2				22.3

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N PRO2833) with new, clean, disposable polyethylene tubing.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>09/30/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Quality Assurance:</p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;">Phil Pike</td> <td style="width:25%; border: none;"><u>10/2/13 7:30</u></td> <td style="width:25%; border: none;">ECS Office</td> <td style="width:25%; border: none;"><u>10/2/13 7:30</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> <tr> <td style="border: none;">ECS Office</td> <td style="border: none;"><u>10/2/13 13:40</u></td> <td style="border: none;">Pace</td> <td style="border: none;"><u>10/2/13 13:40</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> </table>	Phil Pike	<u>10/2/13 7:30</u>	ECS Office	<u>10/2/13 7:30</u>	Relinquished by	Date/Time	Received by	Date/Time	ECS Office	<u>10/2/13 13:40</u>	Pace	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-1 Pre GAC</u></p> <p>Well Diameter (D) <u>6.0</u> inch _____ or feet</p> <p>conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>280</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield <u>Low</u> Medium <u>High</u></p>																																																																	
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South Carolina Department of Health and Environmental Control  
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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u> Field Personnel <u>A. Williamson</u> General Weather Conditions <u>Sunny</u> Ambient Air Temperature <u>80</u> F  Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u> Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u> Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u> Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u> Calibration Measurement Results pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u> Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u> Chain of Custody Phil Pike <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u> Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u> Received by <u>Pace</u> Date/Time <u>10/2/13 13:40</u> Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____	Well # <u>WSW-1 Post GAC</u>  Well Diameter (D) <u>6.0</u> inch _____ or feet conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469 Screen Interval <u>--</u> ft. to <u>--</u> ft. Total Well Depth (TWD) <u>280</u> ft. Depth to GW(DGW) <u>--</u> ft.  Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft. 1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal. 3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol) Total Vol. of Water Purged Before Sampling <u>--</u> gal. Well Yield Low _____ Medium _____ High _____																																																																																	
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>09/30/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width:100%; border: none;"> <tr> <td style="width:33%;"><u>Phil Pike</u></td> <td style="width:33%;"><u>10/2/13 7:30</u></td> <td style="width:33%;"><u>ECS Office</u></td> <td style="width:33%;"><u>10/2/13 7:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>10/2/13 13:40</u></td> <td><u>Pace</u></td> <td><u>10/2/13 13:40</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-2</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet</p> <p>conversion factor(C): 3.143*(D/2)<sup>2</sup> for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u></p>																																																																	
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>WSW-3</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>6.0</u> inch <u>--</u> or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>--</u> ft. to <u>--</u> ft.	Total Well Depth (TWD) <u>--</u> ft.
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>	Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>	Depth to GW(DGW) <u>--</u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Calibration Measurement Results		3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
pH 4.0 = <u>4.01 @ 24 C</u>	Conductivity 4.49 = <u>4.57</u>	Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>8.26</u>	Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u>	
Chain of Custody			
<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								18:45
pH (s.u.)								7.91
O.R.P. (mV)								-106
Temperature (°C)								19.27
Specific Cond. (mS/cm)								0.192
Dissolved Oxygen (mg/L)								0.96
Turbidity (NTU)								13.8

Remarks Sampled from open hole inside well house using a bailer. No purge.  
744 Hwy 378 E.



South Carolina Department of Health and Environmental Control  
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>10/01/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Quality Assurance: Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results pH 4.0 = <u>4.01 @ 24° C</u> Conductivity 4.49 = <u>4.57</u> Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p>Chain of Custody A. Williamson <u>10/1/13 19:30</u> ECS Office <u>10/1/13 19:30</u> Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u> Received by <u>Pace</u> Date/Time <u>10/2/13 13:40</u> Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____</p>	<p>Well # <u>WSW-4</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal. 3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>---</u> Medium <u>---</u> High <u>---</u></p>																																																																																	
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<p>Remarks <u>Sampled from spigot on side of house after purging for 10 minutes.</u> <u>752 Hwy 378 E.</u></p>																																																																																		

South Carolina Department of Health and Environmental Control  
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**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>10/01/13</u>		Well # <u>WSW-5</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>6.0</u> inch _____ or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>--</u> ft. to <u>--</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Total Well Depth (TWD) <u>300</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Depth to GW(DGW) <u>--</u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Calibration Measurement Results		3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
pH 4.0 = <u>4.01 @ 24°C</u>	Conductivity 4.49 = <u>4.57</u>	Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>8.26</u>	Well Yield <u>Low</u> <u>Medium</u> <u>High</u>	
Chain of Custody			
<u>A. Williamson</u>	<u>10/1/13 19:30</u>	<u>ECS Office</u>	<u>10/1/13 19:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								9:09
pH (s.u.)								7.75
O.R.P. (mV)								63
Temperature (°C)								17
Specific Cond. (mS/cm)								0.462
Dissolved Oxygen (mg/L)								3.67
Turbidity (NTU)								13.1

Remarks	<u>Sampled from spigot on well head after purging for 10 minutes.</u> <u>Total well depth as indicated on well ID tag. 745 Hwy 378 E.</u>
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>10/01/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;"><u>Chain of Custody</u></p> <table style="width:100%; border: none;"> <tr> <td style="border: none;"><u>A. Williamson</u></td> <td style="border: none;"><u>10/1/13 19:30</u></td> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>10/1/13 19:30</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> <tr> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>10/2/13 13:40</u></td> <td style="border: none;"><u>Pace</u></td> <td style="border: none;"><u>10/2/13 13:40</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> </table>	<u>A. Williamson</u>	<u>10/1/13 19:30</u>	<u>ECS Office</u>	<u>10/1/13 19:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-6</u></p> <p>Well Diameter (D) <u>6.0</u> inch _____ or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>400</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low _____ Medium _____ High _____</p>																																																																	
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<p>Remarks <u>Sampled from spigot on back side of Northside VFD after purging for 10 minutes.</u></p> <p><u>719 Hwy 378 E.</u></p>																																																																																								

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>WSW-8 Pre GAC</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>--</u> inch <u>--</u> or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>--</u> ft. to <u>--</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Total Well Depth (TWD) <u>--</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Depth to GW(DGW) <u>--</u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u>	Serial Number: <u>T908009</u>	1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Calibration Measurement Results		3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
pH 4.0 = <u>4.01 @ 24'C</u>	Conductivity 4.49 = <u>4.57</u>	Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>8.26</u>	Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u>	
Chain of Custody			
Phil Pike	<u>10/2/13 7:30</u>	ECS Office	<u>10/2/13 7:30</u>
Relinquished by	Date/Time	Received by	Date/Time
ECS Office	<u>10/2/13 13:40</u>	Pace	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								16:30
pH (s.u.)								7.34
O.R.P. (mV)								141
Temperature (°C)								19.19
Specific Cond. (mS/cm)								0.671
Dissolved Oxygen (mg/L)								4.69
Turbidity (NTU)								2.6

Remarks	<u>Sampled from "Pre" sample port inside GAC building next to well house, prior to GAC treatment, after purging for 10 minutes.</u> <u>724 Hwy 378 E.</u>
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>09/30/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Quality Assurance:</p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%;"><u>Phil Pike</u></td> <td style="width:33%;"><u>10/2/13 7:30</u></td> <td style="width:33%;"><u>ECS Office</u></td> <td style="width:33%;"><u>10/2/13 7:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>10/2/13 13:40</u></td> <td><u>Pace</u></td> <td><u>10/2/13 13:40</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-8 Post GAC</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet</p> <p>conversion factor(C): <math>3.143 \times (D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u></p>																																																																	
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<p>Remarks <u>Sample collected from "Post" sample port inside GAC building next to well house, after GAC treatment, after purging for 10 minutes.</u></p> <p><u>724 Hwy 378 E.</u></p>																																																																																		

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>WSW-9</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>--</u> inch <u>--</u> or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>--</u> ft. to <u>--</u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Total Well Depth (TWD) <u>--</u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Depth to GW(DGW) <u>--</u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		1Csg. Vol. (LWC*C)= $\frac{0.00}{0.00} \times \frac{0.163}{0.00} = \frac{0.00}{0.00}$ gal.	
Calibration Measurement Results		3Csg. Volume = $3 \times \frac{0.00}{0.00} = \frac{0.00}{0.00}$ gals.(Std. Purge Vol)	
pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u>		Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u>		Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u>	
Chain of Custody			
<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								16:55
pH (s.u.)								7.50
O.R.P. (mV)								38
Temperature (°C)								19.9
Specific Cond. (mS/cm)								0.468
Dissolved Oxygen (mg/L)								5.22
Turbidity (NTU)								2.0

Remarks Sampled from spigot on side of well house after purging for 10 minutes.  
71 Faulkner Mountain Road.

South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u> Field Personnel <u>A. Williamson</u> General Weather Conditions <u>Sunny</u> Ambient Air Temperature <u>80</u> F  Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u> Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u> Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u> Quality Assurance: Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u> Calibration Measurement Results pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u> Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u> Chain of Custody Phil Pike <u>10/2/13 7:30</u> ECS Office <u>10/2/13 7:30</u> Relinquished by <u>ECS Office</u> Date/Time <u>10/2/13 13:40</u> Received by <u>_____</u> Date/Time <u>_____</u> Relinquished by <u>_____</u> Date/Time <u>_____</u> Received by <u>_____</u> Date/Time <u>_____</u>	Well # <u>WSW-10</u>  Well Diameter (D) <u>--</u> inch <u>_____</u> or feet conversion factor(C): 3.143*(D/2) <sup>2</sup> for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469 Screen Interval <u>--</u> ft. to <u>--</u> ft. Total Well Depth (TWD) <u>--</u> ft. Depth to GW(DGW) <u>--</u> ft.  Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft. 1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal. 3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol) Total Vol. of Water Purged Before Sampling <u>--</u> gal. Well Yield Low <u>_____</u> Medium <u>_____</u> High <u>_____</u>																																																																																	
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**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>09/30/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p style="text-align: center;">Quality Assurance:</p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p style="text-align: center;">Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width:100%; border: none;"> <tr> <td style="width:33%;"><u>Phil Pike</u></td> <td style="width:33%;"><u>10/2/13 7:30</u></td> <td style="width:33%;"><u>ECS Office</u></td> <td style="width:33%;"><u>10/2/13 7:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>10/2/13 13:40</u></td> <td><u>Pace</u></td> <td><u>10/2/13 13:40</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-11</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet</p> <p>conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u></p>																																																																	
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>WSW-12</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>    </u> inch <u>    </u> or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80 F</u>		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>    </u> ft. to <u>    </u> ft.	
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Total Well Depth (TWD) <u>    </u> ft.	
Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>		Depth to GW(DGW) <u>    </u> ft.	
Quality Assurance:		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>		1Csg. Vol. (LWC*C)= $\frac{0.00}{0.00} \times 0.163 = 0.00$ gal.	
Calibration Measurement Results		3Csg. Volume = $3 \times 0.00 = 0.00$ gals.(Std. Purge Vol)	
pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u>		Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u>		Well Yield <u>Low</u> <u>Medium</u> <u>High</u>	
Chain of Custody			
<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>
Relinquished by	Date/Time	Received by	Date/Time
<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>
Relinquished by	Date/Time	Received by	Date/Time

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								17:55
pH (s.u.)								7.02
O.R.P. (mV)								147
Temperature (°C)								18.52
Specific Cond. (mS/cm)								0.612
Dissolved Oxygen (mg/L)								5.01
Turbidity (NTU)								0.4

Remarks Sampled from spigot on side of well house after purging for 10 minutes.  
64 Faulkner Mountain Road.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

<p>Date(mm/dd/yy) <u>09/30/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p style="text-align: center;">Quality Assurance: Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width:100%; border: none;"> <tr> <td style="border: none;"><u>Phil Pike</u></td> <td style="border: none;"><u>10/2/13 7:30</u></td> <td style="border: none;">ECS Office</td> <td style="border: none;"><u>10/2/13 7:30</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> <tr> <td style="border: none;"><u>ECS Office</u></td> <td style="border: none;"><u>10/2/13 13:40</u></td> <td style="border: none;">Pace</td> <td style="border: none;"><u>10/2/13 13:40</u></td> </tr> <tr> <td style="border: none;">Relinquished by</td> <td style="border: none;">Date/Time</td> <td style="border: none;">Received by</td> <td style="border: none;">Date/Time</td> </tr> </table>	<u>Phil Pike</u>	<u>10/2/13 7:30</u>	ECS Office	<u>10/2/13 7:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>10/2/13 13:40</u>	Pace	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-13</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet</p> <p>conversion factor(C): 3.143*(D/2)^2 for a 2 inch well C= 0.163 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469</p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.</p> <p>3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u></p>																																																																	
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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																										
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South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

### Field Data Information Sheet for Ground Water Sampling

Date(mm/dd/yy) <u>09/30/13</u>		Well # <u>WSW-14</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>--</u> inch <u>        </u> or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>--</u> ft. to <u>--</u> ft.	Total Well Depth (TWD) <u>--</u> ft.
Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u>	Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u>	Depth to GW(DGW) <u>--</u> ft.	Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.
Quality Assurance:		1Csg. Vol. (LWC*C)= $\frac{0.00}{0.00} \times 0.163 = 0.00$ gal.	
Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u>	Calibration Measurement Results	3Csg. Volume = $3 \times \frac{0.00}{0.00} = 0.00$ gals.(Std. Purge Vol)	
pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u>	Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u>	Total Vol. of Water Purged Before Sampling <u>--</u> gal.	
Chain of Custody		Well Yield <u>Low</u> <u>        </u> Medium <u>        </u> High <u>        </u>	
<u>Phil Pike</u> <u>10/2/13 7:30</u>	<u>ECS Office</u> <u>10/2/13 7:30</u>		
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	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)								--
Time (military)								17:21
pH (s.u.)								7.10
O.R.P. (mV)								138
Temperature (°C)								19.62
Specific Cond. (mS/cm)								0.549
Dissolved Oxygen (mg/L)								4.14
Turbidity (NTU)								6.0

Remarks	<u>Sampled from spigot inside well house after purging for 10 minutes.</u>
	<u>54 Faulkner Mountain Road.</u>

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

### Field Data Information Sheet for Ground Water Sampling

<p>Date(mm/dd/yy) <u>09/30/13</u></p> <p>Field Personnel <u>A. Williamson</u></p> <p>General Weather Conditions <u>Sunny</u></p> <p>Ambient Air Temperature <u>80</u> F</p> <p>Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u></p> <p>Method of Well Purging: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Method of Sample Collection: Bailer <u>--</u> Pump Type <u>WSW pump</u></p> <p>Quality Assurance:</p> <p>Water Quality Meter: <u>Horiba W22XD - U22</u> Serial Number: <u>T908009</u></p> <p>Calibration Measurement Results</p> <p>pH 4.0 = <u>4.01 @ 24°C</u> Conductivity 4.49 = <u>4.57</u></p> <p>Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.26</u></p> <p style="text-align: center;">Chain of Custody</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><u>Phil Pike</u></td> <td style="width: 25%;"><u>10/2/13 7:30</u></td> <td style="width: 25%;"><u>ECS Office</u></td> <td style="width: 25%;"><u>10/2/13 7:30</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> <tr> <td><u>ECS Office</u></td> <td><u>10/2/13 13:40</u></td> <td><u>Pace</u></td> <td><u>10/2/13 13:40</u></td> </tr> <tr> <td>Relinquished by</td> <td>Date/Time</td> <td>Received by</td> <td>Date/Time</td> </tr> </table>	<u>Phil Pike</u>	<u>10/2/13 7:30</u>	<u>ECS Office</u>	<u>10/2/13 7:30</u>	Relinquished by	Date/Time	Received by	Date/Time	<u>ECS Office</u>	<u>10/2/13 13:40</u>	<u>Pace</u>	<u>10/2/13 13:40</u>	Relinquished by	Date/Time	Received by	Date/Time	<p>Well # <u>WSW-15</u></p> <p>Well Diameter (D) <u>--</u> inch <u>--</u> or feet</p> <p>conversion factor(C): <math>3.143*(D/2)^2</math> for a 2 inch well C= <u>0.163</u></p> <p>for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u></p> <p>Screen Interval <u>--</u> ft. to <u>--</u> ft.</p> <p>Total Well Depth (TWD) <u>--</u> ft.</p> <p>Depth to GW(DGW) <u>--</u> ft.</p> <p>Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.</p> <p>1Csg. Vol. (LWC*C)= <math>\frac{0.00}{0.00} \times \frac{0.163}{0.00} = \frac{0.00}{0.00}</math> gal.</p> <p>3Csg. Volume = <math>3 \times \frac{0.00}{0.00} = \frac{0.00}{0.00}</math> gals.(Std. Purge Vol)</p> <p>Total Vol. of Water Purged Before Sampling <u>--</u> gal.</p> <p>Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u></p>																																																																	
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Initial</th> <th>1st vol.</th> <th>2nd vol.</th> <th>3rd vol.</th> <th>4th vol.</th> <th>5th vol.</th> <th>Post</th> <th>Sampling</th> </tr> </thead> <tbody> <tr> <td>Volume Purged (gallons)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">--</td> </tr> <tr> <td>Time (military)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">17:09</td> </tr> <tr> <td>pH (s.u.)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">6.99</td> </tr> <tr> <td>O.R.P. (mV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">112</td> </tr> <tr> <td>Temperature (°C)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">19.07</td> </tr> <tr> <td>Specific Cond. (mS/cm)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">1.230</td> </tr> <tr> <td>Dissolved Oxygen (mg/L)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">2.56</td> </tr> <tr> <td>Turbidity (NTU)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">8.4</td> </tr> </tbody> </table>		Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling	Volume Purged (gallons)								--	Time (military)								17:09	pH (s.u.)								6.99	O.R.P. (mV)								112	Temperature (°C)								19.07	Specific Cond. (mS/cm)								1.230	Dissolved Oxygen (mg/L)								2.56	Turbidity (NTU)								8.4	<p>Remarks <u>Sampled from spigot on side of well house after purging for 10 minutes.</u></p> <p><u>57 Faulkner Mountain Road.</u></p>
	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling																																																																										
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October 08, 2013

Noelle France  
Environmental Compliance Servi  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174452

Dear Noelle France:

Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Kevin Herring

kevin.herring@pacelabs.com  
Project Manager

Enclosures



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### CERTIFICATIONS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174452

---

#### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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**SAMPLE SUMMARY**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92174452001	07960-TW9	Water	09/30/13 13:20	10/02/13 16:00
92174452002	07960-TW6	Water	09/30/13 14:50	10/02/13 16:00
92174452003	07960-MW16	Water	09/30/13 14:40	10/02/13 16:00
92174452004	07960-MW19	Water	09/30/13 16:10	10/02/13 16:00
92174452005	07960-MW23	Water	09/30/13 16:40	10/02/13 16:00
92174452006	07960-TW8	Water	09/30/13 16:50	10/02/13 16:00
92174452007	07960-TW7	Water	09/30/13 17:50	10/02/13 16:00
92174452008	07960-MW17	Water	09/30/13 17:30	10/02/13 16:00
92174452009	07960-MW15	Water	09/30/13 17:40	10/02/13 16:00
92174452010	07960-MW18	Water	09/30/13 19:00	10/02/13 16:00
92174452011	07960-WSW2	Water	09/30/13 15:35	10/02/13 16:00
92174452012	07960-WSW1 PRE GAC	Water	09/30/13 18:00	10/02/13 16:00
92174452013	07960-WSW1 POST GAC	Water	09/30/13 16:05	10/02/13 16:00
92174452014	07960-WSW8 PRE GAC	Water	09/30/13 16:30	10/02/13 16:00
92174452015	07960-WSW8 POST GAC	Water	09/30/13 16:35	10/02/13 16:00
92174452016	07960-WSW9	Water	09/30/13 16:55	10/02/13 16:00
92174452017	07960-WSW15	Water	09/30/13 17:09	10/02/13 16:00
92174452018	07960-WSW14	Water	09/30/13 17:21	10/02/13 16:00
92174452019	07960-WSW13	Water	09/30/13 17:37	10/02/13 16:00
92174452020	07960-WSW12	Water	09/30/13 17:55	10/02/13 16:00
92174452021	07960-WSW11	Water	09/30/13 18:01	10/02/13 16:00
92174452022	07960-WSW10	Water	09/30/13 18:15	10/02/13 16:00
92174452023	07960-WSW7	Water	09/30/13 18:29	10/02/13 16:00
92174452024	07960-WSW3	Water	09/30/13 18:45	10/02/13 16:00
92174452025	07560-FIELD BLANK 1	Water	09/30/13 19:00	10/02/13 16:00
92174452026	TRIP BLANK	Water	09/30/13 00:00	10/02/13 16:00

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**SAMPLE ANALYTE COUNT**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92174452001	07960-TW9	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452002	07960-TW6	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452003	07960-MW16	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452004	07960-MW19	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452005	07960-MW23	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452006	07960-TW8	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452007	07960-TW7	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452008	07960-MW17	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452009	07960-MW15	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452010	07960-MW18	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452011	07960-WSW2	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452012	07960-WSW1 PRE GAC	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452013	07960-WSW1 POST GAC	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452014	07960-WSW8 PRE GAC	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452015	07960-WSW8 POST GAC	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452016	07960-WSW9	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452017	07960-WSW15	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452018	07960-WSW14	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452019	07960-WSW13	EPA 8011	EJK	2	PASI-C

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**SAMPLE ANALYTE COUNT**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	MCK	20	PASI-C
92174452020	07960-WSW12	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452021	07960-WSW11	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452022	07960-WSW10	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452023	07960-WSW7	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452024	07960-WSW3	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452025	07560-FIELD BLANK 1	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174452026	TRIP BLANK	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-TW9 Lab ID: 92174452001 Collected: 09/30/13 13:20 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/03/13 13:20	10/04/13 14:16	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	98 %		60-140		1	10/03/13 13:20	10/04/13 14:16	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/03/13 22:32	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/03/13 22:32	994-05-8	M1
Benzene	ND ug/L		5.0	1.7	1		10/03/13 22:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/03/13 22:32	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/03/13 22:32	75-65-0	M1
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/03/13 22:32	762-75-4	P5
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/03/13 22:32	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/03/13 22:32	108-20-3	
Ethanol	ND ug/L		200	138	1		10/03/13 22:32	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/03/13 22:32	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/03/13 22:32	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/03/13 22:32	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		10/03/13 22:32	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		10/03/13 22:32	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/03/13 22:32	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/03/13 22:32	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/03/13 22:32	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		10/03/13 22:32	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130		1		10/03/13 22:32	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		10/03/13 22:32	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-TW6 Lab ID: 92174452002 Collected: 09/30/13 14:50 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:21	10/04/13 14:37	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	95 %		60-140		1	10/03/13 13:21	10/04/13 14:37	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 22:48	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 22:48	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 22:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 22:48	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 22:48	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 22:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 22:48	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 22:48	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 22:48	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 22:48	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 22:48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 22:48	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 22:48	91-20-3	
Toluene	7.3	ug/L	5.0	1.6	1		10/03/13 22:48	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 22:48	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 22:48	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 22:48	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		70-130		1		10/03/13 22:48	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		70-130		1		10/03/13 22:48	17060-07-0	
Toluene-d8 (S)	97 %		70-130		1		10/03/13 22:48	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-MW16 Lab ID: 92174452003 Collected: 09/30/13 14:40 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/04/13 22:11	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	10/04/13 17:10	10/04/13 22:11	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 23:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 23:04	994-05-8	
Benzene	24.5	ug/L	5.0	1.7	1		10/03/13 23:04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 23:04	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 23:04	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 23:04	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 23:04	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 23:04	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 23:04	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 23:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 23:04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 23:04	1634-04-4	
Naphthalene	6.6	ug/L	5.0	2.0	1		10/03/13 23:04	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 23:04	108-88-3	
Xylene (Total)	10.2	ug/L	10.0	2.7	1		10/03/13 23:04	1330-20-7	
m&p-Xylene	10.2	ug/L	10.0	3.1	1		10/03/13 23:04	179601-23-1	
o-Xylene	1.7J	ug/L	5.0	1.6	1		10/03/13 23:04	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/03/13 23:04	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		10/03/13 23:04	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		10/03/13 23:04	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-MW19 Lab ID: 92174452004 Collected: 09/30/13 16:10 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/04/13 22:32	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	10/04/13 17:10	10/04/13 22:32	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 23:20	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 23:20	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 23:20	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 23:20	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 23:20	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 23:20	762-75-4	P5
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 23:20	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 23:20	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 23:20	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 23:20	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 23:20	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 23:20	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 23:20	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 23:20	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 23:20	1330-20-7	MS
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 23:20	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 23:20	95-47-6	M1
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		10/03/13 23:20	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		10/03/13 23:20	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		10/03/13 23:20	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-MW23 Lab ID: 92174452005 Collected: 09/30/13 16:40 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/04/13 22:52	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	103 %		60-140		1	10/04/13 17:10	10/04/13 22:52	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 23:36	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 23:36	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 23:36	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 23:36	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 23:36	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 23:36	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 23:36	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 23:36	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 23:36	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 23:36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 23:36	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 23:36	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 23:36	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 23:36	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 23:36	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 23:36	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 23:36	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103 %		70-130		1		10/03/13 23:36	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		70-130		1		10/03/13 23:36	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		10/03/13 23:36	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-TW8 Lab ID: 92174452006 Collected: 09/30/13 16:50 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/04/13 23:52	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	102 %		60-140		1	10/04/13 17:10	10/04/13 23:52	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 23:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 23:52	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 23:52	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 23:52	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 23:52	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 23:52	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 23:52	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 23:52	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 23:52	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 23:52	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 23:52	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 23:52	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 23:52	91-20-3	
Toluene	5.4	ug/L	5.0	1.6	1		10/03/13 23:52	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 23:52	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 23:52	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 23:52	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		70-130		1		10/03/13 23:52	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130		1		10/03/13 23:52	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		10/03/13 23:52	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-TW7 Lab ID: 92174452007 Collected: 09/30/13 17:50 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 00:32	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105 %		60-140		1	10/04/13 17:10	10/05/13 00:32	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 00:08	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 00:08	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 00:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 00:08	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 00:08	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 00:08	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 00:08	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 00:08	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 00:08	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 00:08	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 00:08	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 00:08	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 00:08	91-20-3	
Toluene	12.5	ug/L	5.0	1.6	1		10/04/13 00:08	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 00:08	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 00:08	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 00:08	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		70-130		1		10/04/13 00:08	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		70-130		1		10/04/13 00:08	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		10/04/13 00:08	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-MW17 Lab ID: 92174452008 Collected: 09/30/13 17:30 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 00:53	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	10/04/13 17:10	10/05/13 00:53	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 00:23	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 00:23	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 00:23	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 00:23	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 00:23	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 00:23	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 00:23	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 00:23	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 00:23	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 00:23	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 00:23	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 00:23	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 00:23	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 00:23	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 00:23	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 00:23	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 00:23	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/04/13 00:23	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		10/04/13 00:23	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		10/04/13 00:23	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-MW15 Lab ID: 92174452009 Collected: 09/30/13 17:40 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 01:13	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	103 %		60-140		1	10/04/13 17:10	10/05/13 01:13	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 00:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 00:39	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 00:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 00:39	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 00:39	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 00:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 00:39	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 00:39	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 00:39	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 00:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 00:39	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 00:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 00:39	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 00:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 00:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 00:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 00:39	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103 %		70-130		1		10/04/13 00:39	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		70-130		1		10/04/13 00:39	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		10/04/13 00:39	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-MW18 Lab ID: 92174452010 Collected: 09/30/13 19:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/04/13 17:10	10/05/13 01:33	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	104 %		60-140		1	10/04/13 17:10	10/05/13 01:33	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/04/13 00:55	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/04/13 00:55	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		10/04/13 00:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/04/13 00:55	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/04/13 00:55	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/04/13 00:55	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/04/13 00:55	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/04/13 00:55	108-20-3	
Ethanol	ND ug/L		200	138	1		10/04/13 00:55	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/04/13 00:55	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/04/13 00:55	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/04/13 00:55	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		10/04/13 00:55	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		10/04/13 00:55	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/04/13 00:55	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/04/13 00:55	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/04/13 00:55	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		70-130		1		10/04/13 00:55	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130		1		10/04/13 00:55	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		10/04/13 00:55	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Sample: 07960-WSW2 Lab ID: 92174452011 Collected: 09/30/13 15:35 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 01:54	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/04/13 17:10	10/05/13 01:54	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 17:59	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 17:59	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 17:59	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 17:59	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/03/13 17:59	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 17:59	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 17:59	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 17:59	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 17:59	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 17:59	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 17:59	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 17:59	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 17:59	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 17:59	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 17:59	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 17:59	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 17:59	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 17:59	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		10/03/13 17:59	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 17:59	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-WSW1 PRE GAC Lab ID: 92174452012 Collected: 09/30/13 18:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 02:14	106-93-4	
<i>Surrogates</i>									
1-Chloro-2-bromopropane (S)	104	%	60-140		1	10/04/13 17:10	10/05/13 02:14	301-79-56	
<b>8260 MSV Low Level SC</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	145	ug/L	100	50.0	1		10/03/13 18:15	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 18:15	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 18:15	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 18:15	624-95-3	
tert-Butyl Alcohol	39.2J	ug/L	100	3.6	1		10/03/13 18:15	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 18:15	762-75-4	
1,2-Dichloroethane	3.1	ug/L	1.0	0.12	1		10/03/13 18:15	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 18:15	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 18:15	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 18:15	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 18:15	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 18:15	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 18:15	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 18:15	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 18:15	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 18:15	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 18:15	95-47-6	
<i>Surrogates</i>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 18:15	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		10/03/13 18:15	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 18:15	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-WSW1 POST GAC Lab ID: 92174452013 Collected: 09/30/13 16:05 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 02:34	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	104 %		60-140		1	10/04/13 17:10	10/05/13 02:34	301-79-56	
<b>8260 MSV Low Level SC</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 18:31	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 18:31	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 18:31	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 18:31	624-95-3	
tert-Butyl Alcohol	34.5J	ug/L	100	3.6	1		10/03/13 18:31	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 18:31	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 18:31	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 18:31	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 18:31	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 18:31	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 18:31	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 18:31	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 18:31	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 18:31	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 18:31	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 18:31	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 18:31	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		10/03/13 18:31	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		70-130		1		10/03/13 18:31	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		10/03/13 18:31	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Sample: 07960-WSW8 PRE GAC Lab ID: 92174452014 Collected: 09/30/13 16:30 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 02:55	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/04/13 17:10	10/05/13 02:55	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	142	ug/L	100	50.0	1		10/03/13 18:47	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 18:47	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 18:47	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 18:47	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/03/13 18:47	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 18:47	762-75-4	
1,2-Dichloroethane	1.7	ug/L	1.0	0.12	1		10/03/13 18:47	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 18:47	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 18:47	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 18:47	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 18:47	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 18:47	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 18:47	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 18:47	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 18:47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 18:47	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 18:47	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 18:47	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		10/03/13 18:47	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 18:47	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-WSW8 POST GAC Lab ID: 92174452015 Collected: 09/30/13 16:35 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 03:16	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	10/04/13 17:10	10/05/13 03:16	301-79-56	
<b>8260 MSV Low Level SC</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	132	ug/L	100	50.0	1		10/03/13 19:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 19:03	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 19:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 19:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/03/13 19:03	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 19:03	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 19:03	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 19:03	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 19:03	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 19:03	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 19:03	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 19:03	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 19:03	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 19:03	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 19:03	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 19:03	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 19:03	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 19:03	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		10/03/13 19:03	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 19:03	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Sample: 07960-WSW9      Lab ID: 92174452016      Collected: 09/30/13 16:55      Received: 10/02/13 16:00      Matrix: Water									
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 03:36	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	10/04/13 17:10	10/05/13 03:36	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 19:19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 19:19	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 19:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 19:19	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/03/13 19:19	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 19:19	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 19:19	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 19:19	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 19:19	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 19:19	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 19:19	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 19:19	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 19:19	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 19:19	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 19:19	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 19:19	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 19:19	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 19:19	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		10/03/13 19:19	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 19:19	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-WSW15 Lab ID: 92174452017 Collected: 09/30/13 17:09 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 03:57	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	101	%	60-140		1	10/04/13 17:10	10/05/13 03:57	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 19:36	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 19:36	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 19:36	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 19:36	624-95-3	
tert-Butyl Alcohol	30.0J	ug/L	100	3.6	1		10/03/13 19:36	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 19:36	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 19:36	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 19:36	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 19:36	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 19:36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 19:36	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 19:36	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 19:36	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 19:36	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 19:36	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 19:36	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 19:36	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 19:36	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/03/13 19:36	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 19:36	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Sample: 07960-WSW14 Lab ID: 92174452018 Collected: 09/30/13 17:21 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 04:17	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	10/04/13 17:10	10/05/13 04:17	301-79-56	
<b>8260 MSV Low Level SC</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 19:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 19:52	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 19:52	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 19:52	624-95-3	
tert-Butyl Alcohol	30.7J	ug/L	100	3.6	1		10/03/13 19:52	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 19:52	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 19:52	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 19:52	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 19:52	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 19:52	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 19:52	637-92-3	
Methyl-tert-butyl ether	0.44J	ug/L	1.0	0.21	1		10/03/13 19:52	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 19:52	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 19:52	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 19:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 19:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 19:52	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 19:52	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		10/03/13 19:52	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 19:52	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Sample: 07960-WSW13 Lab ID: 92174452019 Collected: 09/30/13 17:37 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 04:38	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	101	%	60-140		1	10/04/13 17:10	10/05/13 04:38	301-79-56	
<b>8260 MSV Low Level SC</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 20:08	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 20:08	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 20:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 20:08	624-95-3	
tert-Butyl Alcohol	29.6J	ug/L	100	3.6	1		10/03/13 20:08	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 20:08	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 20:08	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 20:08	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 20:08	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 20:08	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 20:08	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 20:08	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 20:08	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 20:08	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 20:08	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 20:08	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 20:08	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/03/13 20:08	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		10/03/13 20:08	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 20:08	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-WSW12 Lab ID: 92174452020 Collected: 09/30/13 17:55 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 04:58	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/04/13 17:10	10/05/13 04:58	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 20:24	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 20:24	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 20:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 20:24	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/03/13 20:24	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 20:24	762-75-4	
1,2-Dichloroethane	0.71J	ug/L	1.0	0.12	1		10/03/13 20:24	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 20:24	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 20:24	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 20:24	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 20:24	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 20:24	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 20:24	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 20:24	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 20:24	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 20:24	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 20:24	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 20:24	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/03/13 20:24	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 20:24	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-WSW11 Lab ID: 92174452021 Collected: 09/30/13 18:01 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 05:18	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	10/04/13 17:10	10/05/13 05:18	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 20:40	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 20:40	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 20:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 20:40	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/03/13 20:40	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 20:40	762-75-4	
1,2-Dichloroethane	0.83J	ug/L	1.0	0.12	1		10/03/13 20:40	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 20:40	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 20:40	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 20:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 20:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 20:40	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 20:40	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 20:40	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 20:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 20:40	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 20:40	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 20:40	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		10/03/13 20:40	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 20:40	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-WSW10 Lab ID: 92174452022 Collected: 09/30/13 18:15 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/04/13 17:10	10/05/13 05:39	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	10/04/13 17:10	10/05/13 05:39	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 20:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 20:56	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 20:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 20:56	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/03/13 20:56	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 20:56	762-75-4	
1,2-Dichloroethane	0.60J	ug/L	1.0	0.12	1		10/03/13 20:56	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 20:56	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 20:56	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 20:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 20:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 20:56	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 20:56	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 20:56	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 20:56	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 20:56	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 20:56	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 20:56	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		10/03/13 20:56	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 20:56	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: 07960-WSW7 Lab ID: 92174452023 Collected: 09/30/13 18:29 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	10/05/13 17:10	10/05/13 19:39	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	10/05/13 17:10	10/05/13 19:39	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 21:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 21:12	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 21:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 21:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		10/03/13 21:12	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 21:12	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 21:12	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 21:12	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 21:12	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 21:12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 21:12	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 21:12	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 21:12	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 21:12	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 21:12	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 21:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 21:12	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 21:12	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		10/03/13 21:12	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 21:12	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Sample: 07960-WSW3 Lab ID: 92174452024 Collected: 09/30/13 18:45 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/05/13 17:11	10/05/13 20:00	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/05/13 17:11	10/05/13 20:00	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 21:28	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 21:28	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 21:28	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 21:28	624-95-3	
tert-Butyl Alcohol	29.3J	ug/L	100	3.6	1		10/03/13 21:28	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 21:28	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 21:28	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 21:28	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 21:28	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 21:28	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 21:28	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 21:28	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 21:28	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 21:28	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 21:28	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 21:28	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 21:28	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 21:28	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/03/13 21:28	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 21:28	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Sample: 07560-FIELD BLANK 1 Lab ID: 92174452025 Collected: 09/30/13 19:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/05/13 17:11	10/05/13 20:20	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	108 %		60-140		1	10/05/13 17:11	10/05/13 20:20	301-79-56	
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/03/13 13:10	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/03/13 13:10	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		10/03/13 13:10	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/03/13 13:10	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/03/13 13:10	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/03/13 13:10	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/03/13 13:10	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/03/13 13:10	108-20-3	
Ethanol	ND ug/L		200	138	1		10/03/13 13:10	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/03/13 13:10	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/03/13 13:10	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/03/13 13:10	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		10/03/13 13:10	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		10/03/13 13:10	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/03/13 13:10	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/03/13 13:10	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/03/13 13:10	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		70-130		1		10/03/13 13:10	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130		1		10/03/13 13:10	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		10/03/13 13:10	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

Sample: TRIP BLANK Lab ID: 92174452026 Collected: 09/30/13 00:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/05/13 17:11	10/05/13 20:40	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	10/05/13 17:11	10/05/13 20:40	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 13:26	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 13:26	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 13:26	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 13:26	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 13:26	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 13:26	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 13:26	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 13:26	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 13:26	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 13:26	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 13:26	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 13:26	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 13:26	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 13:26	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 13:26	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 13:26	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 13:26	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 13:26	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		10/03/13 13:26	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 13:26	2037-26-5	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

QC Batch: MSV/24456 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC  
 Associated Lab Samples: 92174452011, 92174452012, 92174452013, 92174452014, 92174452015

METHOD BLANK: 1059150 Matrix: Water  
 Associated Lab Samples: 92174452011, 92174452012, 92174452013, 92174452014, 92174452015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	10/03/13 12:05	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 12:05	
Benzene	ug/L	ND	1.0	10/03/13 12:05	
Diisopropyl ether	ug/L	ND	1.0	10/03/13 12:05	
Ethanol	ug/L	ND	200	10/03/13 12:05	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 12:05	
Ethylbenzene	ug/L	ND	1.0	10/03/13 12:05	
m&p-Xylene	ug/L	ND	2.0	10/03/13 12:05	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/03/13 12:05	
Naphthalene	ug/L	ND	1.0	10/03/13 12:05	
o-Xylene	ug/L	ND	1.0	10/03/13 12:05	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 12:05	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 12:05	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 12:05	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 12:05	
Toluene	ug/L	ND	1.0	10/03/13 12:05	
Xylene (Total)	ug/L	ND	2.0	10/03/13 12:05	
1,2-Dichloroethane-d4 (S)	%	98	70-130	10/03/13 12:05	
4-Bromofluorobenzene (S)	%	101	70-130	10/03/13 12:05	
Toluene-d8 (S)	%	100	70-130	10/03/13 12:05	

LABORATORY CONTROL SAMPLE: 1059151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	52.8	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	902	90	70-130	
Benzene	ug/L	50	54.4	109	70-130	
Diisopropyl ether	ug/L	50	58.6	117	70-130	
Ethanol	ug/L	2000	1550	78	70-130	
Ethyl-tert-butyl ether	ug/L	100	105	105	70-130	
Ethylbenzene	ug/L	50	53.6	107	70-130	
m&p-Xylene	ug/L	100	112	112	70-130	
Methyl-tert-butyl ether	ug/L	50	58.1	116	70-130	
Naphthalene	ug/L	50	53.6	107	70-130	
o-Xylene	ug/L	50	59.8	120	70-130	
tert-Amyl Alcohol	ug/L	1000	887	89	70-130	
tert-Amylmethyl ether	ug/L	100	118	118	70-130	
tert-Butyl Alcohol	ug/L	500	468	94	70-130	
tert-Butyl Formate	ug/L	400	404	101	70-130	
Toluene	ug/L	50	52.7	105	70-130	
Xylene (Total)	ug/L	150	171	114	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

LABORATORY CONTROL SAMPLE: 1059151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059152 1059153

Parameter	92174447002		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec				
1,2-Dichloroethane	ug/L	ND	50	50	54.1	56.2	108	112	70-130	4	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1160	1230	116	123	70-130	6	30	
Benzene	ug/L	ND	50	50	57.6	60.2	115	120	70-130	4	30	
Diisopropyl ether	ug/L	ND	50	50	60.5	63.5	121	127	70-130	5	30	
Ethanol	ug/L	ND	2000	2000	2210	2240	110	112	70-130	1	30	
Ethyl-tert-butyl ether	ug/L	ND	100	100	109	114	109	114	70-130	5	30	
Ethylbenzene	ug/L	ND	50	50	55.9	57.3	112	115	70-130	2	30	
m&p-Xylene	ug/L	ND	100	100	117	120	117	120	70-130	3	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	58.3	61.5	117	123	70-130	5	30	
Naphthalene	ug/L	ND	50	50	52.3	55.8	105	112	70-130	6	30	
o-Xylene	ug/L	ND	50	50	63.1	65.6	126	131	70-130	4	30	M1
tert-Amyl Alcohol	ug/L	ND	1000	1000	1190	1260	119	126	70-130	6	30	
tert-Amylmethyl ether	ug/L	ND	100	100	129	134	129	134	70-130	4	30	M1
tert-Butyl Alcohol	ug/L	31.5J	500	500	928	1010	179	196	70-130	9	30	M1
tert-Butyl Formate	ug/L	ND	400	400	51.5	48.2J	13	12	70-130		30	P5
Toluene	ug/L	ND	50	50	56.8	59.4	114	119	70-130	4	30	
1,2-Dichloroethane-d4 (S)	%						97	97	70-130			
4-Bromofluorobenzene (S)	%						102	101	70-130			
Toluene-d8 (S)	%						102	101	70-130			

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

QC Batch: MSV/24457 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC  
 Associated Lab Samples: 92174452016, 92174452017, 92174452018, 92174452019, 92174452020, 92174452021, 92174452022, 92174452023, 92174452024

METHOD BLANK: 1059154 Matrix: Water  
 Associated Lab Samples: 92174452016, 92174452017, 92174452018, 92174452019, 92174452020, 92174452021, 92174452022, 92174452023, 92174452024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	10/03/13 12:05	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 12:05	
Benzene	ug/L	ND	1.0	10/03/13 12:05	
Diisopropyl ether	ug/L	ND	1.0	10/03/13 12:05	
Ethanol	ug/L	ND	200	10/03/13 12:05	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 12:05	
Ethylbenzene	ug/L	ND	1.0	10/03/13 12:05	
m&p-Xylene	ug/L	ND	2.0	10/03/13 12:05	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/03/13 12:05	
Naphthalene	ug/L	ND	1.0	10/03/13 12:05	
o-Xylene	ug/L	ND	1.0	10/03/13 12:05	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 12:05	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 12:05	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 12:05	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 12:05	
Toluene	ug/L	ND	1.0	10/03/13 12:05	
Xylene (Total)	ug/L	ND	2.0	10/03/13 12:05	
1,2-Dichloroethane-d4 (S)	%	98	70-130	10/03/13 12:05	
4-Bromofluorobenzene (S)	%	101	70-130	10/03/13 12:05	
Toluene-d8 (S)	%	100	70-130	10/03/13 12:05	

LABORATORY CONTROL SAMPLE: 1059155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	52.8	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	902	90	70-130	
Benzene	ug/L	50	54.4	109	70-130	
Diisopropyl ether	ug/L	50	58.6	117	70-130	
Ethanol	ug/L	2000	1550	78	70-130	
Ethyl-tert-butyl ether	ug/L	100	105	105	70-130	
Ethylbenzene	ug/L	50	53.6	107	70-130	
m&p-Xylene	ug/L	100	112	112	70-130	
Methyl-tert-butyl ether	ug/L	50	58.1	116	70-130	
Naphthalene	ug/L	50	53.6	107	70-130	
o-Xylene	ug/L	50	59.8	120	70-130	
tert-Amyl Alcohol	ug/L	1000	887	89	70-130	
tert-Amylmethyl ether	ug/L	100	118	118	70-130	
tert-Butyl Alcohol	ug/L	500	468	94	70-130	
tert-Butyl Formate	ug/L	400	404	101	70-130	
Toluene	ug/L	50	52.7	105	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

LABORATORY CONTROL SAMPLE: 1059155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	171	114	70-130	
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1060145 1060146

Parameter	Units	1060145		1060146		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92174452024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
1,2-Dichloroethane	ug/L	ND	50	50	56.6	56.9	113	114	70-130	0	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1200	1260	120	126	70-130	5	30	
Benzene	ug/L	ND	50	50	59.8	60.8	120	122	70-130	2	30	
Diisopropyl ether	ug/L	ND	50	50	64.0	64.9	128	130	70-130	1	30	
Ethanol	ug/L	ND	2000	2000	2450	2420	122	121	70-130	1	30	
Ethyl-tert-butyl ether	ug/L	ND	100	100	113	116	113	116	70-130	2	30	
Ethylbenzene	ug/L	ND	50	50	57.7	58.8	115	118	70-130	2	30	
m&p-Xylene	ug/L	ND	100	100	121	124	121	124	70-130	2	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	60.9	62.4	122	125	70-130	2	30	
Naphthalene	ug/L	ND	50	50	54.9	55.6	110	111	70-130	1	30	
o-Xylene	ug/L	ND	50	50	65.1	66.6	130	133	70-130	2	30	M1
tert-Amyl Alcohol	ug/L	ND	1000	1000	1220	1280	122	128	70-130	5	30	
tert-Amylmethyl ether	ug/L	ND	100	100	133	138	133	138	70-130	3	30	M1
tert-Butyl Alcohol	ug/L	29.3J	500	500	936	988	181	192	70-130	5	30	M1
tert-Butyl Formate	ug/L	ND	400	400	81.3	85.4	20	21	70-130	5	30	P5
Toluene	ug/L	ND	50	50	59.5	60.2	119	120	70-130	1	30	
1,2-Dichloroethane-d4 (S)	%						98	98	70-130			
4-Bromofluorobenzene (S)	%						101	102	70-130			
Toluene-d8 (S)	%						101	102	70-130			

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

QC Batch: MSV/24453 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174452025, 92174452026

METHOD BLANK: 1059091 Matrix: Water  
 Associated Lab Samples: 92174452025, 92174452026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 11:49	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 11:49	
Benzene	ug/L	ND	5.0	10/03/13 11:49	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 11:49	
Ethanol	ug/L	ND	200	10/03/13 11:49	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 11:49	
Ethylbenzene	ug/L	ND	5.0	10/03/13 11:49	
m&p-Xylene	ug/L	ND	10.0	10/03/13 11:49	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 11:49	
Naphthalene	ug/L	ND	5.0	10/03/13 11:49	
o-Xylene	ug/L	ND	5.0	10/03/13 11:49	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 11:49	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 11:49	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 11:49	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 11:49	
Toluene	ug/L	ND	5.0	10/03/13 11:49	
Xylene (Total)	ug/L	ND	10.0	10/03/13 11:49	
1,2-Dichloroethane-d4 (S)	%	97	70-130	10/03/13 11:49	
4-Bromofluorobenzene (S)	%	99	70-130	10/03/13 11:49	
Toluene-d8 (S)	%	100	70-130	10/03/13 11:49	

LABORATORY CONTROL SAMPLE: 1059092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	53.1	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	912	91	70-130	
Benzene	ug/L	50	54.4	109	70-130	
Diisopropyl ether	ug/L	50	59.4	119	70-130	
Ethanol	ug/L	2000	1520	76	70-130	
Ethyl-tert-butyl ether	ug/L	100	104	104	70-130	
Ethylbenzene	ug/L	50	54.0	108	70-130	
m&p-Xylene	ug/L	100	112	112	70-130	
Methyl-tert-butyl ether	ug/L	50	58.1	116	70-130	
Naphthalene	ug/L	50	54.0	108	70-130	
o-Xylene	ug/L	50	60.0	120	70-130	
tert-Amyl Alcohol	ug/L	1000	898	90	70-130	
tert-Amylmethyl ether	ug/L	100	117	117	70-130	
tert-Butyl Alcohol	ug/L	500	476	95	70-130	
tert-Butyl Formate	ug/L	400	407	102	70-130	
Toluene	ug/L	50	53.1	106	70-130	
Xylene (Total)	ug/L	150	172	115	70-130	

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### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

LABORATORY CONTROL SAMPLE: 1059092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

QC Batch: MSV/24462 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174452001, 92174452002, 92174452003

METHOD BLANK: 1059377 Matrix: Water  
 Associated Lab Samples: 92174452001, 92174452002, 92174452003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 16:28	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 16:28	
Benzene	ug/L	ND	5.0	10/03/13 16:28	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 16:28	
Ethanol	ug/L	ND	200	10/03/13 16:28	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 16:28	
Ethylbenzene	ug/L	ND	5.0	10/03/13 16:28	
m&p-Xylene	ug/L	ND	10.0	10/03/13 16:28	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 16:28	
Naphthalene	ug/L	ND	5.0	10/03/13 16:28	
o-Xylene	ug/L	ND	5.0	10/03/13 16:28	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 16:28	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 16:28	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 16:28	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 16:28	
Toluene	ug/L	ND	5.0	10/03/13 16:28	
Xylene (Total)	ug/L	ND	10.0	10/03/13 16:28	
1,2-Dichloroethane-d4 (S)	%	96	70-130	10/03/13 16:28	
4-Bromofluorobenzene (S)	%	102	70-130	10/03/13 16:28	
Toluene-d8 (S)	%	98	70-130	10/03/13 16:28	

LABORATORY CONTROL SAMPLE: 1059378

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	48.5	97	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1090	109	70-130	
Benzene	ug/L	50	50.1	100	70-130	
Diisopropyl ether	ug/L	50	55.8	112	70-130	
Ethanol	ug/L	2000	2350	117	70-130	
Ethyl-tert-butyl ether	ug/L	100	96.2	96	70-130	
Ethylbenzene	ug/L	50	48.1	96	70-130	
m&p-Xylene	ug/L	100	98.5	98	70-130	
Methyl-tert-butyl ether	ug/L	50	54.4	109	70-130	
Naphthalene	ug/L	50	55.1	110	70-130	
o-Xylene	ug/L	50	51.1	102	70-130	
tert-Amyl Alcohol	ug/L	1000	1120	112	70-130	
tert-Amylmethyl ether	ug/L	100	109	109	70-130	
tert-Butyl Alcohol	ug/L	500	552	110	70-130	
tert-Butyl Formate	ug/L	400	426	107	70-130	
Toluene	ug/L	50	49.0	98	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

LABORATORY CONTROL SAMPLE: 1059378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059379 1059380

Parameter	Units	92174452001		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
		Result	Conc	Spike Conc	Spike Conc	MS Result	MSD Result				RPD	RPD	
1,2-Dichloroethane	ug/L	ND	50	50	50	54.9	54.3	109	108	70-130	1	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1000	1200	1180	120	118	70-130	2	30	
Benzene	ug/L	ND	50	50	50	58.8	58.3	118	117	70-130	1	30	
Diisopropyl ether	ug/L	ND	50	50	50	62.2	61.3	124	123	70-130	2	30	
Ethanol	ug/L	ND	2000	2000	2000	2240	2260	112	113	70-130	1	30	
Ethyl-tert-butyl ether	ug/L	ND	100	100	100	112	112	112	112	70-130	0	30	
Ethylbenzene	ug/L	ND	50	50	50	56.4	56.7	113	113	70-130	0	30	
m&p-Xylene	ug/L	ND	100	100	100	118	119	118	118	70-130	0	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	50	60.2	60.1	120	120	70-130	0	30	
Naphthalene	ug/L	ND	50	50	50	54.7	54.1	108	107	70-130	1	30	
o-Xylene	ug/L	ND	50	50	50	64.8	64.4	129	129	70-130	1	30	
tert-Amyl Alcohol	ug/L	ND	1000	1000	1000	1220	1200	122	120	70-130	1	30	
tert-Amylmethyl ether	ug/L	ND	100	100	100	131	131	131	131	70-130	0	30	M1
tert-Butyl Alcohol	ug/L	ND	500	500	500	981	962	196	192	70-130	2	30	M1
tert-Butyl Formate	ug/L	ND	400	400	400	41.4J	41.6J	10	10	70-130			P5
Toluene	ug/L	ND	50	50	50	58.2	58.3	116	116	70-130	0	30	
1,2-Dichloroethane-d4 (S)	%							98	97	70-130			
4-Bromofluorobenzene (S)	%							102	102	70-130			
Toluene-d8 (S)	%							101	101	70-130			

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

QC Batch: MSV/24465 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174452004, 92174452005, 92174452006, 92174452007, 92174452008, 92174452009, 92174452010

METHOD BLANK: 1059522 Matrix: Water

Associated Lab Samples: 92174452004, 92174452005, 92174452006, 92174452007, 92174452008, 92174452009, 92174452010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 16:44	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 16:44	
Benzene	ug/L	ND	5.0	10/03/13 16:44	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 16:44	
Ethanol	ug/L	ND	200	10/03/13 16:44	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 16:44	
Ethylbenzene	ug/L	ND	5.0	10/03/13 16:44	
m&p-Xylene	ug/L	ND	10.0	10/03/13 16:44	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 16:44	
Naphthalene	ug/L	ND	5.0	10/03/13 16:44	
o-Xylene	ug/L	ND	5.0	10/03/13 16:44	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 16:44	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 16:44	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 16:44	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 16:44	
Toluene	ug/L	ND	5.0	10/03/13 16:44	
Xylene (Total)	ug/L	ND	10.0	10/03/13 16:44	
1,2-Dichloroethane-d4 (S)	%	100	70-130	10/03/13 16:44	
4-Bromofluorobenzene (S)	%	101	70-130	10/03/13 16:44	
Toluene-d8 (S)	%	98	70-130	10/03/13 16:44	

LABORATORY CONTROL SAMPLE: 1059523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	48.5	97	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1090	109	70-130	
Benzene	ug/L	50	50.1	100	70-130	
Diisopropyl ether	ug/L	50	55.8	112	70-130	
Ethanol	ug/L	2000	2350	117	70-130	
Ethyl-tert-butyl ether	ug/L	100	96.2	96	70-130	
Ethylbenzene	ug/L	50	48.1	96	70-130	
m&p-Xylene	ug/L	100	98.5	98	70-130	
Methyl-tert-butyl ether	ug/L	50	54.4	109	70-130	
Naphthalene	ug/L	50	55.1	110	70-130	
o-Xylene	ug/L	50	51.1	102	70-130	
tert-Amyl Alcohol	ug/L	1000	1120	112	70-130	
tert-Amylmethyl ether	ug/L	100	109	109	70-130	
tert-Butyl Alcohol	ug/L	500	552	110	70-130	
tert-Butyl Formate	ug/L	400	426	107	70-130	
Toluene	ug/L	50	49.0	98	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

LABORATORY CONTROL SAMPLE: 1059523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059524 1059525

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
		92174452004 Result	Spike Conc.	Spike Conc.	RPD						RPD		
1,2-Dichloroethane	ug/L	ND	50	50	53.2	55.0	106	110	70-130	3	30		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1140	1190	114	119	70-130	5	30		
Benzene	ug/L	ND	50	50	57.2	59.0	114	118	70-130	3	30		
Diisopropyl ether	ug/L	ND	50	50	60.8	61.8	122	124	70-130	2	30		
Ethanol	ug/L	ND	2000	2000	2300	2180	115	109	70-130	5	30		
Ethyl-tert-butyl ether	ug/L	ND	100	100	109	111	109	111	70-130	2	30		
Ethylbenzene	ug/L	ND	50	50	54.8	57.1	110	114	70-130	4	30		
m&p-Xylene	ug/L	ND	100	100	115	120	115	120	70-130	4	30		
Methyl-tert-butyl ether	ug/L	ND	50	50	58.7	59.6	117	119	70-130	2	30		
Naphthalene	ug/L	ND	50	50	51.8	53.4	104	107	70-130	3	30		
o-Xylene	ug/L	ND	50	50	62.0	65.3	124	131	70-130	5	30 M1		
tert-Amyl Alcohol	ug/L	ND	1000	1000	1180	1210	118	121	70-130	3	30		
tert-Amylmethyl ether	ug/L	ND	100	100	129	130	129	130	70-130	1	30		
tert-Butyl Alcohol	ug/L	ND	500	500	939	962	188	192	70-130	2	30 M1		
tert-Butyl Formate	ug/L	ND	400	400	43.7J	42.5J	11	11	70-130		30 P5		
Toluene	ug/L	ND	50	50	57.9	59.9	114	118	70-130	3	30		
1,2-Dichloroethane-d4 (S)	%						98	97	70-130				
4-Bromofluorobenzene (S)	%						100	102	70-130				
Toluene-d8 (S)	%						101	101	70-130				

**REPORT OF LABORATORY ANALYSIS**

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 9800 Kinsey Ave Suite 100  
 Huntersville, NC 28078  
 (704)875-9092

**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

QC Batch: OEXT/24088 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92174452001, 92174452002

METHOD BLANK: 1059083 Matrix: Water  
 Associated Lab Samples: 92174452001, 92174452002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/04/13 06:05	
1-Chloro-2-bromopropane (S)	%	109	60-140	10/04/13 06:05	

LABORATORY CONTROL SAMPLE & LCSD: 1059084 1059085

Parameter	Units	Spike Conc	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	29	0.29	0.28	100	100	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				107	107	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059086 1059087

Parameter	Units	92174447006 Result	MS Spike Conc	MSD Spike Conc	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.29	.29	0.29	0.29	100	102	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						107	108	60-140			

SAMPLE DUPLICATE: 1059088

Parameter	Units	92174447007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	111	112	0		

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

QC Batch: OEXT/24123 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92174452003, 92174452004, 92174452005, 92174452006, 92174452007, 92174452008, 92174452009,  
 92174452010, 92174452011, 92174452012, 92174452013, 92174452014, 92174452015, 92174452016,  
 92174452017, 92174452018, 92174452019, 92174452020, 92174452021, 92174452022

METHOD BLANK: 1060729 Matrix: Water  
 Associated Lab Samples: 92174452003, 92174452004, 92174452005, 92174452006, 92174452007, 92174452008, 92174452009,  
 92174452010, 92174452011, 92174452012, 92174452013, 92174452014, 92174452015, 92174452016,  
 92174452017, 92174452018, 92174452019, 92174452020, 92174452021, 92174452022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/04/13 21:10	
1-Chloro-2-bromopropane (S)	%	101	60-140	10/04/13 21:10	

LABORATORY CONTROL SAMPLE & LCSD: 1060730 1060731

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.25	0.24	86	84	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				104	100	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1060732 1060733

Parameter	Units	92174452005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.25	0.25	88	90	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						106	109	60-140			

SAMPLE DUPLICATE: 1060734

Parameter	Units	92174452006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	102	104	2		

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174452

QC Batch: OEXT/24124 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92174452023, 92174452024, 92174452025, 92174452026

METHOD BLANK: 1060779 Matrix: Water  
 Associated Lab Samples: 92174452023, 92174452024, 92174452025, 92174452026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/05/13 18:38	
1-Chloro-2-bromopropane (S)	%	103	60-140	10/05/13 18:38	

LABORATORY CONTROL SAMPLE & LCSD: 1060780 1060781

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.24	0.23	84	80	60-140	5	20	
1-Chloro-2-bromopropane (S)	%				103	103	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1060782 1060783

Parameter	Units	92174627001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.25	0.26	88	92	60-140	4	20	
1-Chloro-2-bromopropane (S)	%						98	106	60-140			

SAMPLE DUPLICATE: 1060784

Parameter	Units	92174627002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	97	105	9		

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## QUALIFIERS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174452

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

p5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92174452001	07960-TW9	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174452002	07960-TW6	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174452003	07960-MW16	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452004	07960-MW19	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452005	07960-MW23	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452006	07960-TW8	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452007	07960-TW7	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452008	07960-MW17	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452009	07960-MW15	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452010	07960-MW18	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452011	07960-WSW2	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452012	07960-WSW1 PRE GAC	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452013	07960-WSW1 POST GAC	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452014	07960-WSW8 PRE GAC	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452015	07960-WSW8 POST GAC	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452016	07960-WSW9	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452017	07960-WSW15	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452018	07960-WSW14	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452019	07960-WSW13	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452020	07960-WSW12	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452021	07960-WSW11	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452022	07960-WSW10	EPA 8011	OEXT/24123	EPA 8011	GCSV/15683
92174452023	07960-WSW7	EPA 8011	OEXT/24124	EPA 8011	GCSV/15684
92174452024	07960-WSW3	EPA 8011	OEXT/24124	EPA 8011	GCSV/15684
92174452025	07560-FIELD BLANK 1	EPA 8011	OEXT/24124	EPA 8011	GCSV/15684
92174452026	TRIP BLANK	EPA 8011	OEXT/24124	EPA 8011	GCSV/15684
92174452011	07960-WSW2	EPA 8260	MSV/24456		
92174452012	07960-WSW1 PRE GAC	EPA 8260	MSV/24456		
92174452013	07960-WSW1 POST GAC	EPA 8260	MSV/24456		
92174452014	07960-WSW8 PRE GAC	EPA 8260	MSV/24456		
92174452015	07960-WSW8 POST GAC	EPA 8260	MSV/24456		
92174452016	07960-WSW9	EPA 8260	MSV/24457		
92174452017	07960-WSW15	EPA 8260	MSV/24457		
92174452018	07960-WSW14	EPA 8260	MSV/24457		
92174452019	07960-WSW13	EPA 8260	MSV/24457		
92174452020	07960-WSW12	EPA 8260	MSV/24457		
92174452021	07960-WSW11	EPA 8260	MSV/24457		
92174452022	07960-WSW10	EPA 8260	MSV/24457		
92174452023	07960-WSW7	EPA 8260	MSV/24457		
92174452024	07960-WSW3	EPA 8260	MSV/24457		
92174452001	07960-TW9	EPA 8260	MSV/24462		
92174452002	07960-TW6	EPA 8260	MSV/24462		
92174452003	07960-MW16	EPA 8260	MSV/24462		
92174452004	07960-MW19	EPA 8260	MSV/24465		
92174452005	07960-MW23	EPA 8260	MSV/24465		
92174452006	07960-TW8	EPA 8260	MSV/24465		

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

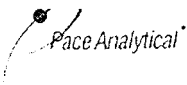
Project: 378 Truck Stop 14-214210

Pace Project No.: 92174452

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92174452007	07960-TW7	EPA 8260	MSV/24465		
92174452008	07960-MW17	EPA 8260	MSV/24465		
92174452009	07960-MW15	EPA 8260	MSV/24465		
92174452010	07960-MW18	EPA 8260	MSV/24465		
92174452025	07560-FIELD BLANK 1	EPA 8260	MSV/24453		
92174452026	TRIP BLANK	EPA 8260	MSV/24453		

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Sample Condition Upon Receipt (SCUR)

Document Number:  
F-CHR-CS-03-rev.11

Issuing Authority:  
Pace Huntersville Quality Office

Client Name: FCU

Where Received:  Huntersville  Asheville  Eden  Raleigh

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Page Other \_\_\_\_\_

Optional  
Proj. Due Date  
Proj. Name

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1102 T1301 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 1.7 C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: SM (10/3/11)

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16. <u>no date/time on blank &amp; etc</u>
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<u>(10/3/11)</u>
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review: AMB Date: 10-2-12  
SRF Review: JS Date: 10/2/13

WO#: 92174452



Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
Required Client Information:

Company: **ECS**  
Address: **1324 S PANT BELL**  
City: **CHICAGO IL**  
State: **IL**  
Zip: **60608**  
Phone: **708-583-2174**  
Fax: **708-583-2174**  
Requested Due Date/TAT: **5-DAY**

**Section B**  
Report Project Information

Report To: **NOELLE FRANCE**  
Copy To: **NOELLE FRANCE**  
Purchase Order No.: **14-214210**  
Project Name: **378 TRUCK STOP**  
Project Number: **14-214210**

**Section C**  
Invoice Information:

Attention: **ACCOUNTING**  
Company Name: **ECS**  
Address: **ACAMPAN MA**  
City: **ACAMPAN MA**  
State: **MA**  
Zip: **01001**  
Reference: **LEVIN HERRIN**

Page: **1** of **5**  
Invoice No: **1005501**

REGULATORY AGENCY: **INDDES GROUND WATER DRINKING WATER**

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information	Matrix Codes MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Residual Chlorine (Y/N)	Pace Project No/ Lab I.D.
				COMPOSITE START	COMPOSITE END/STOP			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>			
1	07960 - TW 9	WTG	WTG	9/30	1320	6	X									001
2	07960 - TW 6				1450											002
3	07960 - MW 16				1440											003
4	07960 - MW 19				1610											004
5	07960 - MW 23				1640											005
6	07960 - TW 8				1650											006
7	07960 - TW 7				1750											007
8	07960 - MW 12				1730											008
9	07960 - MW 15				1740											009
10	07960 - MW 18				1900											010
11	07960 - WSW 2				1535											011
12	07960 - WSW 1 GRAB				1600											012

ADDITIONAL COMMENTS: **Report 5 values**

RELINQUISHED BY / AFFILIATION: **Olga Adams ECS** DATE: **10/2/13** TIME: **730**

ACCEPTED BY / AFFILIATION: **ECS OFFICE** DATE: **10/2/13** TIME: **730**

SAMPLER NAME AND SIGNATURE: **PHILIPPA PACE** DATE SIGNED: **10/2/13**

PRINT Name of SAMPLER: **PHILIPPA PACE** SIGNATURE of SAMPLER: **Philippa Pace**

DATE SIGNED (MM/DD/YYYY): **10/1/13**

Received on ice (Y/N): **Y** Custody Sealed Cooler (Y/N): **Y** Samples Intact (Y/N): **Y**



### CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page 2 of 3  
1686805

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: <u>ECS</u>		Report To: <u>Noelle France</u>		Attention: <u>Accounting</u>	
Address: <u>12507 S Grant Blvd</u>		Copy To:		Company Name: <u>ECS</u>	
<u>Capitol Hill, DC</u>		Purchase Order No.: <u>14-214210</u>		Address: <u>ACQUANUM MA</u>	
Email To: <u>Finance@ECS.com</u>		Project Name: <u>328 Main St</u>		Pace Quote Reference:	
Phone: <u>703-583-2700</u> Fax:		Project Number: <u>14-214210</u>		Pace Project Manager: <u>Kevin Hastings</u>	
Requested Due Date/TAT: <u>5:00 PM</u>				Pace Profile #:	
				REGULATORY AGENCY	
				NPDES GROUND WATER DRINKING WATER	
				<input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	
				Site Location	
				STATE: <u>SC</u>	

ITEM #	SAMPLE ID (A-Z, 0-9 / -)	Matrix Codes MATRIX CODE	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test Y/N	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
			DATE	TIME	DATE	TIME			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>	Methanol	Other			
1	07960-WSW 1 Post GAC	WTG			9/30	1605	6				X								013
2	07960-WSW 8 PRE GAC					1630													014
3	07960-WSW 8 Post GAC					1635													015
4	07960-WSW 9					1655													016
5	07960-WSW 15					1709													017
6	07960-WSW 14					1721													018
7	07960-WSW 13					1737													019
8	07960-WSW 12					1755													020
9	07960-WSW 11					1801													021
10	07960-WSW 10					1815													022
11	07960-WSW 7					1829													023
12	07960-WSW 3					1845													024

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Report 5 values	Phil Cole / ECS	10/1/13	730	ECS OFFICE	10/2/13	730	
	ECS OFFICE	10/2/13	1340	Jonathan PACE	10/2/13	1340	
	J. Guenther / PACE	10/2/13	1600	Jon	10/2/13	1600	10/2/13

SAMPLER NAME AND SIGNATURE		Temperature	Received on Ice (Y/N)	Custody Sealed/ Collet (Y/N)	Samples intact (Y/N)
PRINT Name of SAMPLER: <u>Phil Cole / PACE Williamson</u>	DATE Signed (MM/DD/YYYY): <u>10/1/13</u>				
SIGNATURE of SAMPLER: <u>Phil Cole</u>					

\* Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. P-ALL-CO-020rev.07, 15-May-2007

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 3 of 3  
Invoice Number: 666884

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: <u>EGS</u>	Report To: <u>Mulle ENAVES</u>	Attention: <u>Accounting</u>	Company Name: <u>EGS</u>	REGULATORY AGENCY: <u>NPDES</u>	GROUND WATER: <u>ORCA</u>
Address: <u>1329 S. POINT BLVD</u>	Copy To: <u>EGS</u>	Address: <u>AGAWAM MA</u>	Address: <u>AGAWAM MA</u>	DRINKING WATER: <u>DR</u>	OTHER: <u>DR</u>
<u>CHARLOTTE NC</u>	Purchase Order No.: <u>19-21726</u>	Page Order: <u>Kevin Higgins</u>	Reference: <u>Kevin Higgins</u>	Site Location: <u>DR</u>	STATE: <u>DR</u>
Employee: <u>CHRYSTAL BEESEKANSUBHIC</u>	Project Name: <u>378 Mule Skp</u>	Pace Project Manager: <u>Kevin Higgins</u>	Pace Profile #:	Requested Analysis Filtered (Y/N):	Residual Chlorine (Y/N):
Phone: <u>704-585-2711</u>	Project Number: <u>19-21726</u>	Requested Due Date/TAT: <u>5-DAY</u>			<u>92174452</u>

ITEM #	Section D Required Client Information	Matrix Codes MATRIX CODE	MATERIAL CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Sample Conditions
				COMPOSITE START	COMPOSITE END/GRAB			H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol				
1	OTBIC Field BEAK 1	WT	WT	DATE	TIME	DATE	TIME										
2	TWP BEAK	WT	WT	DATE	TIME	DATE	TIME										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

**ADDITIONAL COMMENTS**  
Request to values

**RELINQUISHED BY / AFFILIATION**  
Chloride / EGS

**DATE**  
10/21/13

**TIME**  
730

**ACCEPTED BY / AFFILIATION**  
EGS OFFICE

**DATE**  
10/21/13

**TIME**  
730

**SAMPLER NAME AND SIGNATURE**  
PRINT Name of SAMPLER: Cheryl Pate  
SIGNATURE of SAMPLER: Cheryl Pate

**DATE Signed (MM/DD/YY)**  
10/1/13

**Received on Ice (Y/N)**  
Y

**Custody Sealed Cooler (Y/N)**  
Y

**Samples Intact (Y/N)**  
Y





Pace Analytical Services, Inc.  
205 East Meadow Road - Suite A  
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Pace Analytical Services, Inc.  
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(828)254-7176

Pace Analytical Services, Inc.  
9800 Kincey Ave Suite 100  
Huntersville, NC 28078  
(704)875-9092

October 09, 2013

Noelle France  
Environmental Compliance Servi  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174447

Dear Noelle France:


Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

This report was revised 10/9/13 to correct a sample ID error.

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

Sincerely,

  
Kevin Herring

kevin.herring@pacelabs.com  
Project Manager

Enclosures



### REPORT OF LABORATORY ANALYSIS

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### CERTIFICATIONS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

---

#### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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### SAMPLE SUMMARY

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174447

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92174447001	07960-MW-13	Water	10/01/13 09:45	10/02/13 16:00
92174447002	07960-WSW-4	Water	10/01/13 08:51	10/02/13 16:00
92174447003	07960-WSW-5	Water	10/01/13 09:09	10/02/13 16:00
92174447004	07960-WSW-6	Water	10/01/13 09:21	10/02/13 16:00
92174447005	07960-MW-26	Water	10/01/13 11:31	10/02/13 16:00
92174447006	07960-FB-2	Water	10/01/13 12:10	10/02/13 16:00
92174447007	07960-MW-31	Water	10/01/13 11:41	10/02/13 16:00
92174447008	07960-MW-25	Water	10/01/13 11:57	10/02/13 16:00
92174447009	07960-MW-24	Water	10/01/13 11:15	10/02/13 16:00
92174447010	07960-MW-11	Water	10/01/13 12:41	10/02/13 16:00
92174447011	07960-MW-14	Water	10/01/13 12:53	10/02/13 16:00
92174447012	07960-MW-7	Water	10/01/13 13:31	10/02/13 16:00
92174447013	07960-MW-27	Water	10/01/13 14:47	10/02/13 16:00
92174447014	07960-MW-29	Water	10/01/13 14:29	10/02/13 16:00
92174447015	07960-MW-2	Water	10/01/13 14:13	10/02/13 16:00
92174447016	07960-MW-6	Water	10/01/13 15:21	10/02/13 16:00
92174447017	07960-MW-21	Water	10/01/13 15:37	10/02/13 16:00
92174447018	07960-DUPLICATE 2	Water	10/01/13 00:00	10/02/13 16:00
92174447019	TRIP BLANK	Water	10/01/13 00:00	10/02/13 16:00

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**SAMPLE ANALYTE COUNT**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92174447001	07960-MW-13	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447002	07960-WSW-4	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447003	07960-WSW-5	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447004	07960-WSW-6	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447005	07960-MW-26	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447006	07960-FB-2	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447007	07960-MW-31	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447008	07960-MW-25	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447009	07960-MW-24	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447010	07960-MW-11	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447011	07960-MW-14	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447012	07960-MW-7	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447013	07960-MW-27	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447014	07960-MW-29	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447015	07960-MW-2	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447016	07960-MW-6	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447017	07960-MW-21	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447018	07960-DUPLICATE 2	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174447019	TRIP BLANK	EPA 8011	EJK	2	PASI-C

**REPORT OF LABORATORY ANALYSIS**

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### SAMPLE ANALYTE COUNT

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174447

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	MCK	20	PASI-C

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Sample: 07960-MW-13 Lab ID: 92174447001 Collected: 10/01/13 09:45 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 05:24	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	113	%	60-140		1	10/03/13 12:59	10/04/13 05:24	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	1260	ug/L	200	154	2		10/03/13 19:38	75-85-4	
tert-Amylmethyl ether	ND	ug/L	20.0	6.8	2		10/03/13 19:38	994-05-8	
Benzene	533	ug/L	50.0	17.0	10		10/04/13 17:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	200	64.2	2		10/03/13 19:38	624-95-3	
tert-Butyl Alcohol	147J	ug/L	200	115	2		10/03/13 19:38	75-65-0	
tert-Butyl Formate	ND	ug/L	100	14.6	2		10/03/13 19:38	762-75-4	
1,2-Dichloroethane	38.9	ug/L	10.0	3.6	2		10/03/13 19:38	107-06-2	
Diisopropyl ether	ND	ug/L	10.0	3.4	2		10/03/13 19:38	108-20-3	
Ethanol	ND	ug/L	400	276	2		10/03/13 19:38	64-17-5	
Ethylbenzene	22.8	ug/L	10.0	3.2	2		10/03/13 19:38	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	20.0	7.2	2		10/03/13 19:38	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	10.0	3.4	2		10/03/13 19:38	1634-04-4	
Naphthalene	53.3	ug/L	10.0	4.0	2		10/03/13 19:38	91-20-3	
Toluene	25.1	ug/L	10.0	3.2	2		10/03/13 19:38	108-88-3	
Xylene (Total)	139	ug/L	20.0	5.4	2		10/03/13 19:38	1330-20-7	
m&p-Xylene	108	ug/L	20.0	6.2	2		10/03/13 19:38	179601-23-1	
o-Xylene	31.2	ug/L	10.0	3.2	2		10/03/13 19:38	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		2		10/03/13 19:38	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		2		10/03/13 19:38	17060-07-0	
Toluene-d8 (S)	99	%	70-130		2		10/03/13 19:38	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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 9800 Kincey Ave. Suite 100  
 Huntersville, NC 28078  
 (704)875-9092

**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-WSW-4 Lab ID: 92174447002 Collected: 10/01/13 08:51 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:19	10/04/13 07:06	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/03/13 13:19	10/04/13 07:06	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 17:11	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 17:11	994-05-8	M1
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 17:11	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 17:11	624-95-3	
tert-Butyl Alcohol	31.5J	ug/L	100	3.6	1		10/03/13 17:11	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 17:11	762-75-4	P5
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 17:11	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 17:11	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 17:11	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 17:11	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 17:11	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 17:11	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 17:11	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 17:11	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 17:11	1330-20-7	MS
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 17:11	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 17:11	95-47-6	M1
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 17:11	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		10/03/13 17:11	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/03/13 17:11	2037-26-5	

**REPORT OF LABORATORY ANALYSIS**

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Sample: 07960-WSW-5 Lab ID: 92174447003 Collected: 10/01/13 09:09 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 07:26	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/03/13 13:20	10/04/13 07:26	301-79-56	
<b>8260 MSV Low Level SC</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		10/03/13 17:27	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		10/03/13 17:27	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		10/03/13 17:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		10/03/13 17:27	624-95-3	
tert-Butyl Alcohol	30.2J	ug/L	100	3.6	1		10/03/13 17:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		10/03/13 17:27	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		10/03/13 17:27	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		10/03/13 17:27	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		10/03/13 17:27	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		10/03/13 17:27	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		10/03/13 17:27	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		10/03/13 17:27	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		10/03/13 17:27	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		10/03/13 17:27	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		10/03/13 17:27	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		10/03/13 17:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		10/03/13 17:27	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 17:27	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/03/13 17:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 17:27	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-WSW-6 Lab ID: 92174447004 Collected: 10/01/13 09:21 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/03/13 13:20	10/04/13 07:46	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	78 %		60-140		1	10/03/13 13:20	10/04/13 07:46	301-79-56	
<b>8260 MSV Low Level SC</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	50.0	1		10/03/13 17:43	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	0.10	1		10/03/13 17:43	994-05-8	
Benzene	ND ug/L		1.0	0.25	1		10/03/13 17:43	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	50.0	1		10/03/13 17:43	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	3.6	1		10/03/13 17:43	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	1.9	1		10/03/13 17:43	762-75-4	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		10/03/13 17:43	107-06-2	
Diisopropyl ether	ND ug/L		1.0	0.12	1		10/03/13 17:43	108-20-3	
Ethanol	ND ug/L		200	33.0	1		10/03/13 17:43	64-17-5	
Ethylbenzene	ND ug/L		1.0	0.30	1		10/03/13 17:43	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	0.070	1		10/03/13 17:43	637-92-3	
Methyl-tert-butyl ether	ND ug/L		1.0	0.21	1		10/03/13 17:43	1634-04-4	
Naphthalene	ND ug/L		1.0	0.24	1		10/03/13 17:43	91-20-3	
Toluene	ND ug/L		1.0	0.26	1		10/03/13 17:43	108-88-3	
Xylene (Total)	ND ug/L		2.0	0.66	1		10/03/13 17:43	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		10/03/13 17:43	179601-23-1	
o-Xylene	ND ug/L		1.0	0.23	1		10/03/13 17:43	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		10/03/13 17:43	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		70-130		1		10/03/13 17:43	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		10/03/13 17:43	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-MW-26 Lab ID: 92174447005 Collected: 10/01/13 11:31 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/03/13 13:20	10/04/13 08:06	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105 %		60-140		1	10/03/13 13:20	10/04/13 08:06	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/04/13 08:17	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/04/13 08:17	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		10/04/13 08:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/04/13 08:17	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/04/13 08:17	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/04/13 08:17	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/04/13 08:17	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/04/13 08:17	108-20-3	
Ethanol	ND ug/L		200	138	1		10/04/13 08:17	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/04/13 08:17	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/04/13 08:17	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/04/13 08:17	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		10/04/13 08:17	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		10/04/13 08:17	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/04/13 08:17	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/04/13 08:17	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/04/13 08:17	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		1		10/04/13 08:17	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		10/04/13 08:17	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		10/04/13 08:17	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Sample: 07960-FB-2 Lab ID: 92174447006 Collected: 10/01/13 12:10 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 08:27	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/03/13 13:20	10/04/13 08:27	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 12:38	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 12:38	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 12:38	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 12:38	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 12:38	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 12:38	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 12:38	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 12:38	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 12:38	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 12:38	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 12:38	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 12:38	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 12:38	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 12:38	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 12:38	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 12:38	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 12:38	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 12:38	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		10/03/13 12:38	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 12:38	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Sample: 07960-MW-31 Lab ID: 92174447007 Collected: 10/01/13 11:41 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 09:29	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	10/03/13 13:20	10/04/13 09:29	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	509	ug/L	100	76.8	1		10/04/13 08:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 08:34	994-05-8	
Benzene	321	ug/L	50.0	17.0	10		10/04/13 15:59	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 08:34	624-95-3	
tert-Butyl Alcohol	69.8J	ug/L	100	57.7	1		10/04/13 08:34	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 08:34	762-75-4	
1,2-Dichloroethane	45.6	ug/L	5.0	1.8	1		10/04/13 08:34	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 08:34	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 08:34	64-17-5	
Ethylbenzene	60.4	ug/L	5.0	1.6	1		10/04/13 08:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 08:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 08:34	1634-04-4	
Naphthalene	48.4	ug/L	5.0	2.0	1		10/04/13 08:34	91-20-3	
Toluene	54.8	ug/L	5.0	1.6	1		10/04/13 08:34	108-88-3	
Xylene (Total)	194	ug/L	10.0	2.7	1		10/04/13 08:34	1330-20-7	
m&p-Xylene	152	ug/L	10.0	3.1	1		10/04/13 08:34	179601-23-1	
o-Xylene	42.1	ug/L	5.0	1.6	1		10/04/13 08:34	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/04/13 08:34	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		10/04/13 08:34	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/04/13 08:34	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-MW-25 Lab ID: 92174447008 Collected: 10/01/13 11:57 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 10:10	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	10/03/13 13:20	10/04/13 10:10	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	136	ug/L	100	76.8	1		10/04/13 08:51	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 08:51	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 08:51	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 08:51	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 08:51	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 08:51	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 08:51	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 08:51	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 08:51	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 08:51	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 08:51	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 08:51	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 08:51	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 08:51	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 08:51	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 08:51	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 08:51	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/04/13 08:51	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		10/04/13 08:51	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/04/13 08:51	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-MW-24 Lab ID: 92174447009 Collected: 10/01/13 11:15 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/03/13 13:20	10/04/13 10:30	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105 %		60-140		1	10/03/13 13:20	10/04/13 10:30	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/03/13 19:54	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/03/13 19:54	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		10/03/13 19:54	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/03/13 19:54	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/03/13 19:54	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/03/13 19:54	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/03/13 19:54	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/03/13 19:54	108-20-3	
Ethanol	ND ug/L		200	138	1		10/03/13 19:54	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/03/13 19:54	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/03/13 19:54	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/03/13 19:54	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		10/03/13 19:54	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		10/03/13 19:54	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/03/13 19:54	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/03/13 19:54	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/03/13 19:54	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		70-130		1		10/03/13 19:54	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130		1		10/03/13 19:54	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		10/03/13 19:54	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Sample: 07960-MW-11 Lab ID: 92174447010 Collected: 10/01/13 12:41 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 10:51	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/03/13 13:20	10/04/13 10:51	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	266	ug/L	100	76.8	1		10/03/13 20:10	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 20:10	994-05-8	
Benzene	16.2	ug/L	5.0	1.7	1		10/03/13 20:10	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 20:10	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 20:10	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 20:10	762-75-4	
1,2-Dichloroethane	3.0J	ug/L	5.0	1.8	1		10/03/13 20:10	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 20:10	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 20:10	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 20:10	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 20:10	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 20:10	1634-04-4	
Naphthalene	2.1J	ug/L	5.0	2.0	1		10/03/13 20:10	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 20:10	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 20:10	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 20:10	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 20:10	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/03/13 20:10	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		10/03/13 20:10	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		10/03/13 20:10	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-MW-14 Lab ID: 92174447011 Collected: 10/01/13 12:53 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 11:11	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	10/03/13 13:20	10/04/13 11:11	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 20:26	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 20:26	994-05-8	
Benzene	3.3J	ug/L	5.0	1.7	1		10/03/13 20:26	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 20:26	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 20:26	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 20:26	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 20:26	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 20:26	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 20:26	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 20:26	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 20:26	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 20:26	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 20:26	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 20:26	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 20:26	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 20:26	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 20:26	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/03/13 20:26	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		10/03/13 20:26	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/03/13 20:26	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-MW-7 Lab ID: 92174447012 Collected: 10/01/13 13:31 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	7.6 ug/L		0.19	0.19	10	10/06/13 15:00	10/07/13 11:28	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	0 %		60-140		10	10/06/13 15:00	10/07/13 11:28	301-79-56	S4
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	6780 ug/L		200	154	2		10/03/13 20:42	75-85-4	
tert-Amylmethyl ether	ND ug/L		20.0	6.8	2		10/03/13 20:42	994-05-8	
Benzene	2100 ug/L		250	85.0	50		10/04/13 16:47	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		200	64.2	2		10/03/13 20:42	624-95-3	
tert-Butyl Alcohol	ND ug/L		200	115	2		10/03/13 20:42	75-65-0	
tert-Butyl Formate	ND ug/L		100	14.6	2		10/03/13 20:42	762-75-4	
1,2-Dichloroethane	123 ug/L		10.0	3.6	2		10/03/13 20:42	107-06-2	
Diisopropyl ether	ND ug/L		10.0	3.4	2		10/03/13 20:42	108-20-3	
Ethanol	ND ug/L		400	276	2		10/03/13 20:42	64-17-5	
Ethylbenzene	652 ug/L		250	80.0	50		10/04/13 16:47	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		20.0	7.2	2		10/03/13 20:42	637-92-3	
Methyl-tert-butyl ether	ND ug/L		10.0	3.4	2		10/03/13 20:42	1634-04-4	
Naphthalene	328 ug/L		10.0	4.0	2		10/03/13 20:42	91-20-3	
Toluene	32.0 ug/L		10.0	3.2	2		10/03/13 20:42	108-88-3	
Xylene (Total)	4120 ug/L		500	135	50		10/04/13 16:47	1330-20-7	
m&p-Xylene	2750 ug/L		500	155	50		10/04/13 16:47	179601-23-1	
o-Xylene	1370 ug/L		250	80.0	50		10/04/13 16:47	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		2		10/03/13 20:42	460-00-4	
1,2-Dichloroethane-d4 (S)	87 %		70-130		2		10/03/13 20:42	17060-07-0	
Toluene-d8 (S)	99 %		70-130		2		10/03/13 20:42	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Sample: 07960-MW-27 Lab ID: 92174447013 Collected: 10/01/13 14:47 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/03/13 13:20	10/04/13 11:52	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	104 %		60-140		1	10/03/13 13:20	10/04/13 11:52	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/03/13 20:58	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/03/13 20:58	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		10/03/13 20:58	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/03/13 20:58	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/03/13 20:58	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/03/13 20:58	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/03/13 20:58	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/03/13 20:58	108-20-3	
Ethanol	ND ug/L		200	138	1		10/03/13 20:58	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/03/13 20:58	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/03/13 20:58	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/03/13 20:58	1634-04-4	
Naphthalene	2.3J ug/L		5.0	2.0	1		10/03/13 20:58	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		10/03/13 20:58	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/03/13 20:58	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/03/13 20:58	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/03/13 20:58	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		10/03/13 20:58	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130		1		10/03/13 20:58	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		10/03/13 20:58	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-MW-29 Lab ID: 92174447014 Collected: 10/01/13 14:29 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 12:12	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	79	%	60-140		1	10/03/13 13:20	10/04/13 12:12	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	3620	ug/L	100	76.8	1		10/03/13 21:13	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 21:13	994-05-8	
Benzene	65.1	ug/L	5.0	1.7	1		10/03/13 21:13	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 21:13	624-95-3	
tert-Butyl Alcohol	408	ug/L	100	57.7	1		10/03/13 21:13	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 21:13	762-75-4	
1,2-Dichloroethane	20.5	ug/L	5.0	1.8	1		10/03/13 21:13	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 21:13	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 21:13	64-17-5	
Ethylbenzene	16.2	ug/L	5.0	1.6	1		10/03/13 21:13	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 21:13	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 21:13	1634-04-4	
Naphthalene	10.4	ug/L	5.0	2.0	1		10/03/13 21:13	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 21:13	108-88-3	
Xylene (Total)	54.0	ug/L	10.0	2.7	1		10/03/13 21:13	1330-20-7	
m&p-Xylene	29.6	ug/L	10.0	3.1	1		10/03/13 21:13	179601-23-1	
o-Xylene	24.4	ug/L	5.0	1.6	1		10/03/13 21:13	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 21:13	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		10/03/13 21:13	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/03/13 21:13	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-MW-2 Lab ID: 92174447015 Collected: 10/01/13 14:13 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 12:33	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	62	%	60-140		1	10/03/13 13:20	10/04/13 12:33	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	202	ug/L	100	76.8	1		10/03/13 21:29	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 21:29	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 21:29	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 21:29	624-95-3	
tert-Butyl Alcohol	422	ug/L	100	57.7	1		10/03/13 21:29	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 21:29	762-75-4	
1,2-Dichloroethane	26.7	ug/L	5.0	1.8	1		10/03/13 21:29	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 21:29	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 21:29	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 21:29	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 21:29	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 21:29	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 21:29	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 21:29	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 21:29	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 21:29	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 21:29	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/03/13 21:29	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		10/03/13 21:29	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 21:29	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-MW-6 Lab ID: 92174447016 Collected: 10/01/13 15:21 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/06/13 15:00	10/07/13 07:06	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	10/06/13 15:00	10/07/13 07:06	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 21:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 21:45	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 21:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 21:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 21:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 21:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 21:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 21:45	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 21:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 21:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 21:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 21:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 21:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 21:45	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 21:45	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 21:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 21:45	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/03/13 21:45	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		10/03/13 21:45	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		10/03/13 21:45	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Sample: 07960-MW-21 Lab ID: 92174447017 Collected: 10/01/13 15:37 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/03/13 13:20	10/04/13 13:14	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	102 %		60-140		1	10/03/13 13:20	10/04/13 13:14	301-79-56	
<b>8260 MSV</b>									
			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/03/13 22:01	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/03/13 22:01	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		10/03/13 22:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/03/13 22:01	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/03/13 22:01	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/03/13 22:01	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/03/13 22:01	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/03/13 22:01	108-20-3	
Ethanol	ND ug/L		200	138	1		10/03/13 22:01	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/03/13 22:01	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/03/13 22:01	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/03/13 22:01	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		10/03/13 22:01	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		10/03/13 22:01	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/03/13 22:01	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/03/13 22:01	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/03/13 22:01	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		70-130		1		10/03/13 22:01	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		70-130		1		10/03/13 22:01	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		10/03/13 22:01	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: 07960-DUPLICATE 2 Lab ID: 92174447018 Collected: 10/01/13 00:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 13:35	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	10/03/13 13:20	10/04/13 13:35	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	143	ug/L	100	76.8	1		10/03/13 22:17	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 22:17	994-05-8	
Benzene	95.9	ug/L	5.0	1.7	1		10/03/13 22:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 22:17	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 22:17	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 22:17	762-75-4	
1,2-Dichloroethane	9.6	ug/L	5.0	1.8	1		10/03/13 22:17	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 22:17	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 22:17	64-17-5	
Ethylbenzene	15.4	ug/L	5.0	1.6	1		10/03/13 22:17	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 22:17	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 22:17	1634-04-4	
Naphthalene	12.7	ug/L	5.0	2.0	1		10/03/13 22:17	91-20-3	
Toluene	44.2	ug/L	5.0	1.6	1		10/03/13 22:17	108-88-3	
Xylene (Total)	58.3	ug/L	10.0	2.7	1		10/03/13 22:17	1330-20-7	
m&p-Xylene	43.5	ug/L	10.0	3.1	1		10/03/13 22:17	179601-23-1	
o-Xylene	14.7	ug/L	5.0	1.6	1		10/03/13 22:17	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/03/13 22:17	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		10/03/13 22:17	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/03/13 22:17	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

Sample: TRIP BLANK Lab ID: 92174447019 Collected: 10/01/13 00:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 13:20	10/04/13 13:55	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	10/03/13 13:20	10/04/13 13:55	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 12:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 12:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 12:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 12:22	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 12:22	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 12:22	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 12:22	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 12:22	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 12:22	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 12:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 12:22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 12:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 12:22	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 12:22	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 12:22	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 12:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 12:22	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		10/03/13 12:22	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		10/03/13 12:22	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/03/13 12:22	2037-26-5	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

QC Batch: MSV/24456 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC  
 Associated Lab Samples: 92174447002, 92174447003, 92174447004

METHOD BLANK: 1059150 Matrix: Water

Associated Lab Samples: 92174447002, 92174447003, 92174447004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	10/03/13 12:05	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 12:05	
Benzene	ug/L	ND	1.0	10/03/13 12:05	
Diisopropyl ether	ug/L	ND	1.0	10/03/13 12:05	
Ethanol	ug/L	ND	200	10/03/13 12:05	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 12:05	
Ethylbenzene	ug/L	ND	1.0	10/03/13 12:05	
m&p-Xylene	ug/L	ND	2.0	10/03/13 12:05	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/03/13 12:05	
Naphthalene	ug/L	ND	1.0	10/03/13 12:05	
o-Xylene	ug/L	ND	1.0	10/03/13 12:05	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 12:05	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 12:05	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 12:05	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 12:05	
Toluene	ug/L	ND	1.0	10/03/13 12:05	
Xylene (Total)	ug/L	ND	2.0	10/03/13 12:05	
1,2-Dichloroethane-d4 (S)	%	98	70-130	10/03/13 12:05	
4-Bromofluorobenzene (S)	%	101	70-130	10/03/13 12:05	
Toluene-d8 (S)	%	100	70-130	10/03/13 12:05	

LABORATORY CONTROL SAMPLE: 1059151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	52.8	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	902	90	70-130	
Benzene	ug/L	50	54.4	109	70-130	
Diisopropyl ether	ug/L	50	58.6	117	70-130	
Ethanol	ug/L	2000	1550	78	70-130	
Ethyl-tert-butyl ether	ug/L	100	105	105	70-130	
Ethylbenzene	ug/L	50	53.6	107	70-130	
m&p-Xylene	ug/L	100	112	112	70-130	
Methyl-tert-butyl ether	ug/L	50	58.1	116	70-130	
Naphthalene	ug/L	50	53.6	107	70-130	
o-Xylene	ug/L	50	59.8	120	70-130	
tert-Amyl Alcohol	ug/L	1000	887	89	70-130	
tert-Amylmethyl ether	ug/L	100	118	118	70-130	
tert-Butyl Alcohol	ug/L	500	468	94	70-130	
tert-Butyl Formate	ug/L	400	404	101	70-130	
Toluene	ug/L	50	52.7	105	70-130	
Xylene (Total)	ug/L	150	171	114	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

LABORATORY CONTROL SAMPLE: 1059151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059152 1059153

Parameter	Units	92174447002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
1,2-Dichloroethane	ug/L	ND	50	50	54.1	56.2	108	112	70-130	4	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1160	1230	116	123	70-130	6	30	
Benzene	ug/L	ND	50	50	57.6	60.2	115	120	70-130	4	30	
Diisopropyl ether	ug/L	ND	50	50	60.5	63.5	121	127	70-130	5	30	
Ethanol	ug/L	ND	2000	2000	2210	2240	110	112	70-130	1	30	
Ethyl-tert-butyl ether	ug/L	ND	100	100	109	114	109	114	70-130	5	30	
Ethylbenzene	ug/L	ND	50	50	55.9	57.3	112	115	70-130	2	30	
m&p-Xylene	ug/L	ND	100	100	117	120	117	120	70-130	3	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	58.3	61.5	117	123	70-130	5	30	
Naphthalene	ug/L	ND	50	50	52.3	55.8	105	112	70-130	6	30	
o-Xylene	ug/L	ND	50	50	63.1	65.6	126	131	70-130	4	30	M1
tert-Amyl Alcohol	ug/L	ND	1000	1000	1190	1260	119	126	70-130	6	30	
tert-Amylmethyl ether	ug/L	ND	100	100	129	134	129	134	70-130	4	30	M1
tert-Butyl Alcohol	ug/L	31.5J	500	500	928	1010	179	196	70-130	9	30	M1
tert-Butyl Formate	ug/L	ND	400	400	51.5	48.2J	13	12	70-130			P5
Toluene	ug/L	ND	50	50	56.8	59.4	114	119	70-130	4	30	
1,2-Dichloroethane-d4 (S)	%						97	97	70-130			
4-Bromofluorobenzene (S)	%						102	101	70-130			
Toluene-d8 (S)	%						102	101	70-130			

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

QC Batch: MSV/24453 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174447006, 92174447019

METHOD BLANK: 1059091 Matrix: Water

Associated Lab Samples: 92174447006, 92174447019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 11:49	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 11:49	
Benzene	ug/L	ND	5.0	10/03/13 11:49	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 11:49	
Ethanol	ug/L	ND	200	10/03/13 11:49	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 11:49	
Ethylbenzene	ug/L	ND	5.0	10/03/13 11:49	
m&p-Xylene	ug/L	ND	10.0	10/03/13 11:49	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 11:49	
Naphthalene	ug/L	ND	5.0	10/03/13 11:49	
o-Xylene	ug/L	ND	5.0	10/03/13 11:49	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 11:49	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 11:49	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 11:49	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 11:49	
Toluene	ug/L	ND	5.0	10/03/13 11:49	
Xylene (Total)	ug/L	ND	10.0	10/03/13 11:49	
1,2-Dichloroethane-d4 (S)	%	97	70-130	10/03/13 11:49	
4-Bromofluorobenzene (S)	%	99	70-130	10/03/13 11:49	
Toluene-d8 (S)	%	100	70-130	10/03/13 11:49	

LABORATORY CONTROL SAMPLE: 1059092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	53.1	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	912	91	70-130	
Benzene	ug/L	50	54.4	109	70-130	
Diisopropyl ether	ug/L	50	59.4	119	70-130	
Ethanol	ug/L	2000	1520	76	70-130	
Ethyl-tert-butyl ether	ug/L	100	104	104	70-130	
Ethylbenzene	ug/L	50	54.0	108	70-130	
m&p-Xylene	ug/L	100	112	112	70-130	
Methyl-tert-butyl ether	ug/L	50	58.1	116	70-130	
Naphthalene	ug/L	50	54.0	108	70-130	
o-Xylene	ug/L	50	60.0	120	70-130	
tert-Amyl Alcohol	ug/L	1000	898	90	70-130	
tert-Amylmethyl ether	ug/L	100	117	117	70-130	
tert-Butyl Alcohol	ug/L	500	476	95	70-130	
tert-Butyl Formate	ug/L	400	407	102	70-130	
Toluene	ug/L	50	53.1	106	70-130	
Xylene (Total)	ug/L	150	172	115	70-130	

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### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174447

LABORATORY CONTROL SAMPLE: 1059092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

QC Batch: MSV/24459 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174447005, 92174447007, 92174447008

METHOD BLANK: 1059285 Matrix: Water  
 Associated Lab Samples: 92174447005, 92174447007, 92174447008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 22:49	
3,3-Dimethyl-1-Butanol	ug/L	84.6J	100	10/03/13 22:49	
Benzene	ug/L	ND	5.0	10/03/13 22:49	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 22:49	
Ethanol	ug/L	ND	200	10/03/13 22:49	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 22:49	
Ethylbenzene	ug/L	ND	5.0	10/03/13 22:49	
m&p-Xylene	ug/L	ND	10.0	10/03/13 22:49	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 22:49	
Naphthalene	ug/L	ND	5.0	10/03/13 22:49	
o-Xylene	ug/L	ND	5.0	10/03/13 22:49	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 22:49	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 22:49	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 22:49	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 22:49	
Toluene	ug/L	ND	5.0	10/03/13 22:49	
Xylene (Total)	ug/L	ND	10.0	10/03/13 22:49	
1,2-Dichloroethane-d4 (S)	%	101	70-130	10/03/13 22:49	
4-Bromofluorobenzene (S)	%	100	70-130	10/03/13 22:49	
Toluene-d8 (S)	%	100	70-130	10/03/13 22:49	

LABORATORY CONTROL SAMPLE: 1059286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	53.8	108	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	999	100	70-130	
Benzene	ug/L	50	53.6	107	70-130	
Diisopropyl ether	ug/L	50	58.8	118	70-130	
Ethanol	ug/L	2000	2110	105	70-130	
Ethyl-tert-butyl ether	ug/L	100	105	105	70-130	
Ethylbenzene	ug/L	50	53.0	106	70-130	
m&p-Xylene	ug/L	100	111	111	70-130	
Methyl-tert-butyl ether	ug/L	50	58.7	117	70-130	
Naphthalene	ug/L	50	55.9	112	70-130	
o-Xylene	ug/L	50	58.9	118	70-130	
tert-Amyl Alcohol	ug/L	1000	999	100	70-130	
tert-Amylmethyl ether	ug/L	100	119	119	70-130	
tert-Butyl Alcohol	ug/L	500	529	106	70-130	
tert-Butyl Formate	ug/L	400	399	100	70-130	
Toluene	ug/L	50	52.0	104	70-130	
Xylene (Total)	ug/L	150	170	113	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

LABORATORY CONTROL SAMPLE: 1059286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059287 1059288

Parameter	92174447008		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Conc.	Result	Result	% Rec	% Rec					
1,2-Dichloroethane	ug/L	ND	50	50	53.8	53.1	108	106	70-130	1	30		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1140	1150	114	115	70-130	1	30		
Benzene	ug/L	ND	50	50	57.0	56.5	114	113	70-130	1	30		
Diisopropyl ether	ug/L	ND	50	50	61.4	61.0	123	122	70-130	1	30		
Ethanol	ug/L	ND	2000	2000	2460	2360	123	118	70-130	4	30		
Ethyl-tert-butyl ether	ug/L	ND	100	100	108	108	108	108	70-130	1	30		
Ethylbenzene	ug/L	ND	50	50	55.6	55.6	111	111	70-130	0	30		
m&p-Xylene	ug/L	ND	100	100	116	117	116	117	70-130	1	30		
Methyl-tert-butyl ether	ug/L	ND	50	50	58.2	58.1	116	116	70-130	0	30		
Naphthalene	ug/L	ND	50	50	51.9	52.8	104	106	70-130	2	30		
o-Xylene	ug/L	ND	50	50	62.1	62.8	124	126	70-130	1	30		
tert-Amyl Alcohol	ug/L	136	1000	1000	1180	1160	104	102	70-130	2	30		
tert-Amylmethyl ether	ug/L	ND	100	100	125	125	125	125	70-130	0	30		
tert-Butyl Alcohol	ug/L	ND	500	500	811	849	156	164	70-130	5	30	M1	
tert-Butyl Formate	ug/L	ND	400	400	173	128	43	32	70-130	30	30	M1	
Toluene	ug/L	ND	50	50	56.8	56.0	114	112	70-130	1	30		
1,2-Dichloroethane-d4 (S)	%						99	99	70-130				
4-Bromofluorobenzene (S)	%						101	102	70-130				
Toluene-d8 (S)	%						101	101	70-130				

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

QC Batch: MSV/24462 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174447001, 92174447009, 92174447010, 92174447011, 92174447012, 92174447013, 92174447014,  
 92174447015, 92174447016, 92174447017, 92174447018

METHOD BLANK: 1059377 Matrix: Water  
 Associated Lab Samples: 92174447001, 92174447009, 92174447010, 92174447011, 92174447012, 92174447013, 92174447014,  
 92174447015, 92174447016, 92174447017, 92174447018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 16:28	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 16:28	
Benzene	ug/L	ND	5.0	10/03/13 16:28	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 16:28	
Ethanol	ug/L	ND	200	10/03/13 16:28	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 16:28	
Ethylbenzene	ug/L	ND	5.0	10/03/13 16:28	
m&p-Xylene	ug/L	ND	10.0	10/03/13 16:28	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 16:28	
Naphthalene	ug/L	ND	5.0	10/03/13 16:28	
o-Xylene	ug/L	ND	5.0	10/03/13 16:28	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 16:28	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 16:28	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 16:28	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 16:28	
Toluene	ug/L	ND	5.0	10/03/13 16:28	
Xylene (Total)	ug/L	ND	10.0	10/03/13 16:28	
1,2-Dichloroethane-d4 (S)	%	96	70-130	10/03/13 16:28	
4-Bromofluorobenzene (S)	%	102	70-130	10/03/13 16:28	
Toluene-d8 (S)	%	98	70-130	10/03/13 16:28	

LABORATORY CONTROL SAMPLE: 1059378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	48.5	97	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1090	109	70-130	
Benzene	ug/L	50	50.1	100	70-130	
Diisopropyl ether	ug/L	50	55.8	112	70-130	
Ethanol	ug/L	2000	2350	117	70-130	
Ethyl-tert-butyl ether	ug/L	100	96.2	96	70-130	
Ethylbenzene	ug/L	50	48.1	96	70-130	
m&p-Xylene	ug/L	100	98.5	98	70-130	
Methyl-tert-butyl ether	ug/L	50	54.4	109	70-130	
Naphthalene	ug/L	50	55.1	110	70-130	
o-Xylene	ug/L	50	51.1	102	70-130	
tert-Amyl Alcohol	ug/L	1000	1120	112	70-130	
tert-Amylmethyl ether	ug/L	100	109	109	70-130	
tert-Butyl Alcohol	ug/L	500	552	110	70-130	
tert-Butyl Formate	ug/L	400	426	107	70-130	
Toluene	ug/L	50	49.0	98	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

LABORATORY CONTROL SAMPLE: 1059378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059379 1059380

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92174452001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,2-Dichloroethane	ug/L	ND	50	50	54.9	54.3	109	108	70-130	1	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1200	1180	120	118	70-130	2	30	
Benzene	ug/L	ND	50	50	58.8	58.3	118	117	70-130	1	30	
Diisopropyl ether	ug/L	ND	50	50	62.2	61.3	124	123	70-130	2	30	
Ethanol	ug/L	ND	2000	2000	2240	2260	112	113	70-130	1	30	
Ethyl-tert-butyl ether	ug/L	ND	100	100	112	112	112	112	70-130	0	30	
Ethylbenzene	ug/L	ND	50	50	56.4	56.7	113	113	70-130	0	30	
m&p-Xylene	ug/L	ND	100	100	118	119	118	118	70-130	0	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	60.2	60.1	120	120	70-130	0	30	
Naphthalene	ug/L	ND	50	50	54.7	54.1	108	107	70-130	1	30	
o-Xylene	ug/L	ND	50	50	64.8	64.4	129	129	70-130	1	30	
tert-Amyl Alcohol	ug/L	ND	1000	1000	1220	1200	122	120	70-130	1	30	
tert-Amylmethyl ether	ug/L	ND	100	100	131	131	131	131	70-130	0	30	M1
tert-Butyl Alcohol	ug/L	ND	500	500	981	962	196	192	70-130	2	30	M1
tert-Butyl Formate	ug/L	ND	400	400	41.4J	41.6J	10	10	70-130		30	P5
Toluene	ug/L	ND	50	50	58.2	58.3	116	116	70-130	0	30	
1,2-Dichloroethane-d4 (S)	%						98	97	70-130			
4-Bromofluorobenzene (S)	%						102	102	70-130			
Toluene-d8 (S)	%						101	101	70-130			

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

QC Batch: OEXT/24087 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92174447001

METHOD BLANK: 1059076 Matrix: Water  
 Associated Lab Samples: 92174447001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/03/13 20:57	
1-Chloro-2-bromopropane (S)	%	107	60-140	10/03/13 20:57	

LABORATORY CONTROL SAMPLE & LCSD: 1059077 1059078

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.29	0.28	100	96	60-140	4	20	
1-Chloro-2-bromopropane (S)	%				107	105	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059079 1059080

Parameter	Units	92174440005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.27	0.28	98	100	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						105	107	60-140			

SAMPLE DUPLICATE: 1059081

Parameter	Units	92174440006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	107	109	1		

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174447

QC Batch: OEXT/24088 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92174447002, 92174447003, 92174447004, 92174447005, 92174447006, 92174447007, 92174447008,  
 92174447009, 92174447010, 92174447011, 92174447013, 92174447014, 92174447015, 92174447017,  
 92174447018, 92174447019

METHOD BLANK: 1059083 Matrix: Water  
 Associated Lab Samples: 92174447002, 92174447003, 92174447004, 92174447005, 92174447006, 92174447007, 92174447008,  
 92174447009, 92174447010, 92174447011, 92174447013, 92174447014, 92174447015, 92174447017,  
 92174447018, 92174447019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/04/13 06:05	
1-Chloro-2-bromopropane (S)	%	109	60-140	10/04/13 06:05	

LABORATORY CONTROL SAMPLE & LCSD: 1059084 1059085

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.29	0.28	100	100	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				107	107	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059086 1059087

Parameter	Units	92174447006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.29	.29	0.29	0.29	100	102	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						107	108	60-140			

SAMPLE DUPLICATE: 1059088

Parameter	Units	92174447007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	111	112	0		

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

QC Batch: OEXT/24130 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92174447012, 92174447016

METHOD BLANK: 1060861 Matrix: Water

Associated Lab Samples: 92174447012, 92174447016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/06/13 22:39	
1-Chloro-2-bromopropane (S)	%	109	60-140	10/06/13 22:39	

LABORATORY CONTROL SAMPLE & LCSD: 1060862 1060863

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.25	0.23	86	82	60-140	4	20	
1-Chloro-2-bromopropane (S)	%				110	106	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1060865 1060866

Parameter	Units	92174689004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.23	0.23	82	82	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						108	109	60-140			

SAMPLE DUPLICATE: 1060864

Parameter	Units	92174687002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	109	107	3		

**REPORT OF LABORATORY ANALYSIS**

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9800 Kinsey Ave Suite 100  
Huntersville, NC 28078  
(704)875-9092

## QUALIFIERS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174447

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery

MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

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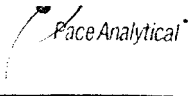
**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174447

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92174447001	07960-MW-13	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174447002	07960-WSW-4	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447003	07960-WSW-5	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447004	07960-WSW-6	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447005	07960-MW-26	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447006	07960-FB-2	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447007	07960-MW-31	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447008	07960-MW-25	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447009	07960-MW-24	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447010	07960-MW-11	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447011	07960-MW-14	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447012	07960-MW-7	EPA 8011	OEXT/24130	EPA 8011	GCSV/15686
92174447013	07960-MW-27	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447014	07960-MW-29	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447015	07960-MW-2	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447016	07960-MW-6	EPA 8011	OEXT/24130	EPA 8011	GCSV/15686
92174447017	07960-MW-21	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447018	07960-DUPLICATE 2	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447019	TRIP BLANK	EPA 8011	OEXT/24088	EPA 8011	GCSV/15668
92174447002	07960-WSW-4	EPA 8260	MSV/24456		
92174447003	07960-WSW-5	EPA 8260	MSV/24456		
92174447004	07960-WSW-6	EPA 8260	MSV/24456		
92174447001	07960-MW-13	EPA 8260	MSV/24462		
92174447005	07960-MW-26	EPA 8260	MSV/24459		
92174447006	07960-FB-2	EPA 8260	MSV/24453		
92174447007	07960-MW-31	EPA 8260	MSV/24459		
92174447008	07960-MW-25	EPA 8260	MSV/24459		
92174447009	07960-MW-24	EPA 8260	MSV/24462		
92174447010	07960-MW-11	EPA 8260	MSV/24462		
92174447011	07960-MW-14	EPA 8260	MSV/24462		
92174447012	07960-MW-7	EPA 8260	MSV/24462		
92174447013	07960-MW-27	EPA 8260	MSV/24462		
92174447014	07960-MW-29	EPA 8260	MSV/24462		
92174447015	07960-MW-2	EPA 8260	MSV/24462		
92174447016	07960-MW-6	EPA 8260	MSV/24462		
92174447017	07960-MW-21	EPA 8260	MSV/24462		
92174447018	07960-DUPLICATE 2	EPA 8260	MSV/24462		
92174447019	TRIP BLANK	EPA 8260	MSV/24453		

**REPORT OF LABORATORY ANALYSIS**

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Sample Condition Upon Receipt (SCUR)

Document Number:  
F-CHR-CS-03-rev.11

Issuing Authority:  
Pace Huntersville Quality Office

Client Name: FLS

Where Received:  Huntersville  Asheville  Eden  Raleigh

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Optional  
Proj. Due Date  
Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1102 T1301 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 1.4 C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: Conf - 10/2/13

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. no time for duplicate 2 on COC or
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. better
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15. (not in)
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. (not in)
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	no date/time on COC or better
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review: \_\_\_\_\_ Date: \_\_\_\_\_  
SRF Review: Temp Date: 10-3-13

WO#: 92174447



Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)



## CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:		Page: _____ of _____
Company: _____		Report To: _____		Attention: _____		1685588
Address: _____		Copy To: _____		Company Name: _____		REGULATORY AGENCY
Email To: _____		Purchase Order No.: _____		Address: _____		
Phone: _____ Fax: _____		Project Name: _____		Pace Quote Reference: _____		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____
Requested Due Date/TAT: _____		Project Number: _____		Pace Project Manager: _____		Site Location: _____
				Pace Profile #: 2915-1		STATE: _____

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
			COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other				
	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE		DATE	TIME	DATE	TIME														
1																	001			
2																	002			
3																	003			
4																	004			
5																	005			
6																	006			
7																	007			
8																	008			
9																	009			
10																	010			
11																	011			
12																	012			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS

<b>SAMPLER NAME AND SIGNATURE</b>		Temperature	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)
PRINT Name of SAMPLER: _____					
SIGNATURE of SAMPLER: _____		DATE Signed (MM/DD/YY): _____			

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. P-ALL-Q-020rev 07, 15-May-2007



### CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:		Page: <u>1585588</u> of _____	
Company: <u>ETS</u>		Report To: _____		Attention: _____		REGULATORY AGENCY	
Address: _____		Copy To: _____		Company Name: _____		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
Email To: _____		Purchase Order No.: _____		Pace Quote Reference: _____		Site Location: _____	
Phone: _____ Fax: _____		Project Name: _____		Pace Project Manager: _____		STATE: _____	
Requested Due Date/TAT: _____		Project Number: <u>12-10</u>		Pace Profile #: _____		Requested Analysis Filtered (Y/N)	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX CODE	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Face Project No. / Lab I.D.		
			COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>						Methanol	Other
			DATE	TIME	DATE	TIME															
1	<b>SAMPLE ID</b> (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	DW WT WW P SL OL WP AR TS OT															<u>92174447</u>				
2																	<u>013</u>				
3																	<u>014</u>				
4																	<u>015</u>				
5																	<u>016</u>				
6																	<u>017</u>				
7																	<u>018</u>				
8																	<u>019</u>				
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<u>None</u>	<u>Relinquished by:</u>	<u>10/1/11</u>	<u>10:00</u>	<u>Accepted by:</u>	<u>10/1/11</u>	<u>10:00</u>	
	<u>Signature:</u>			<u>Signature:</u>			

<b>SAMPLER NAME AND SIGNATURE</b>		Tempt in °C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: _____					
SIGNATURE of SAMPLER: _____					

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-Q-020rev.07, 15-May-2007





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(704)875-9092

October 10, 2013

Noelle France  
Environmental Compliance Servi  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174440

Dear Noelle France:

Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Kevin Herring

kevin.herring@pacelabs.com  
Project Manager

Enclosures



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## CERTIFICATIONS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174440

---

### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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### SAMPLE SUMMARY

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174440

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92174440001	07960-TW1	Water	10/01/13 08:34	10/02/13 16:00
92174440002	07960-TW2	Water	10/01/13 09:50	10/02/13 16:00
92174440003	07960-MW3	Water	10/01/13 09:30	10/02/13 16:00
92174440004	07960-TW3	Water	10/01/13 11:00	10/02/13 16:00
92174440005	07960-MW9	Water	10/01/13 10:50	10/02/13 16:00
92174440006	07960-TW4	Water	10/01/13 12:00	10/02/13 16:00
92174440007	07960-MW10	Water	10/01/13 11:50	10/02/13 16:00
92174440008	07960-TW5	Water	10/01/13 13:30	10/02/13 16:00
92174440009	07960-MW12	Water	10/01/13 12:50	10/02/13 16:00
92174440010	07960-MW22	Water	10/01/13 13:10	10/02/13 16:00
92174440011	07960-MW30	Water	10/01/13 14:10	10/02/13 16:00
92174440012	07960-MW4	Water	10/01/13 14:30	10/02/13 16:00
92174440013	07960-MW8	Water	10/01/13 14:40	10/02/13 16:00
92174440014	07960-MW28	Water	10/01/13 15:40	10/02/13 16:00
92174440015	07960-MW5	Water	10/01/13 15:50	10/02/13 16:00
92174440016	07960-MW20	Water	10/01/13 16:00	10/02/13 16:00
92174440017	07960-DUPLICATE 1	Water	10/01/13 00:00	10/02/13 16:00
92174440018	07960-DUPLICATE 3	Water	10/01/13 00:00	10/02/13 16:00
92174440019	07960-TRIP BLANK	Water	10/01/13 00:00	10/02/13 16:00

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**SAMPLE ANALYTE COUNT**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92174440001	07960-TW1	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440002	07960-TW2	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440003	07960-MW3	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440004	07960-TW3	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440005	07960-MW9	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440006	07960-TW4	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440007	07960-MW10	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440008	07960-TW5	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440009	07960-MW12	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440010	07960-MW22	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440011	07960-MW30	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440012	07960-MW4	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440013	07960-MW8	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440014	07960-MW28	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440015	07960-MW5	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440016	07960-MW20	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440017	07960-DUPLICATE 1	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440018	07960-DUPLICATE 3	EPA 8011	EJK	2	PASI-C
		EPA 8260	MCK	20	PASI-C
92174440019	07960-TRIP BLANK	EPA 8011	EJK	2	PASI-C

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### SAMPLE ANALYTE COUNT

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	MCK	20	PASI-C

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-TW1 Lab ID: 92174440001 Collected: 10/01/13 08:34 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:58	10/03/13 21:59	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	109	%	60-140		1	10/03/13 12:58	10/03/13 21:59	301-79-56	
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	1040	ug/L	100	76.8	1		10/04/13 05:00	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 05:00	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 05:00	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 05:00	624-95-3	
tert-Butyl Alcohol	111	ug/L	100	57.7	1		10/04/13 05:00	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 05:00	762-75-4	
1,2-Dichloroethane	76.1	ug/L	5.0	1.8	1		10/04/13 05:00	107-06-2	
Diisopropyl ether	2.3J	ug/L	5.0	1.7	1		10/04/13 05:00	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 05:00	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 05:00	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 05:00	637-92-3	
Methyl-tert-butyl ether	6.6	ug/L	5.0	1.7	1		10/04/13 05:00	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 05:00	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 05:00	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 05:00	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 05:00	179601-23-1	
o-Xylen	ND	ug/L	5.0	1.6	1		10/04/13 05:00	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/04/13 05:00	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		10/04/13 05:00	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		10/04/13 05:00	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-TW2 Lab ID: 92174440002 Collected: 10/01/13 09:50 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:58	10/03/13 22:19	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	10/03/13 12:58	10/03/13 22:19	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	184	ug/L	100	76.8	1		10/04/13 05:16	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 05:16	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 05:16	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 05:16	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 05:16	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 05:16	762-75-4	
1,2-Dichloroethane	2.0J	ug/L	5.0	1.8	1		10/04/13 05:16	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 05:16	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 05:16	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 05:16	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 05:16	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 05:16	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 05:16	91-20-3	
Toluene	46.6	ug/L	5.0	1.6	1		10/04/13 05:16	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 05:16	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 05:16	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 05:16	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/04/13 05:16	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		10/04/13 05:16	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/04/13 05:16	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Sample: 07960-MW3 Lab ID: 92174440003 Collected: 10/01/13 09:30 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	0.80	ug/L	0.019	0.019	1	10/03/13 12:58	10/03/13 22:39	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	89	%	60-140		1	10/03/13 12:58	10/03/13 22:39	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	15500	ug/L	5000	3840	50		10/03/13 18:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	170	50		10/03/13 18:03	994-05-8	
Benzene	8500	ug/L	250	85.0	50		10/03/13 18:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	1600	50		10/03/13 18:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	2880	50		10/03/13 18:03	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	365	50		10/03/13 18:03	762-75-4	
1,2-Dichloroethane	568	ug/L	250	90.0	50		10/03/13 18:03	107-06-2	
Diisopropyl ether	ND	ug/L	250	85.0	50		10/03/13 18:03	108-20-3	
Ethanol	ND	ug/L	10000	6890	50		10/03/13 18:03	64-17-5	
Ethylbenzene	1540	ug/L	250	80.0	50		10/03/13 18:03	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	180	50		10/03/13 18:03	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	85.0	50		10/03/13 18:03	1634-04-4	
Naphthalene	498	ug/L	250	100	50		10/03/13 18:03	91-20-3	
Toluene	784	ug/L	250	80.0	50		10/03/13 18:03	108-88-3	
Xylene (Total)	6080	ug/L	500	135	50		10/03/13 18:03	1330-20-7	
m&p-Xylene	4040	ug/L	500	155	50		10/03/13 18:03	179601-23-1	
o-Xylene	2040	ug/L	250	80.0	50		10/03/13 18:03	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		50		10/03/13 18:03	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		50		10/03/13 18:03	17060-07-0	
Toluene-d8 (S)	100	%	70-130		50		10/03/13 18:03	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-TW3 Lab ID: 92174440004 Collected: 10/01/13 11:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:58	10/03/13 22:59	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	10/03/13 12:58	10/03/13 22:59	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	135	ug/L	100	76.8	1		10/04/13 05:32	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 05:32	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 05:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 05:32	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 05:32	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 05:32	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 05:32	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 05:32	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 05:32	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 05:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 05:32	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 05:32	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 05:32	91-20-3	
Toluene	48.8	ug/L	5.0	1.6	1		10/04/13 05:32	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 05:32	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 05:32	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 05:32	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/04/13 05:32	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		10/04/13 05:32	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/04/13 05:32	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Sample: 07960-MW9 Lab ID: 92174440005 Collected: 10/01/13 10:50 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.019	0.019	1	10/03/13 12:58	10/03/13 23:20	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	100 %		60-140		1	10/03/13 12:58	10/03/13 23:20	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/04/13 05:48	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/04/13 05:48	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		10/04/13 05:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/04/13 05:48	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/04/13 05:48	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/04/13 05:48	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/04/13 05:48	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/04/13 05:48	108-20-3	
Ethanol	ND ug/L		200	138	1		10/04/13 05:48	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/04/13 05:48	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/04/13 05:48	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/04/13 05:48	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		10/04/13 05:48	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		10/04/13 05:48	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/04/13 05:48	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/04/13 05:48	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/04/13 05:48	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		10/04/13 05:48	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		10/04/13 05:48	17060-07-0	
Toluene-d8 (S)	101 %		70-130		1		10/04/13 05:48	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-TW4 Lab ID: 92174440006 Collected: 10/01/13 12:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:58	10/04/13 00:21	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	10/03/13 12:58	10/04/13 00:21	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 06:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 06:04	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 06:04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 06:04	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 06:04	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 06:04	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 06:04	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 06:04	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 06:04	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 06:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 06:04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 06:04	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 06:04	91-20-3	
Toluene	14.7	ug/L	5.0	1.6	1		10/04/13 06:04	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 06:04	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 06:04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 06:04	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/04/13 06:04	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/04/13 06:04	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/04/13 06:04	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Sample: 07960-MW10 Lab ID: 92174440007 Collected: 10/01/13 11:50 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 01:01	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	10/03/13 12:59	10/04/13 01:01	301-79-56	
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 06:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 06:21	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 06:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 06:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 06:21	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 06:21	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 06:21	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 06:21	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 06:21	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 06:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 06:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 06:21	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 06:21	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 06:21	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 06:21	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 06:21	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 06:21	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/04/13 06:21	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		10/04/13 06:21	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/04/13 06:21	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-TW5 Lab ID: 92174440008 Collected: 10/01/13 13:30 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND ug/L		0.020	0.020	1	10/03/13 12:59	10/04/13 01:21	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	68 %		60-140		1	10/03/13 12:59	10/04/13 01:21	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		10/04/13 06:37	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		10/04/13 06:37	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		10/04/13 06:37	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		10/04/13 06:37	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		10/04/13 06:37	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		10/04/13 06:37	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		10/04/13 06:37	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		10/04/13 06:37	108-20-3	
Ethanol	ND ug/L		200	138	1		10/04/13 06:37	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		10/04/13 06:37	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		10/04/13 06:37	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		10/04/13 06:37	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		10/04/13 06:37	91-20-3	
Toluene	109 ug/L		5.0	1.6	1		10/04/13 06:37	108-88-3	
Xylene (Total)	ND ug/L		10.0	2.7	1		10/04/13 06:37	1330-20-7	
m&p-Xylene	ND ug/L		10.0	3.1	1		10/04/13 06:37	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		10/04/13 06:37	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		1		10/04/13 06:37	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		10/04/13 06:37	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		10/04/13 06:37	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Sample: 07960-MW12 Lab ID: 92174440009 Collected: 10/01/13 12:50 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	1.3 ug/L		0.040	0.040	2	10/03/13 12:59	10/04/13 17:44	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	117 %		60-140		2	10/03/13 12:59	10/04/13 17:44	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	1440 ug/L		400	307	4		10/03/13 18:19	75-85-4	
tert-Amylmethyl ether	ND ug/L		40.0	13.6	4		10/03/13 18:19	994-05-8	
Benzene	2020 ug/L		125	42.5	25		10/04/13 17:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		400	128	4		10/03/13 18:19	624-95-3	
tert-Butyl Alcohol	945 ug/L		400	231	4		10/03/13 18:19	75-65-0	
tert-Butyl Formate	ND ug/L		200	29.2	4		10/03/13 18:19	762-75-4	
1,2-Dichloroethane	94.2 ug/L		20.0	7.2	4		10/03/13 18:19	107-06-2	
Diisopropyl ether	ND ug/L		20.0	6.8	4		10/03/13 18:19	108-20-3	
Ethanol	ND ug/L		800	55.1	4		10/03/13 18:19	64-17-5	
Ethylbenzene	193 ug/L		20.0	6.4	4		10/03/13 18:19	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		40.0	14.4	4		10/03/13 18:19	637-92-3	
Methyl-tert-butyl ether	ND ug/L		20.0	6.8	4		10/03/13 18:19	1634-04-4	
Naphthalene	139 ug/L		20.0	8.0	4		10/03/13 18:19	91-20-3	
Toluene	169 ug/L		20.0	6.4	4		10/03/13 18:19	108-88-3	
Xylene (Total)	840 ug/L		40.0	10.8	4		10/03/13 18:19	1330-20-7	
m&p-Xylene	631 ug/L		40.0	12.4	4		10/03/13 18:19	179601-23-1	
o-Xylene	209 ug/L		20.0	6.4	4		10/03/13 18:19	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96 %		70-130		4		10/03/13 18:19	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		70-130		4		10/03/13 18:19	17060-07-0	
Toluene-d8 (S)	100 %		70-130		4		10/03/13 18:19	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Sample: 07960-MW22 Lab ID: 92174440010 Collected: 10/01/13 13:10 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	109 ug/L		3.9	3.9	200	10/08/13 20:13	10/09/13 04:49	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	0 %		60-140		200	10/08/13 20:13	10/09/13 04:49	301-79-56	S4
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		20000	15400	200		10/03/13 18:35	75-85-4	
tert-Amylmethyl ether	ND ug/L		2000	680	200		10/03/13 18:35	994-05-8	
Benzene	10900 ug/L		1000	340	200		10/03/13 18:35	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		20000	6420	200		10/03/13 18:35	624-95-3	
tert-Butyl Alcohol	ND ug/L		20000	11500	200		10/03/13 18:35	75-65-0	
tert-Butyl Formate	ND ug/L		10000	1460	200		10/03/13 18:35	762-75-4	
1,2-Dichloroethane	420J ug/L		1000	360	200		10/03/13 18:35	107-06-2	
Diisopropyl ether	ND ug/L		1000	340	200		10/03/13 18:35	108-20-3	
Ethanol	ND ug/L		40000	27600	200		10/03/13 18:35	64-17-5	
Ethylbenzene	2640 ug/L		1000	320	200		10/03/13 18:35	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		2000	720	200		10/03/13 18:35	637-92-3	
Methyl-tert-butyl ether	ND ug/L		1000	340	200		10/03/13 18:35	1634-04-4	
Naphthalene	1270 ug/L		1000	400	200		10/03/13 18:35	91-20-3	
Toluene	30500 ug/L		1000	320	200		10/03/13 18:35	108-88-3	
Xylene (Total)	20800 ug/L		2000	540	200		10/03/13 18:35	1330-20-7	
m&p-Xylene	14200 ug/L		2000	620	200		10/03/13 18:35	179601-23-1	
o-Xylene	6600 ug/L		1000	320	200		10/03/13 18:35	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		70-130		200		10/03/13 18:35	460-00-4	
1,2-Dichloroethane-d4 (S)	94 %		70-130		200		10/03/13 18:35	17060-07-0	
Toluene-d8 (S)	98 %		70-130		200		10/03/13 18:35	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Sample: 07960-MW30 Lab ID: 92174440011 Collected: 10/01/13 14:10 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	0.11	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 02:22	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	104	%	60-140		1	10/03/13 12:59	10/04/13 02:22	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	1880	ug/L	500	384	5		10/03/13 18:51	75-85-4	
tert-Amylmethyl ether	ND	ug/L	50.0	17.0	5		10/03/13 18:51	994-05-8	
Benzene	602	ug/L	25.0	8.5	5		10/03/13 18:51	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	500	160	5		10/03/13 18:51	624-95-3	
tert-Butyl Alcohol	618	ug/L	500	288	5		10/03/13 18:51	75-65-0	
tert-Butyl Formate	ND	ug/L	250	36.5	5		10/03/13 18:51	762-75-4	
1,2-Dichloroethane	37.7	ug/L	25.0	9.0	5		10/03/13 18:51	107-06-2	
Diisopropyl ether	ND	ug/L	25.0	8.5	5		10/03/13 18:51	108-20-3	
Ethanol	ND	ug/L	1000	689	5		10/03/13 18:51	64-17-5	
Ethylbenzene	24.2J	ug/L	25.0	8.0	5		10/03/13 18:51	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	50.0	18.0	5		10/03/13 18:51	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	25.0	8.5	5		10/03/13 18:51	1634-04-4	
Naphthalene	46.8	ug/L	25.0	10.0	5		10/03/13 18:51	91-20-3	
Toluene	ND	ug/L	25.0	8.0	5		10/03/13 18:51	108-88-3	
Xylene (Total)	99.3	ug/L	50.0	13.5	5		10/03/13 18:51	1330-20-7	
m&p-Xylene	63.7	ug/L	50.0	15.5	5		10/03/13 18:51	179601-23-1	
o-Xylene	35.5	ug/L	25.0	8.0	5		10/03/13 18:51	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		5		10/03/13 18:51	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		5		10/03/13 18:51	17060-07-0	
Toluene-d8 (S)	99	%	70-130		5		10/03/13 18:51	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-MW4 Lab ID: 92174440012 Collected: 10/01/13 14:30 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 02:42	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	10/03/13 12:59	10/04/13 02:42	301-79-56	
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	141	ug/L	100	76.8	1		10/04/13 06:53	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 06:53	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 06:53	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 06:53	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 06:53	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 06:53	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 06:53	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 06:53	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 06:53	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 06:53	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 06:53	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 06:53	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 06:53	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 06:53	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 06:53	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 06:53	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 06:53	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/04/13 06:53	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/04/13 06:53	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/04/13 06:53	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-MW8 Lab ID: 92174440013 Collected: 10/01/13 14:40 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 03:02	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107 %		60-140		1	10/03/13 12:59	10/04/13 03:02	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 07:10	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 07:10	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 07:10	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 07:10	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 07:10	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 07:10	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 07:10	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 07:10	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 07:10	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 07:10	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 07:10	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 07:10	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 07:10	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 07:10	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 07:10	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 07:10	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 07:10	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		10/04/13 07:10	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		70-130		1		10/04/13 07:10	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		10/04/13 07:10	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-MW28 Lab ID: 92174440014 Collected: 10/01/13 15:40 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 03:22	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	10/03/13 12:59	10/04/13 03:22	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 07:27	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 07:27	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 07:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 07:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 07:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 07:27	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 07:27	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 07:27	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 07:27	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 07:27	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 07:27	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 07:27	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 07:27	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 07:27	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 07:27	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 07:27	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 07:27	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/04/13 07:27	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/04/13 07:27	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/04/13 07:27	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-MW5 Lab ID: 92174440015 Collected: 10/01/13 15:50 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 03:43	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107 %		60-140		1	10/03/13 12:59	10/04/13 03:43	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 07:43	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 07:43	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 07:43	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 07:43	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 07:43	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 07:43	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 07:43	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 07:43	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 07:43	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 07:43	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 07:43	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 07:43	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 07:43	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 07:43	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 07:43	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 07:43	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 07:43	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		70-130		1		10/04/13 07:43	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		10/04/13 07:43	17060-07-0	
Toluene-d8 (S)	100 %		70-130		1		10/04/13 07:43	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-MW20 Lab ID: 92174440016 Collected: 10/01/13 16:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 04:03	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	109	%	60-140		1	10/03/13 12:59	10/04/13 04:03	301-79-56	
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/04/13 08:00	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/04/13 08:00	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/04/13 08:00	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/04/13 08:00	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/04/13 08:00	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/04/13 08:00	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/04/13 08:00	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/04/13 08:00	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/04/13 08:00	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/04/13 08:00	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/04/13 08:00	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/04/13 08:00	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/04/13 08:00	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/04/13 08:00	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/04/13 08:00	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/04/13 08:00	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/04/13 08:00	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/04/13 08:00	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/04/13 08:00	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/04/13 08:00	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-DUPLICATE 1 Lab ID: 92174440017 Collected: 10/01/13 00:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>									
Analytical Method: EPA 8011 Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	0.86	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 04:24	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	99	%	60-140		1	10/03/13 12:59	10/04/13 04:24	301-79-56	
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	15600	ug/L	5000	3840	50		10/03/13 19:06	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	170	50		10/03/13 19:06	994-05-8	
Benzene	8780	ug/L	250	85.0	50		10/03/13 19:06	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	1600	50		10/03/13 19:06	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	2880	50		10/03/13 19:06	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	365	50		10/03/13 19:06	762-75-4	
1,2-Dichloroethane	572	ug/L	250	90.0	50		10/03/13 19:06	107-06-2	
Diisopropyl ether	ND	ug/L	250	85.0	50		10/03/13 19:06	108-20-3	
Ethanol	ND	ug/L	10000	6890	50		10/03/13 19:06	64-17-5	
Ethylbenzene	1510	ug/L	250	80.0	50		10/03/13 19:06	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	180	50		10/03/13 19:06	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	85.0	50		10/03/13 19:06	1634-04-4	
Naphthalene	505	ug/L	250	100	50		10/03/13 19:06	91-20-3	
Toluene	786	ug/L	250	80.0	50		10/03/13 19:06	108-88-3	
Xylene (Total)	5950	ug/L	500	135	50		10/03/13 19:06	1330-20-7	
m&p-Xylene	3940	ug/L	500	155	50		10/03/13 19:06	179601-23-1	
o-Xylene	2010	ug/L	250	80.0	50		10/03/13 19:06	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		50		10/03/13 19:06	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		50		10/03/13 19:06	17060-07-0	
Toluene-d8 (S)	98	%	70-130		50		10/03/13 19:06	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

Sample: 07960-DUPLICATE 3 Lab ID: 92174440018 Collected: 10/01/13 00:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>			Analytical Method: EPA 8011 Preparation Method: EPA 8011						
1,2-Dibromoethane (EDB)	103 ug/L		4.1	4.1	200	10/03/13 12:59	10/04/13 18:26	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	0 %		60-140		200	10/03/13 12:59	10/04/13 18:26	301-79-56	S4
<b>8260 MSV</b>			Analytical Method: EPA 8260						
tert-Amyl Alcohol	ND ug/L		20000	15400	200		10/03/13 19:22	75-85-4	
tert-Amylmethyl ether	ND ug/L		2000	680	200		10/03/13 19:22	994-05-8	
Benzene	11100 ug/L		1000	340	200		10/03/13 19:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		20000	6420	200		10/03/13 19:22	624-95-3	
tert-Butyl Alcohol	ND ug/L		20000	11500	200		10/03/13 19:22	75-65-0	
tert-Butyl Formate	ND ug/L		10000	1460	200		10/03/13 19:22	762-75-4	
1,2-Dichloroethane	407J ug/L		1000	360	200		10/03/13 19:22	107-06-2	
Diisopropyl ether	ND ug/L		1000	340	200		10/03/13 19:22	108-20-3	
Ethanol	ND ug/L		40000	27600	200		10/03/13 19:22	64-17-5	
Ethylbenzene	2230 ug/L		1000	320	200		10/03/13 19:22	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		2000	720	200		10/03/13 19:22	637-92-3	
Methyl-tert-butyl ether	ND ug/L		1000	340	200		10/03/13 19:22	1634-04-4	
Naphthalene	950J ug/L		1000	400	200		10/03/13 19:22	91-20-3	
Toluene	30600 ug/L		1000	320	200		10/03/13 19:22	108-88-3	
Xylene (Total)	17500 ug/L		2000	540	200		10/03/13 19:22	1330-20-7	
m&p-Xylene	11900 ug/L		2000	620	200		10/03/13 19:22	179601-23-1	
o-Xylene	5620 ug/L		1000	320	200		10/03/13 19:22	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		200		10/03/13 19:22	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		70-130		200		10/03/13 19:22	17060-07-0	
Toluene-d8 (S)	99 %		70-130		200		10/03/13 19:22	2037-26-5	

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**ANALYTICAL RESULTS**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Sample: 07960-TRIP BLANK Lab ID: 92174440019 Collected: 10/01/13 00:00 Received: 10/02/13 16:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	10/03/13 12:59	10/04/13 05:04	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	10/03/13 12:59	10/04/13 05:04	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/03/13 12:54	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/03/13 12:54	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/03/13 12:54	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/03/13 12:54	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/03/13 12:54	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/03/13 12:54	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/03/13 12:54	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/03/13 12:54	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/03/13 12:54	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/03/13 12:54	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/03/13 12:54	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/03/13 12:54	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/03/13 12:54	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/03/13 12:54	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/03/13 12:54	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/03/13 12:54	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/03/13 12:54	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		10/03/13 12:54	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		10/03/13 12:54	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		10/03/13 12:54	2037-26-5	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

QC Batch: MSV/24453 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174440019

METHOD BLANK: 1059091 Matrix: Water  
 Associated Lab Samples: 92174440019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 11:49	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 11:49	
Benzene	ug/L	ND	5.0	10/03/13 11:49	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 11:49	
Ethanol	ug/L	ND	200	10/03/13 11:49	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 11:49	
Ethylbenzene	ug/L	ND	5.0	10/03/13 11:49	
m&p-Xylene	ug/L	ND	10.0	10/03/13 11:49	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 11:49	
Naphthalene	ug/L	ND	5.0	10/03/13 11:49	
o-Xylene	ug/L	ND	5.0	10/03/13 11:49	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 11:49	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 11:49	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 11:49	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 11:49	
Toluene	ug/L	ND	5.0	10/03/13 11:49	
Xylene (Total)	ug/L	ND	10.0	10/03/13 11:49	
1,2-Dichloroethane-d4 (S)	%	97	70-130	10/03/13 11:49	
4-Bromofluorobenzene (S)	%	99	70-130	10/03/13 11:49	
Toluene-d8 (S)	%	100	70-130	10/03/13 11:49	

LABORATORY CONTROL SAMPLE 1059092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	53.1	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	912	91	70-130	
Benzene	ug/L	50	54.4	109	70-130	
Diisopropyl ether	ug/L	50	59.4	119	70-130	
Ethanol	ug/L	2000	1520	76	70-130	
Ethyl-tert-butyl ether	ug/L	100	104	104	70-130	
Ethylbenzene	ug/L	50	54.0	108	70-130	
m&p-Xylene	ug/L	100	112	112	70-130	
Methyl-tert-butyl ether	ug/L	50	58.1	116	70-130	
Naphthalene	ug/L	50	54.0	108	70-130	
o-Xylene	ug/L	50	60.0	120	70-130	
tert-Amyl Alcohol	ug/L	1000	898	90	70-130	
tert-Amylmethyl ether	ug/L	100	117	117	70-130	
tert-Butyl Alcohol	ug/L	500	476	95	70-130	
tert-Butyl Formate	ug/L	400	407	102	70-130	
Toluene	ug/L	50	53.1	106	70-130	
Xylene (Total)	ug/L	150	172	115	70-130	

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### QUALITY CONTROL DATA

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174440

LABORATORY CONTROL SAMPLE: 1059092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

QC Batch: MSV/24459 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174440001, 92174440002, 92174440004, 92174440005, 92174440006, 92174440007, 92174440008,  
 92174440012, 92174440013, 92174440014, 92174440015, 92174440016

METHOD BLANK: 1059285 Matrix: Water  
 Associated Lab Samples: 92174440001, 92174440002, 92174440004, 92174440005, 92174440006, 92174440007, 92174440008,  
 92174440012, 92174440013, 92174440014, 92174440015, 92174440016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 22:49	
3,3-Dimethyl-1-Butanol	ug/L	84.6J	100	10/03/13 22:49	
Benzene	ug/L	ND	5.0	10/03/13 22:49	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 22:49	
Ethanol	ug/L	ND	200	10/03/13 22:49	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 22:49	
Ethylbenzene	ug/L	ND	5.0	10/03/13 22:49	
m&p-Xylene	ug/L	ND	10.0	10/03/13 22:49	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 22:49	
Naphthalene	ug/L	ND	5.0	10/03/13 22:49	
o-Xylene	ug/L	ND	5.0	10/03/13 22:49	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 22:49	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 22:49	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 22:49	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 22:49	
Toluene	ug/L	ND	5.0	10/03/13 22:49	
Xylene (Total)	ug/L	ND	10.0	10/03/13 22:49	
1,2-Dichloroethane-d4 (S)	%	101	70-130	10/03/13 22:49	
4-Bromofluorobenzene (S)	%	100	70-130	10/03/13 22:49	
Toluene-d8 (S)	%	100	70-130	10/03/13 22:49	

LABORATORY CONTROL SAMPLE 1059286

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	53.8	108	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	999	100	70-130	
Benzene	ug/L	50	53.6	107	70-130	
Diisopropyl ether	ug/L	50	58.8	118	70-130	
Ethanol	ug/L	2000	2110	105	70-130	
Ethyl-tert-butyl ether	ug/L	100	105	105	70-130	
Ethylbenzene	ug/L	50	53.0	106	70-130	
m&p-Xylene	ug/L	100	111	111	70-130	
Methyl-tert-butyl ether	ug/L	50	58.7	117	70-130	
Naphthalene	ug/L	50	55.9	112	70-130	
o-Xylene	ug/L	50	58.9	118	70-130	
tert-Amyl Alcohol	ug/L	1000	999	100	70-130	
tert-Amylmethyl ether	ug/L	100	119	119	70-130	
tert-Butyl Alcohol	ug/L	500	529	106	70-130	
tert-Butyl Formate	ug/L	400	399	100	70-130	
Toluene	ug/L	50	52.0	104	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210

Pace Project No.: 92174440

LABORATORY CONTROL SAMPLE: 1059286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	170	113	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059287 1059288

Parameter	Units	92174447008		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
1,2-Dichloroethane	ug/L	ND	50	50	53.8	53.1	108	106	70-130	1	30			
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1140	1150	114	115	70-130	1	30			
Benzene	ug/L	ND	50	50	57.0	56.5	114	113	70-130	1	30			
Diisopropyl ether	ug/L	ND	50	50	61.4	61.0	123	122	70-130	1	30			
Ethanol	ug/L	ND	2000	2000	2460	2360	123	118	70-130	4	30			
Ethyl-tert-butyl ether	ug/L	ND	100	100	108	108	108	108	70-130	1	30			
Ethylbenzene	ug/L	ND	50	50	55.6	55.6	111	111	70-130	0	30			
m&p-Xylene	ug/L	ND	100	100	116	117	116	117	70-130	1	30			
Methyl-tert-butyl ether	ug/L	ND	50	50	58.2	58.1	116	116	70-130	0	30			
Naphthalene	ug/L	ND	50	50	51.9	52.8	104	106	70-130	2	30			
o-Xylene	ug/L	ND	50	50	62.1	62.8	124	126	70-130	1	30			
tert-Amyl Alcohol	ug/L	136	1000	1000	1180	1160	104	102	70-130	2	30			
tert-Amylmethyl ether	ug/L	ND	100	100	125	125	125	125	70-130	0	30			
tert-Butyl Alcohol	ug/L	ND	500	500	811	849	156	164	70-130	5	30	M1		
tert-Butyl Formate	ug/L	ND	400	400	173	128	43	32	70-130	30	30	M1		
Toluene	ug/L	ND	50	50	56.8	56.0	114	112	70-130	1	30			
1,2-Dichloroethane-d4 (S)	%						99	99	70-130					
4-Bromofluorobenzene (S)	%						101	102	70-130					
Toluene-d8 (S)	%						101	101	70-130					

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

QC Batch: MSV/24462 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92174440003, 92174440009, 92174440010, 92174440011, 92174440017, 92174440018

METHOD BLANK: 1059377 Matrix: Water  
 Associated Lab Samples: 92174440003, 92174440009, 92174440010, 92174440011, 92174440017, 92174440018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/03/13 16:28	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/03/13 16:28	
Benzene	ug/L	ND	5.0	10/03/13 16:28	
Diisopropyl ether	ug/L	ND	5.0	10/03/13 16:28	
Ethanol	ug/L	ND	200	10/03/13 16:28	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/03/13 16:28	
Ethylbenzene	ug/L	ND	5.0	10/03/13 16:28	
m&p-Xylene	ug/L	ND	10.0	10/03/13 16:28	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/03/13 16:28	
Naphthalene	ug/L	ND	5.0	10/03/13 16:28	
o-Xylene	ug/L	ND	5.0	10/03/13 16:28	
tert-Amyl Alcohol	ug/L	ND	100	10/03/13 16:28	
tert-Amylmethyl ether	ug/L	ND	10.0	10/03/13 16:28	
tert-Butyl Alcohol	ug/L	ND	100	10/03/13 16:28	
tert-Butyl Formate	ug/L	ND	50.0	10/03/13 16:28	
Toluene	ug/L	ND	5.0	10/03/13 16:28	
Xylene (Total)	ug/L	ND	10.0	10/03/13 16:28	
1,2-Dichloroethane-d4 (S)	%	96	70-130	10/03/13 16:28	
4-Bromofluorobenzene (S)	%	102	70-130	10/03/13 16:28	
Toluene-d8 (S)	%	98	70-130	10/03/13 16:28	

LABORATORY CONTROL SAMPLE 1059378

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	48.5	97	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1090	109	70-130	
Benzene	ug/L	50	50.1	100	70-130	
Diisopropyl ether	ug/L	50	55.8	112	70-130	
Ethanol	ug/L	2000	2350	117	70-130	
Ethyl-tert-butyl ether	ug/L	100	96.2	96	70-130	
Ethylbenzene	ug/L	50	48.1	96	70-130	
m&p-Xylene	ug/L	100	98.5	98	70-130	
Methyl-tert-butyl ether	ug/L	50	54.4	109	70-130	
Naphthalene	ug/L	50	55.1	110	70-130	
o-Xylene	ug/L	50	51.1	102	70-130	
tert-Amyl Alcohol	ug/L	1000	1120	112	70-130	
tert-Amylmethyl ether	ug/L	100	109	109	70-130	
tert-Butyl Alcohol	ug/L	500	552	110	70-130	
tert-Butyl Formate	ug/L	400	426	107	70-130	
Toluene	ug/L	50	49.0	98	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

LABORATORY CONTROL SAMPLE: 1059378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059379 1059380

Parameter	Units	92174452001		MSD		MS		MSD		% Rec Limits	Max RPD	Quai
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec				
1,2-Dichloroethane	ug/L	ND	50	50	54.9	54.3	109	108	70-130	1	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1200	1180	120	118	70-130	2	30	
Benzene	ug/L	ND	50	50	58.8	58.3	118	117	70-130	1	30	
Diisopropyl ether	ug/L	ND	50	50	62.2	61.3	124	123	70-130	2	30	
Ethanol	ug/L	ND	2000	2000	2240	2260	112	113	70-130	1	30	
Ethyl-tert-butyl ether	ug/L	ND	100	100	112	112	112	112	70-130	0	30	
Ethylbenzene	ug/L	ND	50	50	56.4	56.7	113	113	70-130	0	30	
m&p-Xylene	ug/L	ND	100	100	118	119	118	118	70-130	0	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	60.2	60.1	120	120	70-130	0	30	
Naphthalene	ug/L	ND	50	50	54.7	54.1	108	107	70-130	1	30	
o-Xylene	ug/L	ND	50	50	64.8	64.4	129	129	70-130	1	30	
tert-Amyl Alcohol	ug/L	ND	1000	1000	1220	1200	122	120	70-130	1	30	
tert-Amylmethyl ether	ug/L	ND	100	100	131	131	131	131	70-130	0	30	M1
tert-Butyl Alcohol	ug/L	ND	500	500	981	962	196	192	70-130	2	30	M1
tert-Butyl Formate	ug/L	ND	400	400	41.4J	41.6J	10	10	70-130			P5
Toluene	ug/L	ND	50	50	58.2	58.3	116	116	70-130	0	30	
1,2-Dichloroethane-d4 (S)	%						98	97	70-130			
4-Bromofluorobenzene (S)	%						102	102	70-130			
Toluene-d8 (S)	%						101	101	70-130			

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

QC Batch: OEXT/24087 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92174440001, 92174440002, 92174440003, 92174440004, 92174440005, 92174440006, 92174440007,  
 92174440008, 92174440009, 92174440011, 92174440012, 92174440013, 92174440014, 92174440015,  
 92174440016, 92174440017, 92174440018, 92174440019

METHOD BLANK: 1059076 Matrix: Water  
 Associated Lab Samples: 92174440001, 92174440002, 92174440003, 92174440004, 92174440005, 92174440006, 92174440007,  
 92174440008, 92174440009, 92174440011, 92174440012, 92174440013, 92174440014, 92174440015,  
 92174440016, 92174440017, 92174440018, 92174440019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/03/13 20:57	
1-Chloro-2-bromopropane (S)	%	107	60-140	10/03/13 20:57	

LABORATORY CONTROL SAMPLE & LCSD: 1059077 1059078

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	% Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.29	0.28	100	96	60-140	4	20	
1-Chloro-2-bromopropane (S)	%				107	105	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1059079 1059080

Parameter	Units	92174440005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	28	28	0.27	0.28	98	100	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						105	107	60-140			

SAMPLE DUPLICATE: 1059081

Parameter	Units	92174440006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	107	109	1		

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**QUALITY CONTROL DATA**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

QC Batch: OEXT/24165 Analysis Method: EPA 8011  
 QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
 Associated Lab Samples: 92174440010

METHOD BLANK: 1062173 Matrix: Water  
 Associated Lab Samples: 92174440010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/08/13 23:46	
1-Chloro-2-bromopropane (S)	%	104	60-140	10/08/13 23:46	

LABORATORY CONTROL SAMPLE & LCSD: 1062174 1062175

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	28	0.23	0.27	82	94	60-140	15	20	
1-Chloro-2-bromopropane (S)	%				107	110	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1062176 1062177

Parameter	Units	92174891002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.29	.29	0.23	0.23	80	80	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						105	105	60-140			

SAMPLE DUPLICATE: 1062178

Parameter	Units	92174891003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	103	105	2		

**REPORT OF LABORATORY ANALYSIS**

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Pace Analytical Services, Inc.  
205 East Meadow Road - Suite A  
Eden, NC 27288  
(336)623-8921

Pace Analytical Services, Inc.  
2225 Riverside Dr  
Asheville, NC 28804  
(828)254-7176

Pace Analytical Services, Inc.  
9800 Kinsey Ave. Suite 100  
Huntersville, NC 28078  
(704)875-9092

## QUALIFIERS

Project: 378 Truck Stop 14-214210  
Pace Project No.: 92174440

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.
- S4 Surrogate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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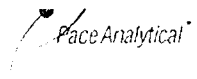
**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 378 Truck Stop 14-214210  
 Pace Project No.: 92174440

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92174440001	07960-TW1	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440002	07960-TW2	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440003	07960-MW3	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440004	07960-TW3	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440005	07960-MW9	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440006	07960-TW4	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440007	07960-MW10	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440008	07960-TW5	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440009	07960-MW12	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440010	07960-MW22	EPA 8011	OEXT/24165	EPA 8011	GCSV/15700
92174440011	07960-MW30	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440012	07960-MW4	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440013	07960-MW8	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440014	07960-MW28	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440015	07960-MW5	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440016	07960-MW20	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440017	07960-DUPLICATE 1	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440018	07960-DUPLICATE 3	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440019	07960-TRIP BLANK	EPA 8011	OEXT/24087	EPA 8011	GCSV/15667
92174440001	07960-TW1	EPA 8260	MSV/24459		
92174440002	07960-TW2	EPA 8260	MSV/24459		
92174440003	07960-MW3	EPA 8260	MSV/24462		
92174440004	07960-TW3	EPA 8260	MSV/24459		
92174440005	07960-MW9	EPA 8260	MSV/24459		
92174440006	07960-TW4	EPA 8260	MSV/24459		
92174440007	07960-MW10	EPA 8260	MSV/24459		
92174440008	07960-TW5	EPA 8260	MSV/24459		
92174440009	07960-MW12	EPA 8260	MSV/24462		
92174440010	07960-MW22	EPA 8260	MSV/24462		
92174440011	07960-MW30	EPA 8260	MSV/24462		
92174440012	07960-MW4	EPA 8260	MSV/24459		
92174440013	07960-MW8	EPA 8260	MSV/24459		
92174440014	07960-MW28	EPA 8260	MSV/24459		
92174440015	07960-MW5	EPA 8260	MSV/24459		
92174440016	07960-MW20	EPA 8260	MSV/24459		
92174440017	07960-DUPLICATE 1	EPA 8260	MSV/24462		
92174440018	07960-DUPLICATE 3	EPA 8260	MSV/24462		
92174440019	07960-TRIP BLANK	EPA 8260	MSV/24453		

**REPORT OF LABORATORY ANALYSIS**

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Sample Condition Upon Receipt (SCUR)

Document Number:  
F-CHR-CS-03-rev.11

Issuing Authority:  
Pace Huntersville Quality Office

Client Name: F-4

Where Received:  Huntersville  Asheville  Eden  Raleigh

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1102 T1301 Type of ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 1.6 C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and initials of person examining contents: cmw 10/4/13

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>1.5</u>
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>no time on duplicate samples on box or bottles.</u>
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16. <u>no blank (1100) in cool box 5-11-13</u>
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

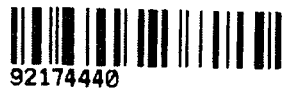
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review:	<u>AMRB</u>	Date:	<u>10-2-13</u>
SRF Review:	<u>Y-2</u>	Date:	<u>10/3/13</u>

WO#: 92174440

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)





### CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2  
 00000000

<b>Section A</b> Required Client Information		<b>Section B</b> Required Project Information		<b>Section C</b> Invoice Information	
Company: <u>ECS</u>	Request To: <u>Noelle France</u>	Attention: <u>ACCOUNTING</u>	REGULATORY AGENCY		
Address: <u>1324 S. POINT BLVD</u>	Company Name: <u>ECS</u>	Address: <u>AG ANDAM MA</u>	NPDES	GROUND WATER	DRINKING WATER
<u>CHARLOTTE NC</u>	Project Start: <u>14-214-210</u>	Project End: <u>14-214-210</u>	<input checked="" type="checkbox"/> NPDES	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Email To: <u>NPDES@ECS CONSULTING</u>	Project Status: <u>378 Brock St</u>	Site Location: <u>SC</u>			
Phone: <u>704-383-2741</u>	Project Number: <u>14-214-210</u>	State: <u>SC</u>			
Requested Due Date/TAT: <u>5-DAY</u>					

ITEM #	SAMPLE ID (A-Z, 0-9 / -)	Matrix Codes (M, W, S, A, T, P, O, G)	Matrix Code Description	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test (Y/N)	Residual Chlorine (Y/N)
				DATE	TIME	DATE	TIME			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>		
1	07960-TN 1	WT				10/1	8:34	6		X							001
2	07960-TN 2	WT					9:50										002
3	07960-MW 3	WT					9:30										003
4	07960-TN 3	WT					11:00										004
5	07960-MW 9	WT					1:50										005
6	07960-TN 4	WT					12:00										006
7	07960-MW 10	WT					11:50										007
8	07960-TN 5	WT					1:30										008
9	07960-MW 12	WT					12:50										009
10	07960-MW 22	WT					1:30										010
11	07960-MW 30	WT					1:10										011
12	07960-MW 4	WT					1:40										012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Report 5 values	Philip Pace / ECS	10/2/13	7:30	ECS OFFICE	10/2/13	7:30	
	ECS OFFICE	10/2/13	13:40	Philip Pace / PACE	10/2/13	13:40	
	Philip Pace / PACE	10/2/13	16:00	Philip Pace / PACE	10/2/13	16:00	116 40

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Rec: (Y/N)	Closely Sealed Container (Y/N)	Samples intact (Y/N)
PRINT Name of SAMPLER: <u>Philip Pace</u>	DATE Signed (MM/DD/YY): <u>10/1/13</u>				
SIGNATURE of SAMPLER: <u>Philip Pace</u>					

\*Important Note: By signing this form you are certifying that you are not a provider of services and you are not a party to any contract or agreement. A late charge of 1.5% per month for any invoices not paid within 30 days.

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**APPENDIX D**

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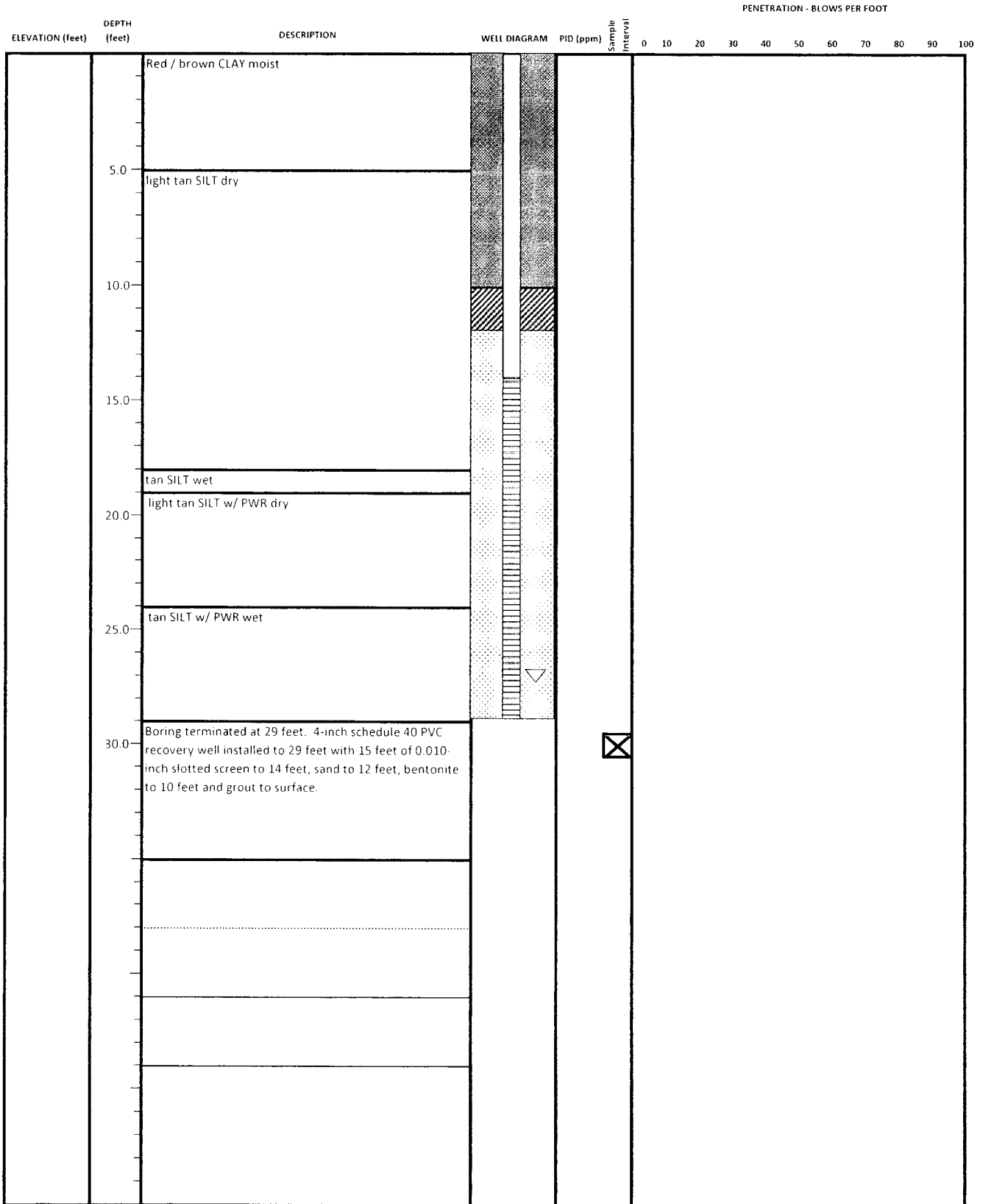
Boring Log

# BORING LOG

Job Name: 378 Truck Stop  
 Location: 731 Highway 378  
Edgefield, SC



Datum Elevation: \_\_\_\_\_ feet  
 Height of Riser: \_\_\_\_\_ feet



**REMARKS:** Drilled with D-120 using 6 5/8" hollow Stem augers.  
 Borehole diameter approximately 10".  
 Geologic Exploration - GEX

**DRILLED BY:** GEX - Brian Thomas  
**LOGGED BY:** ECS - P. Pike

**BORING NUMBER:** 07960-RW1  
**DATE STARTED:** 8/20/2013  
**DATE COMPLETED:** 8/20/2013  
**PROJECT NUMBER:** 14-214210

- ▽ GW level @ time of boring
- ▨ Bentonite
- [Pattern: Dotted] Screen
- [Pattern: Diagonal Lines] Drill Cuttings
- ▴ GW level measured after well installation
- [Pattern: Dotted] Sand
- [Pattern: Vertical Lines] Hand Auger
- [Pattern: Horizontal Lines] Standard Penetration Test
- [Pattern: Dotted] Grout
- [Pattern: Dotted] Riser

**APPENDIX E**

---

Well Construction Record





Water Well Record
Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:

Name: WILKERSON FUEL (last) (first)
Address: PO BOX 2835
City: ROCK HILL State: SC Zip: 29732
Telephone: Work: Home:

7. PERMIT NUMBER:

UMW-25155

8. USE:

- Residential, Public Supply, Process, Irrigation, Air Conditioning, Emergency, Test Well, Monitor Well, Replacement

2. LOCATION OF WELL: SC COUNTY: EDGEFIELD

Name: 378 TRUCK STOP
Street Address: 731 US 378
City: EDGEFIELD Zip: 29824
Latitude: 33° 56' 13.74" Longitude: 81° 57' 03.02"

9. WELL DEPTH (completed)

Date Started: 08/20/13

29.0 ft. Date Completed: 08/20/13

10. CASING: Threaded Welded

Diam.: 4 INCH
Type: PVC Galvanized Steel Other
4.0 in. to 14.0 ft. depth

Height: Above Below Surface: 0.0 ft. Weight: lb./ft. Drive Shoe? Yes No

3. PUBLIC SYSTEM NAME: PUBLIC SYSTEM NUMBER:

07960 RW-1

11. SCREEN:

Type: SCH 40 PVC Diam.: 4 INCH
Slot/Gauge: .010 Length: 15.0 FEET
Set Between: 14.0 ft. and 29.0 ft. NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis Yes (please enclose) No

4. ABANDONMENT: Yes No

Grouted Depth: from ft. to ft.

12. STATIC WATER LEVEL 14.0 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 12.0 ft to 29.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

16. WELL GROUTED? Yes No

Neat Cement Bentonite Bentonite/Cement Other
Depth: From 0.0 ft. to 9.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction

Type: Well Disinfected Yes No Type: Amount:

18. PUMP: Date installed: Not installed

Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: Submersible Jet (shallow) Turbine
Jet (deep) Reciprocating Centrifugal

19. WELL DRILLER: BRIAN THOMAS

CERT. NO.: 01465

Address: (Print) 176 COMMERCE BLVD Level: A B C D (circle one)
STATESVILLE, NC 28625

Telephone No.: 704-872-7686 Fax No.: 704-872-0248

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signature of Brian Thomas

Signed: Date: 08/21/13

Well Driller

If D Level Driller, provide supervising driller's name:

Table with 3 columns: Formation Description, Thickness of Stratum, Depth to Bottom of Stratum. Rows include RED SILTY CLAY, TAN CLAYEY SILT, PARTIALLY WEATHERED ROCK/MUDSTONE.

- 6. TYPE: Mud Rotary, Jetted, Bored, Dug, Air Rotary, Driven, Cable tool, Other AUGER

**APPENDIX F**

---

AFVR Field Data Sheets, Calculations, and Summary Table

**SUMMARY OF AGGRESSIVE FLUID/VAPOR RECOVERY INFORMATION<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date	Time <sup>2</sup> (hours)	Average Effluent Velocity <sup>3</sup> (fpm)	Average Effluent Temperature (°F)	Average Effluent Concentration (ppm)	Total Free Product Volatized <sup>4</sup> (gallons)	Total Free Product as Fluid <sup>5</sup> (gallons)	Total Free Product Recovered <sup>6</sup> (gallons)	Total Fluid Volume removed( gallons)
RW-1	8/29/2013	12	3246	210.5	12	0.02	0	0.02	212
MW-22	12/15/2011	6	4,217	202.9	119	0.15	0	0.15	17
MW-1	12/15/2011	2							
MW-1	11/14/2011	8	4,756	212.3	90	0.18	0	0.18	50
<b>Totals</b>		--	--	--	--	0.350	0	0.350	279

Notes:

1. Aggressive Fluid/Vapor Recovery (AFVR) events using vacuum trucks provided by A&D Environmental and Industrial Services, Inc.
2. Duration of the AFVR event at well location.
3. Cross-sectional area of exhaust stack is 0.19 sq. ft.
4. Total Volatized in gallons = Air emissions in pounds/(6.25 lbs./gal.)
5. Total Free Product as Fluid is obtained from disposal manifest and/or correspondence with subcontractors from each AFVR event.
6. Total Free Product Recovered = Total Free Product Volatized + Total Free Product as Fluid.

**TABLE 1**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**AGGRESSIVE FLUID/VAPOR RECOVERY EVENTS**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft.)	Depth to Groundwater (ft.)	Depth to Free Product (ft.)	Free Product Thickness (ft.)	Groundwater Elevation <sup>2</sup> (ft.)	Well Depth (ft.)	Screened Interval (ft.)
07960-RW-1	8/29/13 (pre-AFVR)	101.63	14.49	--	--	87.14	29	14-29
	8/29/13 (immediately post-AFVR)		18.10	--	--	83.53		
	8/29/13 (20 minutes post-AFVR)		17.55	--	--	84.08		
07960-MW-1	8/29/13 (pre-AFVR)	101.98	17.66	--	--	84.32	44.81	unknown
	8/29/13 (immediately post-AFVR)		18.90	--	--	83.08		
	8/29/13 (20 minutes post-AFVR)		18.80	--	--	83.18		
07960-MW-3	8/29/13 (pre-AFVR)	101.54	20.41	--	--	81.13	40	10-40
	8/29/13 (immediately post-AFVR)		19.49	--	--	82.05		
	8/29/13 (20 minutes post-AFVR)		18.49	--	--	83.05		
07960-MW-7	8/29/13 (pre-AFVR)	99.72	23.50	--	--	76.22	34.92	19.92-34.92
	8/29/13 (immediately post-AFVR)		18.80	--	--	80.92		
	8/29/13 (20 minutes post-AFVR)		18.42	--	--	81.30		
07960-MW-21	8/29/13 (pre-AFVR)	101.70	21.71	--	--	79.99	40.16	25.16-40.16
	8/29/13 (immediately post-AFVR)		19.55	--	--	82.15		
	8/29/13 (20 minutes post-AFVR)		19.50	--	--	82.20		
07960-MW-22	12/15/11 (pre-AFVR)	105.13	38.05	37.80	0.25	67.27	40.09	25.09-40.09
	12/15/11 (immediately post-AFVR)		39.78	--	--	65.35		
	12/15/11 (20 minutes post-AFVR)		39.66	39.60	0.06	65.52		
07960-MW-12	12/15/11 (pre-AFVR)	103.46	dry	--	--	--	34.99	19.99-34.99
	12/15/11 (immediately post-AFVR)		dry	--	--	--		
	12/15/11 (20 minutes post-AFVR)		dry	--	--	--		
07960-MW-14	12/15/11 (pre-AFVR)	103.48	36.52	--	--	66.96	39.74	24.74-39.74
	12/15/11 (immediately post-AFVR)		36.43	--	--	67.05		
	12/15/11 (20 minutes post-AFVR)		36.42	--	--	67.06		
07960-MW-15	12/15/11 (pre-AFVR)	103.16	35.99	--	--	67.17	40.13	25.13-40.13
	12/15/11 (immediately post-AFVR)		35.67	--	--	67.49		
	12/15/11 (20 minutes post-AFVR)		35.67	--	--	67.49		
07960-MW-1	12/15/11 (pre-AFVR)	101.98	33.50	--	--	68.48	44.81	unknown
	12/15/11 (immediately post-AFVR)		34.07	--	--	67.91		
	12/15/11 (20 minutes post-AFVR)		34.21	--	--	67.77		
07960-MW-3	12/15/11 (pre-AFVR)	101.54	33.42	--	--	68.12	40	10-40
	12/15/11 (immediately post-AFVR)		33.40	--	--	68.14		
	12/15/11 (20 minutes post-AFVR)		33.41	--	--	68.13		
07960-MW-6	12/15/11 (pre-AFVR)	102.25	34.06	--	--	68.19	34.92	19.92-34.92
	12/15/11 (immediately post-AFVR)		33.06	--	--	69.19		
	12/15/11 (20 minutes post-AFVR)		33.06	--	--	69.19		
07960-MW-21	12/15/11 (pre-AFVR)	101.70	32.79	--	--	68.91	40.16	25.16-40.16
	12/15/11 (immediately post-AFVR)		32.80	--	--	68.90		
	12/15/11 (20 minutes post-AFVR)		32.76	--	--	68.94		
07960-MW-1	11/14/11 (pre-AFVR)	101.98	32.92	--	--	69.06	44.81	unknown
	11/14/11 (immediately post-AFVR)		34.92	--	--	67.06		
	11/14/11 (20 minutes post-AFVR)		34.61	--	--	67.37		
07960-MW-3	11/14/11 (pre-AFVR)	101.54	33.00	--	--	68.54	40	10-40
	11/14/11 (immediately post-AFVR)		32.83	--	--	68.71		
	11/14/11 (20 minutes post-AFVR)		32.83	--	--	68.71		
07960-MW-6	11/14/11 (pre-AFVR)	102.25	33.54	--	--	68.71	34.92	19.92-34.92
	11/14/11 (immediately post-AFVR)		33.53	--	--	68.72		
	11/14/11 (20 minutes post-AFVR)		33.53	--	--	68.72		
07960-MW-21	11/14/11 (pre-AFVR)	101.70	32.12	--	--	69.58	40.16	25.16-40.16
	11/14/11 (immediately post-AFVR)		32.18	--	--	69.52		
	11/14/11 (20 minutes post-AFVR)		32.16	--	--	69.54		
07960-MW-13	7/25/11 (pre-AFVR)	101.48	29.70	--	--	71.78	40.19	25.19-40.19
	7/25/11 (immediately post-AFVR)		39.91	--	--	61.57		
	7/25/11 (20 minutes post-AFVR)		39.27	--	--	62.21		
07960-MW-12	7/25/11 (pre-AFVR)	103.46	31.99	--	--	71.47	34.99	19.99-34.99
	7/25/11 (immediately post-AFVR)		dry	--	--	--		
	7/25/11 (20 minutes post-AFVR)		34.65	--	--	68.81		

TABLE 1  
SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>  
AGGRESSIVE FLUID/VAPOR RECOVERY EVENTS  
378 TRUCK STOP

Well ID	Date Measured	Top of Casing Elevation (ft.)	Depth to Groundwater (ft.)	Depth to Free Product (ft.)	Free Product Thickness (ft.)	Groundwater Elevation <sup>2</sup> (ft.)	Well Depth (ft.)	Screened Interval (ft.)
07960-MW-22	7/20/11 (pre-AFVR)	105.13	33.84	--	--	71.29	40.09	25.09-40.09
	7/20/11 (immediately post-AFVR)		37.66	--	--	67.47		
	7/20/11 (20 minutes post-AFVR)		37.52	--	--	67.61		
07960-MW-16	7/19/11 (pre-AFVR)	101.32	30.55	--	--	70.77	40.11	25.11-40.11
	7/19/11 (immediately post-AFVR)		37.76	--	--	63.56		
	7/19/11 (20 minutes post-AFVR)		37.52	--	--	63.80		
07960-MW-1	3/16/11 (pre-AFVR)	101.98	25.55	25.53	0.02	76.45	unknown	unknown
	3/16/11 (immediately post-AFVR)		28.58	--	--	73.40		
	3/16/11 (20 minutes post-AFVR)		28.58	--	--	73.40		
07960-MW-3	3/16/11 (pre-AFVR)	101.54	25.86	--	--	75.68	40	10-40
	3/16/11 (immediately post-AFVR)		26.13	--	--	75.41		
	3/16/11 (20 minutes post-AFVR)		26.10	--	--	75.44		
07960-MW-7	3/16/11 (pre-AFVR)	99.72	23.44	--	--	76.28	34.92	19.92-34.92
	3/16/11 (immediately post-AFVR)		22.81	--	--	76.91		
	3/16/11 (20 minutes post-AFVR)		22.89	--	--	76.83		
07960-MW-21	3/16/11 (pre-AFVR)	101.70	24.30	--	--	77.40	40.16	25.16-40.16
	3/16/11 (immediately post-AFVR)		24.23	--	--	77.47		
	3/16/11 (20 minutes post-AFVR)		24.23	--	--	77.47		

Notes:

1. Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.
2. Groundwater elevation adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.

**APPENDIX A  
AFVR EVENT FIELD DATA SHEETS**

AFVR Measurements Prior to and After Event

Project Name: 378 Truck Stop UST Permit No: 07960  
 Project No: 14-214210.01 ECS Field Rep.: B. Peay  
 Date: 8/29/2013

**Measurements Prior to AFVR Event**

Vac. Truck (VT) Co. A&D  
 VT No.: 18  
 VT Tank Capacity: 3,200 gallons  
 Inside Diameter of VT Outlet Stack 6 inches  
 Is Tank Empty & Clean (Y/N) Y

**Measurements After AFVR Event**

VT Tank Product volume 0 gallons  
 VT Tank Water volume 212 gallons

Well ID	Prior to AFVR -		Immediately After -		20-min After AFVR -		Stinger (ft)
	Depth to Product (ft)	Depth to Water (ft)	Depth to Product (ft)	Depth to Water (ft)	Depth to Product (ft)	Depth to Water (ft)	
07960-RW1	NP	14.49	NP	18.10	NP	17.55	15.1
07960-MW3	NP	20.41	NP	19.49	NP	18.49	--
07960-MW7	NP	23.50	NP	18.80	NP	18.42	--
07960-MW1	NP	17.66	NP	18.90	NP	18.80	--
07960-MW21	NP	21.71	NP	19.55	NP	19.50	--

Stinger lowered to 15.7 @ 1745hrs

NP denotes no measurable free product.

NM denotes not measured.

**APPENDIX A  
AFVR EVENT FIELD DATA SHEETS**

Project Name: 378 Truck Stop  
 UST Permit No: 07960  
 Date: 8/29/2013

ECS Project No: 14-214210.01  
 Field Operative: B. Peay  
 Subcontractor: A&D

**Measurements During AFVR Event**

Time	Stack Outlet				Vac Truck Vacuum (in. of Hg)	Non-AFVR Wells							
	Air Flow (ft/min)	Temperature (Fahrenheit)	R.H. (%)	TLV (ppm)		07960-MW1		07960-MW21		07960-MW3		07960-MW7	
						DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)
8:15													
8:30	3,601	184.3	4.1	68	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
8:45	3,710	183.4	4.5	55	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
9:00	3,705	185.2	4.4	45	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
9:15	3,540	177.9	4.9	10	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
9:30	3,705	182.3	4.8	10	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
9:45	3,570	191.6	4.1	10	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
10:00	3,420	192.3	3.1	5	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
10:15	3,710	206.9	2.9	4	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
10:45	3,390	206.1	2.9	2	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
11:15	3,030	207.1	2.9	2	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
11:45	3,160	204.1	2.7	24	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
12:15	3,005	201.0	2.1	10	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
12:45	3,145	223.5	1.2	0	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
13:15	3,331	223.9	1.2	6	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
13:45	3,160	228.4	0.8	30	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
14:15	3,291	225.7	1.1	20	23.5	NM	0.10	NM	0.00	NM	0.00	NM	0.00
14:45	3,247	225.0	0.5	10	23.5	NM	0.15	NM	0.00	NM	0.00	NM	0.00
15:15	3,390	227.5	0.8	5	23.5	NM	0.15	NM	0.00	NM	0.00	NM	0.00
15:45	2,922	226.4	0.8	2	23.5	NM	0.14	NM	0.00	NM	0.00	NM	0.00
16:15	3,240	221.7	1.3	4	23.5	NM	0.05	NM	0.00	NM	0.00	NM	0.00
16:45	2,922	225.7	0.7	1	23.5	NM	0.05	NM	0.00	NM	0.00	NM	0.00
17:15	2,721	226.0	0.9	1	23.5	NM	0.05	NM	0.00	NM	0.00	NM	0.00
17:45	2,790	221.1	1.5	0	23.5	NM	0.05	NM	0.00	NM	0.05	NM	0.05

**APPENDIX A  
AFVR EVENT FIELD DATA SHEETS**

Project Name: 378 Truck Stop  
 UST Permit No: 07960  
 Date: 8/29/2013

ECS Project No: 14-214210.01  
 Field Operative: B. Peay  
 Subcontractor: A&D

**Measurements During AFVR Event**

Time	Stack Outlet				Vac Truck Vacuum (in. of Hg)	Non-AFVR Wells							
	Air Flow (ft/min)	Temperature (Fahrenheit)	R.H. (%)	TLV (ppm)		07960-MW1		07960-MW21		07960-MW3		07960-MW7	
						DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)	DTW (ft)	Vacuum (in of H2O)
18:15	3,019	218.3	2.0	1	23.5	NM	0.05	NM	0.00	NM	0.05	NM	0.05
18:45	3,313	214.0	2.4	1	23.5	NM	0.05	NM	0.00	NM	0.05	NM	0.05
19:15	2,474	212.5	2.5	1	23.5	NM	0.05	NM	0.00	NM	0.05	NM	0.05
19:45	3,180	225.3	1.5	1	23.5	NM	0.05	NM	0.00	NM	0.05	NM	0.05
20:15	3,200	227.3	1.8	0	23.5	NM	0.05	NM	0.00	NM	0.05	NM	0.05



**APPENDIX A  
EMISSIONS CALCULATIONS**

**AGGRESSIVE FLUID VAPOR RECOVERY EVENT**

SITE NAME: 378 Truck Stop  
 UST PERMIT NUMBER: 07960  
 AVERAGE DEPTH TO GROUNDWATER: 19.02  
 DESCRIBE SOIL IN THE SATURATED ZONE: SILT with PWR  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): Unknown  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: 07960-RW-1  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM TRUCK (cfm @ in Hg): 450 cfm @ 24 in Hg

**DRY STANDARD CUBIC FEET PER MINUTE (DSCFM) AIR FLOW CALCULATIONS (Qstd)**

Date	Time	Vacuum (in. of Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>sw</sub> (Wt/Wt)	B <sub>s</sub> (vol/vol)	Q <sub>std</sub> (flow)
Connection to RW-2									
Start	8:15	Stinger set at 15.1 ft. below top of casing.							
08/29/13	8:30	23.5	3,601	6	184.3	4.1	0.014936	0.023	566
08/29/13	8:45	23.5	3,710	6	183.4	4.5	0.016103	0.025	583
08/29/13	9:00	23.5	3,705	6	185.2	4.4	0.016457	0.026	580
08/29/13	9:15	23.5	3,540	6	177.9	4.9	0.015511	0.024	561
08/29/13	9:30	23.5	3,705	6	182.3	4.8	0.016785	0.026	582
08/29/13	9:45	23.5	3,570	6	191.6	4.1	0.017554	0.027	552
08/29/13	10:00	23.5	3,420	6	192.3	3.1	0.013383	0.021	532
08/29/13	10:15	23.5	3,710	6	206.9	2.9	0.017034	0.027	561
08/29/13	10:45	23.5	3,390	6	206.1	2.9	0.016754	0.026	514
08/29/13	11:15	23.5	3,030	6	207.1	2.9	0.017105	0.027	458
08/29/13	11:45	23.5	3,160	6	204.1	2.7	0.014935	0.023	482
08/29/13	12:15	23.5	3,005	6	201.0	2.1	0.010831	0.017	463
08/29/13	12:45	23.5	3,145	6	223.5	1.2	0.009649	0.015	470
08/29/13	13:15	23.5	3,331	6	223.9	1.2	0.009724	0.015	497
08/29/13	13:45	23.5	3,160	6	228.4	0.8	0.007028	0.011	471
08/29/13	14:15	23.5	3,291	6	225.7	1.1	0.009216	0.015	490
08/29/13	14:45	23.5	3,247	6	225.0	0.5	0.004100	0.007	488
08/29/13	15:15	23.5	3,390	6	227.5	0.8	0.006909	0.011	506
08/29/13	15:45	23.5	2,922	6	226.4	0.8	0.006766	0.011	437
08/29/13	16:15	23.5	3,240	6	221.7	1.3	0.010107	0.016	485
08/29/13	16:45	23.5	2,922	6	225.7	0.7	0.005833	0.009	438
08/29/13	17:15	23.5	2,721	6	226.0	0.9	0.007564	0.012	406
08/29/13	17:45	23.5	2,790	6	221.1	1.5	0.011554	0.018	417
08/29/13	18:15	23.5	3,019	6	218.3	2.0	0.014666	0.023	451
08/29/13	18:45	23.5	3,313	6	214.0	2.4	0.016220	0.025	497
08/29/13	19:15	23.5	2,474	6	212.5	2.5	0.016407	0.026	372
08/29/13	19:45	23.5	3,180	6	225.3	1.5	0.012538	0.020	472
08/29/13	20:15	23.5	3,200	6	227.3	1.8	0.015703	0.025	471
<b>Averages</b>		23.5	3,246	6	210.5	2.3	0.012549	0.020	493

**NOTES**

Qstd = Flow at DSCFM

Vacuum = The level of vacuum being applied recorded from the vacuum truck tank (inches of Hg)

Velocity = The rate at which air flows is measured at the blower discharge piping (anemometer or pitot tube)

Pipe ID = The inside diameter of the blower discharge piping (from the vacuum truck)

Temperature = The temperature of the air stream exiting the blower discharge piping (dry bulb temp., in deg. °F)

Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping

B<sub>sw</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart (temp Vs relative humidity) based on an elevation of 459 feet above sea level.

B<sub>s</sub> = water vapor % by volume

**EQUATIONS**

$$B_{ws} = (B_{sw}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{sw}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1 - \text{Water Vapor}) * \text{velocity} * (\text{PI} * (\text{diameter}/24)^2) * (528^\circ\text{R}/(\text{Temp} + 460))$$

**APPENDIX A  
EMISSIONS CALCULATIONS**

**EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop

AFVR EVENT DATE: 29-Aug-2013

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub>	PPM <sub>dry</sub>	RF	PPM <sub>conc</sub>	C <sub>c,m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
15	566	68	68	70	1.02	71	35	0.00000	0.08	0.09	0.02
30	583	55	55	56	1.02	58	29	0.00000	0.06	0.07	0.02
45	580	45	45	46	1.02	47	24	0.00000	0.05	0.06	0.01
60	561	10	10	10	1.02	10	5	0.00000	0.01	0.01	0.00
75	582	10	10	10	1.02	10	5	0.00000	0.01	0.01	0.00
90	552	10	10	10	1.02	10	5	0.00000	0.01	0.01	0.00
105	532	5	5	5	1.02	5	3	0.00000	0.01	0.01	0.00
120	561	4	4	4	1.02	4	2	0.00000	0.00	0.01	0.00
150	514	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
180	458	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
210	482	24	24	25	1.02	25	13	0.00000	0.02	0.03	0.01
240	463	10	10	10	1.02	10	5	0.00000	0.01	0.01	0.01
270	470	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
300	497	6	6	6	1.02	6	3	0.00000	0.01	0.01	0.00
330	471	30	30	30	1.02	31	15	0.00000	0.03	0.03	0.02
360	490	20	20	20	1.02	21	10	0.00000	0.02	0.02	0.01
390	488	10	10	10	1.02	10	5	0.00000	0.01	0.01	0.01
420	506	5	5	5	1.02	5	3	0.00000	0.00	0.01	0.00
450	437	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
480	485	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
510	438	1	1	1	1.02	1	1	0.00000	0.00	0.00	0.00
540	406	1	1	1	1.02	1	1	0.00000	0.00	0.00	0.00
570	417	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
600	451	1	1	1	1.02	1	1	0.00000	0.00	0.00	0.00
630	497	1	1	1	1.02	1	1	0.00000	0.00	0.00	0.00
660	372	1	1	1	1.02	1	1	0.00000	0.00	0.00	0.00
690	472	1	1	1	1.02	1	1	0.00000	0.00	0.00	0.00
720	471	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
<b>Averages</b>	493	12	12	12	1.02	12	6	0.00000	0.01	0.01	0.00

Total emissions in pounds: **0.13**

Total emissions in gallons: **0.02**

**NOTES**

PPM<sub>measured</sub> = Actual measurements (ppm) taken with TLV at the blower discharge piping

PPM<sub>wet</sub> = "wet" concentration

PPM<sub>dry</sub> = "dry" concentration

RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2. January 1990.

K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)

PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP

C<sub>c,m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon

M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon

K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP

C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP

PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon

PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of of VOC's as gasoline

PMR = lb, pollutant mass removal of VOC's as gasoline

APPENDIX A  
EMISSIONS CALCULATIONS

EQUATIONS

$$\text{PPM}_{\text{wet}} = \text{PPM}_{\text{measured}}$$

$$\text{PPM}_{\text{dry}} = (\text{PPM}_{\text{wet}})/(1 - B_{\text{ws}})$$

$$\text{PPM}_c = (\text{PPM}_d)(K)$$

$$C_{c,m} = (\text{PPM}_c)(M_c / K_3)$$

$$C_c = (C_{c,m})(62.43 \times 10^{-9} \text{ lb-m}^3/\text{mg-ft}^3)$$

$$\text{PMR}_c = (C_c)(Q_{\text{std}})(60 \text{ min/hr})$$

$$\text{PMR}_g = (\text{PMR}_c)(M_g/M_{cg})$$

$$\text{PMR} = (\text{PMR}_g)(\# \text{minutes}/60)$$

**APPENDIX G**

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Disposal Manifests

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

2. Page 1 of 1

3. Emergency Response Phone

4. Waste Tracking Number

803-957-9175

33833

5. Generator's Name and Mailing Address **Wilkerson Fuel Company, Inc**

Generator's Site Address (if different than mailing address)

PO Box 2835

378 Truck Stop

Rock Hill, SC 29732

731 Highway 378

Edgefield, SC 29824

Generator's Phone: 704-567-2711 Noelle France - ECS

6. Transporter 1 Company Name

U.S. EPA ID Number

A&D Environmental Services (SC), LLC

SCD987592331

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

A&D Environmental Services (NC), Inc

U.S. EPA ID Number

2718 Uhwarrie Road

Archdale, NC 27263

Facility's Phone:

NCD986232221

336-434-7760

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

No.

Type

1.

Non-Hazardous, Non-Regulated

4

DM

220

G

200 gallons

2.

Purge Water

4

DM

2000

P

2608 pounds of 1.30 tms

3.

Soil

4.

13. Special Handling Instructions and Additional Information

A&D (SC) Job #14103 SCDHEC UST Permit #07960 ECS Project: 14-214210

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Officer's Printed/Typed Name

Signature

Month Day Year

Noelle A. France

Noelle A. France for Wilkerson Fuel

10 3 13

15. International Shipments  Import to U.S.  Export from U.S.

Port of origin:

Date leaving U.S.

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Chris Peter

Chris Peter

10 7 13

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator):

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

Traavis Cloud

Traavis Cloud

10 09 13

DESIGNATED FACILITY TO GENERATOR



# A&D Environmental Services

# Bill of Lading / Material Manifest

A&D Job No: <i>1274</i>	Generator ID Number	Page 1 of	Emergency Response Phone <b>800-434-7750</b>	Tracking Number <b>04228</b>
----------------------------	---------------------	-----------	---	---------------------------------

Generator's Name and Mailing Address <i>A&amp;D Environmental Services 2718 Uwaharrie Road Archdale, SC</i>	Generator's site address (if different from mailing address)
--	--

Transporter 1 <input type="checkbox"/> 2 <input type="checkbox"/>	Company Name <b>A&amp;D Environmental Services, Inc.</b>	US EPA ID No: <b>NCD98623222</b>
---	---	----------------------------------

Transporter 1 <input type="checkbox"/> 2 <input type="checkbox"/>	Company Name <b>A&amp;D Environmental Services (SC), LLC</b>	US EPA ID No: <b>SCD987598331</b>
---	---	-----------------------------------

Designated Facility	Designated Facility	Designated Facility	Designated Facility	Designated Facility
<b>A&amp;D Environmental Services, Inc.</b> 2718 Uwaharrie Road Archdale, NC 27263 336-434-7750 NCD98623221	<b>A&amp;D Environmental Services, Inc.</b> 3149 Lear Drive Burlington, NC 27215 336-229-0058 NCR000138628	<b>A&amp;D Environmental Services (SC), LLC</b> 1915 Brentwood Street High Point, NC 27260 336-882-8000 NCR000002501	<b>A&amp;D Environmental Services (SC), LLC</b> 1741 Calks Ferry Road Lexington, SC 29073 803-957-9175 SCD987598331	<b>A&amp;D Environmental Services (SC), LLC</b> 305 B South Main Street Mauldin, SC 29662 803-967-3500 SCR000765677

HM	Hazardous Materials Shipping Name and Description (if applicable)	No.	Type	QTY	Wt/Vol	Profile Number
	<i>Universal Waste Lamps</i>	1	TF	Approx. 212		0 Free Product (Shreen)

Petroleum Products for Recycle		No.	Type	QTY	Wt/Vol	Profile Number
X	NA1993, Diesel fuel, 3, III					ERG# 128
X	NA1993, Fuel oil (No.1,2,4,5 or 6), 3, III					ERG# 128
X	UN1203, Gasoline, 3, II					ERG# 128
X	NA1270, Petroleum Oil, 3, III					ERG# 128

Universal Waste Lamps, Batteries, Ballasts, and Electronics for Recycle							
HM	No.	Type	Est. Wt.	Count	Shipping Name and Description (if applicable)	Common Name	Discrepancy
X					RQ, UN2809, Mercury contained in manufactured articles, 8, III	ERG# 172 Mercury Containing Articles	
X					RQ, UN2809, Mercury, 8, III	ERG# 172 Mercury	
X					RQ, UN3432, Polychlorinated biphenyls, solid, 9, II	ERG# 171 TSCA Exempt PCB Lamp Ballasts	
X					UN2800, Batteries, wet, nonspillable, 8, III	ERG# 154 Sealed Lead Acid Batteries	
X					UN2794, Batteries, wet, filled with acid, 8, III	ERG# 154 Lead Acid Batteries	
X					UN2795, Batteries, wet, filled with alkali, 8, III	ERG# 154 Wet NiCad Batteries	
X					UN3090, Lithium batteries, 9, II	ERG# 138 Lithium Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III	ERG# 154 Alkaline Batteries	
X					UN3028, Batteries, dry, containing potassium hydroxide solid, 8, III	ERG# 154 NiCad Batteries	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Fluorescent lamps 4" or <	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Fluorescent lamps 4" or >	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Circular/U tube lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Compact Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Shattershield	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	HID/MV/JV Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164(e))	Incandescent Lamps	
					Non-PCB Light Ballasts for Recycle (Not DOT-Regulated)	Non-PCB Light Ballasts	
					Electronic Equipment for Recycle (Not DOT-Regulated)	Electronics	

**Generator's Certification:** This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40CFR Part 261 or any applicable state law, and unless specifically identified above the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

Generator's/Officer's Printed/Typed Name <i>Bryan Richardson</i>	Signature <i>Bryan Richardson</i>	Month 8	Day 29	Year 13
Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

Discrepancy Indication / Additional Information:	Month	Day	Year
--	-------	-----	------

Designated Facility Certification: I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy indicated above.			
Printed/Typed Name	Signature	Month	Day Year

**GENERATOR'S/SHIPPER'S INITIAL COPY**

**APPENDIX K**

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Data Verification Checklist

### Contractor Checklist

For each report submitted to the UST Management Division, the contractor will be required to verify that all data elements for the required scope of work have been provided. For items not required for the scope of work, the N/A box should be checked. For items required and not completed or provided, the No box should be checked and a thorough description of the reason must be provided.

Item #	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	x		
2	Is UST Owner/Operator name, address, & phone number provided?	x		
3	Is name, address, & phone number of current property owner provided?	x		
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	x		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?	x		
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	x		
7	Has the facility history been summarized?	x		
8	Has the regional geology and hydrogeology been described?	x		
9	Are the receptor survey results provided as required?	x		
10	Has current use of the site and adjacent land been described?	x		
11	Has the site-specific geology and hydrogeology been described?	x		
12	Has the primary soil type been described?	x		
13	Have field screening results been described?			x
14	Has a description of the soil sample collection and preservation been detailed?			x
15	Has the field screening methodology and procedure been detailed?			x
16	Has the monitoring well installation and development dates been provided?	x		
17	Has the method of well development been detailed?	x		
18	Has justification been provided for the locations of the monitoring wells?			x
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	x		
20	Has the groundwater sampling methodology been detailed?	x		
21	Have the groundwater sampling dates and groundwater measurements been provided?	x		
22	Has the purging methodology been detailed?	x		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete?	x		
24	If free-product is present, has the thickness been provided?	x		
25	Does the report include a brief discussion of the assessment done and the results?	x		
26	Does the report include a brief discussion of the aquifer evaluation and results?			x
27	Does the report include a brief discussion of the fate & transport models used?			x



Item #	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			x
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			x
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			x
31	Have recommendations for further action been provided and explained?	x		
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			x
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)	x		
34	Has the current and historical laboratory data been provided in tabular format?	x		
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			x
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			x
37	Has the topographic map been provided with all required elements? (Figure 1)	x		
38	Has the site base map been provided with all required elements? (Figure 2)	x		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)	x		
40	Has the site potentiometric map been provided? (Figure 5)	x		
41	Have the geologic cross-sections been provided? (Figure 6)			x
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			x
43	Has the site survey been provided and include all necessary elements? (Appendix A)			x
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	x		
45	Is the laboratory performing the analyses properly certified?	x		
46	Has the tax map been included with all necessary elements? (Appendix C)			x
47	Have the soil boring/field screening logs been provided? (Appendix D)	x		
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)	x		
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			x
50	Have the disposal manifests been provided? (Appendix G)	x		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			x
52	Has all fate and transport modeling been provided? (Appendix I)			x
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			x
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	x		





PROMOTE PROTECT PROSPER  
South Carolina Department of Health  
and Environmental Control

**UNDERGROUND STORAGE TANK MANAGEMENT DIVISION  
BUREAU OF LAND AND WASTE MANAGEMENT**

**2600 Bull Street  
Columbia, SC 29201  
Telephone (803) 898-2544  
Fax (803) 898-0673**



**MEMORANDUM**

**To:** Rob McDaniel, Manager  
Enforcement Section

**Date:** November 6, 2013

**Re:** Enforcement Referral

**Type:** Technical-Active Corrective Action (ACA) Options form

**UST Permit #:** 07960

**Facility Name:** Former 378 Truck Stop, 731 Hwy 378, Edgefield, SC

**Owner/Operator:** Frank Wilkerson, Wilkerson Fuel Co., Inc.  
(when the release is reported) P O Box 2835, Rock Hill, SC 29732  
Phone # (803)324-4080

**Regulatory Citation:** Subpart F, Section 280.65 Investigation for soil and ground-water cleanup of the South Carolina Underground Storage Tank Regulations, R. 61-92

**Requested Action/Information:** Requested the Responsible Party to select either the state-lead or owner/operator choice to complete ACA for the release reported on October 3, 1974. Two community meetings have occurred thus far without the Responsible Party, Frank Wilkerson, showing up to address the community's concerns. The release is a Class 2A with work needing to proceed due to risk to drinking water wells. Not receiving the ACA Options form is impeding corrective action requirements.

**Additional Comments:** First ACA Options form sent April 8, 2013. A second ACA Options letter sent certified on July 9, 2013. A Notice of Alleged Violation letter sent certified on July 31, 2013. I have not received a response or phone call relating to choosing an ACA Option.

Are there any Tank Ownership Issues? :  Yes  No If yes please explain.

Are there any other persons being dealt with other than the tank owner?  Yes  No

Referred By: Cather R. [Signature] Date: 11/6/13

Section Manager's Approval: [Signature] Date: 11/6/13

Division Director's Approval: [Signature] Date: 11/6/13

enc: Copy of ACA Options letters & NOAV Letter  
cc: Technical File



Catherine B. Templeton, Director

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

APR 08 2013



MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

Re: **Corrective Action Options**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Assessment Report received March 11, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report submitted by Environmental Compliance Services, Inc. on your behalf. The report indicates that active corrective action is necessary at the site to mitigate petroleum impact and ensure that there is no detrimental exposure to human health or the environment.

Funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account will soon be available for active corrective action. The selected technology must reduce free product and petroleum chemicals of concern (CoC) concentrations to site-specific target levels (SSTLs) determined by the Division.

The SUPERB Site Rehabilitation and Fund Access Regulations R.61-98 require the UST owner/operator to develop and implement a reasonable, cost-effective corrective action to be performed by a Agency-certified site rehabilitation contractor. As the owner/operator for the release reported on October 3, 1974, you may choose one of two options as to how to proceed with this requirement: state lead or owner/operator lead.

State Lead Option:

- If you choose the state lead option, the Division will procure a certified site rehabilitation contractor to perform corrective action on your behalf. The Agency will enter into an enforceable contract with the awarded contractor. As long as you do not interfere with or prohibit the work at your site, you will not be responsible in the event the state selected contractor does not perform appropriately or does not make satisfactory progress towards achieving the established corrective action goals. To utilize the state lead option, please sign and return the applicable Permission and Right-of-Entry forms within 15 days of the date of this letter.

Owner/Operator Lead Option:

- If you select the owner/operator lead option, you will be required to select a contractor to perform the corrective action. In order to assist you in determining the clean-up technology, time frame, clean-up levels, and associated costs, the Division will prepare a technical specification package and provide you copies to send to contractors of your choice. In addition, the Division will announce the request for solicitations in the South Carolina Business Opportunities, a bi-weekly state government publication, to ensure that an adequate solicitation

response is obtained so that a fair and competitive price can be established. This announcement will clearly indicate that you will select the contractor to implement the corrective action.

- Compensation to the contractor will be from the SUPERB Account, but you may have the obligation to pay your selected contractor for any costs not approved by the Agency.
- The Division strongly suggests that a written contract between you and the selected contractor be developed following the completion of the solicitation process. The parties to this contract would be you and the contractor you choose; the Agency would not be a party to this contract. The Division's function would be to monitor and ensure progress of corrective action activities.
- If the contractor you select does not or cannot complete the required activities, you will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount. No additional funding from the SUPERB Account may be allowed. Under R.61-92, Part 280: Underground Storage Tank Control Regulations, you as the owner/operator are ultimately responsible to the Agency for the actions of your contractor. The Agency will pursue enforcement actions against you if the contractor you select does not make satisfactory progress towards achieving established corrective actions goals. To utilize the owner/operator lead option, please sign and return the enclosed Active Corrective Action Options Form within 15 days of the date of this letter.

On all correspondence or inquiries regarding this project, please reference UST Permit #07960. If you have any questions, please contact me at (803) 896-6633 or by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Permission/Right-of-Entry forms  
Active Corrective Action Options form

cc: Technical file (w/o enc)



Catherine B. Templeton, Director

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

**CERTIFIED MAIL:91 7108 2133 3934 4767 3917**

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

**MAR 09 2013**



Re: Corrective Action Options-Second Attempt  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
Assessment Report received March 11, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report submitted by Environmental Compliance Services, Inc. on your behalf. The report indicates that active corrective action is necessary at the site to mitigate petroleum impact and ensure that there is no detrimental exposure to human health or the environment.

Funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account will soon be available for active corrective action. The selected technology must reduce the petroleum chemicals of concern (CoC) concentrations to site-specific target levels (SSTLs) determined by the Division.

The SUPERB Site Rehabilitation and Fund Access Regulations R.61-98 require the UST owner/operator to develop and implement a reasonable, cost-effective corrective action to be performed by an Agency-certified site rehabilitation contractor. As the owner/operator you are the responsible party for the release reported on October 3, 1974. You may choose one of two options as to how to proceed with this requirement: state lead or owner/operator lead.

State Lead Option:

- If you choose the state lead option, the Division will procure a certified site rehabilitation contractor to perform corrective action on your behalf. The Agency will enter into an enforceable contract with the awarded contractor. As long as you do not interfere with or prohibit the work at your site, DHEC will not hold you responsible for the failure of the state selected contractor to meet the terms of the contract. To utilize the state lead option, please sign and return the applicable Permission and Right-of-Entry forms within 15 days of the date of this letter.

Owner/Operator Lead Option:

- If you select the owner/operator lead option, you will be required to select a contractor to perform the corrective action. In order to assist you in determining the clean-up technology, time frame, clean-up levels, and associated costs, the Division will prepare a technical specification package and provide you copies to send to contractors of your choice. In addition, the Division will announce the request for solicitations in the South Carolina Business Opportunities, a bi-weekly state government publication, to ensure that an adequate solicitation response is obtained so that a fair and competitive price can be established. This announcement will clearly indicate that you will select the contractor to implement the corrective action.
- Compensation to the contractor will be from the SUPERB Account, but you may have the obligation to pay your selected contractor for any costs not approved by the Agency.
- The Division strongly suggests that a written contract between you and the selected contractor be developed following the completion of the solicitation process. The parties to this contract would be you and the contractor you choose; the Agency would not be a party to this contract. The Division's function would be to monitor and ensure progress of corrective action activities.
- If the contractor you select does not or cannot complete the required activities, you will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount. No additional funding from the SUPERB Account may be allowed. Under R.61-92, Part 280: Underground Storage Tank Control Regulations, you as the owner/operator are ultimately responsible to the Agency for the actions of your contractor. The Agency will pursue enforcement actions against you if the contractor you select does not make satisfactory progress towards achieving established corrective actions goals. To utilize the owner/operator lead option, please sign and return the enclosed Active Corrective Action Options Form within 15 days of the date of this letter.

On all correspondence or inquiries regarding this project, please reference UST Permit # 07960. If you have any questions, please contact me at (803) 898-0610 or [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Permission/Right-of-Entry forms  
Active Corrective Action Options form

cc: Environmental Compliance Services, P O Box 3528, Fort Mill, SC 29708 (w/o enc)  
Technical file (w/o enc)

State Lead Option

**PERMISSION FORM**

**UNDERGROUND STORAGE TANK OWNER**

UST Permit # 07960

**If you are the owner of the former or existing underground storage tanks for the release reported on October 3, 1974 or are designated as their authorized representative, but do not own the property, please complete this form.**

I, \_\_\_\_\_ certify that I am the legal owner of the former and existing underground storage tanks located at the facility identified below and for the release reported on October 3, 1974 or serve as the authorized representative for the UST owner. I grant permission to the South Carolina Department of Health and Environmental Control (Agency) to secure on my behalf services of a contractor to conduct assessment and corrective action activities, as required. The contractor will be designated as my contractor for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that the Agency or its contractor will be responsible for obtaining right-of-entry from the property owner and notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility \_\_\_\_\_ Phone # \_\_\_\_\_

Street Address of Facility \_\_\_\_\_

Town, City, District, Suburb \_\_\_\_\_

Name of nearest intersecting street, road, highway, alley \_\_\_\_\_

\_\_\_\_\_ Is this facility within the city limits? (yes or no) \_\_\_\_\_

Does a public water or sewer utility service this facility? (yes or no) \_\_\_\_\_, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines \_\_\_\_\_, phone number \_\_\_\_\_

NAME of UST owner (Please Print): \_\_\_\_\_

Phone Number (home) \_\_\_\_\_ (work) \_\_\_\_\_

Signature of UST Owner: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_



Owner/ Operator Lead Option

ACTIVE CORRECTIVE ACTION  
OPTIONS FORM

UST PERMIT # 07960

I, \_\_\_\_\_, certify that I am the legal owner on record for the underground storage tanks at the facility identified below for the release reported on October 3, 1974 or serve as the authorized representative for the owner. I wish to secure price quotations for corrective action activities as required by the Agency, and to select my own corrective action contractor after price quotation results are received. I understand that the Agency will also advertise for price quotations in the South Carolina Business Opportunities and provide the results to me. **I understand compensation to the contractor will be from the SUPERB Account, but I may have the obligation to pay the contractor for any costs not approved by the Agency. I understand that if the contractor I select does not or cannot complete the required activities, I will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount and that no additional funding from the SUPERB Account may be allowed. I also understand that the Agency will pursue enforcement actions against me if the contractor I select does not make satisfactory progress towards achieving established corrective actions goals.**

NAME of UST owner or authorized representative (Please Print): \_\_\_\_\_

Phone Number (home) \_\_\_\_\_ (work) \_\_\_\_\_

Signature of UST Owner: \_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_



Catherine B. Templeton, Director

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



**CERTIFIED:91 7199 9991 7030 0479 9986**

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

JUL 3 1 2013

Re: **Notice of Alleged Violation**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
ACA Options Form sent April 8, 2013  
ACA Options Form Second Attempt sent certified July 9, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control directed you to select either the state-lead or owner/operator option for active corrective action (ACA) in April and July 2013. To date the required form has not been received. In accordance with Section 280.65 of the South Carolina Underground Storage Tank Regulations, ACA must be conducted as chemicals of concern are above the risk-based-screening levels and site specific target levels for the site.

**Please sign and submit either the Owner/Operator ACA Options or the appropriate state-lead ACA Options form within 15 days from the date of this letter. Should you not submit the form on or before August 15, 2013, this office will be forced to initiate enforcement action.**

On all correspondence concerning this site, please reference UST Permit #07960. If there are any questions concerning this project, please contact me at (803) 898-0610. I can also be reached by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov) or by fax at (803) 898-0673.

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Copies of ACA Options Letters sent

cc: Environmental Compliance Services, Inc., P O Box 3528, Fort Mill, SC 29708  
Technical file

PERMISSION FORM

UNDERGROUND STORAGE TANK OWNER

UST Permit # 07960

If you are the owner of the former or existing underground storage tanks for the release reported on October 3, 1974 or are designated as their authorized representative, but do not own the property, please complete this form.

I, Frank M. Wilkerson Sr certify that I am the legal owner of the former and existing underground storage tanks located at the facility identified below and for the release reported on October 3, 1974 or serve as the authorized representative for the UST owner. I grant permission to the South Carolina Department of Health and Environmental Control (Agency) to secure on my behalf services of a contractor to conduct assessment and corrective action activities, as required. The contractor will be designated as my contractor for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that the Agency or its contractor will be responsible for obtaining right-of-entry from the property owner and notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility 378 Truck Stop Phone #

Street Address of Facility 131 Hwy 378

Town, City, District, Suburb Edgefield, SC

Name of nearest intersecting street, road, highway, alley Faulkner Mtn Rd

Is this facility within the city limits? (yes or no) No

Does a public water or sewer utility service this facility? (yes or no) No, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines

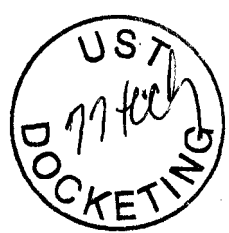
NAME of UST owner (Please Print): Wilkerson Fuel Co, Inc

Phone Number (home) (work) 803-324-4080

Signature of UST Owner: Frank M Wilkerson

Witness: Thomas K. ...

Date: Aug Month 4 Day 2013 Year



RECEIVED

NOV 14 2013

SC DHEC - Bureau of Land & Waste Management

*Sal*



South Carolina Department of Health and Environmental Control

**UNDERGROUND STORAGE TANK MANAGEMENT DIVISION  
BUREAU OF LAND AND WASTE MANAGEMENT**

2600 Bull Street  
Columbia, SC 29201  
Telephone (803) 898-2544  
Fax (803) 898-0673



**MEMORANDUM**

**To:** Rob McDaniel, Manager  
Enforcement Section

**Date:** November 6, 2013

**Re:** Enforcement Referral

**Type:** Technical-Active Corrective Action (ACA) Options form

**UST Permit #:** 07960

**Facility Name:** Former 378 Truck Stop, 731 Hwy 378, Edgefield, SC

**Owner/Operator:** Frank Wilkerson, Wilkerson Fuel Co., Inc.  
(when the release is reported) P O Box 2835, Rock Hill, SC 29732  
Phone # (803)324-4080

**Regulatory Citation:** Subpart F, Section 280.65 Investigation for soil and ground-water cleanup of the South Carolina Underground Storage Tank Regulations, R. 61-92

**Requested Action/Information:** Requested the Responsible Party to select either the state-lead or owner/operator choice to complete ACA for the release reported on October 3, 1974. Two community meetings have occurred thus far without the Responsible Party, Frank Wilkerson, showing up to address the community's concerns. The release is a Class 2A with work needing to proceed due to risk to drinking water wells. Not receiving the ACA Options form is impeding corrective action requirements.

**Additional Comments:** First ACA Options form sent April 8, 2013. A second ACA Options letter sent certified on July 9, 2013. A Notice of Alleged Violation letter sent certified on July 31, 2013. I have not received a response or phone call relating to choosing an ACA Option.

Are there any Tank Ownership Issues? :  Yes  No If yes please explain.

Are there any other persons being dealt with other than the tank owner?  Yes  No

Referred By: *Catherine Ridge* Date: 11/6/13

Section Manager's Approval: *Leea. [Signature]* Date: 11/6/13

Division Director's Approval: *mp [Signature]* Date: 11/6/13

enc: Copy of ACA Options letters & NOAV Letter  
cc: Technical File

**RECEIVED**

NOV 06 2013

SC DHEC - Bureau of Land & Waste Management

*Enf. ID# 13-0380-UST  
Resolved 11-14-13*

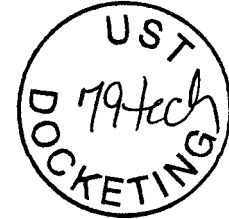


Catherine B. Templeton, Director

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

RONNY LOWDER  
EMERALD INC  
PO BOX 3050  
SUMTER SC 29151

DEC 03 2013



Re: **Notice to Proceed-GAC Change**  
378 Truck Stop, 731 Highway 378, Edgefield, SC 29824  
**UST Permit # 07960; CA# 47162**  
IFB-5400005822 5/3/13 EMW; PO # 4600254190  
Edgefield County

Dear Mr. Lowder:

Under the terms and conditions of the referenced contract, GAC filter replacements have been approved for the Gordon and Scurry residences. Mr. Sydney Gordon resides at 724 Highway 378 and is the owner of water supply well WSW-8. He can be contacted at (803)637-5266. Ms. Hattie Scurry resides at 730 Highway 378 and is the owner of water supply well WSW-1. She can be contacted at (803)637-5793.

This facility has been assigned an individual Cost Agreement (CA) number as listed above. Please reference **CA # 47162 and PO # 4600254190** on the invoice submitted for payment. Emerald Inc. should complete the work in accordance with the contract specifications. The work must be conducted as outlined in the UST Quality Assurance Program Plan (QAPP) and in accordance with all applicable regulations. A GAC Unit Installation and Maintenance record should be submitted within **thirty (30) days** from the date of the Notice to Proceed.

If you have any questions or need further assistance, please contact me at (803) 898-0610 or by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Approved Cost Agreement form  
Site Information

cc: Technical File (w/ ACA form)  
Maia Milenkova, UST Management Division (w/ACA form)

# Approved Cost Agreement 47162

Facility: 07960 378 TRUCK STOP

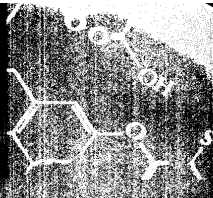
RIDGLECT

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		B PERSONNEL	1.0000	90.00	90.00
24 GAC SYSTEM		C FILTER REPLACEMENT/REMOVAL	2.0000	350.00	700.00
<b>Total Amount</b>					790.00



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE



13504 South Point Boulevard, Unit F, Charlotte, NC 28273 tel 704.583.2711 fax 704.583.2744 www.ecsconsult.com

July 30, 2010  
ECS Project No. 14-214210  
UST Permit No. 07960



Ms. Cathleen Ridgley  
South Carolina Department of Health  
and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201

Re: Tier II Plan  
378 Truck Stop  
731 Highway 378  
Edgefield, South Carolina 29824  
Edgefield County

Dear Ms. Ridgley:

Please find enclosed an Assessment Component Cost Agreement (ACCA) and Tier II Assessment Plan (AP) for the above referenced site. The ACCA and AP have been prepared as requested in your correspondence dated July 9, 2010. The ACCA includes drilling footage for the installation of 14 shallow monitoring wells and eight telescoping monitoring wells to delineate the horizontal and vertical extent of the petroleum-impacted groundwater plume and to serve as points of compliance for the 15 private water supply wells identified during the Tier I assessment. Groundwater field screening has not been recommended due to the shallow depths at which drilling refusal was encountered during the Tier I assessment. The locations of the proposed monitoring wells are shown on the attached draft Site Vicinity Map. Additionally, costs have been included for a comprehensive groundwater sampling event following the installation of the monitoring wells, soil sampling during the well installation activities, slug testing, soil and groundwater disposal, and a comprehensive site survey.

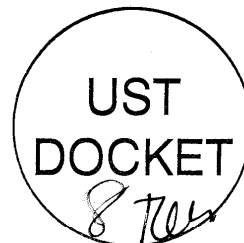
Please contact me at 704-583-2711 or email [cdupuis@ecsconsult.com](mailto:cdupuis@ecsconsult.com) if you have any questions or require additional information.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Christine E. Dupuis  
Project Manager

Enclosures

F:\Projects\14-214210 378 Truck Stop\Tier II Plan\Tier II Plan Cover Letter.doc



Printed on recycled, carbon neutral paper



### Tier II Assessment Plan Underground Storage Tank Program

UST Permit #: 07960 County: Edgefield Facility Name: 378 Truck Stop  
Facility Address: 731 Highway 378 City: Edgefield State: South Carolina Zipcode: 29824  
Responsible Party: Wilkerson Fuel Company, Inc. Address: PO Box 2835  
City: Rock Hill State: South Carolina Zipcode: 29732  
No. USTs: 3 Removed? 01/01/1987 Replaced? \_\_\_\_\_  
(date: MM/DD/YYYY) (date: MM/DD/YYYY)

Current use of facility/property: \_\_\_\_\_  
The site is currently not in use as a petroleum retail store. There are currently no USTs onsite. A one story building is present onsite.

Current property owner name: Gail and Barbera Whitmer Address: 1226 Highway 378 East  
City: Edgefield State: South Carolina Zipcode: 29824

#### 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.

Proposed shallow well locations are not recommended for pre-screening due to the depth to rock observed during Tier I assessment activities. ECS does not recommend attempting collection of groundwater screening samples in the locations of the proposed telescoping wells to prevent potential cross-contamination of the aquifer.

#### Permanent Monitoring Wells (estimate number and total completed depth)

# of shallow wells: 14 Total depth: 560  
# of deep wells: 8 Total depth: 640

#### Comments, if warranted:

The shallow monitoring wells and telescoping monitoring wells are proposed to help further delineate dissolved-phase petroleum contamination in several locations and to serve as points of compliance for the water supply wells identified with 1,000 ft of the site.

#### Analyses

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

BTEX, MTBE, Naphthalene, EDB, 1,2 DCA, Lead, and 8 Oxygenates = 42 groundwater samples  
-14 new shallow monitoring wells and 8 new telescoping monitoring wells  
-5 existing shallow monitoring wells  
-15 water supply wells  
Nitrate, Sulfate, Ferrous Iron, and Methane = 22 groundwater samples (from newly installed monitoring wells)  
Grain Size Analysis = 2 soil samples (collected from newly installed shallow and deep monitoring wells located downgradient of the source area)  
BTEX, Naphthalene = 3 soil samples (collected during installation of 2 new wells to be installed onsite and 1 new well to be installed offsite directly to the east to help delineate soil contamination identified during Tier I assessment activities)

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

Start up date: 08/31/2010 Completion date: 09/24/2010  
(MM/DD/YYYY) (MM/DD/YYYY)  
Report submittal date: 10/15/2010 (MM/DD/YYYY)



UST Permit #: 07960

Facility Name: 378 Truck Stop

### Site Maps

1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:

North arrow	Legend with facility name and address, 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)

Two slug tests are proposed; one in a downgradient shallow monitoring well and one in a downgradient telescoping monitoring well. However, it is likely both the shallow and telescoping wells will be completed in rock. If the wells are completed in rock, the slug tests will not be conducted.

Slug tests are selected because they are more cost effective than aquifer pumping tests.

### Small Volume Disposal Type and Method

#### Soil:

Drums = 92 drums of soil

#### Purge water:

Drums = 10 drums of purged well water from well development and sampling

### Additional comments:

The shallow monitoring wells and telescoping monitoring wells are proposed to help further delineate dissolved-phase petroleum contamination in several locations and to serve as points of compliance for the water supply wells identified with 1,000 ft of the site.

Five personnel mob's have been requested: one for monitoring well installation activities, one for the groundwater sampling event, one for the slug tests, one for the survey, and one for disposal of the waste drums.  
One equipment mob is requested for well installation drilling activities.



**ASSESSMENT COMPONENT COST AGREEMENT  
SOUTH CAROLINA**  
Department of Health and Environmental Control  
Underground Storage Tank Program  
State Underground Petroleum Environmental Response Bank Account

<b>Facility Name</b> 378 Truck Stop				
<b>UST Permit #</b> 7960		<b>Cost Agreement #</b> NA		
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>1. Plan*</b>				
A. Plan Preparation	1	x	\$100.00	\$100.00
B. Tax Map		x	\$50.00	\$0.00
<b>2. Receptor Survey *</b>				
		x	\$500.00	\$0.00
<b>3. Comprehensive Survey</b>				
	1	x	\$1,000.00	\$1,000.00
<b>4. Mob/Demob</b>				
A. Equipment	1	x	\$575.00	\$575.00
B. Personnel	5	each x	\$290.00	\$1,450.00
C. Adverse Train Vehicle		x	\$575.00	\$0.00
<b>5. Soil Borings (hand auger)*</b>				
		feet x	\$14.00	\$0.00
<b>6. Soil Borings (drilled) &amp; Field Screening</b>				
A. Standard		feet x	\$17.00	\$0.00
B. Alternative, on-site		feet x	\$12.50	\$0.00
C. Fractured Rock		feet x	\$27.50	\$0.00
<b>7. Soil Leachability Model</b>				
		each x	\$200.00	\$0.00
<b>8. Abandonment*</b>				
		feet x	\$5.00	\$0.00
<b>9. Well Installation*</b>				
A. Water Table (hand auger)		feet x	\$20.00	\$0.00
B. Water Table (drilled)	560	feet x	\$38.00	\$21,280.00
C. Telescoping	640	feet x	\$58.00	\$37,120.00
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
<b>10. Groundwater Sample Collection</b>				
A. Groundwater	22	samples x	\$55.00	\$1,210.00
B. Air Vapor		samples x	\$90.00	\$0.00
C. Water Supply	15	samples x	\$25.00	\$375.00
D. Groundwater No Purge	5	samples x	\$35.00	\$175.00
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
<b>11. Analyses-Groundwater</b> (see Analytical Methodology for site-specific analyses)				
A. BTEX+Naphth.+MTBE	42	samples x	\$100.00	\$4,200.00
B. Rush BTEX analysis		samples x	\$120.00	\$0.00
D. PAH's		samples x	\$120.00	\$0.00
E. Lead	42	samples x	\$20.00	\$840.00
F. EDB	42	samples x	\$55.00	\$2,310.00
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	22	samples x	\$20.00	\$440.00
L. Sulfate	22	samples x	\$20.00	\$440.00
M. Ferrous Iron	22	samples x	\$20.00	\$440.00
N. Methane	22	samples x	\$110.00	\$2,420.00
O. Organic Lead		samples x	\$100.00	\$0.00
P. 8 Oxygenates	42	samples x	\$85.00	\$3,570.00
AA. Filtered Lead		samples x	\$46.00	\$0.00
BB. 1,2-DCA	42	samples x	\$10.75	\$451.50

<b>11. Analyses-Soil</b>				
Q. BTEX + Naphth.	3	samples x	\$100.00	\$300.00
R. PAH's		samples x	\$120.00	\$0.00
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	2	samples x	\$75.00	\$150.00
X. Total Organic Carbon		samples x	\$35.00	\$0.00
<b>11. Analyses-Air</b>				
Y. BTEX + Naphthalene		samples x	\$247.50	\$0.00
Z. Hydrocarbon Fuel Identification		samples x	\$620.00	\$0.00
<b>12. Aquifer Characterization*</b>				
A. Pumping Test	2	hours x	\$120.00	\$0.00
B. Slug Test*		tests x	\$150.00	\$300.00
C. Fractured Rock		tests x	\$500.00	\$0.00
<b>13. Free Product Recovery Rate Test*</b>				
		tests x	\$120.00	\$0.00
<b>14. Fate/Transport Modeling</b>				
A. Mathematical Model		each x	\$300.00	\$0.00
B. Computer Model		each x	\$500.00	\$0.00
<b>15. Risk Evaluation</b>				
A. Tier I Risk Evaluation		x	\$301.00	\$0.00
B. Tier II Risk Evaluation		x	\$500.00	\$0.00
<b>16. Subsequent Survey*</b>				
		x	\$260.00	\$0.00
<b>17. Disposal*</b>				
A. Wastewater				
1. Purging/Sampling	10	drums x	\$90.00	\$900.00
2. Pumping Test/EFR		gallons x	\$0.60	\$0.00
B. Free Product		drums x	\$110.00	\$0.00
C. Soil (Treatment/Disposal)	92	drum/ton x	\$50.00	\$4,600.00
<b>18. Miscellaneous (attach receipts)</b>				
		x		\$0.00
		x		\$0.00
		x		\$0.00
<b>20. Tier I Assessment (Use DHEC 3665 form)</b>				
<b>21. IGWA (Use DHEC 3666 form)</b>				
<b>22. Corrective Action (Use DHEC 3667 form)</b>				
<b>23. EFR</b>				
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
<b>24. Granulated Activated Carbon (GAC) filter system installation &amp; service:</b>				
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
<b>25. Well Repair</b>				
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
<b>19. Report/Project Management</b>				
and Coordination	15%	x	\$84,646.50	\$12,696.98
<b>TOTAL</b>				<b>\$97,343.48</b>

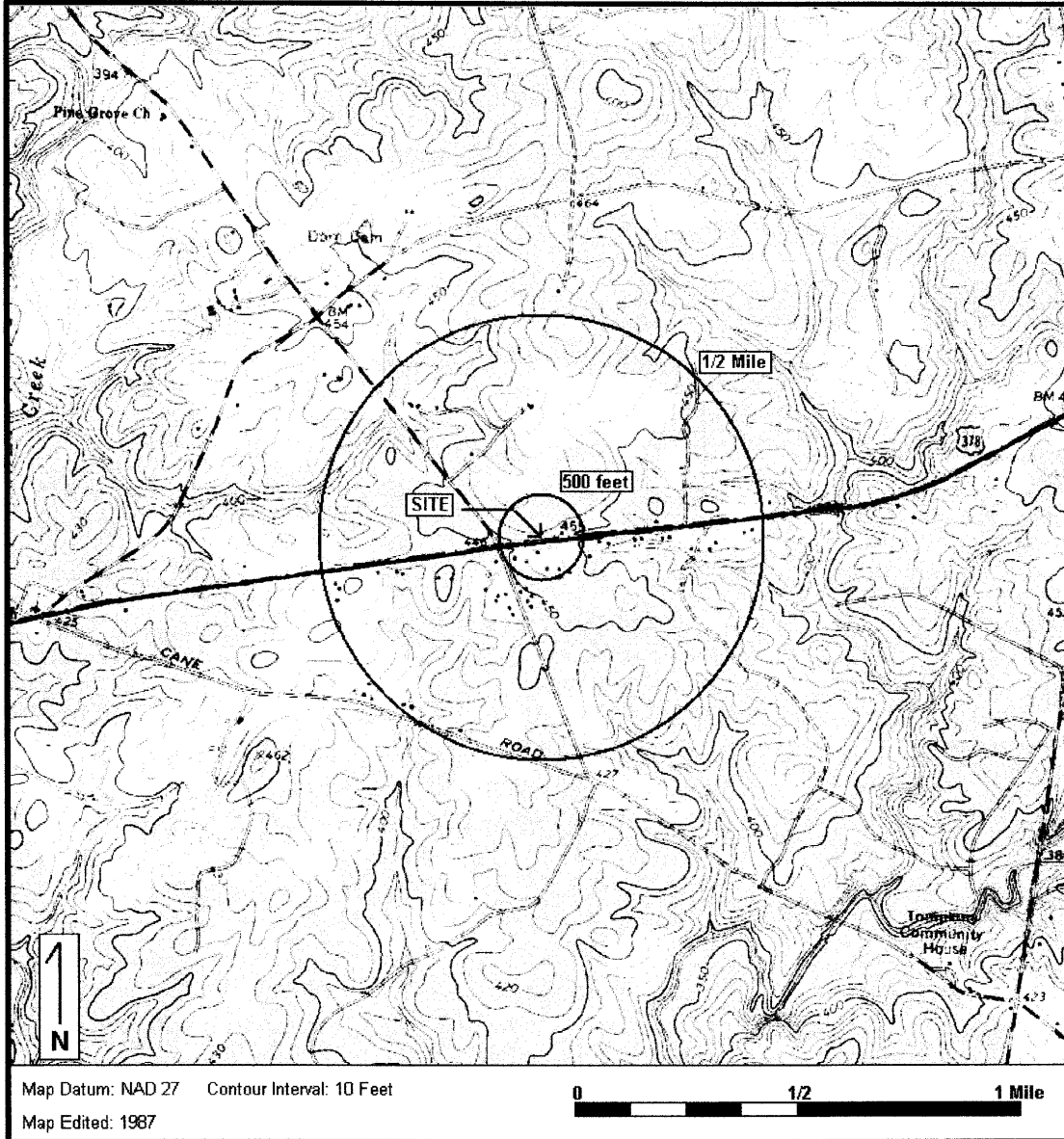
\*The appropriate mobilization cost can be added to complete these tasks, as necessary



Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

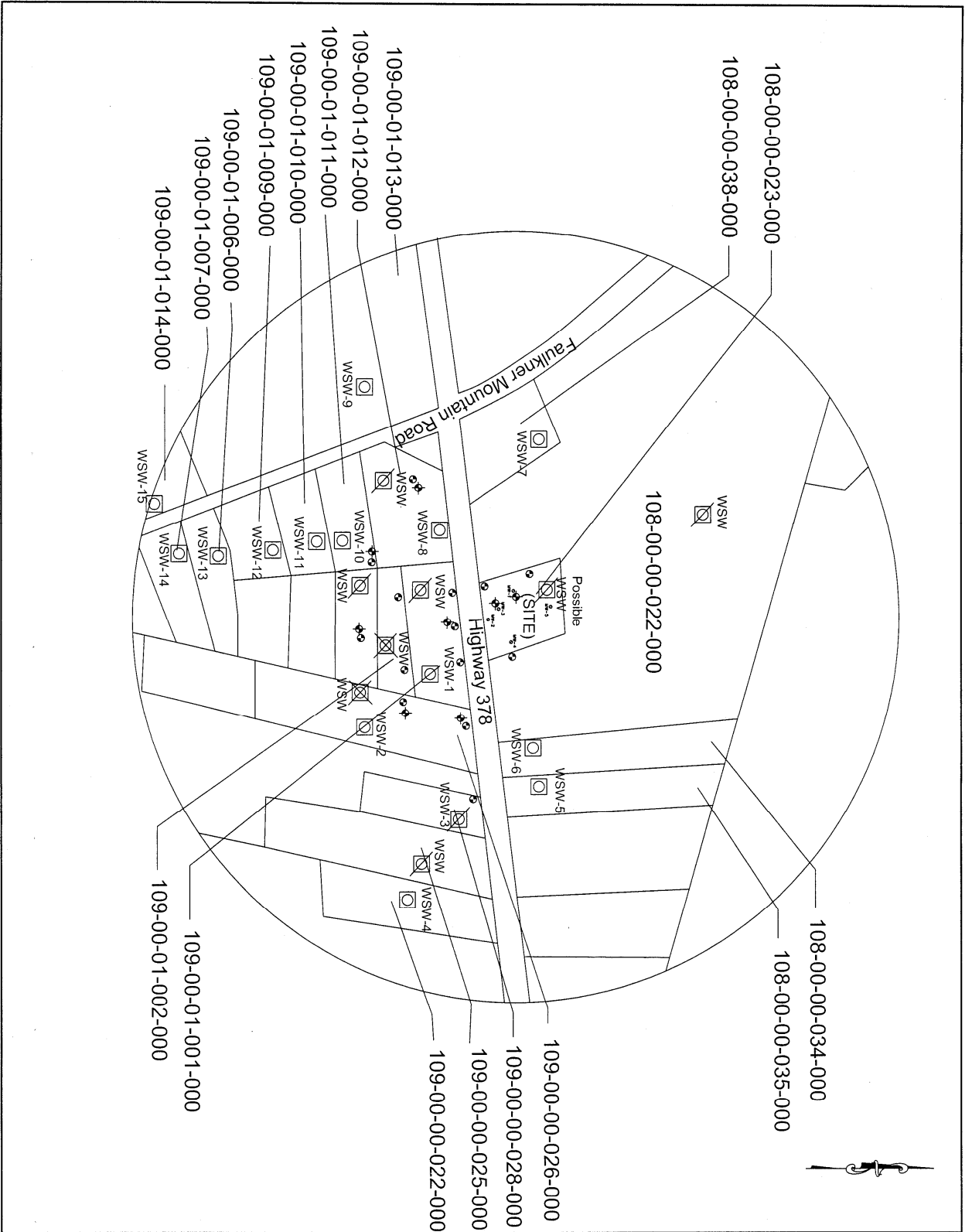
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH


Generated By: Rich Walas



**Legend**

- 108-00-00-023-000 PARCEL ID
- PARCEL BOUNDARY
- ☐ WSW-1 WATER SUPPLY WELL
- ☒ DISCONNECTED WSW
- ☒ ABANDONED WSW
- Shallow Monitoring Well
- ⊕ Proposed Telescoping Monitoring Well

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.



**WHERE BUSINESS AND THE ENVIRONMENT CONVERGE**  
 13804 SOUTH POINT BLVD. UNIT F  
 CHANDLER, AZ 85226  
 TEL: (704) 983-2711 FAX: (704) 983-2744

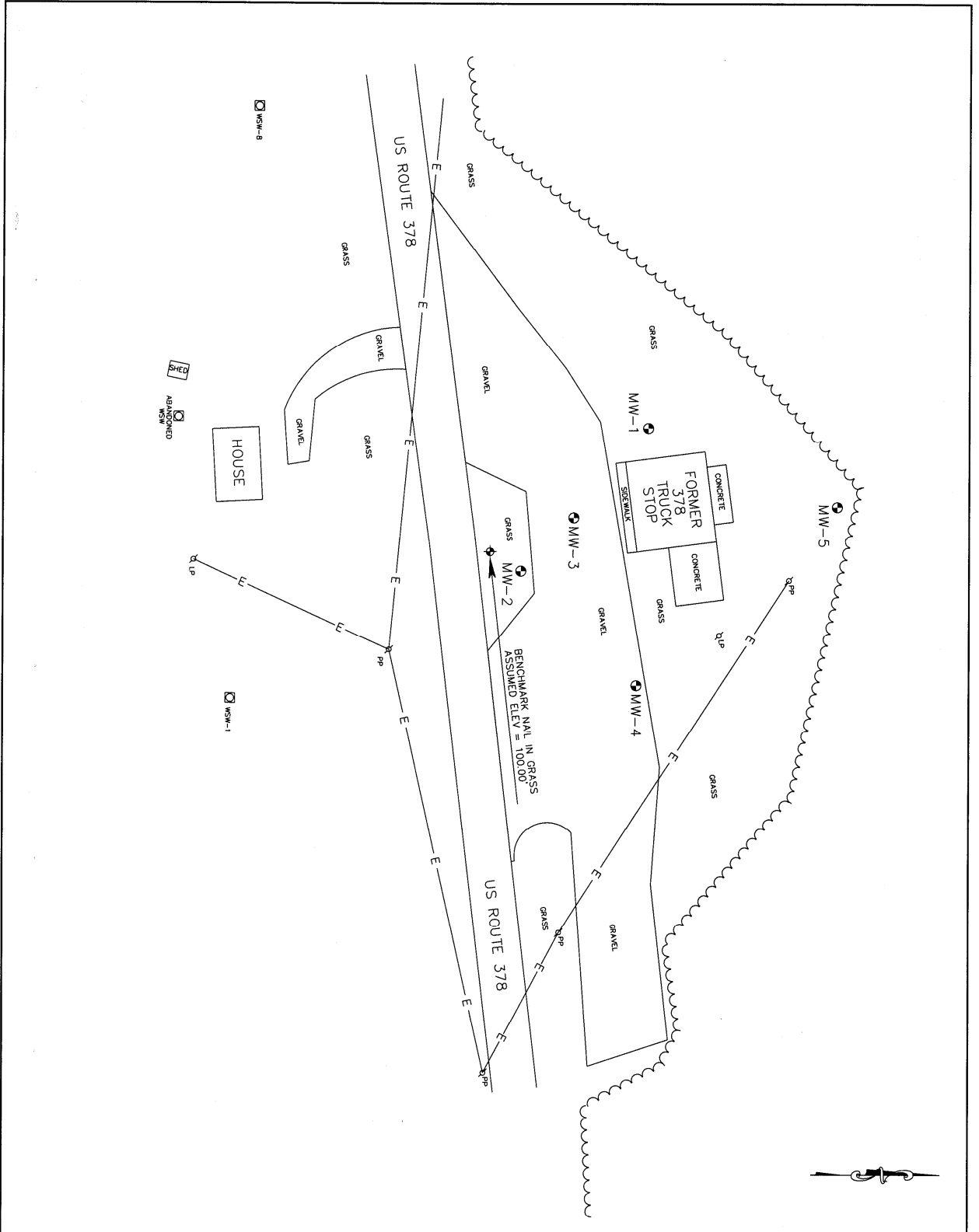
**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**TITLE:**  
 Site Vicinity Map

**CLIENT:**  
 Wilkerson Fuel Company, Inc.

**GRAPHIC SCALE:**  
 1" = 250'

COMPUTER DATE/CAPFILE	1/25	1/25	2/00
DRAWN BY	REVISION BY	CHECKED BY	APPROVED BY
CD	CD	CD	CD
SCALE	DATE	JOB NO.	FIGURE NO.
1"=250'	6/15/10	14-214210	2



- Legend**
- Overhead Electric Line
  - Utility Pole
  - ⊕ Monitoring Well
  - ☐ Water Supply Well

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.  
 Horizontal and vertical locations of wells and selected site features determined through measurements made by representatives of ECS.

**ECS**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 11804 SOUTH POINT BLVD, JUPITER  
 FLORIDA 33458  
 TEL: (704) 953-2711 FAX: (704) 953-2744

**378 Truck Stop**  
 731 Highway 378  
 Edgerfield, SC

CLIENT	Wilkerson Fuel Company, Inc.		
TITLE	Site Plan		
DATE	6/15/10	JOB NO.	14-214213
SCALE	1"=50'	FIGURE NO.	3
DESIGNED BY	CD	CHECKED BY	CD
DRAWN BY	CD	APPROVED BY	CD
DATE	6/15/10	DATE	6/15/10
SCALE	1"=50'	DATE	6/15/10

# GAC Unit Installation and Maintenance

Date 12/9/13

Facility Name 378 Truck Stop

UST Permit number 07960

GAC Address 730 Highway 378, Edgefield, SC (Scurry Residence)

GAC Unit serial and model number and meter reading  
Tank #1(no serial number)

**NEW INSTALLATION**

Date installation completed \_\_\_\_\_

Attachments required:  schematic of system as installed  
 copy of analytical data for pre and post GAC samples  
 calculations for filter change  
 calculations for breakthrough

**MAINTENANCE AND SERVICE**

**■ FILTER CHANGE**

Filter Disposal method: Landfill

Condition of GAC Unit \_\_\_\_\_ in need of repair\*  good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\*  good

\*Repair needed: \_\_\_\_\_

**SERVICE/REPAIR CALL**

Service or repair provided \_\_\_\_\_

**SAMPLE COLLECTION** (circle)      Pre-GAC      Post GAC

**Comments:** Samples were not collected.

---

# GAC Unit Installation and Maintenance

Date 12/9/13

Facility Name 378 Truck Stop

UST Permit number 19550

GAC Address 724 Highway 378, Edgefield, SC (Gordon Residence)

GAC Unit serial and model number and meter reading  
Tank #1(no serial number)

## NEW INSTALLATION

Date installation completed \_\_\_\_\_

Attachments required:  schematic of system as installed  
 copy of analytical data for pre and post GAC samples  
 calculations for filter change  
 calculations for breakthrough

## MAINTENANCE AND SERVICE

### FILTER CHANGE

Filter Disposal method: Landfill

Condition of GAC Unit \_\_\_\_\_ in need of repair\*  good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\*  good

\*Repair needed: \_\_\_\_\_

### SERVICE/REPAIR CALL

Service or repair provided \_\_\_\_\_

SAMPLE COLLECTION (circle)      Pre-GAC      Post GAC

Comments: Samples were not collected.



# GAC Maintenance Report

Permit # 07960

Emerald Job # 63

Address	Serial #	Model#	Date serviced	Condition of unit	Samples collected
730 Hwy 378, Edgefield, SC Scurry Residence			12/9/13	Needs Repairs <u>Good</u>	Pre-GAC Post-GAC
724 Hwy 378, Edgefield, SC Gordon Residence			12/9/13	Needs Repairs <u>Good</u>	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC

**Notes:**

Repairs/service: \_\_\_\_\_

Filter disposal method: Landfill

Comments: Samples were not collected.



Catherine B. Templeton, Director

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

RONNY LOWDER  
EMERALD INC  
PO BOX 3050  
SUMTER SC 29151

JAN 24 2014



Re: **GAC Unit Maintenance**  
378 Truck Stop, 731 Highway 378, Edgefield, SC 29824  
**UST Permit # 07960; CA# 47423**  
IFB-5400005822 5/3/13 EMW; PO # 4600254190  
Edgefield County

Dear Mr. Lowder:

Under the terms and conditions of the referenced contract, maintenance to the granular activated carbon (GAC) unit has been approved for Sydney Gordon's residence located at 724 Highway 378.

This facility has been assigned an individual Cost Agreement (CA) number as listed above. Please reference **CA # 47423 and PO # 4600254190** on the invoice submitted for payment. The work must be conducted as outlined in the UST Quality Assurance Program Plan (QAPP) and in accordance with all applicable regulations.

If you have any questions or need further assistance, please contact me at (803) 898-0610 or by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Approved Cost Agreement form

cc: Technical File (w/enc)  
Maia Milenkova, UST Management Division (w/enc)

# Approved Cost Agreement 47423

Facility: 07960 378 TRUCK STOP

RIDGLECT

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		B PERSONNEL	1.0000	90.00	90.00
18 MISCELLANEOUS		SERVICE CALL	2.0000	35.00	70.00
<b>Total Amount</b>					<b>160.00</b>

*Cashlan*

# GAC Unit Installation and Maintenance

Date 1/15/14

Facility Name 378 Truck Stop

UST Permit number 07960

GAC Address 730 Highway 378, Edgefield, SC (Scurry Residence)

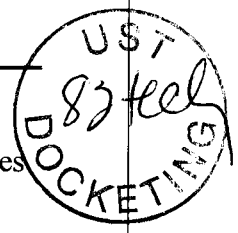
GAC Unit serial and model number and meter reading  
Tank #1(no serial number)



**NEW INSTALLATION**

Date installation completed \_\_\_\_\_

Attachments required:  schematic of system as installed  
 copy of analytical data for pre and post GAC samples  
 calculations for filter change  
 calculations for breakthrough



**MAINTENANCE AND SERVICE**

**FILTER CHANGE**

Filter Disposal method: \_\_\_\_\_

Condition of GAC Unit \_\_\_\_\_ in need of repair\*  good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\*  good

\*Repair needed: \_\_\_\_\_

**SERVICE/REPAIR CALL**

Service or repair provided: \_\_\_\_\_

**SAMPLE COLLECTION (circle)**      Pre-GAC      Post GAC

**Comments:** This unit was in backwash mode upon arrival. There was a possible power surge to the unit. Reset controller head.

# GAC Unit Installation and Maintenance

Date 1/15/14

Facility Name 378 Truck Stop

UST Permit number 19550

GAC Address 724 Highway 378, Edgefield, SC (Gordon Residence)

GAC Unit serial and model number and meter reading  
Tank #1(no serial number)

## NEW INSTALLATION

Date installation completed \_\_\_\_\_

Attachments required:  schematic of system as installed  
 copy of analytical data for pre and post GAC samples  
 calculations for filter change  
 calculations for breakthrough

## MAINTENANCE AND SERVICE

**FILTER CHANGE**

Filter Disposal method: \_\_\_\_\_

Condition of GAC Unit \_\_\_\_\_ in need of repair\*  good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\*  good

\*Repair needed: \_\_\_\_\_

**SERVICE/REPAIR CALL**

Service or repair provided \_\_\_\_\_

**SAMPLE COLLECTION** (circle)      Pre-GAC      Post GAC

**Comments:** This unit was in backwash mode upon arrival. There was a possible power surge to the unit. Reset controller head.

---

## GAC Maintenance Report

### Permit # 07960

Address	Serial #	Model#	Date serviced	Condition of unit	Samples collected
730 Hwy 378, Edgefield, SC Scurry Residence			1/15/14	Needs Repairs <u>Good</u>	Pre-GAC Post-GAC
724 Hwy 378, Edgefield, SC Gordon Residence			1/15/14	Needs Repairs <u>Good</u>	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC

**Notes:**

Repairs/service: Reconnected power to units.

Filter disposal method: \_\_\_\_\_

Comments: Both units were in backwash upon arrival.



Catherine B. Templeton, Director

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

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

MAR 04 2014



Re: Site Specific Work Plan Request  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release reported October 3, 1974  
Assessment Report received October 24, 2013  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report. The next appropriate scope of work is to conduct aggressive fluid and vapor recovery (AFVR) and a groundwater sampling event to remove free product and reduce petroleum chemicals of concern (CoC). One 96-hour AFVR event using monitoring well MW-1 and recovery well RW-1 as extraction points should be conducted. Thirty days after the event, all monitoring wells and water supply wells associated with the release should be sampled for BTEX, naphthalene, MtBE, the oxygenates, 1,2-DCA, and EDB. This scope of work should be conducted in accordance with the UST Quality Assurance Programmatic Plan (QAPP) Revision 2.0 and must be conducted in compliance with all applicable regulations. A copy of the Agency's QAPP for the Underground Storage Tank Division is available at <http://www.scdhec.gov/environment/lwm/usthome/Qapp.htm>.

**Please have your contractor complete and submit the Site Specific Work Plan and Cost Agreement within fifteen (15) days of the date of this letter.** The Site Specific Work Plan form can be found at <http://www.dhec.sc.gov/administration/library/D-0653.pdf>. Every component may not be necessary to complete the above scope of work. The State Underground Petroleum Environmental Response Bank (SUPERB) Account allowable cost for each component is included on the Assessment Component Cost Agreement Form. **Please note that technical and financial preapproval from the Agency must be issued before work begins.**

On all correspondence regarding this site, please reference UST Permit #07960. If you have questions or need additional information, feel free to call me at (803) 898-0610.

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

cc: Environmental Compliance Services, Inc., P O Box 3528, Fort Mill, SC 29708  
Technical File



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

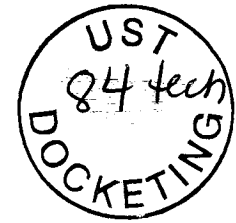
13504 South Point Boulevard, Unit F, Charlotte, NC 28273 tel 704.583.2711 fax 704.583.2744 www.ecsconsult.com

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
SCDHEC  
2600 Bull Street  
Columbia, South Carolina 29201



March 7, 2014  
ECS Project 14-810782

Re: Site Specific Work Plan  
378 Truck Stop  
731 Highway 378  
Edgefield, South Carolina  
UST Permit #07960



Ms. Ridgley:

Enclosed please find the Site Specific Work Plan requested for the referenced site, in your letter dated March 4, 2014. Should you have any questions or require additional information, please do not hesitate to call me at (704) 583-2711 or by email at [nfrance@ecsconsult.com](mailto:nfrance@ecsconsult.com).

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Noelle A. France  
Project Manager





## Site-Specific Work Plan for Approved ACQAP Underground Storage Tank Management Division

To: Cathleen Ridgely (SCDHEC Project Manager)  
 From: Noelle France (Contractor Project Manager)  
 Contractor: ECS, Inc. UST Contractor Certification Number: 358

Facility Name: 378 Truck Stop UST Permit #: 07960  
 Facility Address: 371 Highway 378, Edgefield, South Carolina  
 Responsible Party: Wilkerson Fuel Company Phone: 803-324-4080  
 RP Address: P.O. Box 2835 Rock Hill, South Carolina 29732  
 Property Owner (if different): Gail and Barbara Whitmere  
 Property Owner Address: 1226 Highway 378 East, Edgefield, South Carolina  
 Current Use of Property: Site not in use

**Scope of Work** (Please check all that apply)

- |                                 |   |  |                              |
|---------------------------------|---|--|------------------------------|
| <input type="checkbox"/> IGWA   | <input type="checkbox"/> Tier II                      | <input checked="" type="checkbox"/> Groundwater Sampling | <input type="checkbox"/> GAC |
| <input type="checkbox"/> Tier I | <input type="checkbox"/> Monitoring Well Installation | <input checked="" type="checkbox"/> Other _____          | 96- hour FVR                 |

**Analyses** (Please check all that apply)

Groundwater/Surface Water:

- |  |  |                                      |   |
|--|--|--------------------------------------|---|
| <input checked="" type="checkbox"/> BTEXNMDCA (8260B)  | <input type="checkbox"/> Lead          | <input type="checkbox"/> BOD         | <input type="checkbox"/> Methane        |
| <input checked="" type="checkbox"/> Oxygenates (8260B) | <input type="checkbox"/> 8 RCRA Metals | <input type="checkbox"/> Nitrate     | <input type="checkbox"/> Ethanol        |
| <input checked="" type="checkbox"/> EDB (8011)         | <input type="checkbox"/> TPH           | <input type="checkbox"/> Sulfate     | <input type="checkbox"/> Dissolved Iron |
| <input type="checkbox"/> PAH (8270D)                   | <input type="checkbox"/> pH            | <input type="checkbox"/> Other _____ |   |

Soil:

- |                                |  |  |                                     |
|--------------------------------|--|--|-------------------------------------|
| <input type="checkbox"/> BTEXN | <input type="checkbox"/> 8 RCRA Metals       | <input type="checkbox"/> TPH-DRO (3550B/8015B) | <input type="checkbox"/> Grain Size |
| <input type="checkbox"/> PAH   | <input type="checkbox"/> Oil & Grease (9071) | <input type="checkbox"/> TPH-GRO (5030B/8015B) | <input type="checkbox"/> TOC        |

Air:

- BTEXN

**Sample Collection** (Estimate the number of samples of each matrix that are expected to be collected.)

_____ Soil	<u>17</u> Water Supply Wells	_____ Air	<u>3</u> Field Blank
<u>40</u> Monitoring Wells	_____ Surface Water	<u>3</u> Duplicate	<u>4</u> Trip Blank

**Field Screening Methodology**

Estimate number and total completed depth for each point, and include their proposed locations on the attached map.

# of shallow points proposed: \_\_\_\_\_ Estimated Footage: \_\_\_\_\_ feet per point  
 # of deep points proposed: \_\_\_\_\_ Estimated Footage: \_\_\_\_\_ feet per point  
 Field Screening Methodology: \_\_\_\_\_

**Permanent Monitoring Wells**

Estimate number and total completed depth for each well, and include their proposed locations on the attached map.

# of shallow wells: \_\_\_\_\_ Estimated Footage: \_\_\_\_\_ feet per point  
 # of deep wells: \_\_\_\_\_ Estimated Footage: \_\_\_\_\_ feet per point  
 # of recovery wells: \_\_\_\_\_ Estimated Footage: \_\_\_\_\_ feet per point

Monitoring Well development method (consistent with SOP): \_\_\_\_\_

Comments, if warranted:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

UST Permit #: 07960 Facility Name: 378 Truck Stop

**Implementation Schedule** (Number of calendar days from approval)  
Field Work Start-Up: 14 Field Work Completion: 60  
Report Submittal: 90 # of Copies Provided to Property Owners: 16

**Aquifer Characterization**  
Pump Test:  Slug Test:  (Check one and provide explanation below for choice)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Investigation Derived Waste Disposal**  
Soil: \_\_\_\_\_ Tons Purge Water: (Including water from AFVR event) 2,600 Gallons  
Drilling Fluids: \_\_\_\_\_ Gallons Free-Phase Product: \_\_\_\_\_ Gallons

**Additional Details For This Scope of Work**  
For example, list wells to be sampled, wells to be abandoned/repared, well pads/bolts/caps to replace, details of AFVR event, etc.  
Wells to be sampled: 07960-MW1 through 07960-MW31, 07960-TW1 through 07960-TW9, WSW-1 Pre GAC, WSW-1 Post GAC, WSW-2 through WSW-7, WSW-8 Pre GAC, WSW-8 Post GAC, WSW-9 through WSW-15.  
96- hour AFVR event to be performed on 07960-MW1 and 07960-RW1.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Compliance With Annual Contractor Quality Assurance Plan (ACQAP)**  
Y Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.  
Name of Laboratory: Pace Analytical Services, Inc.  
SCDHEC Certification Number: 99006001  
Name of Laboratory Director: Jeff Graham  
  
\_\_\_\_ Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.  
Name of Well Driller: \_\_\_\_\_  
SCLLR Certification Number: \_\_\_\_\_  
  
\_\_\_\_ Other variations from ACQAP. Please describe below.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Attachments**

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 Proposed monitoring well locations  
Location of property lines Legend with facility name and address, UST permit number, and bar scale  
Location of buildings Streets or highways (indicate names and numbers)  
Previous soil sampling locations Location of all present and former ASTs and USTs  
Previous monitoring well locations Location of all potential receptors  
Proposed soil boring locations
3. Assessment Component Cost Agreement, SCDHEC Form D-3664



South Carolina Department of Health and Environmental Control

**ASSESSMENT COMPONENT COST AGREEMENT  
SOUTH CAROLINA**

Department of Health and Environmental Control  
Underground Storage Tank Management Division  
State Underground Petroleum Environmental Response Bank Account  
November 1, 2013

UST Permit #: 07960

Cost Agreement #: \_\_\_\_\_

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>1. Plan Preparation</b>				
A1. Site-specific Work Plan	1	each	\$150.00	\$150.00
B1. Tax Map		each	\$70.00	\$0.00
C1. Tier II or Comp. Plan /QAPP Appendix B		each	\$250.00	\$0.00
<b>2. A1. Receptor Survey *</b>				
		each	\$551.00	\$0.00
<b>3. Survey (500 ft x 500 ft)</b>				
A1. Comprehensive Survey		each	\$1,040.00	\$0.00
<b>B. Subsurface Geophysical Survey</b>				
1B. < 10 meters below grade		each	\$1,300.00	\$0.00
2B. > 10 meters below grade		each	\$2,310.00	\$0.00
C1. Geophysical UST or Drum Survey		each	\$910.00	\$0.00
<b>4. Mob/Demob</b>				
A1. Equipment	1	each	\$1,020.00	\$1,020.00
B1. Personnel	3	each	\$423.00	\$1,269.00
C1. Adverse Terrain Vehicle		each	\$500.00	\$0.00
<b>5. A1. Soil Borings (hand auger)*</b>				
		foot	\$5.00	\$0.00
<b>6. Soil Borings (requiring equipment, push technology, etc)* or Field Screening (including water sample, soil sample, soil gas sample, etc.)*</b>				
A1. Standard		per foot	\$7.40	\$0.00
C1. Fractured Rock		per foot	\$20.20	\$0.00
<b>7. A1. Soil Leachability Model</b>				
		each	\$60.00	\$0.00
<b>8. Abandonment (per foot)*</b>				
A1. 2" diameter or less		per foot	\$3.10	\$0.00
B1. Greater than 2" to 6" diameter		per foot	\$4.50	\$0.00
C1. Dug/Bored well (up to 6 feet diameter)		per foot	\$15.00	\$0.00
<b>9. Well Installation (per foot)*</b>				
A1. Water Table (hand augered)		per foot	\$10.60	\$0.00
B1. Water Table (drill rig)		per foot	\$38.00	\$0.00
C1. Telescoping		per foot	\$31.80	\$0.00
D1. Rock Drilling		per foot	\$26.80	\$0.00
E1. 2" Rock Coring		per foot	\$30.90	\$0.00
G1. Rock Multi-sampling ports/screens		per foot	\$33.40	\$0.00
H1. Recovery Well (4" diameter)		per foot	\$30.00	\$0.00
II. Pushed Pre-packed screen (1.25" dia)		per foot	\$15.00	\$0.00
J1. Rotasonic (2" diameter)		per foot	\$44.00	\$0.00
K. Re-develop Existing Well		per foot	\$11.00	\$0.00
<b>10. Groundwater Sample Collection / Gauge Depth to Water or Product *</b>				
A1. Groundwater Purge		per well/recept	\$60.00	\$0.00
B1. Air or Vapors		per recepto	\$12.00	\$0.00
C1. Water Supply	17	er well/recept	\$22.00	\$374.00
D1. Groundwater No Purge or Duplicate	40	er well/recept	\$28.00	\$1,120.00
E1. Gauge Well only		per well	\$7.00	\$0.00
F1. Sample Below Product		per well	\$12.00	\$0.00
G1. Passive Diffusion Bag		each	\$26.00	\$0.00
H1. Field Blank	3	each	\$24.60	\$73.80

<b>11. Laboratory Analyses-Groundwater</b>					
A2. BTEXNM+Oxyg's+1,2 DCA+Eth(82	67	per sample	\$122.00		\$8,174.00
AA1. Lead, Filtered		per sample	\$13.80		\$0.00
B2. Rush EPA Method 8260B (All of item A.)		per sample	\$153.60		\$0.00
C2. Trimethal, Butyl, and Isopropyl Benzenes		per sample	\$36.40		\$0.00
D1. PAH's		per sample	\$60.60		\$0.00
E1. Lead		per sample	\$16.00		\$0.00
F1. EDB by EPA 8011	67	per sample	\$45.20		\$3,028.40
FF1. EDB by EPA Method 8011 Rush		per sample	\$68.20		\$0.00
G1. 8 RCRA Metals		per sample	\$63.40		\$0.00
H1. TPH (9070)		per sample	\$41.00		\$0.00
II. pH		per sample	\$5.20		\$0.00
J1. BOD		per sample	\$20.00		\$0.00
PP. Ethanol		per sample	\$14.80		\$0.00
<b>11. Analyses-Soil</b>					
Q1. BTEX + Naphth.		per sample	\$64.00		\$0.00
R1. PAH's		per sample	\$64.04		\$0.00
S1. 8 RCRA Metals		per sample	\$56.40		\$0.00
U1. TPH-DRO (3550C/8015C)		per sample	\$40.00		\$0.00
V1. TPH- GRO (5030B/8015C)		per sample	\$35.96		\$0.00
W1. Grain size/hydrometer		per sample	\$104.00		\$0.00
X1. Total Organic Carbon		per sample	\$30.60		\$0.00
<b>11. Analyses-Air</b>					
Y1. BTEX + Naphthalene		per sample	\$216.00		\$0.00
<b>11. Analyses-Free Phase Product</b>					
Z1. Hydrocarbon Fuel Identification		per sample	\$357.00		\$0.00
<b>12. Aquifer Characterization</b>					
A1. Pumping Test*		per hour	\$23.00		\$0.00
B1. Slug Test*		per test	\$191.00		\$0.00
C1. Fractured Rock		per test	\$100.00		\$0.00
<b>13. A1. Free Product Recovery Rate Test*</b>		each	\$38.00		\$0.00
<b>14. Fate/Transport Modeling</b>					
A1. Mathematical Model		each	\$100.00		\$0.00
B1. Computer Model		each	\$100.00		\$0.00
<b>15. Risk Evaluation</b>					
A. Tier I Risk Evaluation		each	\$300.00		\$0.00
B1. Tier II Risk Evaluation		each	\$100.00		\$0.00
<b>16. A1. Subsequent Survey*</b>		each	\$260.00		\$0.00
<b>17. Disposal (gallons or tons)*</b>					
AA. Wastewater	2600	gallon	\$0.56		\$1,456.00
BB. Free Product		gallon	\$0.50		\$0.00
C1. Soil Treatment/Disposal		ton	\$60.00		\$0.00
D1. Drilling fluids		gallon	\$0.42		\$0.00
<b>18. Miscellaneous (attach receipts)</b>					
		each	\$0.00		\$0.00
		each	\$0.00		\$0.00
		each	\$0.00		\$0.00
<b>20. Tier I Assessment (Use DHEC 3665 form)</b>		standard			\$0.00
<b>21. IGWA (Use DHEC 3666 form)</b>		standard			\$0.00
<b>22. Corrective Action (Use DHEC 3667 form)</b>		PPF Bid			\$0.00

<b>23. Aggressive Fluid &amp; Vapor Recovery (AFVR)</b>				
A1. 8-hour Event*		each	\$1,375.00	\$0.00
A2. 24-hour Event*		each	\$3,515.00	\$0.00
A3. 48-hour Event*		each	\$6,265.00	\$0.00
A4. 96-hour Event*	1	each	\$12,567.50	\$12,567.50
C1. Off-gas Treatment 8 hour		per event	\$122.50	\$0.00
C2. Off-gas Treatment 24 hour		per event	\$241.50	\$0.00
C3. Off-gas Treatment 48 hour		per event	\$327.00	\$0.00
C4. Off-gas Treatment 96 hour		per event	\$780.00	\$0.00
D. Site Reconnaissance	1	each	\$203.25	\$203.25
E1. Additional Hook-ups	1	each	\$25.75	\$25.75
F. Effluent Disposal		gallon	\$0.30	\$0.00
G. AFVR Mobilization/Demobilization	1	each	\$391.50	\$391.50
<b>24. Granulated Activated Carbon (GAC) filter system installation &amp; service:</b>				
A1. New GAC System Installation*		each	\$1,900.00	\$0.00
BB. Refurbished GAC Sys. Install*		each	\$900.00	\$0.00
C1. Filter replacement/removal*		each	\$350.00	\$0.00
DD. GAC System removal, cleaning, & refurbishment*		each	\$275.00	\$0.00
E1. GAC System housing*		each	\$250.00	\$0.00
F. In-line particulate filter		each	\$150.00	\$0.00
G1. Additional piping & fittings		foot	\$1.50	\$0.00
<b>25. Well Repair</b>				
A1. Additional Copies of the Report Deli	16	each	\$50.00	\$800.00
B1. Repair 2x2 MW pad*		each	\$50.00	\$0.00
C1. Repair 4x4 MW pad*		each	\$88.00	\$0.00
D1. Repair well vault*		each	\$118.00	\$0.00
F1. Replace well cover bolts		each	\$2.60	\$0.00
G. Replace locking well cap & lock		each	\$15.00	\$0.00
H1. Replace/Repair stick-up*		each	\$134.00	\$0.00
II. Convert Flush-mount to Stick-up*		each	\$150.00	\$0.00
J1. Convert Stick-up to Flush-mount*		each	\$130.00	\$0.00
K1. Replace missing/illegible well ID plate		each	\$12.00	\$0.00
<b>Report Prep &amp; Project Management</b>	10%	percent	\$30,653.20	\$3,065.32
<b>TOTAL</b>				<b>\$33,718.52</b>

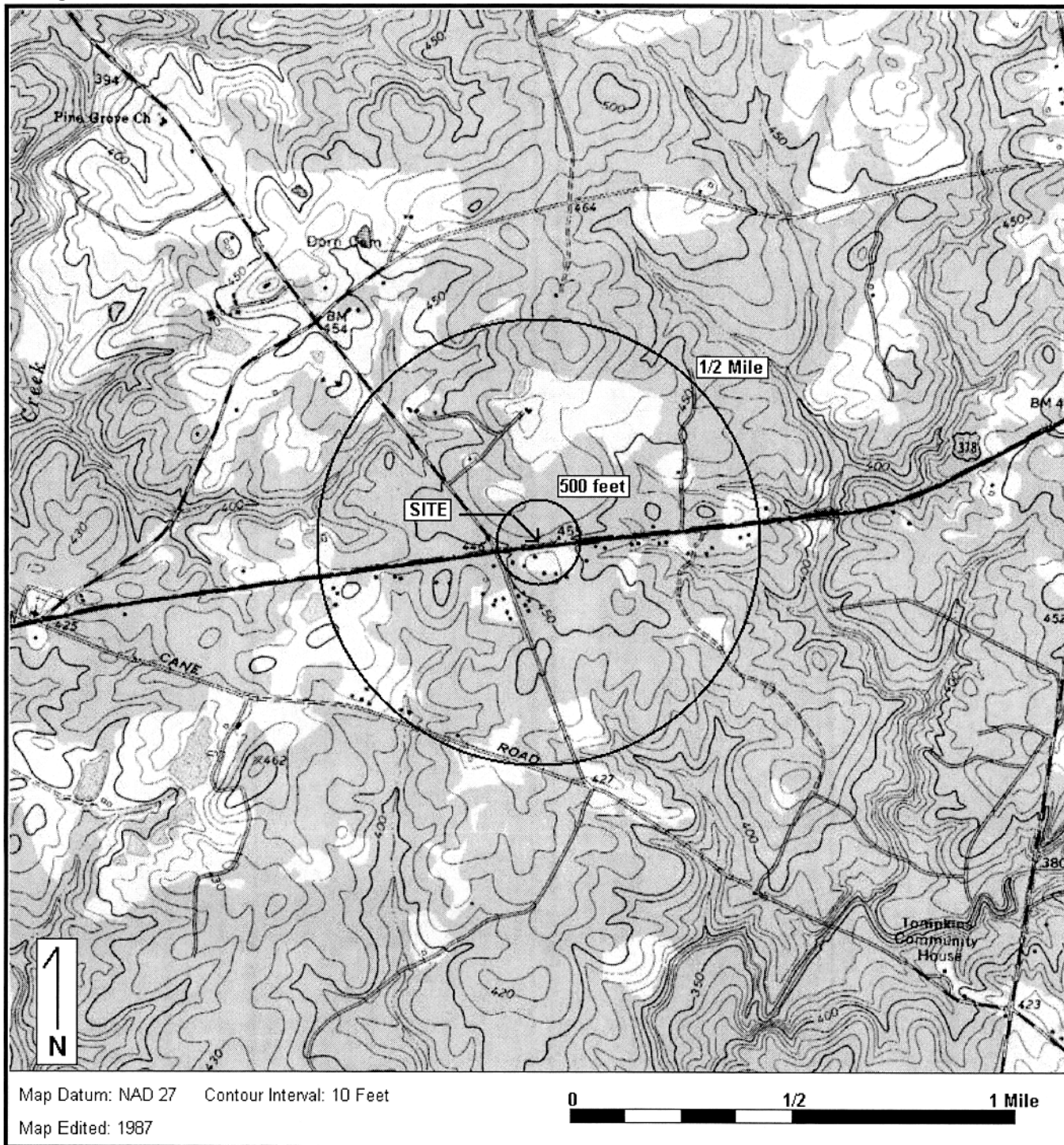
\*The appropriate mobilization cost can be added to complete these tasks, as necessary



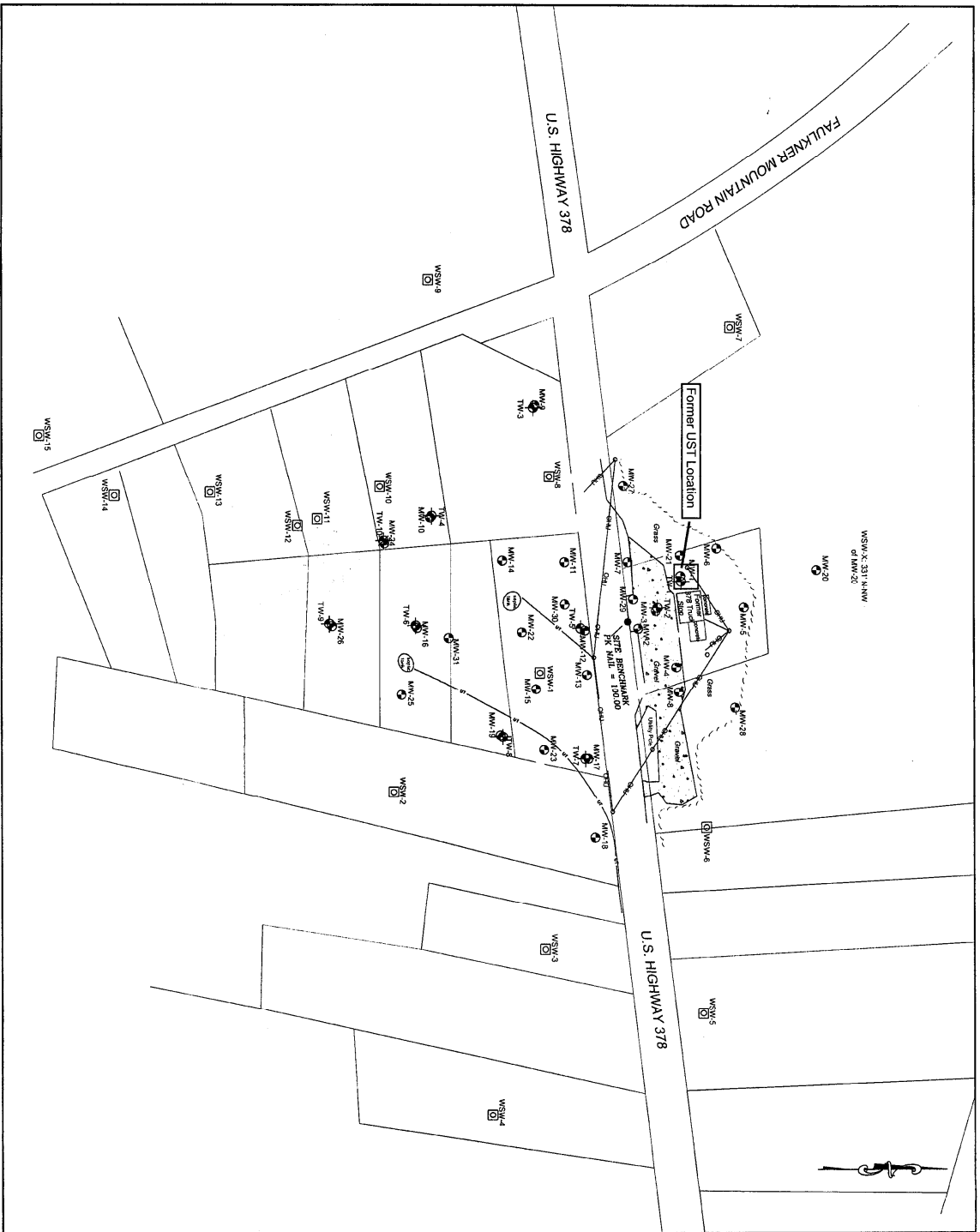
Environmental Compliance Services, Inc.  
 13504 South Point Boulevard  
 Charlotte, NC 28273  
 Phone 704.583.2711  
 www.ecsconsult.com

378 Truck Stop  
 731 Highway 378  
 Edgefield, SC 29824

Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC  
 Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH  
 Generated By: Rich Walas



- Legend**
- Approximate Property Line
  - GHU Overhead Electric Line
  - Underground Telephone Line
  - Utility Pole
  - ⊕ Shallow (Water Table) Monitoring Well
  - ⊕ Telescoping Monitoring Well
  - ⊕ Abandoned Telescoping Monitoring Well
  - ⊕ Water Supply Well
  - ⊕ MW-1 Well I.D.

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13504 SOUTH POINT BLVD. UNIT F  
 FARMERS BRANCH, GA 30204  
 TEL: (770) 555-2711 FAX: (770) 555-2744

**378 Truck Stop**  
 731 Highway 378  
 Edgeland, SC **UST # 07960**

**Site Plan**

**Client:** **Milkinson Fuel Company, Inc.**

DATE:	11/15/99	SCALE:	AS SHOWN
DESIGNED BY:	CD	CHECKED BY:	CD
DRAWN BY:	CD	APPROVED BY:	CD
PROJECT NO.:	52011	FOURTH NO.:	2



Catherine B. Templeton, Director

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

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

MAR 17 2014



Re: **AFVR & Groundwater Sampling Directive**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960; Cost Agreement # 47617  
Release reported October 3, 1974  
Assessment Report received October 24, 2013  
Site Specific Work Plan received March 10, 2014  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) recognizes your commitment to continue work at this site using Environmental Compliance Services (ECS), Inc. as your contractor. The next appropriate scope of work is aggressive fluid and vapor recovery (AFVR) and a groundwater sampling event. This scope of work should be conducted in accordance with the UST Quality Assurance Program Plan (QAPP) Revision 2.0. Please note that AFVR procedures have been updated. A copy of the QAPP is available at <http://www.scdhec.gov/environment/lwm/usthome/Qapp.htm>.

Cost Agreement #47617 has been approved in the amount shown on the enclosed cost agreement form for this scope of work. One 96-hour AFVR event using monitoring well MW-1 and recovery well RW-1 as extraction points should be conducted. Thirty days after the event, all monitoring wells and water supply wells associated with the release should be sampled for BTEX, naphthalene, MtBE, the oxygenates, 1,2-DCA, and EDB. Analyses should be in accordance with Appendix E of the QAPP to include duplicate samples, field and trip blanks.

Please have ECS, Inc. send me an e-mail when the AFVR event has been scheduled.

An AFVR report and invoice must be submitted to the Agency within 90 days from the date of this letter. Your contractor may directly bill the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Interim invoices may be submitted for this scope of work. If the invoice is 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 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 Agency is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Agency for the



cost to be paid. The Agency 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, the Agency 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 Agency grants pre-approval for transportation of free-phase product and petroleum-contaminated groundwater from the referenced facility to a permitted treatment facility for disposal. The transport and disposal must be conducted in accordance with the QAPP.

On all correspondence concerning this facility, please reference UST Permit #07960. If there are any questions concerning this project, feel free to contact me by telephone at (803) 898-0610, by fax at (803) 898-0673, or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Approved cost agreement form

cc: Environmental Compliance Services, Inc., P O Box 3528, Fort Mill, SC 29708 (w/enc)  
Technical File (w/enc)

# Approved Cost Agreement 47617

Facility: 07960 378 TRUCK STOP

RIDGLECT

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		A1 SITE SPECIFIC WORK PLAN	1.0000	150.00	150.00
04 MOB/DEMOB		A1 EQUIPMENT	1.0000	1,020.00	1,020.00
		B1 PERSONNEL	3.0000	423.00	1,269.00
10 SAMPLE COLLECTION		C1 WATER SUPPLY	17.0000	22.00	374.00
		D1 GROUNDWATER NO PURGE/DUPLICATE	40.0000	28.00	1,120.00
		H1 FIELD BLANK	3.0000	24.60	73.80
11 ANALYSES	GW GROUNDWATER	A2 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	67.0000	122.00	8,174.00
		F1 EDB BY 8011	67.0000	45.20	3,028.40
17 DISPOSAL		AA WASTEWATER	100.0000	0.56	56.00
19 RPT/PROJECT MNGT & COORDINATIO		PERC REPORT PREPARATION	0.1000	35,207.45	3,520.75
23 EFR		A4 96 HOUR EVENT	1.0000	12,567.50	12,567.50
		C4 OFF GAS TREATMENT 96 HOUR	1.0000	780.00	780.00
		D SITE RECONNAISSANCE	1.0000	203.25	203.25
		F EFFLUENT DISPOSAL	20,000.0000	0.30	6,000.00
		G AFVR EQUIPMENT MOB	1.0000	391.50	391.50
<b>Total Amount</b>					<b>38,728.20</b>

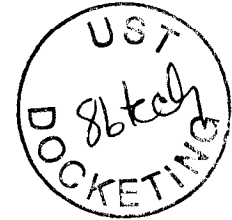


Catherine B. Templeton, Director

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

RONNY LOWDER  
EMERALD INC  
PO BOX 3050  
SUMTER SC 29151

MAR 25 2014



Re: **GAC Unit Maintenance**  
378 Truck Stop, 731 Highway 378, Edgefield, SC 29824  
**UST Permit # 07960; CA# 47790**  
IFB-5400005822 5/3/13 EMW; PO # 4600254190  
Edgefield County

Dear Mr. Lowder:

Under the terms and conditions of the referenced contract, maintenance to the granular activated carbon (GAC) unit was approved for Hattie Scurry's residence located at 724 Highway 378.

This facility has been assigned an individual Cost Agreement (CA) number as listed above. Please reference **CA # 47790 and PO # 4600254190** on the invoice submitted for payment.

If you have any questions or need further assistance, please contact me at (803) 898-0610 or by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Approved Cost Agreement form

cc: Technical File (w/enc)  
Maia Milenkova, UST Management Division (w/enc)

# Approved Cost Agreement 47790

Facility: 07960 378 TRUCK STOP

RIDGLECT

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		B PERSONNEL	1.0000	90.00	90.00
18 MISCELLANEOUS		SERVICE CALL	2.0000	35.00	70.00
<b>Total Amount</b>					<b>160.00</b>

# GAC Unit Installation and Maintenance

Date 1/28/14

Facility Name 378 Truck Stop

UST Permit number 07960

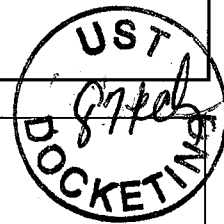
GAC Address 730 Highway 378, Edgefield, SC (Scurry Residence)

GAC Unit serial and model number and meter reading  
Tank #1(no serial number)

## NEW INSTALLATION

Date installation completed \_\_\_\_\_

Attachments required:  schematic of system as installed  
 copy of analytical data for pre and post GAC samples  
 calculations for filter change  
 calculations for breakthrough



## MAINTENANCE AND SERVICE

FILTER CHANGE

Filter Disposal method: \_\_\_\_\_

Condition of GAC Unit \_\_\_\_\_ in need of repair\*  good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\*  good

\*Repair needed: \_\_\_\_\_

SERVICE/REPAIR CALL

Service or repair provided: Replaced coupling and fitting.

SAMPLE COLLECTION (circle)      Pre-GAC      Post GAC

**Comments:** Replaced coupling and fitting in well house where galvanized pipe goes to the unit. Emerald, Inc. personnel were unable to test pump after repairs, as the pump was turned off and could not be turned back on.

## GAC Maintenance Report

Permit # 07960

Address	Serial #	Model#	Date serviced	Condition of unit	Samples collected
730 Hwy 378, Edgefield, SC Scurry Residence			1/28/14	Needs Repairs <u>Good</u>	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC

**Notes:**

Repairs/service: Replaced coupling and fitting.

Filter disposal method: \_\_\_\_\_

Comments: Replaced coupling and fitting in well house where galvanized pipe goes to the unit. Emerald, Inc. personnel were unable to test pump after repairs, as the pump was turned off and could not be turned back on. 2 hours of service call.



Catherine B. Templeton, Director

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

**CALVIN O BARTLEY JR**  
**102 FAULKNER MTN ROAD**  
**EDGEFIELD SC 29824**

**JUN 24 2014**



Re: **Letter of Concern**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # **07960**  
Request received June 11, 2014  
Edgefield County

Dear Mr. Bartley:

On June 11, 2014, you requested that this office provide you with an update on the environmental conditions at the above referenced facility.

We received a report on October 3, 1974, documenting petroleum chemicals of concern (CoC) in the subsurface in the vicinity of the underground storage tanks (USTs). Our records revealed that three USTs were reported to the UST Division. All of the USTs were removed from the site on January 1, 1987. In response to the initial report of petroleum CoC, we directed Wilkerson Fuel Company, Inc., as the party responsible for performing activities under state and federal law, to assess the extent and severity of the contamination. Aggressive Fluid and Vapor Recovery (AFVR) removes petroleum CoC from the groundwater and a 96-hour AFVR event is scheduled to occur on July 1, 2014. A groundwater sampling event of all wells associated with the release will be conducted following the AFVR event to obtain current groundwater data and monitor petroleum CoC levels.

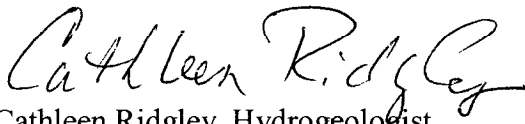
The Division would also like to clarify for you the financial and liability issues surrounding the petroleum CoC at this facility. The release of petroleum products from the UST is qualified to receive funding from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. This means that reasonable costs to up to \$1,000,000 can be paid by the SUPERB Account for site rehabilitation actions associated with this release.

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 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 Agency 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 at (803) 898-0610. I can also be reached by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov) or by fax at (803) 898-0673.

Sincerely,

A handwritten signature in cursive script that reads "Cathleen Ridgley".

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

cc: Environmental Compliance Services, PO Box 3528, Fort Mill, SC 29708  
Technical File





Freedom of Information Request Form

Customer Service: (803) 898-3882

1406171

Date: \_\_\_\_\_

Internal request number: \_\_\_\_\_

Contact information

Name: Calvin O. Bartley, Jr. Company/Organization: \_\_\_\_\_
Street address: 102 Faulkner Mtn. Rd. City: Edgefield State: SC Zip Code: 29824
Phone number: 803-480-5748 (m) Email address: nbartley@logcreektimber.com

Request information

I'm requesting: [X] Specific documents [ ] File review

Facility or project name: letter of concern - UST

Facility address: 731 Hwy 378 East, Edgefield, SC 29824

County: Edgefield

DHEC file custodian/staff contact if known: \_\_\_\_\_

Description of documents or files requested:

I need a Letter of Concern on the existing UST site located as shown above. I am purchasing that property from the current owner who is the Responsible Party. If possible, this letter of concern should also show the current status of that site.

Family Privacy Protection Act statement

The Family Privacy Protection Act, SC Code Section 30-2-50, prohibits any person... Violation of this law is a crime.

I have read and understand this statement. I am not requesting personal information solicitation or in violation of law.

Signed: s0.wp.com Digitally signed by s0.wp.com DN: ou=Created by http://www.fiddler2.com, o=DO\_NOT\_TRUST, cn=s0.wp.com Date: 2014.06.11 09:38:07 -0400

Submit requests: \_\_\_\_\_ • Fax: (803) 898-3816 • Mail: FOI Office, 2600 Bull St., Columbia, S C 29201

Office Use Only: Date completed: \_\_\_\_\_

Billing info: Research: Time: \_\_\_\_\_ Cost: \_\_\_\_\_

Description: \_\_\_\_\_

Services: [ ] Scan #: \_\_\_\_\_ [ ] WebX documents #: \_\_\_\_\_ [ ] Hard copies #: \_\_\_\_\_ [ ] CD duplication: \_\_\_\_\_ [ ] Other: \_\_\_\_\_

Delivery options: [ ] Pick up [ ] Emailed [ ] Mailed [ ] Other: \_\_\_\_\_ Total charge: \_\_\_\_\_

RECEIVED

JUN 11 2014

Freedom of Information Office

Calvin Bartley Jr.

Stamp

6/11/2014

Department of Health and Environmental Control Mail - FOI - Letter of Concern request



6/11/2014 9:35 AM

---

## FOI - Letter of Concern request

**Neil Bartley** <nbartley@logcreektimber.com>  
To: "foi@dhec.sc.gov" <foi@dhec.sc.gov>

Wed, Jun 11, 2014 at 9:35 AM

To the attention of Leanne Young,

Ms. Young, please handle this as discussed on the phone earlier today. Your assistance is most appreciated.

Thank you,

Calvin (O'Neil) Bartley, Jr.

Neil Bartley

Log Creek Timber Company

851 Columbia Road

Edgefield, SC 29824

Office: 803-637-3265

Fax: 803-637-3267

Mobile: 803-480-5748

www.logcreektimber.com

---

 **D-2295 Letter of Concern FOI request 11 June 14.pdf**  
346K

# Document Receipt Information

Hard Copy

CD

Email

Date Received 9-15-14

Permit Number 07960

Project Manager Cathleen Ridgley

Name of Contractor ECS

UST Certification Number \_\_\_\_\_

Docket Number 89424

Scanned \_\_\_\_\_

AFVR / GWS



**AGRESSIVE FLUID VAPOR RECOVERY  
AND GROUNDWATER SAMPLING  
REPORT**

**378 TRUCK STOP  
731 HIGHWAY 378  
EDGEFIELD, SOUTH CAROLINA  
UST PERMIT #07960**

WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

Prepared for:  
Wilkerson Fuel Company, Inc.  
Post Office Box 2835  
Rock Hill, South Carolina

ECS Project No.14-214210  
September 12, 2014

Prepared by:  
ECS, Inc.  
13504 South Point Blvd, Unit F  
Charlotte, NC 28273  
tel 704.583.2711 fax 704.583.2744  
[www.ecsconsult.com](http://www.ecsconsult.com)

**AGGRESSIVE FLUID VAPOR RECOVERY AND GROUNDWATER SAMPLING REPORT**

**378 TRUCK STOP  
731 HWY 378  
EDGEFIELD, SOUTH CAROLINA  
EDGEFIELD COUNTY**

**UST PERMIT NO. 07960  
ECS PROJECT NO. 14-214210**

Prepared For:

Wilkerson Fuel Company, Inc.  
Post Office Box 2835  
Rock Hill, South Carolina 29732

Prepared By:

Environmental Compliance Services, Inc.  
Post Office Box 3528  
Fort Mill, South Carolina 28273-3528

September 12, 2014

  
Noelle France  
Project Manager

  
David R. Mazorra, P.E.  
South Carolina Licensed Professional  
Engineer #31409  
Date: 9/12/14



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## 1.0 INTRODUCTION

This report presents the results of the corrective action and groundwater sampling activities conducted at the 378 Truck Stop site between April 3 and July 30, 2014. The activities were conducted in accordance with the Underground Storage Tank (UST) Quality Assurance Program Plan (QAPP) Revision 2.0, and Cost Agreement Number 47617 as approved by the South Carolina Department of Health and Environmental Control (SCDHEC) in correspondence dated March 17, 2014.

### 1.1 SITE INFORMATION

**UST Facility Name:** 378 Truck Stop  
**UST Permit Number:** 07960  
**Facility Address:** 731 Highway 378  
Edgefield, South Carolina  
**Telephone Number:** Unknown

### 1.2 UST OWNER/OPERATOR

**Name:** Wilkerson Fuel Company, Inc.  
**Address:** Post Office Box 2835  
Rock Hill, South Carolina  
**Telephone Number:** (803) 324-4080

### 1.3 PROPERTY OWNER INFORMATION

**Name:** Gail and Barbara Whitmer  
**Address:** 1226 Highway 378 East  
Edgefield, South Carolina 29824  
**Telephone Number:** Unknown

### 1.4 DHEC CERTIFIED UST SITE REHABILITATION CONTRACTOR INFORMATION

**Name:** Environmental Compliance Services, Inc. (ECS)  
**Address:** Post Office Box 3528  
Fort Mill, South Carolina 29708  
**Telephone Number:** (800) 627-0493  
**Certification Number:** 358

### 1.5 SITE HISTORY

**UST Permit:** 07960  
**Site Name:** 378 Truck Stop  
**Date Release Reported to SCDHEC:** October 3, 1974, date confirmed July 8, 1996  
**Estimated Quantity of Product Released:** Not reported  
**Cause of Release:** UST system  
**SC RBCA Classification Code:** Unknown



### UST Permit #07960

UST #	Size (gallons)	Product	Date Installed	Currently in Use	Date Closed
1	550	Diesel	Unknown	No (removed)	1/1/1987
2	1,000	Gasoline	Unknown	No (removed)	1/1/1987
3	2,000	Gasoline	Unknown	No (removed)	1/1/1987

The site was not in use at the time of the corrective action and groundwater sampling activities summarized in this report. An abandoned building was present onsite during our visits associated with the site activities. A concrete slab was located directly to the east of, and abutting, the onsite building. A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. Reportedly, one 550-gallon diesel, one 1,000-gallon gasoline, and one 2,000-gallon USTs and their associated piping, and dispensers were removed from the site on January 1, 1987. The site did not contain USTs at the time of this report. A Site Locus map showing surrounding properties has been included as **Figure 1**. A Site Plan has been included as **Figure 2**.

#### 1.6 REGIONAL GEOLOGY/HYDROGEOLOGY

The area is located in the Carolina Terrane of the Piedmont Physiographic Province. The Carolina Terrane consists of upper Precambrian to Cambrian greenschist facies metasedimentary and metavolcanic rocks intruded by numerous granitic and gabbroic plutons ranging in age from 265 to 650 million years. A mantle of residual soil and saprolite is reported to typically overlie the crystalline rocks of the Carolina Terrane. The thickness of the mantle ranges from approximately six to 60 feet, although it apparently is absent in places and thicker than 60 feet in others. The surface layers are reported to be composed chiefly of sandy clay. The clay content of most saprolites typically ranges from 10 to 25 percent, with some containing as little as three percent and others as much as 70 percent.

The mantle that covers the underlying fractured bedrock in most places provides an intergranular medium through which recharge into, and discharge of water from, the fractured rocks commonly occur. As a result, groundwater flow has been reported to occur within a composite two-media system. The top of the system has been the water table surface, which has been typically located within the saprolite. The fractured bedrock is expected to generally grade downward into unfractured rock below a depth of approximately 300 feet. The base of the groundwater system is therefore indistinct.

## **2.0 RECEPTOR SURVEY & SITE DATA**

### **2.1 RECEPTOR SURVEY**

A receptor survey was conducted within a 1,000 foot radius of the subject site during the May 2010 Tier I assessment activities. The 378 Truck Stop site was located in a predominantly residential area in Edgefield County. Properties directly surrounding the site were open fields. Nearby properties were mainly open fields and residences. A volunteer fire department station was located on the corner of Highway 378 and Faulkner Mountain Road.

At the time of the May 2010 Tier II, municipal water was not provided to the area. Multiple private water supply wells were identified during the Tier I receptor survey and were subsequently plotted on a site vicinity map. A comprehensive survey which included the private water supply wells, conducted during Tier II assessment activities, resulted in multiple changes to the site vicinity map.

### **2.2 SITE GEOLOGY/HYDROGEOLOGY**

During the Tier I the project area was underlain at shallow depths by light brown silt and silty clay. Rock and partially weathered rock were encountered below the silt and clay at varying depths throughout the study area. Partially weathered rock was first encountered at depths ranging from approximately 26 feet below land surface (bls) (07960-MW18 and 07960-MW27) to 50 feet bls (07690-TW9) across the subject area. Overall, partially weathered rock was first encountered at or below a depth of 30 feet bls onsite and in locations south of the site. Partially weathered rock was first encountered at more shallow depths in locations west, southwest, and southeast of the site. Rock was first encountered at depths ranging from approximately 30 feet bls (07960-MW8) to 68 feet bls (07690-TW3) across the subject area. The depths to rock observed during shallow monitoring well installation varied from approximately 30 feet bls to 39 feet bls. Overall, rock was encountered a bit deeper onsite and south of the site as compared to other areas (north, east, west, southwest, and southeast). Depths to rock were observed at shallower depths (between 32 and 35 feet bls) during telescoping well installation in areas southwest and southeast of the site, as compared to telescoping wells installed onsite and in areas south of the site. The largest discrepancy was observed at telescoping well 07690-TW3, located southwest of the site, where rock was not encountered until a depth of 68 feet bls.

The percentages of gravel, sand, and silt/clay in a soil sample collected during Tier I well installation activities from monitoring well 07960-MW3 at a depth of 40 feet below grade were 10.0%, 39.8%, and 50.1%, respectively. The percentages of gravel, sand, silt, and clay in a soil sample collected during Tier II well installation activities from 07960-MW12 at a depth of 30 feet below grade were 4.1%, 27.5%, 50.7%, and 17.7%, respectively. A soil sample was proposed for collection during installation of monitoring well 07690-TW5 at a depth within the well's screened interval. This sample was subsequently collected at a depth of 55 feet below grade. Following discussions with SCDHEC, the sample was not submitted for laboratory grain size analysis, as this sample consisted mainly of pulverized rock particles from the well drilling process.

## **3.0 ASSESSMENT INFORMATION**

### **3.1 SOIL ASSESSMENT**

Soil assessment was not required for the scope of work outlined in the March 17, 2014 directive.

### **3.2 GROUNDWATER FIELD SCREENING**

Groundwater field screening was not required for the scope of work outlined in the March 17, 2014 directive.

### **3.3 MONITORING WELL INFORMATION**

Monitoring wells installation was not required for the scope of work outlined in the March 17, 2014 directive.

### **3.4 GROUNDWATER ASSESSMENT**

#### **3.4.1 Free Product/Water Level Measurements**

On April 3, 2014, depths to free phase product and depths to groundwater were recorded for previously detected free phase product monitoring wells 07960-MW1 and 07960-RW1 prior to the 96-hour Aggressive Fluid Vapor Recovery (AFVR) event conducted June 30, 2014 through July 4, 2014. On April 3, 2014 free phase product was detected in site well 07960-MW1 at a thickness of 0.06 feet.

On July 28, 2014, forty monitoring wells (07960-MW1 through 07960-MW31, and 07960-TW1 through TW9) were gauged for depths to groundwater, depth to free product and total well depths.

The groundwater elevations in the shallow monitoring wells (those wells with a screened interval between 10-45 feet bls), relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 72.23 feet (07960-MW9) to 79.83 feet (07960-MW7).

The groundwater elevations in the intermediate depth telescoping monitoring wells (defined as those wells with a screened interval between 53-68 feet bls), relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 82.34 feet (07960-TW7) to 73.74 feet (07960-TW6). Groundwater monitoring well 07960-MW4 is not included in evaluation of intermediate groundwater flow as the screened interval did not correspond to the other intermediate wells.

The groundwater elevations in the deep telescoping monitoring wells (defined as those wells with a screened interval between 75-80 feet bls), relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 72.83 feet (07960-TW3) to 77.38 feet (07960-TW2).

Based on these data, the shallow groundwater table generally flows to the southeast. The average horizontal hydraulic gradient for the shallow monitoring well network was approximately 0.0095 ft/ft.

The groundwater flow direction in the intermediate depth wells was generally west-southwest. The average horizontal hydraulic gradient for the intermediate depth monitoring well network was approximately 0.0281 ft/ft.

The average horizontal hydraulic gradient for the deep monitoring well network was approximately 0.013 ft/ft. The groundwater flow direction for the deep telescoping wells is northeast to southwest.

The groundwater elevation data for current and available historical data is presented in **Table 2**. Groundwater elevation maps based on the July 2014 data have been included as **Figure 5A**, **Figure 5B**, and **Figure 5C**, for the shallow wells, intermediate wells, and deep wells respectively.

#### 3.4.2 Well Sampling

Forty monitoring wells, 31 shallow wells, (07960-MW1 through 07960-MW31) and nine telescoping monitoring wells (07960-TW1 through 07960-TW9), and 15 water supply wells were sampled from July 28 through July 30, 2014. Wells; 07960-MW1, 07960-MW2, 07960-MW13, 07960-MW18, 07960-MW21, 07960-MW26, 07960-MW28, 07960-MW29, 07960-MW30, 07960-MW31, and 07960-TW1 through 07960-TW9, were purged prior to sampling.

Water supply wells 07960-WSW1 (pre & post Granular Activated Charcoal [GAC]), 07960-WSW2 through 07960-WSW7, 07960-WSW8, (pre & post GAC), and 07960-WSW9 through 07960-WSW15 were sampled on July 29, 2014.

Groundwater samples (except for the water supply wells) were collected using a disposable bailer. Groundwater samples collected were containerized in laboratory-prepared glass bottles, packed on ice, and transported to Pace Analytical Services, Inc. (Huntersville, NC), a South Carolina certified laboratory. Standard chain-of-custody procedures were maintained, as documented in **Appendix B**.

Three duplicate samples identified as Duplicate-1, Duplicate-2 and Duplicate-3 were collected from 07960-MW31, 07960-MW12, and 07960-MW1 respectively, within 5 minutes of the initial groundwater sample collection. The duplicate samples were assigned a unique identification name with no time listed on the chain of custody to avoid potential laboratory analytical bias. The duplicate samples were identified in the field book. Three field blanks were also collected during well sampling for quality assurance and quality control. Three trip blanks (one set per cooler) were included for quality assurance and quality control.

Sixty four water samples (31 shallow groundwater monitoring wells, 15 water supply wells, 9 telescoping wells, 3 duplicates, 3 field blanks, and 3 trip blanks) were analyzed for benzene, toluene, ethylbenzene, and total xylenes (collectively referred to as BTEX compounds), naphthalene, methyl tert-butyl ether (MTBE), 1,2-Dichloroethane (1,2 DCA) and eight oxygenates by Environmental Protection Agency (EPA) Method 8260. All water samples with the exception of the trip blanks were analyzed for the presence of 1, 2 Dibromoethane (EDB) by Method 8011. The chemicals of concern (CoCs) referred to consist of BTEX, MTBE, Naphthalene, 1,2 DCA and EDB.

#### 3.4.3 Groundwater Analytical Data

Groundwater samples collected from monitoring wells 07960-MW1, 07960-MW2, 07960-MW3, 07960-MW4, 07960-MW7, 07960-MW11, 07960-MW12, 07960-MW13, 07960-MW16, 07960-MW22, 07960-MW29 through 07960-MW31, and 07960-TW1, were reported to contain one or more CoC above their respective Risk Based Screening Levels (RBSLs), as defined in the SCDHEC, Bureau of Land and Waste Management, Underground Storage Tank Program, May, 15, 2001, *South Carolina Risk Based Corrective Action for Petroleum Releases*.

The Action Levels (ALs) are defined in SCDHEC, Department of Health and Environmental Control, Bureau of Land and Waste Management, Underground Storage Tank Program, October 22, 2008, *Certification of the Oxygenate Compounds*.

Monitoring wells 07960-MW1, 07960-MW3, 07960-MW7, 07960-MW11, 07960-MW12, 07960-MW13, 07960-MW29, 07960-MW30, 07960-MW31 and 07960-TW1 were reported to contain one or more of the eight oxygenates above their respective ALs. The eight oxygenates were detected below their respective ALs in 07960-MW4, 07960-MW16, and 07960-TW2.

Chemicals of Concern were not detected in the field blank or the trip blank samples.

The current and available historical groundwater analytical data for CoC and the eight oxygenates is presented in **Table 3A** and **Table 3B** respectively. Groundwater quality maps based on the July 2014 analytical data are included as **Figure 4A**, **Figure 4B**, **Figure 4C**, and **Figure 4D**. The laboratory reports for groundwater samples are included in **Appendix B**. Groundwater Sampling Field Data Sheets have been included in **Appendix B**. A quality assurance and quality control evaluation is also included in **Appendix B**.

#### 3.4.4 Aquifer Characterization

Aquifer characteristic determinations were not required for the scope of work outlined in the March 17, 2014 directive.

## 4.0 CORRECTIVE ACTION

The SCDHEC directive included one 96-hour AFVR event to remove free phase product from site monitoring wells 07960-RW1 and 07960-MW1. A site reconnaissance was performed for this site on April 3, 2014. The site reconnaissance indicated the presence of free phase petroleum product in 07969-MW1 at a thickness of 0.06 feet.

### 4.1 CORRECTIVE ACTION ACTIVITIES

#### 4.1.1 AFVR Event – June 30- July 4, 2014

The trailer mounted AFVR equipment consisted of one Dekker VMX0303K oil-sealed vacuum system capable of extracting dry vapors from the subsurface at a rate of 275 cubic feet per minute (CFM) at 25 inches Mercury (in.Hg) vacuum. The vacuum blower is connected to a manifold, air/water separator, and magnehelic gauges for system monitoring. A water discharge line is connected from the oil water separator, flow meter, and transfer pump that pumps the water to a holding tank temporarily stored onsite. Wells 07960-RW1 and 07960-MW1 were used as target extraction wells during this event.

A trailer mounter ThermTech VAC-50 thermal oxidation system, capable of treating 25% of the Lower Explosive Limit at 500 CFM, was used to reduce the off-gas emission concentrations from the AFVR blower to the atmosphere. The thermal oxidizer was deactivated for periods of time in which the pre-treated organic vapor concentration were below 0.1 pound per hour.

The drop tube (also known as stinger pipe) was initially lowered to the depth of fluid encountered the well. The stinger pipe was periodically lowered throughout the first 8 hours of the event and then adjusted to levels with higher vapor concentrations recorded from the exhaust stack for the duration of the event. Monitoring wells 07960-MW3, 07960-MW21 and 07960-TW1 were used as observation wells to collect vacuum radius of influence measurements throughout the AFVR event.

Measurements of vacuum, air velocities, temperature, and off-gas concentration readings (with exception) were collected at 30-minute intervals during the first 8 hours, then at 1-hour intervals between 9 and 24 hours of the event, and collected at 2-hour intervals throughout the remainder of the event.

The vacuum readings averaged 27.84 in.Hg over the course of the event. The air velocity rates averaged 309.01 feet per minute (ft/min) from the discharge stack on the blower over the course of the event. The organic vapor concentrations recovered from the targeted observation wells was measured at the discharge stack using the Bacharach TLV Sniffer, and averaged 1,843 parts per million (ppm) during the event. The exhaust stack gas temperatures averaged 118.36 degrees Fahrenheit (°F).

Free product was not detected in the monitoring wells 07960-RW1, 07960-MW1, 07960-MW3, 07960-MW21 and 07960-TW1 during post-AFVR measurements on July 4, 2014. A summary of free phase product and AFVR data collected is presented in **Table 6**. A summary of groundwater elevation data is presented in **Table 7**.

The total estimated amount of pre-treated petroleum products removed as a vapor, 3.68 pounds (0.61 gallons). The total estimated amount of post-treatment petroleum products emitted to the atmosphere was 0.78 pounds (0.13 gallons).

The thermal oxidizer was successful in removing 99.8% of the off-gas emissions while in operation. Emission calculations were determined using the manufacture's conversion factor to convert the TLV readings into gas concentrations for benzene.

Approximately 1,107 gallons of liquid were removed from wells 07960-RW1 and 07960-MW1 during the July 2014 AFVR event. A measurable amount of free phase product was not detected in the holding tank during post-AFVR measurements. The disposal manifest for the AFVR event is included in **Appendix G**. Field data sheets and emissions calculations for the AFVR event are included in **Appendix L**.

## **4.2 INVESTIGATIVE DERIVED WASTE**

Approximately 1,107 gallons of fluid were extracted during the AFVR event. Liquids produced during the AFVR event were disposed of by Zebra Environmental Services. Copies of the disposal manifests are included in **Appendix G**. Investigative derived waste (IDW) generated during the groundwater sampling event was placed in 55-gallons drums for disposal. The disposal manifest for this IDW is not available yet and will be forwarded to the SCDHEC as soon as it is available.

## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 CONCLUSIONS**

- Free phase product was detected in site wells 07960-MW1 (thickness of 0.06 feet) during site reconnaissance on April 3, 2014.
- Free phase product was detected in monitoring well 07960-MW1 at a thickness of 0.04 feet prior to the AFVR event.
- Approximately 1,107 gallons of fluids were removed from monitoring wells 07960-RW1 and 09760-MW1 during the 96-hour AFVR event conducted June 30 through July 4, 2014. Stack emission calculations indicated 0.61 gallons of petroleum vapors were emitted during the AFVR event.
- Free phase product was not detected in monitoring wells 07960-RW1 and 07960-MW1 during post-AFVR measurements on July 4, 2014.

### **5.2 RECOMMENDATIONS**

- Additional AFVR events should be performed in monitoring wells 07960-RW1 and 07960-MW1 to remove free phase product when product may be present in site monitoring wells.
- ECS recommends conducting a groundwater sampling event to evaluate the effectiveness of the AFVR events, and to continue monitoring CoC and the eight oxygenates in groundwater.



## 6.0 LIMITATIONS

This report has been prepared for the exclusive use of Wilkerson Fuel Company for specific application to the referenced site in Edgefield County, South Carolina. The assessment was conducted based on the scope of work and level of effort desired by the SCDHEC and with resources adequate only for that scope of work. Our findings have been developed in accordance with generally accepted standards of geology and hydrogeology practices in the State of South Carolina, available information, and our professional judgment. No other warranty is expressed or implied.

The data that are presented in this report are indicative of conditions that existed at the precise locations sampled and at the time the samples were collected. Additionally, the data obtained from samples would be interpreted as being meaningful with respect to parameters indicated in the laboratory report. No additional information can logically be inferred from these data.

Certain data contained in this report were not obtained under the supervision of ECS. Although the accuracy of these data cannot be verified, for the purposes of this report, ECS assumes that they are correct.

### 6.1 DATA VERIFICATION

The Project Verifier/Quality Assurance Manager has reviewed this report and provided any additional comments if applicable in **Appendix K**.

## **TABLES**

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**TABLE 2**  
**GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW1	5/25/2010	101.85	15.33	15.37	0.04	86.51	unknown	unknown
	10/18/2010	101.98	26.50	26.54	0.04	75.47		
	4/19/2011		--	21.70	--	80.28		
	8/29/2011		--	31.17	--	70.81		
	2/12/2013		28.12	28.21	0.09	73.84		
	9/30/2013		23.10	23.14	0.04	78.87		
	7/28/2014		--	23.95	--	78.03		
07960-MW2	5/25/2010		101.02	--	16.82	--	84.20	41.72
	10/18/2010	100.99	--	27.10	--	73.89		
	4/19/2011		--	23.34	--	77.68		
	8/29/2011		--	30.91	--	70.08		
	2/12/2013		--	31.33	--	69.66		
	9/30/2013		--	24.02	--	76.97		
	7/28/2014		--	24.39	--	76.60		
07960-MW3	5/25/2010		101.46	--	17.28	--	84.18	40
	10/18/2010	101.54	--	27.58	--	73.96		
	4/19/2011		--	23.78	--	77.76		
	8/29/2011		--	31.38	--	70.16		
	2/12/2013		--	31.79	--	69.75		
	9/30/2013		--	24.51	--	77.03		
	7/28/2014		--	24.74	--	76.80		
07960-MW4	5/25/2010		100.50	--	16.35	--	84.15	40
	10/18/2010	100.48	--	26.20	--	74.28		
	4/19/2011		--	22.12	--	78.36		
	8/29/2011		--	29.92	--	70.56		
	2/12/2013		--	30.00	--	70.48		
	9/30/2013		--	23.09	--	77.39		
	7/28/2014		--	23.10	--	77.38		
07960-MW5	5/25/2010		104.21	--	27.30	--	76.91	40
	10/18/2010	104.18	--	30.24	--	73.94		
	4/19/2011		--	27.63	--	76.55		
	8/29/2011		--	34.18	--	70.00		
	2/12/2013		--	36.02	--	68.16		
	9/30/2013		--	27.51	--	76.67		
	7/28/2014		--	27.01	--	77.17		
07960-MW6	10/18/2010		102.25	--	28.01	--	74.24	35.05
	4/19/2011	--		23.06	--	79.19		
	8/29/2011	--		32.01	--	70.24		
	2/12/2013	--		30.98	--	71.27		
	9/30/2013	--		24.52	--	77.73		
	7/28/2014	--		25.29	--	76.96		
07960-MW7	10/18/2010	99.72	--	25.10	--	74.62	34.92	19.92-34.92
	4/19/2011		--	21.04	--	78.68		
	8/29/2011		--	25.83	--	73.89		
	2/12/2013		--	28.60	--	71.12		
	9/30/2013		--	20.10	--	79.62		
	7/28/2014		--	19.89	--	79.83		

**TABLE 2**  
**GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW8	10/18/2010	99.92	--	25.45	--	74.47	35.08	20.08-35.08
	4/19/2011		--	22.51	--	77.41		
	8/29/2011		--	28.62	--	71.30		
	2/12/2013		--	29.52	--	70.40		
	9/30/2013		--	24.74	--	75.18		
	7/28/2014		--	23.80	--	76.12		
07960-MW9	10/18/2010	94.83	--	30.31	--	64.52	35.17	20.17-35.17
	4/19/2011		--	24.13	--	70.70		
	8/29/2011		--	28.08	--	66.75		
	2/12/2013		--	30.51	--	64.32		
	9/30/2013		--	23.00	--	71.83		
	7/28/2014		--	22.60	--	72.23		
07960-MW10	10/18/2010	99.12	--	29.73	--	69.39	40.16	25.16-40.16
	4/19/2011		--	26.18	--	72.94		
	8/29/2011		--	31.51	--	67.61		
	2/12/2013		--	27.25	--	71.87		
	9/30/2013		--	25.38	--	73.74		
	7/28/2014		--	25.27	--	73.85		
07960-MW11	10/18/2010	102.61	--	28.75	--	73.86	35.23	20.23-35.23
	4/19/2011		--	25.59	--	77.02		
	8/29/2011		--	32.42	--	70.19		
	2/12/2013		--	33.99	--	68.62		
	9/30/2013		--	25.10	--	77.51		
	7/28/2014		--	25.23	--	77.38		
07960-MW12	10/18/2010	103.46	--	29.63	--	73.83	34.99	19.99-34.99
	4/19/2011		--	26.11	--	77.35		
	8/29/2011		--	33.56	--	69.90		
	2/12/2013		--	Dry	--	Dry		
	9/30/2013		--	26.25	--	77.21		
	7/28/2014		--	24.89	--	78.57		
07960-MW13	10/18/2010	101.48	--	27.63	--	73.85	40.19	25.19-40.19
	4/19/2011		--	23.50	--	77.98		
	8/29/2011		--	31.34	--	70.14		
	2/12/2013		--	31.69	--	69.79		
	9/30/2013		--	24.74	--	76.74		
	7/28/2014		--	22.95	--	78.53		
07960-MW14	10/18/2010	103.48	--	29.99	--	73.49	39.74	24.74-39.74
	4/19/2011		--	28.52	--	74.96		
	8/29/2011		--	34.59	--	68.89		
	2/12/2013		--	35.07	--	68.41		
	9/30/2013		--	27.01	--	76.47		
	7/28/2014		--	28.00	--	75.48		
07960-MW15	10/18/2010	103.16	--	30.32	--	72.84	40.13	25.13-40.13
	4/19/2011		--	25.18	--	77.98		
	8/29/2011		--	33.50	--	69.66		
	2/12/2013		--	33.42	--	69.74		
	9/30/2013		--	26.85	--	76.31		
	7/28/2014		--	27.60	--	75.56		

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**GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW16	10/18/2010	101.32	--	30.79	--	70.53	40.11	25.11-40.11
	4/19/2011		--	24.59	--	76.73		
	8/29/2011		--	32.68	--	68.64		
	2/12/2013		--	33.56	--	67.76		
	9/30/2013		--	25.31	--	76.01		
	7/28/2014		--	25.31	--	76.01		
07960-MW17	10/18/2010	98.40	--	23.74	--	74.66	35.02	20.02-35.02
	4/19/2011		--	18.20	--	80.20		
	8/29/2011		--	28.55	--	69.85		
	2/12/2013		--	19.25	--	79.15		
	9/30/2013		--	20.20	--	78.20		
	7/28/2014		--	21.00	--	77.40		
07960-MW18	10/18/2010	95.05	--	22.02	--	73.03	35.67	20.67-35.67
	4/19/2011		--	15.71	--	79.34		
	8/29/2011		--	23.00	--	72.05		
	2/12/2013		--	23.23	--	71.82		
	9/30/2013		--	18.25	--	76.80		
	7/28/2014		--	18.35	--	76.70		
07960-MW19	10/18/2010	101.07	--	27.62	--	73.45	38.57	23.57-38.57
	4/19/2011		--	21.63	--	79.44		
	8/29/2011		--	30.56	--	70.51		
	2/12/2013		--	32.05	--	69.02		
	9/30/2013		--	24.35	--	76.72		
	7/28/2014		--	25.64	--	75.43		
07960-MW20	12/6/2010	110.52	--	41.77	--	68.75	45.05	30.05-45.05
	4/19/2011		--	37.72	--	72.80		
	8/29/2011		--	41.27	--	69.25		
	2/12/2013		--	Dry	--	Dry		
	9/30/2013		--	35.84	--	74.68		
	7/28/2014		--	31.20	--	79.32		
07960-MW21	12/6/2010	101.70	--	32.66	--	69.04	40.16	25.16-40.16
	4/19/2011		--	24.19	--	77.51		
	8/29/2011		--	38.77	--	62.93		
	2/12/2013		--	32.00	--	69.70		
	9/30/2013		--	22.41	--	79.29		
	7/28/2014		--	24.15	--	77.55		
07960-MW22	12/6/2010	105.13	--	34.95	--	70.18	40.09	25.09-40.09
	4/19/2011		--	28.56	--	76.57		
	8/29/2011		--	35.88	--	69.25		
	2/12/2013		37.61	37.98	0.37	67.43		
	9/30/2013		--	29.18	--	75.95		
	7/28/2014		--	29.30	--	75.83		
07960-MW23	12/6/2010	100.01	--	29.26	--	70.75	37.24	22.24-37.24
	4/19/2011		--	19.69	--	80.32		
	8/29/2011		--	29.01	--	71.00		
	2/12/2013		--	26.28	--	73.73		
	9/30/2013		--	22.83	--	77.18		
	7/28/2014		--	24.82	--	75.19		
07960-MW24	12/6/2010	99.08	--	32.25	--	66.83	40.13	25.13-40.13
	4/19/2011		--	25.58	--	73.50		
	8/29/2011		--	31.62	--	67.46		
	2/12/2013		--	33.17	--	65.91		
	9/30/2013		--	26.53	--	72.55		
	7/28/2014		--	26.45	--	72.63		

**TABLE 2**  
**GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW25	12/6/2010	101.54	--	32.00	--	69.54	39.98	24.98-39.98
	4/19/2011		--	23.44	--	78.10		
	8/29/2011		--	32.18	--	69.36		
	2/12/2013		--	33.28	--	68.26		
	9/30/2013		--	24.58	--	76.96		
	7/28/2014		--	25.45	--	76.09		
07960-MW26	12/6/2010	97.25	--	29.08	--	68.17	38.74	23.74-38.74
	4/19/2011		--	21.07	--	76.18		
	8/29/2011		--	29.08	--	68.17		
	2/12/2013		--	30.29	--	66.96		
	9/30/2013		--	21.84	--	75.41		
	7/28/2014		--	18.25	--	79.00		
07960-MW27	12/6/2010	97.20	--	28.48	--	68.72	35.10	20.10-35.10
	4/19/2011		--	24.42	--	72.78		
	8/29/2011		--	29.24	--	67.96		
	2/12/2013		--	30.27	--	66.93		
	9/30/2013		--	22.87	--	74.33		
	7/28/2014		--	22.75	--	74.45		
07960-MW28	12/6/2010	101.29	--	33.39	--	67.90	40.03	25.03-40.03
	4/19/2011		--	20.91	--	80.38		
	8/29/2011		--	29.92	--	71.37		
	2/12/2013		--	28.86	--	72.43		
	9/30/2013		--	24.65	--	76.64		
	7/28/2014		--	22.05	--	79.24		
07960-MW29	2/12/2013	101.08	--	32.04	--	69.04	40.15	25.15-40.15
	9/30/2013		--	23.99	--	77.09		
	7/28/2014		--	23.25	--	77.83		
07960-MW30	2/12/2013	104.62	--	36.20	--	68.42	45.05	30.05-45.05
	9/30/2013		--	28.51	--	76.11		
	7/28/2014		--	26.14	--	78.48		
07960-MW31	2/12/2013	103.20	--	35.31	--	67.89	43.96	28.96-43.96
	9/30/2013		--	27.30	--	75.90		
	7/28/2014		--	24.80	--	78.40		
07960-TW1	10/18/2010	101.83	--	28.44	--	73.39	63.27	58.27-63.27
	4/19/2011		--	25.53	--	76.30		
	8/29/2011		--	32.26	--	69.57		
	2/12/2013		--	33.22	--	68.61		
	9/30/2013		--	25.66	--	76.17		
	7/28/2014		--	25.55	--	76.28		
07960-TW2	10/18/2010	101.97	--	29.57	--	72.40	80.23	75.23-80.23
	4/19/2011		--	23.83	--	78.14		
	8/29/2011		--	31.62	--	70.35		
	2/12/2013		--	33.22	--	68.75		
	9/30/2013		--	24.27	--	77.70		
	7/28/2014		--	24.59	--	77.38		

**TABLE 2**  
**GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation <sup>2</sup> (ft)	Well Depth (ft)	Screened Interval (ft)
07960-TW-3	10/18/2010	95.33	--	25.39	--	69.94	80.62	75.62-80.62
	4/19/2011		--	23.83	--	71.50		
	8/29/2011		--	27.78	--	67.55		
	2/12/2013		--	29.97	--	65.36		
	9/30/2013		--	22.78	--	72.55		
	7/28/2014		--	22.50	--	72.83		
07960-TW4	10/18/2010	99.23	--	43.13	--	56.10	68.56	63.56-68.56
	4/19/2011		--	27.11	--	72.12		
	8/29/2011		--	31.09	--	68.14		
	2/12/2013		--	32.81	--	66.42		
	9/30/2013		--	23.45	--	75.78		
	7/28/2014		--	22.19	--	77.04		
07960-TW5	10/18/2010	103.62	--	29.69	--	73.93	58.38	53.38-58.38
	4/19/2011		--	25.96	--	77.66		
	8/29/2011		--	33.09	--	70.53		
	2/12/2013		--	34.60	--	69.02		
	9/30/2013		--	26.42	--	77.20		
	7/28/2014		--	26.91	--	76.71		
07960-TW6	10/18/2010	101.29	--	31.22	--	70.07	58.55	53.55-58.55
	4/19/2011		--	25.25	--	76.04		
	8/29/2011		--	33.00	--	68.29		
	2/12/2013		--	33.80	--	67.49		
	9/30/2013		--	26.72	--	74.57		
	7/28/2014		--	27.55	--	73.74		
07960-TW7	10/18/2010	98.13	--	50.90	--	47.23	58.94	53.94-58.94
	4/19/2011		--	16.83	--	81.30		
	8/29/2011		--	36.98	--	61.15		
	2/12/2013		--	37.54	--	60.59		
	9/30/2013		--	19.20	--	78.93		
	7/28/2014		--	15.79	--	82.34		
07960-TW8	10/18/2010	101.03	--	28.18	--	72.85	58.53	53.53-58.53
	4/19/2011		--	22.19	--	78.84		
	8/29/2011		--	41.54	--	59.49		
	2/12/2013		--	42.13	--	58.90		
	9/30/2013		--	32.10	--	68.93		
	7/28/2014		--	25.57	--	75.46		
07960-TW9	12/6/2010	96.92	--	28.96	--	67.96	80.12	75.12-80.12
	4/19/2011		--	21.14	--	75.78		
	8/29/2011		--	28.94	--	67.98		
	2/12/2013		--	30.22	--	66.70		
	9/30/2013		--	22.59	--	74.33		
	7/28/2014		--	23.95	--	72.97		

Notes:

1. Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.
2. Groundwater elevations adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.
3. May 2010 survey data collected by Environmental Compliance Services, Inc. during Tier I assessment activities.
4. Subsequent October and December 2010 survey data provided by Pittman Professional Land Surveying.
5. 07960-MW20 installed with a 3 ft stickup riser.

**TABLE 3A**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>
07960 - MW1	5/25/2010	Free Product								
	10/18/2010	Free Product								
	4/19/2011	456	210	1,010	4,700	<50.0	277	<50.0	1.2	NR
	8/29/2011	1,130	317	941	3,779	<50	225	82	1.3	NR
	2/13/2013	Free Product								
	9/30/2013	Free Product								
	7/30/2014	1,080	830	1,680	7,440	<50.0	619	78.0	3.6	NR
07960 - MW2	5/25/2010	109 <sup>2</sup>	<5.0 <sup>3</sup>	114	312	<5.0	50.6	NR <sup>4</sup>	0.035	NR
	10/19/2010	1.7 J <sup>5</sup>	<5.0	<5.0	2.9 J	<5.0	<5.0	24.8	<0.020	NR
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	28.5	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	26.1	<0.019	NR
	2/13/2013	6.7	<5.0	5.0	13.1	<5.0	<5.0	28.8	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	26.7	<0.020	NR
	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	22.1	<0.020	NR
07960 - MW3	5/25/2010	239	139	815	4,800	<5.0	285	126	0.099	28.9
	10/18/2010	6,820	343	981	6,260	3.4 J	449	561	0.31	NR
	4/19/2011	7,300	253	921	5,060	<250	342	542	0.30	NR
	8/29/2011	7,000	572	1,170	6,710	<250	371	438	0.033	NR
	2/13/2013	6,860	366	660	3,256	<250	349	586	0.40	NR
	10/1/2013	8,400	784	1,540	6,080	<250	498	568	0.80	NR
	7/29/2014	6,960	684	1,180	5,330	<250	469	521	1.50	NR
07960 - MW4	5/25/2010	2.9 J	<5.0	1.4 J	<15.0	<5.0	12.7	3.5 J	<0.020	62.8
	10/18/2010	5.7	<5.0	<5.0	<15.0	3.0 J	3.7 J	4.8 J	<0.020	NR
	4/20/2011	16.4	<5.0	6.0	14.0	<5.0	9.3	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.021	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
	7/30/2014	11.4	<5.0	2.8J	<15.0	<5.0	3.4J	2.2J	<0.020	NR
07960 - MW5	5/25/2010	3.6 J	1.8 J	4.0 J	22.3	<5.0	<5.0	4.8 J	<0.020	11.8
	10/18/2010	102	<5.0	4.1 J	135.9	3.2 J	43.5	6.6	<0.020	NR
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW6	10/19/2010	<5.0	<5.0	<5.0	<15.0	3.0 J	<5.0	3.5 J	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW7	10/19/2010	12.9	4.6 J	3.2 J	34.2 J	<5.0	<5.0	4.6 J	0.40	<5.0
	4/20/2011	794	108	410	2,536	<5.0	116	66.6	6.9	NR
	8/29/2011	275	<10.0	42.6	178.8	<10.0	30.7	26	0.58	NR
	2/13/2013	186	<10.0	23.4	<30.0	<10.0	<10.0	11	0.028	NR
	10/1/2013	2,100	32.0	652	4,120	<10.0	328	123	7.6	NR
	7/29/2014	2,200	13.1	623	2,519	3.0J	250J	147	8.1	NR
07960 - MW8	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	4.0 J	<5.0	2.2 J	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR



**TABLE 3A**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)	
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>	
07960 - MW9	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0	
	4/19/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR	
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
07960 - MW10	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0	
	4/19/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
07960 - MW11	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	1.3 J	<0.020	<5.0	
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/2011	7.9	<5.0	<5.0	<15.0	<5.0	<5.0	2.8 J	<0.019	NR	
	2/13/2013	14.2	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	10/1/2013	16.2	<5.0	<5.0	<15.0	<5.0	2.1J	3.0J	<0.020	NR	
	7/30/2014	12.9	<5.0	<5.0	<15.0	<5.0	<5.0	5.1	<0.020	NR	
07960 - MW12	10/19/2010	387	1,210	120	2,650	<5.0	187	24.7	4.8	<5.0	
	4/20/2011	1,360	987	462	1,659	<50.0	91.3	75.7	6.0	NR	
	8/29/2011	429	26.9	8.3 J	18.3 J	<12.5	5.2 J	126	2.5	NR	
	2/13/2013	DRY									
	10/1/2013	2,020	169	193	840	<20.0	139	94.2	1.3	NR	
	7/29/2014	2,530	121	526	1,282	<100	235	161	1.6	NR	
07960 - MW13	10/19/2010	333	109	58.3	282	<10.0	10.1	61.9	0.022	<5.0	
	4/20/2011	376	46.8	31.2	394	<12.5	11.7 J	57.0	0.074	NR	
	8/29/2011	65.5	11.7	9.2	34.2	<5.0	<5.0	41.7	0.033	NR	
	2/13/2013	376	28.7	33.5	330.7	<5.0	12.3	34.3	<0.020	NR	
	10/1/2013	533	25.1	22.8	139	<10.0	53.3	38.9	<0.020	NR	
	7/29/2014	881	25.1	30.6	211.7	<25.0	85.7	57.6	<0.020	NR	
07960 - MW14	10/19/2010	<5.0	<5.0	2.5 J	9.5 J	<5.0	<5.0	<5.0	<0.020	<5.0	
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/2011	2.8 J	<5.0	3.4 J	5.8 J	<5.0	22.0	<5.0	<0.020	NR	
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	10/1/2013	3.3J	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
07960 - MW15	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.0 J	<0.020	<5.0	
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR	
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	9/30/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
07960 - MW16	10/19/2010	246	26.1	14.3	229.2	<5.0	<5.0	2.5 J	<0.020	<5.0	
	4/19/2011	158	8.5	2.5 J	96.2	<5.0	5.8	<5.0	<0.020	NR	
	8/29/2011	NR	NR	NR	NR	NR	NR	NR	<0.019	NR	
	2/13/2013	51.6	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	9/30/2013	24.5	<5.0	<5.0	10.2	<5.0	6.6	<5.0	<0.020	NR	
	7/28/2014	42.7	2.3J	3.5J	94.4	<5.0	43.7	<5.0	<0.020	NR	
07960 - MW17	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	4.3 J	
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR	
	9/30/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR	
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR	

**TABLE 3A**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>
07960 - MW18	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	9/30/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW-19	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.021	NR
	9/30/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW20	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	DRY								
	10/1/2013	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<0.019	NR
	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW21	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW22	12/6/2010	<b>11,900</b>	<b>29,500</b>	<b>1,800</b>	<b>11,400</b>	<100	<b>522</b>	<b>463</b>	<b>122</b>	<b>15.3</b>
	4/20/2011	<b>8,690</b>	<b>20,600</b>	<b>1,870</b>	<b>11,070</b>	<1,250	<1,250	<1,250	<b>119</b>	NR
	8/29/2011	<b>3,630</b>	<b>23,500</b>	<b>3,530</b>	<b>20,200</b>	<1,000	<b>859 J</b>	<1,000	<b>188</b>	NR
	2/13/2013	Free Product								
	10/1/2013	<b>10,900</b>	<b>30,500</b>	<b>2,640</b>	<b>20,800</b>	<1,000	<b>1,270</b>	420J	<b>109</b>	NR
	7/29/2014	<b>9,910</b>	<b>25,800</b>	<b>1,970</b>	<b>15,850</b>	<1,250	<b>926J</b>	<1,250	<b>53.4</b>	NR
07960 - MW23	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW24	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>6.7</b>	<0.020	<5.0
	4/19/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	4.1 J	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.5 J	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW25	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

**TABLE 3A**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>
07960 - MW26	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW27	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>6.4</b>	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.6 J	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	2.3 J	<5.0	<0.020	NR
	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW28	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - MW29	2/13/2013	<b>21.4</b>	<5.0	20.8	63.4	<5.0	<5.0	<b>16.7</b>	<b>0.052</b>	NR
	10/1/2013	<b>65.1</b>	<5.0	16.2	54.0	<5.0	10.4	<b>20.5</b>	<0.020	NR
	7/30/2014	<b>199.0</b>	8.4	29.6	105.6	1.7 J	9.2	<b>65.2</b>	<0.020	NR
07960 - MW30	2/13/2013	<b>527</b>	17.7	12.2	270	<5.0	8.3	<b>21.7</b>	<0.020	NR
	10/1/2013	<b>602</b>	<25.0	24.2 J	99.3	<25.0	<b>46.8</b>	<b>37.7</b>	<b>0.11</b>	NR
	7/29/2014	<b>700</b>	14.8 J	14.1 J	71.7 J	<25	<b>69.9</b>	<b>33.6</b>	<0.020	NR
07960 - MW31	2/13/2013	<b>24.5</b>	26.2	14.7	109.6	<5.0	<5.0	<b>51.4</b>	<0.020	NR
	10/1/2013	<b>321</b>	54.8	60.4	194.0	<5.0	<b>48.4</b>	<b>45.6</b>	<0.020	NR
	7/28/2014	<b>394</b>	78.9	71.3	182.3	<12.5	<b>51.0</b>	<b>36.6</b>	<0.020	NR
07960 - TW1	10/18/2010	<5.0	<5.0	<5.0	<15.0	5.7	<5.0	<b>64.2</b>	<0.020	<5.0
	4/19/2011	<5.0	<5.0	<5.0	<15.0	5.0	<5.0	<b>48.9</b>	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	6.4	<5.0	<b>48.4</b>	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	5.1	<5.0	<b>52.4</b>	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<15.0	6.6	<5.0	<b>76.1</b>	<0.020	NR
	7/29/2014	<b>7.0</b>	<5.0	1.8 J	<15.0	5.9	<5.0	<b>60.5</b>	<0.020	NR
07960 - TW2	10/19/2010	<5.0	3.4 J	<5.0	2.8 J	<5.0	<5.0	4.2 J	<0.020	<5.0
	4/19/2011	<5.0	1.6 J	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	18.7	<5.0	<5.0	<5.0	<0.019	NR
	10/1/2013	<5.0	46.6	<5.0	<15.0	<5.0	<5.0	1.0 J	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.2 J	<0.020	NR
07960 - TW3	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	6.5	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

**TABLE 3A**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naph- thalene (ug/L)	1,2- DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>
07960 - TW4	10/19/2010	<5.0	<5.0	<5.0	<15.0	2.9 J	<5.0	<5.0	<0.019	<5.0
	4/19/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	34.9	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	10/1/2013	<5.0	14.7	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW5	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	1.7 J	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<5.0	109	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW6	10/19/2010	1.5 J	<5.0	<5.0	<15.0	<5.0	<5.0	<b>5.1</b>	<0.020	<5.0
	4/19/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.6 J	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<b>8.9</b>	<0.019	NR
	2/13/2013	<5.0	33.3	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<5.0	7.3	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW7	10/19/2010	<5.0	1.9 J	<5.0	5.6 J	<5.0	<5.0	<5.0	<0.020	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	9/30/2013	<5.0	12.5	<5.0	<15.0	<5.0	<5.0	<5.0	0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW8	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	<5.0
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<5.0	5.4	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW9	12/6/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	<5.0
	4/19/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960 - TW10	12/2/2010	<5.0	<5.0	<5.0	<15.0	<5.0	2.9 J	<5.0	<0.020	NR
07960-WSW1	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.1 J	<0.020	NR
07960-WSW1 pre GAC	11/18/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.5 J	<0.019	NR
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	2.4	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	3.1	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW1 post GAC	11/18/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	3.5J	<0.020	NR

**TABLE 3A**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>
07960-WSW2	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/20/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	Not Sampled								
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW3	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	5/3/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW4	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<1.0	<1.0	<1.0	2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW5	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/2011	Well pump not operational, could not collect sample								
	8/29/2011	Not Sampled								
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW6	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.88 J	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	10/1/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW7	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.019	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW8	10/19/2010	<5.0	<5.0	<5.0	<15.0	3.6 J	<5.0	9.2	<0.020	NR
07960-WSW8 pre GAC	11/12/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	7.5	<0.020	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	2.9 J	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	1.6	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

**TABLE 3A**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>
07960-WSW8 post GAC	11/12/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW9	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW10	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.45 J	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	0.60J	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW11	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	0.45 J	<0.019	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	0.83J	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW12	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	4/21/2011	Well pump not operational, could not collect sample								
	8/29/2011	Well pump not operational, could not collect sample								
	2/13/2013	Well pump not operational, could not collect sample								
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	0.60J	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW13	10/19/2010	<5.0	<5.0	<5.0	<15.0	3.2 J	<5.0	<5.0	<0.020	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSW14	10/19/2010	<5.0	<5.0	<5.0	<15.0	4.0 J	<5.0	<5.0	<0.020	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	1.3	<1.0	<1.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR

**TABLE 3A**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**CHEMICALS OF CONCERN**  
**378 TRUCK STOP**

Well ID	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Total Lead (ug/L)
<b>RBSL<sup>9</sup></b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>40</b>	<b>25</b>	<b>5</b>	<b>0.05</b>	<b>15</b>
07960-WSW15	10/19/2010	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.019	NR
	4/21/2011	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	8/29/2011	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	<0.020	NR
	2/13/2013	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
	9/30/2013	<1.0	<1.0	<1.0	<2.0	0.44J	<1.0	<1.0	<0.020	NR
	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<0.020	NR
07960-WSWX	2/13/2013	Well House Secured & Locked with Padlock								

Notes:

1. Analyses for BTEX compounds, MTBE, naphthalene, and 1,2-DCA by EPA Method 8260B; analyses for EDB by EPA Method 8011; analyses for total lead by EPA Method 6010.
2. Concentrations in bold face type exceeded the May 2001 Risk-Based Screening Level.
3. <= Less than the reporting limit specified in the laboratory report.
4. NA - Analyses not requested.
5. J - Estimated value below the laboratory reporting limit.
6. 07960 - TW10 did not produce enough water and was subsequently abandoned following sample collection.
7. 07960-WSW1 GAC installed on 11/18/10.
8. 07960-WSW8 GAC installed on 11/12/10.
9. Risk Based Action Levels are defined in the South Carolina Department of Health and Environmental Control (SCDHEC), Bureau of Land and Waste Management, Underground Storage Tank Program, May, 15, 2001, South Carolina Risk Based Corrective Action for Petroleum Releases.

**TABLE 3B**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>
07960 - MW1	10/18/2010	Free Product							
	4/19/2011	<2,000	<100	<50.0	<1,000	<1,000	<100	<1,000	<500
	8/29/2011	<2,000	<100	<50.0	<1,000	<1,000	<100	<b>2,160</b>	<500
	2/13/2013	Free Product							
	10/1/2013	Free Product							
	7/30/2014	<2,000	<100	<50.0	<1,000	<1,000	<100	<b>2,500</b>	<500
07960 - MW2	10/19/2010	<200 <sup>2</sup>	<10.0	<5.0	<100	254	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	336	<10.0	96.2 J	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	386	<10.0	87.1 J	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	307	<10.0	132	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	422	<10.0	202	<50.0
	7/30/2014	<200	<10.0	<5.0	<100	149	<10.0	140	<50.0
07960 - MW3	10/18/2010	<200	<10.0	55.7	<100	773	<10.0	<b>12,900<sup>3</sup></b>	<50.0
	4/19/2011	<10,000	<500	<250	<5,000	<5,000	<500	<b>13,800</b>	<2,500
	8/29/2011	<10,000	<500	<250	<5,000	<5,000	<500	<b>10,300</b>	<2,500
	2/13/2013	<10,000	<500	<250	<5,000	<5,000	<500	<b>13,200</b>	<2,500
	10/1/2013	<10,000	<500	<250	<5,000	<5,000	<500	<b>15,500</b>	<2,500
	7/29/2014	<10,000	<500	<250	<5,000	<5,000	<500	<b>10,600</b>	<2,500
07960 - MW4	10/18/2010	<200	<10.0	<5.0	<100	<100	<10.0	199	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	141	<50.0
	7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	115	<50.0
07960 - MW5	10/18/2010	<200	<10.0	<5.0	<100	<100	<10.0	168	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW6	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	131	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW7	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<b>2,650</b>	<50.0
	8/29/2011	<400	<20.0	<10.0	<200	225	<20.0	<b>672</b>	<100
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<400	<20.0	<10.0	<10.0	<200	<20.0	<b>6,780</b>	<100
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<b>4,760J</b>	<50.0
07960 - MW8	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<b>244</b>	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0



TABLE 3B  
GROUNDWATER ANALYTICAL DATA<sup>1</sup>  
EIGHT OXYGENATES  
378 TRUCK STOP

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)	
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>	
07960 - MW9	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0		
07960 - MW10	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0		
07960 - MW11	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<b>266</b>	<50.0	
7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	<b>357</b>	<50.0		
07960 - MW12	10/19/2010	<200	<10.0	<5.0	<100	83.0 J <sup>4</sup>	<10.0	<b>267</b>	<50.0	
	4/20/2011	<2,000	<100	<50.0	<1,000	<1,000	<100	<1,000	<500	
	8/29/2011	<500	<25.0	4.8 J	<250	<250	<25.0	<b>615</b>	<125	
	2/13/2013	Dry								
	10/1/2013	<800	<40.0	<20.0	<400	945	<40.0	<b>1,440</b>	<200	
7/29/2014	<4,000	<200	<100	<2,000	<2,000	<200	<b>4,100</b>	<1,000		
07960 - MW13	10/19/2010	<400	<20.0	<10.0	<200	<200	<20.0	<b>1,260</b>	<100	
	4/20/2011	<500	<25.0	<12.5	<250	<250	<25.0	<b>1,210</b>	<125	
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<b>1,040</b>	<50.0	
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<b>340</b>	<50.0	
	10/1/2013	<400	<20.0	<10.0	<200	147J	<20.0	<b>1,260</b>	<100	
7/29/2014	<1000	<50	<25.0	<500	<500	<50.0	<b>2,090</b>	<250		
07960 - MW14	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0		
07960 - MW15	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0		
07960 - MW16	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<b>360</b>	<50.0	
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<b>321</b>	<50.0	
	8/29/2011	Not Requested								
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	168	<50.0		

**TABLE 3B**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>
07960 - MW17	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW18	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW19	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW20	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	Dry							
	10/11/2003	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW21	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<b>368</b>	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW22	12/6/2010	<4,000	<200	<100	<2,000	<2,000	<200	<b>9,730</b>	<1,000
	4/20/2011	<50,000	<2,500	<1,250	<25,000	<25,000	<2,500	<25,000	<12,500
	8/29/2011	<40,000	<2,000	<1,000	<20,000	<20,000	<2,000	<20,000	<10,000
	2/13/2013	Free Product							
	10/1/2013	<40,000	<2,000	<1,000	<20,000	<20,000	<2,000	<20,000	<10,000
7/29/2014	<50,000	<2,500	<1,250	<25,000	<25,000	<2,500	<25,000	<12,500	
07960 - MW23	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - MW24	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	

**TABLE 3B**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>
07960 - MW25	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	136	<50.0
	7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW26	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW27	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW28	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	7/30/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960 - MW29	10/1/2013	<200	<10.0	<5.0	<100	347	<10.0	<b>3,630</b>	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	408	<10.0	<b>3,620</b>	<50.0
	7/30/2014	<200	<10.0	2.3J	<100	147	<10.0	<b>4,050</b>	<50.0
07960 - MW30	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<1,000	<50.0	<25.0	<500	<b>618</b>	<50.0	<b>1,880</b>	<250
	7/29/2014	<1,000	<50.0	<25.0	<500	<500	<50.0	<b>1,690</b>	<250
07960 - MW31	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	69.8J	<10.0	<b>509</b>	<50.0
	7/28/2014	<500	<25.0	<12.5	<250	<250	<25.0	<b>678</b>	<125
07960 - TW1	10/18/2010	<200	<10.0	<5.0	<100	<100	<10.0	<b>1,180</b>	<50.0
	4/19/2011	<200	<10.0	1.8 J	<100	<100	<10.0	<b>1,000</b>	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<b>871</b>	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<b>899</b>	<50.0
	10/1/2013	<200	<10.0	2.3J	<100	111	<10.0	<b>1,040</b>	<50.0
	7/29/2014	<200	<10.0	1.8J	<100	<100	<10.0	<b>1,230</b>	<50.0
07960 - TW2	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	95.4 J	<50.0
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	184	<50.0
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	77.9J	<50.0
07960 - TW3	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	135	<50.0
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

**TABLE 3B**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>
07960 - TW4	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - TW5	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<b>368</b>	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - TW6	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - TW7	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - TW8	10/19/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - TW9	12/6/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/19/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/28/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960 - TW10	12/2/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	12/2/2010	Abandoned							
07960-WSW1 pre GAC6	11/18/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	8.3 J	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	39.2J	<10.0	145	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW1 post GAC	11/18/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	34.5J	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW2	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/20/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	Not Sampled							
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	

**TABLE 3B**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl-1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>
07960-WSW3	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	5/3/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	29.3J	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW4	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<1.0	<100	31.5J	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW5	12/8/2010	Not sampled for oxygenates. Well pump electric disconnected.							
	4/21/2011	Well pump not operational, could not collect sample							
	8/29/2011	Not Sampled							
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<1.0	<100	30.2J	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW6	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	10/1/2013	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW7	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW8 pre GAC7	11/12/2010	<200	<10.0	<5.0	<100	<100	<10.0	262	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<200	<1.0	<100	<100	<10.0	142	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW8 post GAC	11/12/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	<100	<10.0	132	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW9	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	
07960-WSW10	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0	

**TABLE 3B**  
**GROUNDWATER ANALYTICAL DATA<sup>1</sup>**  
**EIGHT OXYGENATES**  
**378 TRUCK STOP**

Well ID	Date Sampled	Ethanol (ug/L)	Ethyl tert-Butyl Ether (ETBE) (ug/L)	Di-isopropyl Ether (DIPE) (ug/L)	3,3- Dimethyl 1-Butanol (ug/L)	Tertiary Butyl Alcohol (TBA) (ug/L)	Tert-Amyl Methyl Ether (TAME) (ug/L)	tert-Amyl Alcohol (TAA) (ug/L)	tert-Butyl Formate (TBF) (ug/L)
<b>Action Levels<sup>8</sup></b>		<b>10,000</b>	<b>47</b>	<b>150</b>	<b>NA</b>	<b>1,400</b>	<b>128</b>	<b>240</b>	<b>NA</b>
07960-WSW11	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960-WSW12	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	Well pump not operational, could not collect sample							
	8/29/2011	Well pump not operational, could not collect sample							
	2/13/2013	Well pump not operational, could not collect sample							
	9/30/2013	<200	<10.0	<1.0	<100	<100	<10.0	<100	<50.0
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960-WSW13	12/8/2010	Not sampled for oxygenates. Sampled by SCDHEC on 11/4/10.							
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	29.6J	<10.0	<100	<50.0
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960-WSW14	12/8/2010	Not sampled for oxygenates. Sampled by SCDHEC on 11/4/10.							
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	30.7J	<10.0	<100	<50.0
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
07960-WSW15	12/8/2010	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	4/21/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	8/29/2011	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	2/13/2013	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0
	9/30/2013	<200	<10.0	<1.0	<100	30.0J	<10.0	<100	<50.0
	7/29/2014	<200	<10.0	<5.0	<100	<100	<10.0	<100	<50.0

Notes:

1. Analyses for eight oxygenates by EPA Method 8260B.
2. <= Less than the reporting limit specified in the laboratory report.
3. Concentrations in bold face exceed the 2008 SCDHEC Action Level.
4. J = Estimated value below the laboratory reporting limit.
5. 07960 - TW10 did not produce enough water and was subsequently abandoned following sample collection.
6. 07960-WSW1 GAC installed on 11/18/10.
7. 07960-WSW8 GAC installed on 11/12/10.
8. The ALs are defined in SCDHEC, Department of Health and Environmental Control, Bureau of Land and Waste Management, Underground Storage Tank Program, October 22, 2008, Certification of the Oxygenate Compounds.

**TABLE 6**  
**SUMMARY OF AGGRESSIVE FLUID/VAPOR RECOVERY INFORMATION<sup>1</sup>**  
**378 TRUCK STOP**

Well ID	Date	Time <sup>2</sup> (hours)	Average Effluent Velocity <sup>3</sup> (fpm)	Average Effluent Temperature (°F)	Average Effluent Concentration (ppm)	Total Free Product Volatized <sup>4</sup> (gallons)	Total Free Product as Fluid <sup>5</sup> (gallons)	Total Free Product Recovered <sup>6</sup> (gallons)	Total Fluid Volume removed( gallons)
07960 RW1	6/30-7/4 2014	96	309.01	118.36	1,843	0.305	0	0.305	553.5
07960-MW1	6/30-7/4 2014	96	309.01	118.36	1,843	0.305	0	0.305	553.5
07960 RW1	8/29/2013	12	3246	210.5	12	0.02	0	0.02	212
07960-MW22	12/15/2011	6	4,217	202.9	119	0.15	0	0.15	17
07960-MW1	12/15/2011	2							
07960-MW1	11/14/2011	8	4,756	212.3	90	0.18	0	0.18	50
<b>Totals</b>		--	--	--	--	0.960	0	0.960	1,386

Notes:

1. Aggressive Fluid Vapor Recovery (AFVR) events using vacuum trucks provided by A&D Environmental and Industrial Services, Inc. on November 14, 2-11, December 15, 2011, and August 29, 2013.  
The AFVR event in 2014 utilized ECS owned vacuum trailer
2. Duration of the AFVR event at well location.
3. Cross-sectional area of exhaust stack is 0.19 sq. ft.
4. Total Volatized in gallons = Air emissions in pounds/(6.25 lbs./gal.)
5. Total Free Product as Fluid is obtained from disposal manifest and/or correspondence with subcontractors from each AFVR event.
6. Total Free Product Recovered = Total Free Product Volatized + Total Free Product as Fluid.

**TABLE 7**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**AGGRESSIVE FLUID/VAPOR RECOVERY EVENTS**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft.)	Depth to Groundwater (ft.)	Depth to Free Product (ft.)	Free Product Thickness (ft.)	Groundwater Elevation <sup>2</sup> (ft.)	Well Depth (ft.)	Screened Interval (ft.)
07960-TW1	6/30/14 (pre-AFVR)	101.83	22.94	--	--	78.89	63.27	58.27-63.27
	7/4/14 (immediately post-AFVR)		25.98	--	--	75.85		
	7/4/14 (20 minutes post-AFVR)		25.70	--	--	76.13		
07960-MW21	6/30/14 (pre-AFVR)	101.70	21.63	--	--	80.07	40.16	25.16-40.16
	7/4/14 (immediately post-AFVR)		24.16	--	--	77.54		
	7/4/14 (20 minutes post-AFVR)		24.20	--	--	77.50		
07960-MW3	6/30/14 (pre-AFVR)	101.54	22.17	--	--	79.37	40	10-40
	7/4/14 (immediately post-AFVR)		23.55	--	--	77.99		
	7/4/14 (20 minutes post-AFVR)		23.50	--	--	78.04		
07960-MW1	6/30/14 (pre-AFVR)	101.98	20.85	20.89	0.04	84.31	44.81	unknown
	7/4/14 (immediately post-AFVR)		39.39	--	--	62.59		
	7/4/14 (20 minutes post-AFVR)		38.00	--	--	63.98		
07960-RW1	6/30/14 (pre-AFVR)	101.63	19.06	--	--	82.57	29	14-29
	7/4/14 (immediately post-AFVR)		20.89	--	--	80.74		
	7/4/14 (20 minutes post-AFVR)		21.54	--	--	80.09		
07960-RW-1	8/29/13 (pre-AFVR)	101.63	14.49	--	--	87.14	29	14-29
	8/29/13 (immediately post-AFVR)		18.10	--	--	83.53		
	8/29/13 (20 minutes post-AFVR)		17.55	--	--	84.08		
07960-MW1	8/29/13 (pre-AFVR)	101.98	17.66	--	--	84.32	44.81	unknown
	8/29/13 (immediately post-AFVR)		18.90	--	--	83.08		
	8/29/13 (20 minutes post-AFVR)		18.80	--	--	83.18		
07960-MW3	8/29/13 (pre-AFVR)	101.54	20.41	--	--	81.13	40	10-40
	8/29/13 (immediately post-AFVR)		19.49	--	--	82.05		
	8/29/13 (20 minutes post-AFVR)		18.49	--	--	83.05		
07960-MW7	8/29/13 (pre-AFVR)	99.72	23.50	--	--	76.22	34.92	19.92-34.92
	8/29/13 (immediately post-AFVR)		18.80	--	--	80.92		
	8/29/13 (20 minutes post-AFVR)		18.42	--	--	81.30		
07960-MW21	8/29/13 (pre-AFVR)	101.70	21.71	--	--	79.99	40.16	25.16-40.16
	8/29/13 (immediately post-AFVR)		19.55	--	--	82.15		
	8/29/13 (20 minutes post-AFVR)		19.50	--	--	82.20		
07960-MW22	12/15/11 (pre-AFVR)	105.13	38.05	37.80	0.25	67.27	40.09	25.09-40.09
	12/15/11 (immediately post-AFVR)		39.78	--	--	65.35		
	12/15/11 (20 minutes post-AFVR)		39.66	39.60	0.06	65.52		
07960-MW12	12/15/11 (pre-AFVR)	103.46	dry	--	--	--	34.99	19.99-34.99
	12/15/11 (immediately post-AFVR)		dry	--	--	--		
	12/15/11 (20 minutes post-AFVR)		dry	--	--	--		
07960-MW14	12/15/11 (pre-AFVR)	103.48	36.52	--	--	66.96	39.74	24.74-39.74
	12/15/11 (immediately post-AFVR)		36.43	--	--	67.05		
	12/15/11 (20 minutes post-AFVR)		36.42	--	--	67.06		
07960-MW15	12/15/11 (pre-AFVR)	103.16	35.99	--	--	67.17	40.13	25.13-40.13
	12/15/11 (immediately post-AFVR)		35.67	--	--	67.49		
	12/15/11 (20 minutes post-AFVR)		35.67	--	--	67.49		
07960-MW1	12/15/11 (pre-AFVR)	101.98	33.50	--	--	68.48	44.81	unknown
	12/15/11 (immediately post-AFVR)		34.07	--	--	67.91		
	12/15/11 (20 minutes post-AFVR)		34.21	--	--	67.77		
07960-MW3	12/15/11 (pre-AFVR)	101.54	33.42	--	--	68.12	40	10-40
	12/15/11 (immediately post-AFVR)		33.40	--	--	68.14		
	12/15/11 (20 minutes post-AFVR)		33.41	--	--	68.13		
07960-MW-6	12/15/11 (pre-AFVR)	102.25	34.06	--	--	68.19	34.92	19.92-34.92
	12/15/11 (immediately post-AFVR)		33.06	--	--	69.19		
	12/15/11 (20 minutes post-AFVR)		33.06	--	--	69.19		
07960-MW-21	12/15/11 (pre-AFVR)	101.70	32.79	--	--	68.91	40.16	25.16-40.16
	12/15/11 (immediately post-AFVR)		32.80	--	--	68.90		
	12/15/11 (20 minutes post-AFVR)		32.76	--	--	68.94		
07960-MW1	11/14/11 (pre-AFVR)	101.98	32.92	--	--	69.06	44.81	unknown
	11/14/11 (immediately post-AFVR)		34.92	--	--	67.06		
	11/14/11 (20 minutes post-AFVR)		34.61	--	--	67.37		
07960-MW3	11/14/11 (pre-AFVR)	101.54	33.00	--	--	68.54	40	10-40
	11/14/11 (immediately post-AFVR)		32.83	--	--	68.71		
	11/14/11 (20 minutes post-AFVR)		32.83	--	--	68.71		



**TABLE 7**  
**SUMMARY OF GROUNDWATER ELEVATION DATA<sup>1</sup>**  
**AGGRESSIVE FLUID/VAPOR RECOVERY EVENTS**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft.)	Depth to Groundwater (ft.)	Depth to Free Product (ft.)	Free Product Thickness (ft.)	Groundwater Elevation <sup>2</sup> (ft.)	Well Depth (ft.)	Screened Interval (ft.)
07960-MW6	11/14/11 (pre-AFVR)	102.25	33.54	--	--	68.71	34.92	19.92-34.92
	11/14/11 (immediately post-AFVR)		33.53	--	--	68.72		
	11/14/11 (20 minutes post-AFVR)		33.53	--	--	68.72		
07960-MW21	11/14/11 (pre-AFVR)	101.70	32.12	--	--	69.58	40.16	25.16-40.16
	11/14/11 (immediately post-AFVR)		32.18	--	--	69.52		
	11/14/11 (20 minutes post-AFVR)		32.16	--	--	69.54		
07960-MW13	7/25/11 (pre-AFVR)	101.48	29.70	--	--	71.78	40.19	25.19-40.19
	7/25/11 (immediately post-AFVR)		39.91	--	--	61.57		
	7/25/11 (20 minutes post-AFVR)		39.27	--	--	62.21		
07960-MW12	7/25/11 (pre-AFVR)	103.46	31.99	--	--	71.47	34.99	19.99-34.99
	7/25/11 (immediately post-AFVR)		dry	--	--	--		
	7/25/11 (20 minutes post-AFVR)		34.65	--	--	68.81		
07960-MW22	7/20/11 (pre-AFVR)	105.13	33.84	--	--	71.29	40.09	25.09-40.09
	7/20/11 (immediately post-AFVR)		37.66	--	--	67.47		
	7/20/11 (20 minutes post-AFVR)		37.52	--	--	67.61		
07960-MW16	7/19/11 (pre-AFVR)	101.32	30.55	--	--	70.77	40.11	25.11-40.11
	7/19/11 (immediately post-AFVR)		37.76	--	--	63.56		
	7/19/11 (20 minutes post-AFVR)		37.52	--	--	63.80		
07960-MW1	3/16/11 (pre-AFVR)	101.98	25.55	25.53	0.02	76.45	unknown	unknown
	3/16/11 (immediately post-AFVR)		28.58	--	--	73.40		
	3/16/11 (20 minutes post-AFVR)		28.58	--	--	73.40		
07960-MW3	3/16/11 (pre-AFVR)	101.54	25.86	--	--	75.68	40	10-40
	3/16/11 (immediately post-AFVR)		26.13	--	--	75.41		
	3/16/11 (20 minutes post-AFVR)		26.10	--	--	75.44		
07960-MW7	3/16/11 (pre-AFVR)	99.72	23.44	--	--	76.28	34.92	19.92-34.92
	3/16/11 (immediately post-AFVR)		22.81	--	--	76.91		
	3/16/11 (20 minutes post-AFVR)		22.89	--	--	76.83		
07960-MW21	3/16/11 (pre-AFVR)	101.70	24.30	--	--	77.40	40.16	25.16-40.16
	3/16/11 (immediately post-AFVR)		24.23	--	--	77.47		
	3/16/11 (20 minutes post-AFVR)		24.23	--	--	77.47		

Notes:

1. Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.
2. Groundwater elevation adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.

## **FIGURES**

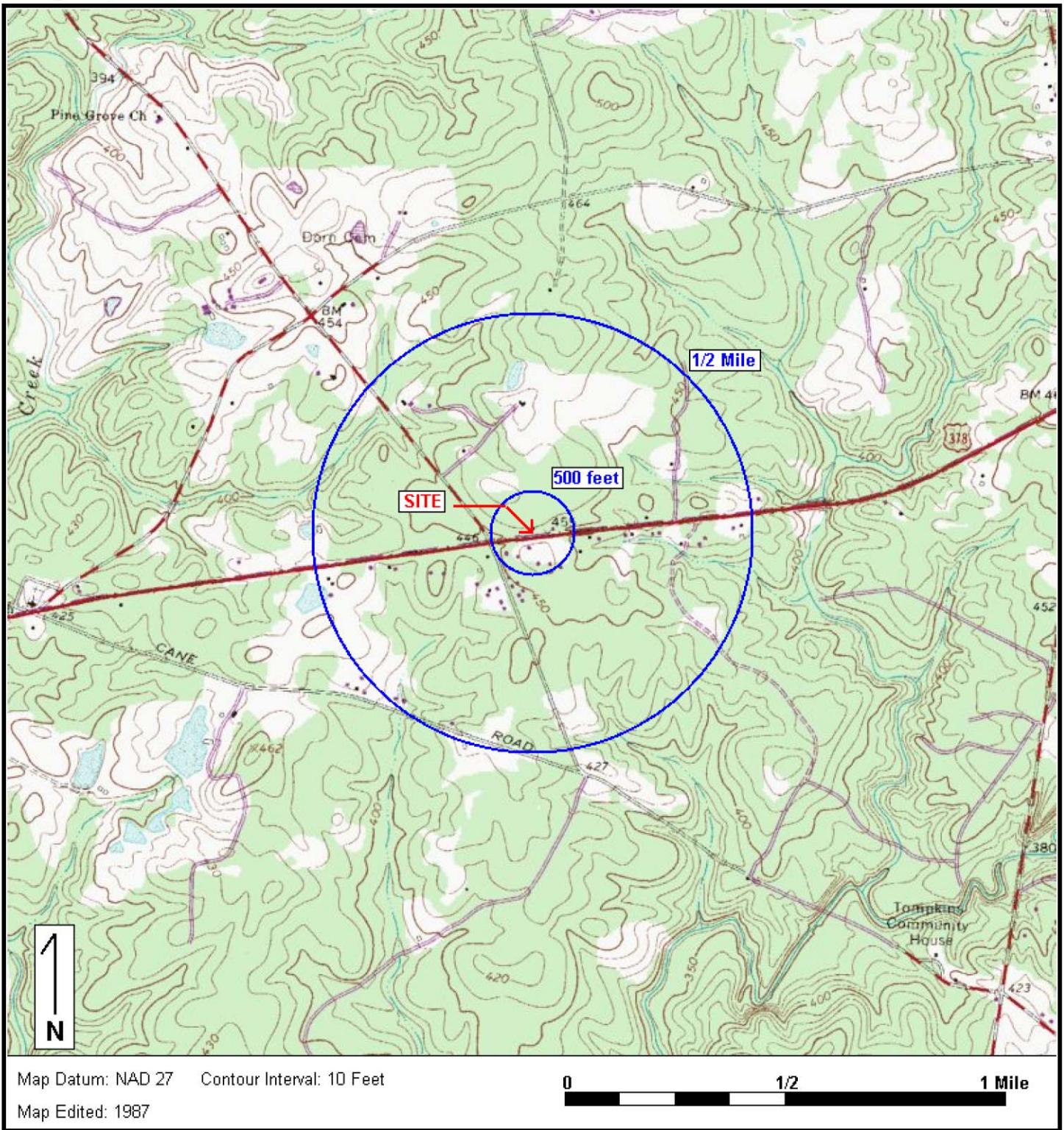
---



Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

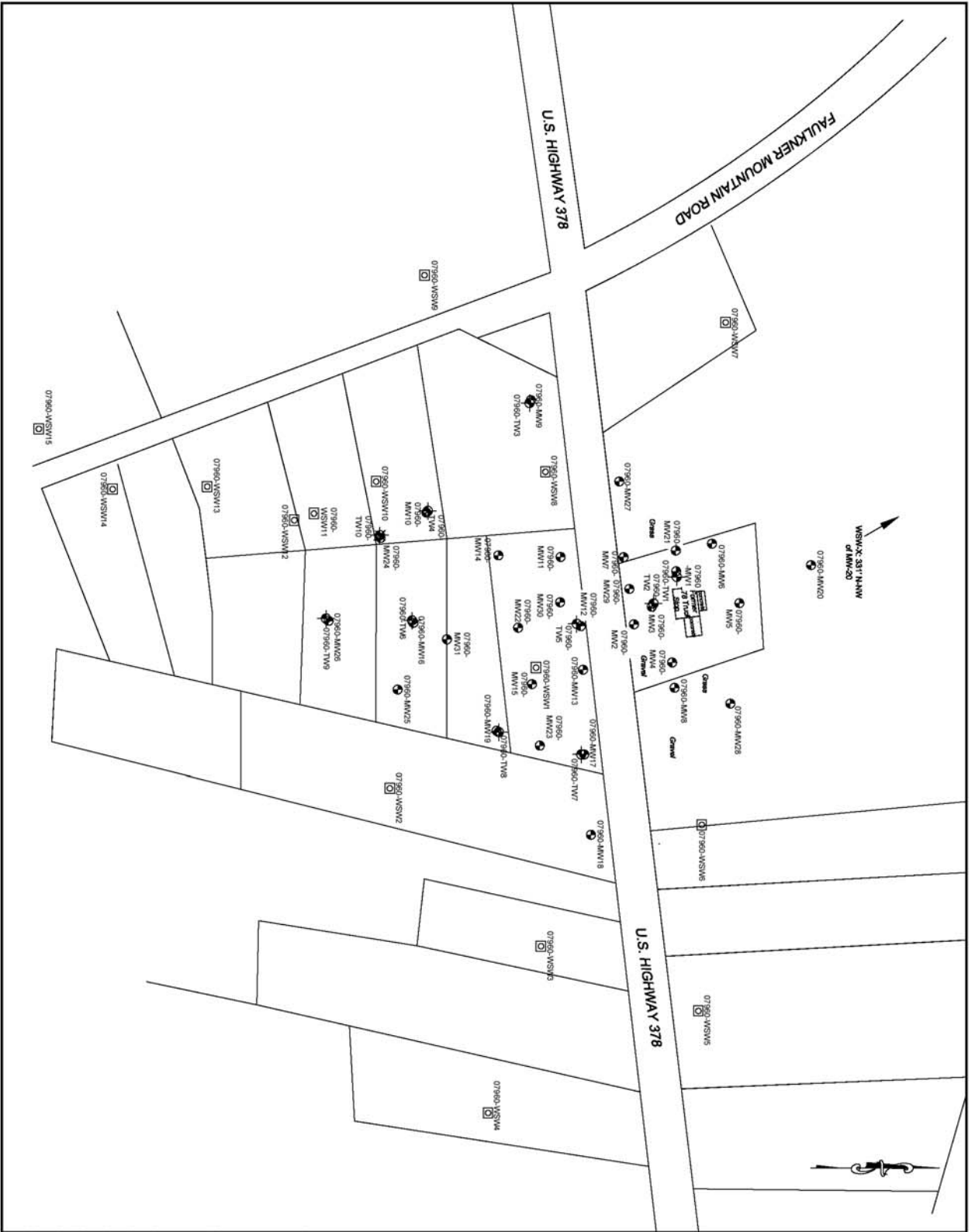
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- 07960-MW1 Shallow (Water Table) Monitoring Well
- 07960-TM1 Telescoping Monitoring Well
- 07960-AM1 Abandoned Telescoping Monitoring Well
- 07960-RSM Water Supply Well
- 07960-RWI Recovery Well

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13904 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704) 585-2711 FAX: (704) 585-2744

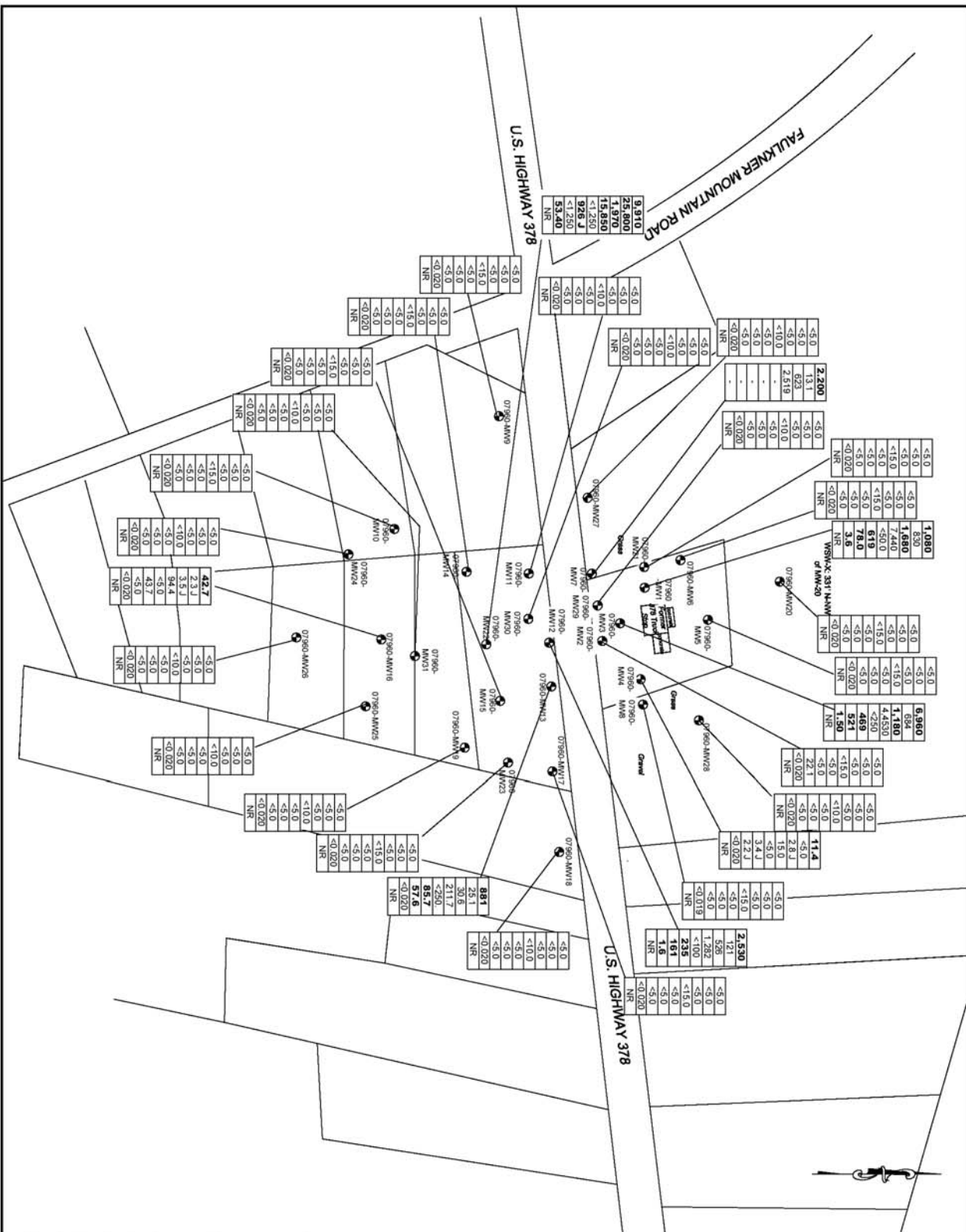
**378 Truck Stop**

731 Highway 378  
 Edgefield, SC

**Site Plan**

CLIENT: **Wilkerson Fuel Company, Inc.**

DATE:	10/17/13	SCALE:	1"=150'
DRAWN BY:	CO	CHECKED BY:	NF
DESIGNED BY:	CO	APPROVED BY:	NF
PROJECT NO.:	14-214210	FIGURE NO.:	2



**Legend**

- Approximate Property Line
- Utility Pole
- Spodow (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well
- Recovery Well

5	Benzene
1,000	Toluene
700	Ethylbenzene
10,000	Xylenes
40	MtBE
25	Naphthalene
0.5	1,2-DCA
0.5	Lead
15	Lead

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.  
 All concentrations are measured in micrograms per liter (ug/L).  
 Groundwater samples collected on 7/28/2014-7/30/2014  
 Above concentrations represent May 2001 Risk-Based Screening Levels; Concentrations in bold face type exceeded the RBSL.  
 J - Estimated value between the method detection limit and the laboratory reporting limit.  
 <1.0 - Less than the reporting limit specified in the laboratory report.  
 NR - Not Requested.



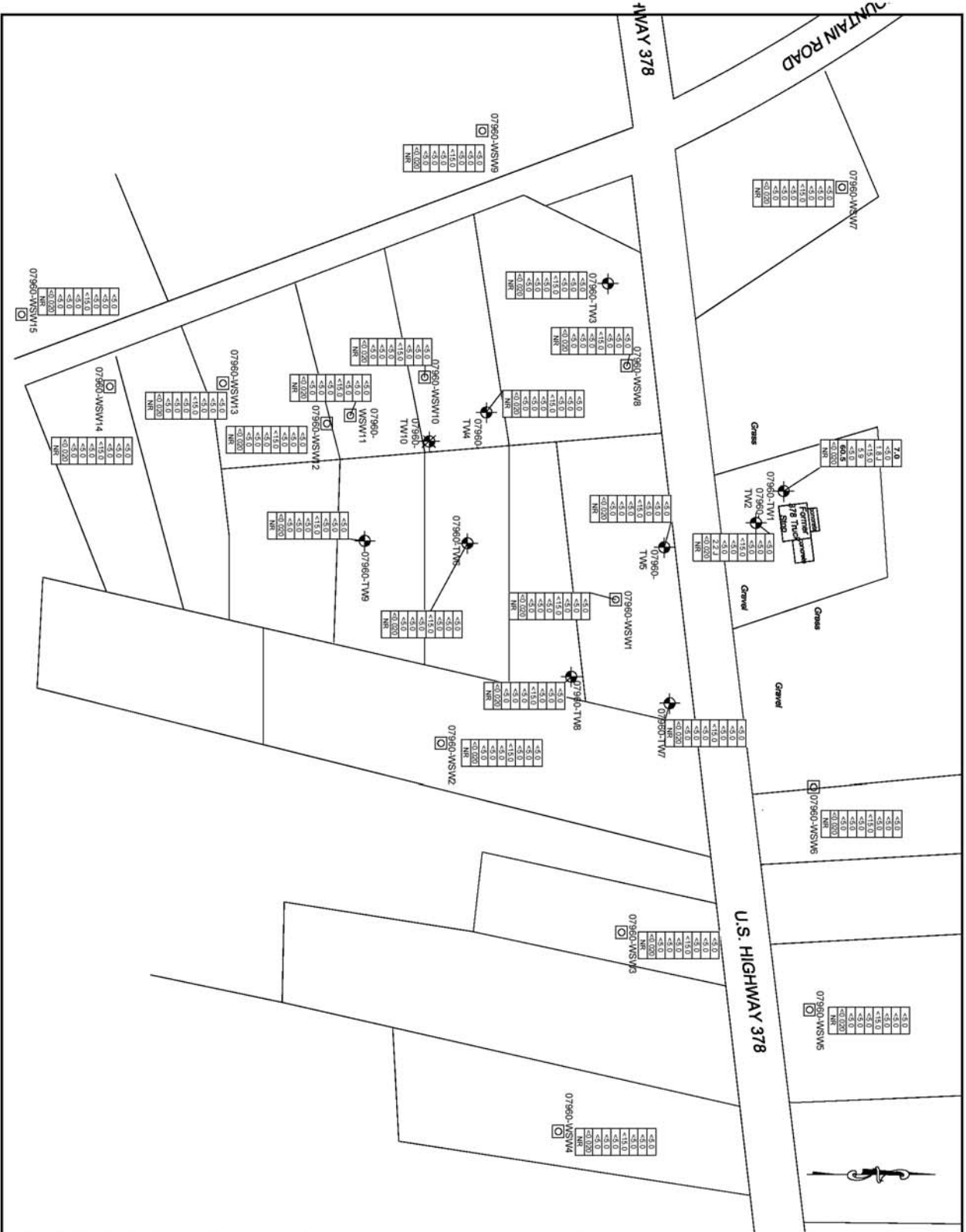
WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13904 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)585-2711 FAX: (704)585-2744

**378 Truck Stop**

731 Highway 378  
 Edgefield, SC

Client: **Groundwater Quality Map CoC Shallow Wells**  
 Wilkerson Fuel Company, Inc.

DATE	10/11/13	SCALE	1"=100'
CHECKED BY	NF	APPROVED BY	NF
DESIGNED BY	NF	DATE	10/11/13
DRAWN BY	KD	JOB NO.	14-214210
CHECKED BY	NF	FIGURE NO.	4A



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- 378 Truck Stop
- 07960-MSW Shallow (Water Table) Monitoring Well
- 07960-TW Telescoping Monitoring Well
- 07960-TM Abandoned Telescoping Monitoring Well
- 07960-MSM Water Supply Well
- 07960-RW Recovery Well

5	Benzene
1,000	Toluene
700	Ethylbenzene
10,000	Xylenes
40	MTEC
25	Naphthalene
5	1,2-DCA
0.05	EDB
15	Lead

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.  
 All concentrations are measured in micrograms per liter (ug/L).  
 Groundwater samples collected on July 28-30, 2014. Method used for analysis is EPA Method 8260A Risk-Based Screening Levels. Concentrations in bold type exceeded the RBSL.  
 J - Estimated value between the method detection limit and the laboratory reporting limit.  
 <math>< 1.0</math> - Less than the reporting limit specified in the laboratory report.  
 NR - Not Requested.  
 NS - Not Sampled.  
 MSW-1 and MSW-8 data represent pre-treatment concentrations.



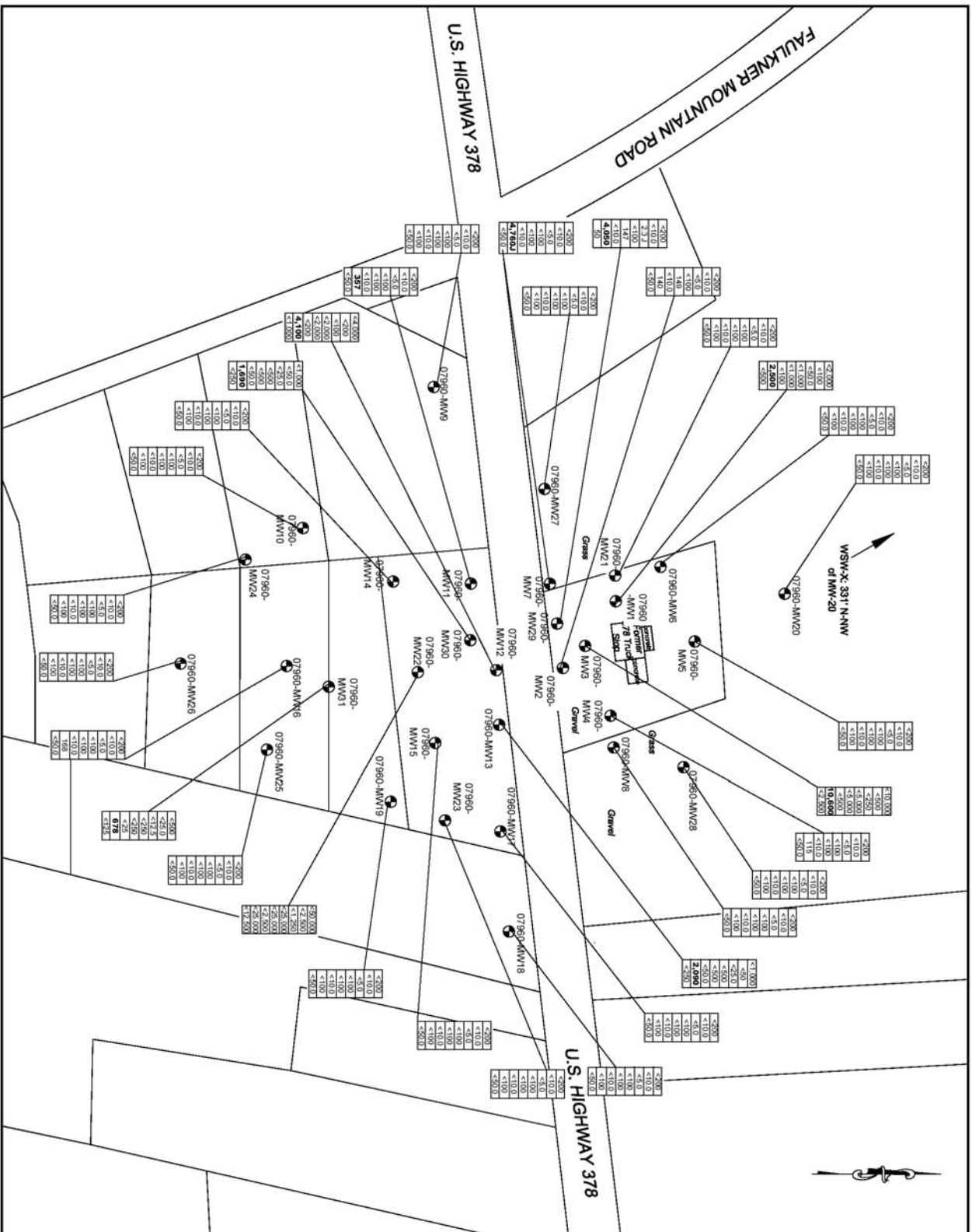
WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13904 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)582-2711 FAX: (704)582-2744

**378 Truck Stop**

731 Highway 378  
 Edgefield, SC

**Wilkinson Quality Map - Soil Testing and Water Supply Risks**

CLIENT	Wilkinson Fuel Company, Inc.
DATE	8/14/14
SCALE	1"=150'
DRAWN BY	KD
CHECKED BY	NF
DESIGNED BY	NF
APPROVED BY	NF
DATE	14-214210
JOB NO.	
FIGURE NO.	4B



**Legend**

- Approximate Property Line
- 07960-MW1 Shallow (Water Table) Monitoring Well
- ⊙ 07960-TM1 Telescoping Monitoring Well
- ⊙ 07960-TM1 Abandoned Telescoping Monitoring Well
- ⊙ 07960-MSM1 Water Supply Well
- ⊙ 07960-RW1 Recovery Well

10,000	Ethanol
4.7	Ethyl tert-Buyl Ether (ETBE)
1.50	Di-Isopropyl Ether (DIPE)
NA	3,3-Dimethyl-1-Butanol
1,400	Tertiary Butyl Alcohol (TBA)
1.28	tert-Amyl Methyl Ether (TAME)
2.40	tert-Amyl Alcohol (TAA)
NA	tert-Buyl Formate (TBF)

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.  
 All concentrations are measured in micrograms per liter (ug/L).  
 Groundwater samples collected July 28–30, 2014  
 SOCKET Action: Present/Action  
 In bold face type exceeded the Action Level.  
 J – Estimated Value between the method detection limit and the reporting limit.  
 <1.0 – Less than the reporting limit specified in the laboratory report.  
 NS – Not Sampled



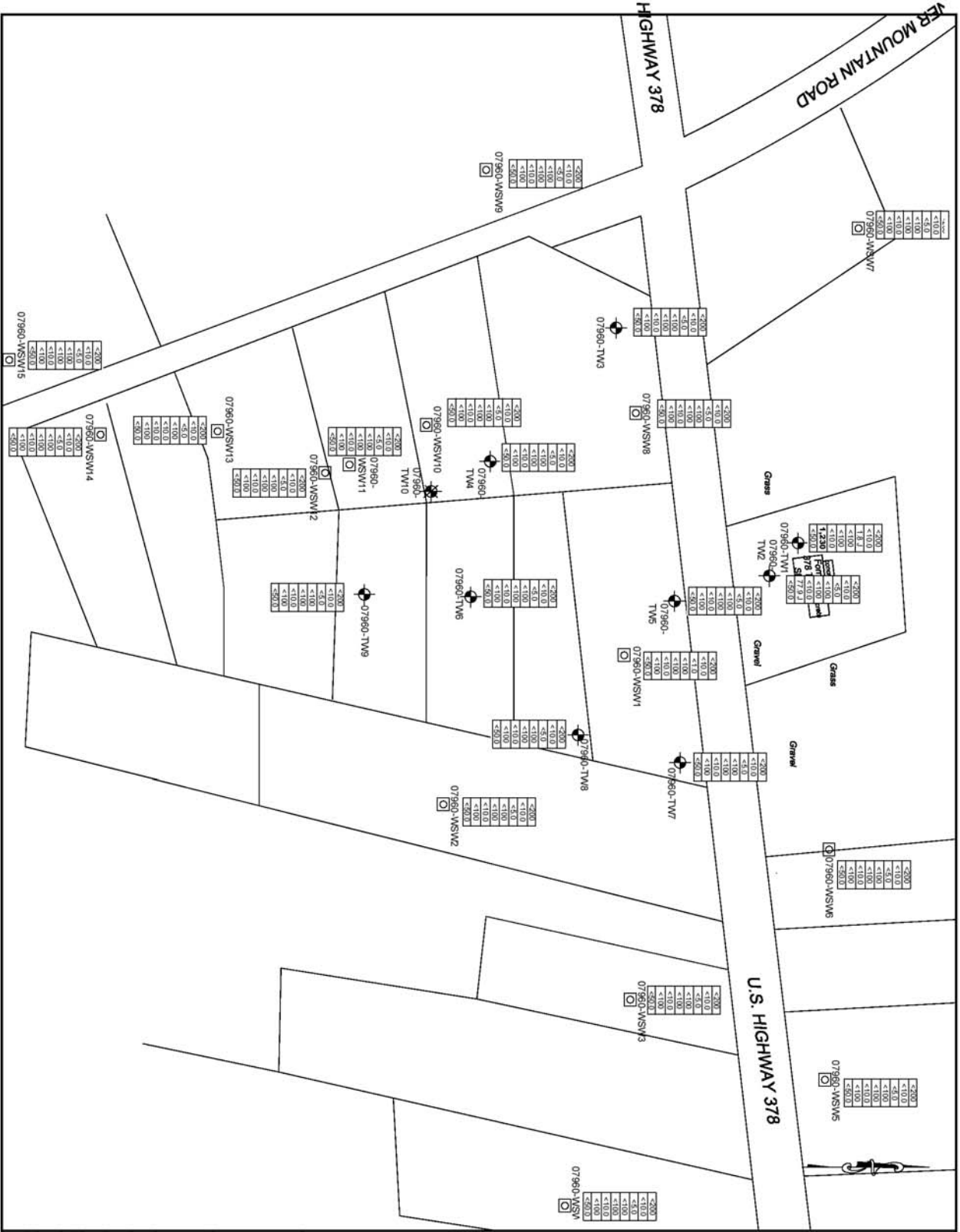
WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13904 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)585-2711 FAX: (704)585-2744

**378 Truck Stop**

731 Highway 378  
 Edgefield, SC

**Groundwater Quality Map - Oxygenates Shallow Wells**  
 Wilkerson Fuel Company, Inc.

DATE	1/10
DRAWN BY	PRZ
CHECKED BY	PRZ
APPROVED BY	PRZ
SCALE	AS SHOWN
DATE	8/14/14
JOB NO.	14-214210
FIGURE NO.	4C



**Legend**

- Approximate Property Line
- Utility Pole
- 07960-MW Spiller (Water Table) Monitoring Well
- 07960-TM Telescoping Monitoring Well
- 07960-TM Abandoned Telescoping Monitoring Well
- 07960-WSM Water Supply Well
- 07960-RM Recovery Well

10,000	Ethanol
47	Ethyl tert-Butyl Ether (ETBE)
150	Di-isopropyl Ether (DIPE)
NA	3,3-Dimethyl-1-Butanol
1,400	Tertiary Butyl Alcohol (TBA)
128	tert-Amy Methyl Ether (TAME)
240	tert-Amy Alcohol (TAA)
NA	tert-Butyl Formate (TBF)

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.  
 All concentrations are measured in micrograms per liter (ug/L).  
 Groundwater samples collected on July 28–30th, 2014.  
 Above concentrations represent 2008 SCDHEC Action Levels; Concentrations in bold face type exceeded the Action Level.  
 J – Estimated Value between the method detection limit and the reporting limit.  
 <1.0 – Less than the reporting limit specified in the laboratory report.  
 NS – Not Sampled  
 WSW-1 and WSW-8 data represent pre-treatment concentrations.

WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13904 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704) 585-2711 FAX: (704) 585-2744

**378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**Client:** Wilkerson Fuel Company, Inc.  
**Title:** Groundwater Quality Map - Ongrades Telescoping and Water Supply Wells

DATE:	8/14/14
SCALE:	1"=120'
DRAWN BY:	KD
CHECKED BY:	NF
DESIGNED BY:	KD
APPROVED BY:	NF
DATE:	14-214210
FIGURE NO.:	4D





**Legend**

— Approximate Property Line

- Utility Pole
- Recovery Well
- Shallow (Water Table) Monitoring Well
- Telescoping Monitoring Well
- Abandoned Telescoping Monitoring Well
- Water Supply Well

(78.03) Groundwater Elevation

— Water Table Contour (Dashed where Intersected)

→ Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark, with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made on July 28th, 2014

Water table contours and flow directions assume homogeneous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

13904 SOUTH POINT BLVD, UNIT F  
CHARLOTTE, NORTH CAROLINA 28273  
TEL: (704) 585-5271 FAX: (704) 585-5244

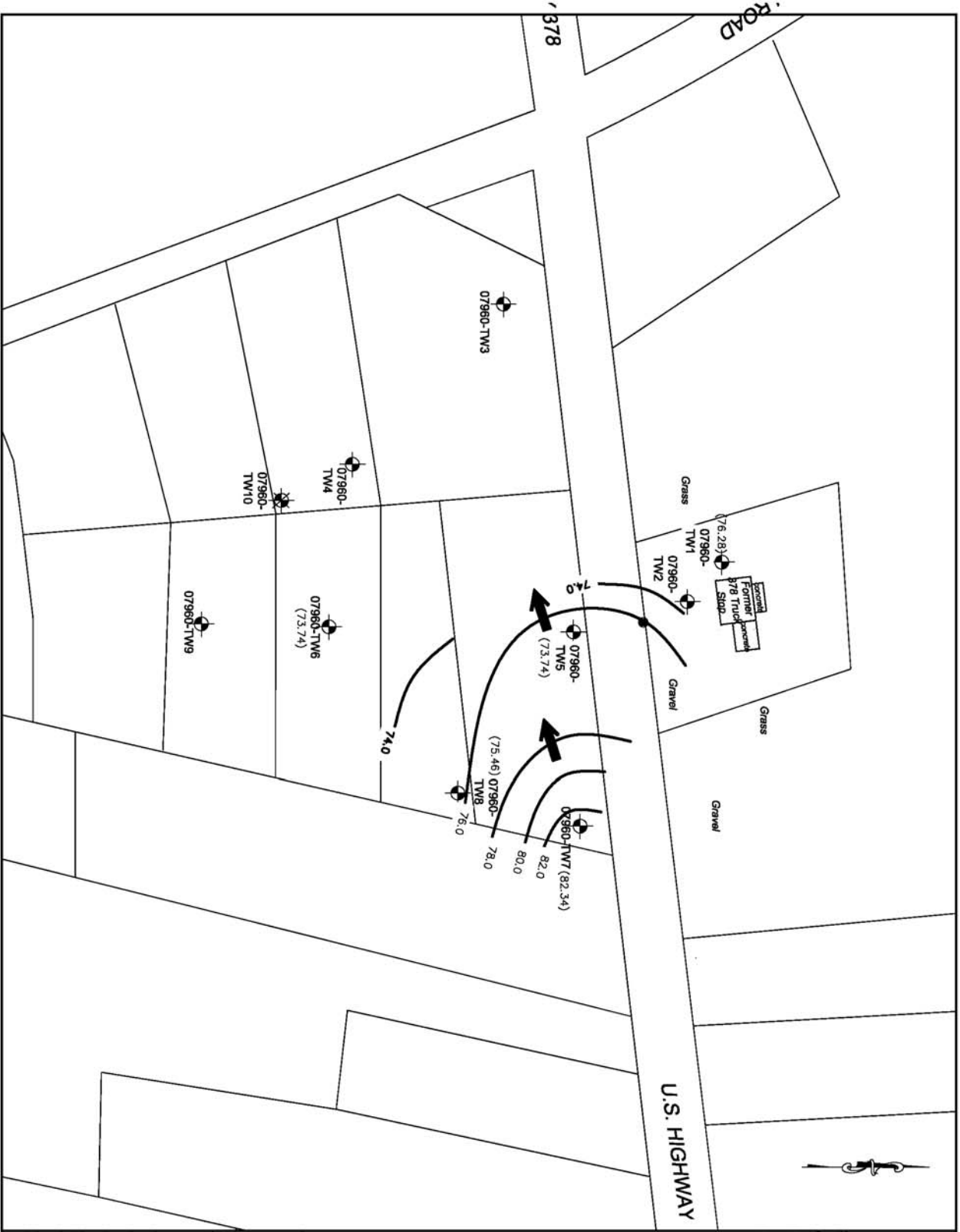
**378 Truck Stop**

731 Highway 378  
Edgefield, SC

**Groundwater Elevation Map - Shallow Wells**

CLIENT: **Wilkinson Fuel Company, Inc.**

DATE	11/14/14	BY	SA
SCALE	1"=100'	DATE	8/13/14
DRAWN BY	KD	CHECKED BY	NF
DESIGNED BY	KD	APPROVED BY	NF
COMPILED/CHECKED	SA	PROJECT NO.	14-214210
DATE	8/13/14	FIGURE NO.	5A



**Legend**

- Approximate Property Line
- Utility Pole
- 07960-RW Recovery Well
- 07960-MW1 Shallow (Water Table) Monitoring Well
- 07960-TW1 Telescoping Monitoring Well
- 07960-MW1\* Abandoned Telescoping Monitoring Well
- 07960-WSW1 Water Supply Well

- (78.26) Groundwater Elevation
- 82.0 Water Table Contour (Dashed where Interred)
- Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark, with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made on July 28th 2014.

Water table contours and flow directions assume homogeneous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.

07960-TW4 was not used for intermediate groundwater elevation.



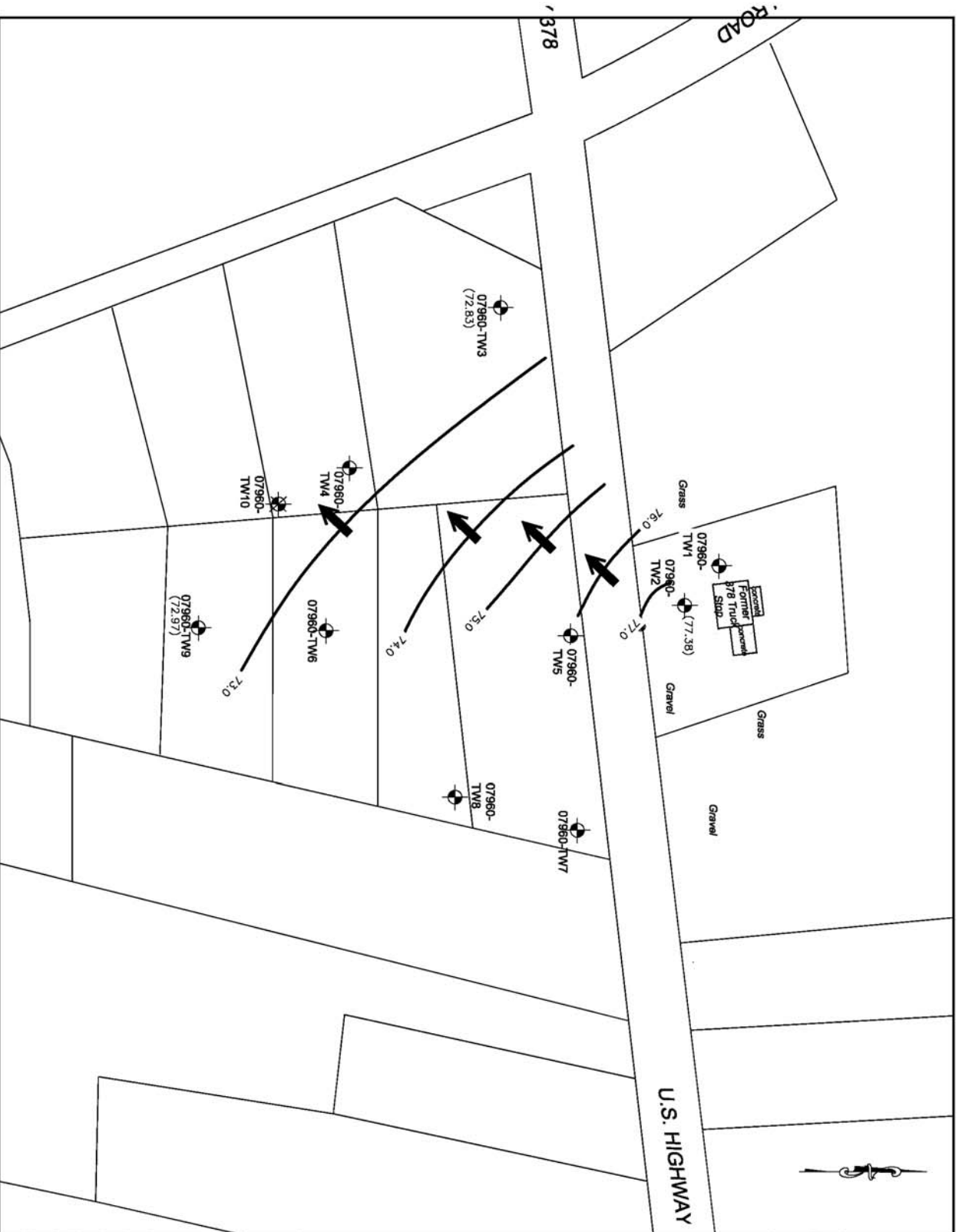
WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13904 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704) 585-2711 FAX: (704) 585-2744

**378 Truck Stop**  
 731 Highway 378  
 Edgefield, SC

**TITLE**  
 Groundwater Elevation Map - Intermediate Wells

**CLIENT**  
 Wilkerson Fuel Company, Inc.

<b>DATE</b>	10/15/13	<b>SCALE</b>	1"=100'
<b>DRAWN BY</b>	KD	<b>CHECKED BY</b>	NF
<b>DESIGNED BY</b>	KD	<b>APPROVED BY</b>	NF
<b>DATE</b>	10/15/13	<b>JOB NO.</b>	14-214210
<b>SCALE</b>	1"=100'	<b>FIGURE NO.</b>	58



**Legend**

- Approximate Property Line
- Utility Pole
- Recovery Well
- Shallow (Kieker Table) Monitoring Well
- Telescoping Monitoring Well
- ★ Abandoned Telescoping Monitoring Well
- Water Supply Well
- (77.38) Groundwater Elevation
- (77.00) Water Table Contour (Dashed where inferred)
- Flow Direction Indicator

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Groundwater elevations are relative to a temporary benchmark, with an assumed datum of 100.00 feet above mean sea level.

Groundwater elevations are based on measurements made on July 28th 2014.

Water table contours and flow directions assume homogeneous, isotropic aquifer conditions and horizontal flow.

Fluctuations in the level of the water table may occur due to factors not accounted for at the time of measurement.

Water table contours are interpolated between data points and inferred in other areas.

07960-TW4 was not used for deep groundwater elevation.



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13904 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704) 585-2711 FAX: (704) 585-2744

**378 Truck Stop**

731 Highway 378  
 Edgefield, SC

THE  
**Groundwater Elevation Map - Deep Wells**

CLIENT  
**Wilkerson Fuel Company, Inc.**

DATE	14-21-2010	SCALE	1"=100'
DRAWN BY	KD	CHECKED BY	NF
DESIGNED BY	KD	APPROVED BY	NF
PROJECT NO.	81314	DATE	14-21-2010
SCALE	1"=100'	JOB NO.	SC

**APPENDIX B**

---

Sampling Logs and Laboratory Reports

# GAUGE REPORT

Environmental Compliance Services, Inc.  
13504 South Point Blvd., Unit F  
Charlotte, North Carolina 28273

Project Name 378 Truck Stop Location Edgedfield, SC  
 Project No. 14-214210.0 UST Permit # 07960 Date 7/28/2014  
 Measured By B. Peay Weather Sunny,90

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
07960-MW-1	----	23.95	----	----	44.45	4.84
07960-MW-2	----	24.39	----	----	42.90	15.05
07960-MW-3	----	24.74	----	----	39.70	----
07960-MW-4	----	23.10	----	----	39.81	----
07960-MW-5	----	27.01	----	----	39.70	----
07960-MW-6	----	25.29	----	----	35.00	----
07960-MW-7	----	19.89	----	----	34.89	----
07960-MW-8	----	23.80	----	----	35.02	----
07960-MW-9	----	22.60	----	----	35.10	----
07960-MW-10	----	25.27	----	----	40.12	----
07960-MW-11	----	25.23	----	----	35.20	----
07960-MW-12	----	24.89	----	----	34.92	----
07960-MW-13	----	22.95	----	----	40.13	8.40
07960-MW-14	----	28.00	----	----	39.70	----
07960-MW-15	----	27.60	----	----	40.05	----
07960-MW-16	----	25.31	----	----	40.05	----
07960-MW-17	----	21.00	----	----	34.97	----
07960-MW-18	----	18.35	----	----	35.61	7.12
07960-MW-19	----	25.64	----	----	38.49	----
07960-MW-20	----	31.20	----	----	42.00	----
07960-MW-21	----	24.15	----	----	40.10	6.68
07960-MW-22	----	29.30	----	----	40.02	----
07960-MW-23	----	24.82	----	----	37.18	----
07960-MW-24	----	26.45	----	----	39.95	----

# GAUGE REPORT

Environmental Compliance Services, Inc.  
13504 South Point Blvd., Unit F  
Charlotte, North Carolina 28273

Project Name 378 Truck Stop Location Edgedfield, SC  
Project No. 14-214210.0 UST Permit # 07960 Date 7/28/2014  
Measured By B. Peay Weather Sunny,90

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
07960-MW-25	----	25.45	----	----	39.91	----
07960-MW-26	----	18.25	----	----	38.66	6.66
07960-MW-27	----	22.75	----	----	35.02	----
07960-MW-28	----	22.05	----	----	39.97	7.80
07960-MW-29	----	23.25	----	----	40.05	10.90
07960-MW-30	----	26.14	----	----	44.95	9.18
07960-MW-31	----	24.80	----	----	43.89	8.22
07960-TW-1	----	25.55	----	----	63.22	21.49
07960-TW-2	----	24.59	----	----	80.19	9.56
07960-TW-3	----	22.50	----	----	80.59	24.92
07960-TW-4	----	22.19	----	----	68.50	9.55
07960-TW-5	----	26.91	----	----	58.32	7.12
07960-TW-6	----	27.55	----	----	58.50	7.54
07960-TW-7	----	15.79	----	----	58.92	10.03
07960-TW-8	----	25.57	----	----	58.47	8.35
07960-TW-9	----	23.95	----	----	80.00	32.35

# GAUGE REPORT

Environmental Compliance Services, Inc.  
 13504 South Point Blvd., Unit F  
 Charlotte, North Carolina 28273

Project Name 378 Truck Stop Location Edgedfield, SC

Project No. 14-214210.0 UST Permit # 07960 Date 7/28/2014

Measured By B. Peay Weather Sunny,90

Well ID	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Recovered (gallons)	Well Depth (feet)	Volume Purged (gallons)
WSW-1 Pre GAC						
WSW-1 Post GAC						
WSW-2						
WSW-3						
WSW-4						
WSW-5						
WSW-6						
WSW-7						
WSW-8 Pre GAC						
WSW-8 Post GAC						
WSW-9						
WSW-10						
WSW-11						
WSW-12						
WSW-13						
WSW-14						
WSW-15						
WSW-X						

Water Supply Wells not gauged.

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14		Well # 07960-MW-1	
Field Personnel A. Williamson		Well Diameter (D) 2.0 inch or feet	
General Weather Conditions Sunny, 90s		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= 0.163	
Ambient Air Temperature 90 F		for a 4 inch well C= 0.652 for a 6 inch well C= 1.469	
Facility Name 378 Truck Stop		Screen Interval Unknown ft. to Unknown ft.	
Method of Well Purging: Baller <input checked="" type="checkbox"/> Pump Type		Total Well Depth (TWD) 44.45 ft.	
Method of Sample Collection: Baller <input checked="" type="checkbox"/> Pump Type		Depth to GW(DGW) 23.95 ft.	
Water Quality Meter: Horiba U-52 Serial Number: YTA6R6E		Depth to FP (Free product) ----- ft.	
pH 4.0 = 4.0 @ 28°C		FP Thickness ----- ft.	
Turbidity 0.0 = 0.0		Length of Water Column (LWC=TWD-DGW) 0.00 ft.	
A. Williamson Relinquished by ECS Office		1Csg. Vol. (LWC*C)= 0.00 X 0.163 = 0.00 gal.	
Date/Time 7/30/14 17:15		3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)	
ECS Office Relinquished by Pace Analytical		Total Vol. of Water Purged Before Sampling Low Medium High	
Date/Time 7/31/14 16:40		Well Yield -----	
ECS Office Relinquished by Pace Analytical		1Csg. Vol. (LWC*C)= 0.00 X 0.163 = 0.00 gal.	
Date/Time 7/31/14 16:40		3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)	
ECS Office Relinquished by Pace Analytical		Total Vol. of Water Purged Before Sampling Low Medium High	
Date/Time 7/31/14 16:40		Well Yield -----	

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						
Time (military)	11:02:00 AM					11:35
pH (s.u.)	5.79	5.75				5.71
O.R.P. (mV)	42	39				32
Temperature (°C)	19.97	19.87				20.53
Specific Cond. (mS/cm)	0.231	0.232				0.240
Dissolved Oxygen (mg/L)	2.09	1.13				3.16
Turbidity (NTU)	966.0	>1000				>1000

Remarks	Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves. Dry at 1.5 volumes
	07962-Duplicate 3 taken from 07962-MW1.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Quality Assurance:  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C  
 Conductivity 4.49 = 4.66  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.01  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by 7/30/14 17:15 Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by 7/31/14 16:40 Received by

Well # 07960-MW-2  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143 \times (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval Unknown ft. to Unknown ft.  
 Total Well Depth (TWD) 42.90 ft.  
 Depth to GW(DGW) 24.39 ft.  
 Depth to FP (Free product) ----- ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 18.51 ft.  
 1Csg. Vol. (LWC\*C)= 18.51 X 0.163 = 3.02 gal.  
 3Csg. Volume = 3x 3.02 = 9.05 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling 14.95 gal.  
 Well Yield Low Medium High X

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Initial							
Volume Purged (gallons)	0.00						0.00
Time (military)	11:59	12:08	12:14	12:19	12:24		12:25
pH (s.u.)	5.81	6.25	6.44	6.45	6.51		6.45
O.R.P. (mV)	-4	1	-11	-20	-23		-24
Temperature (°C)	21.89	21.32	21.07	20.97	21.05		21.04
Specific Cond. (mS/cm)	0.377	0.380	0.377	0.382	0.383		0.384
Dissolved Oxygen (mg/L)	1.17	1.32	1.25	1.07	1.58		0.95
Turbidity (NTU)	>1000	>1000	>1000	>1000	>1000		>1000

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14 Well # 07960-MW-3  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 10 ft. to 40 ft.  
 Total Well Depth (TWD) \_\_\_\_\_ ft. 39.70  
 Depth to GW(DGW) \_\_\_\_\_ ft. 24.74  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) \_\_\_\_\_ ft. 14.96  
 1Csg. Vol. (LWC\*C) = 14.96 X 0.163 = 2.44 gal.  
 3Csg. Volume = 3x 2.44 = 7.32 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Medium \_\_\_\_\_ High \_\_\_\_\_

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						15:05
pH (s.u.)						7.18
O.R.P. (mV)						-19
Temperature (°C)						21.59
Specific Cond. (mS/cm)						0.501
Dissolved Oxygen (mg/L)						0.44
Turbidity (NTU)						15.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  X Pump Type  
 Method of Sample Collection: Bailer  X Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # 07960-MW-4  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143 \times (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 10 ft. to 40 ft.  
 Total Well Depth (TWD) \_\_\_\_\_ ft. 39.81  
 Depth to GW(DGW) \_\_\_\_\_ ft. 23.10  
 Depth to FP (Free product) \_\_\_\_\_ ft. \_\_\_\_\_  
 FP Thickness \_\_\_\_\_ ft. \_\_\_\_\_  
 Length of Water Column (LWC=TWD-DGW) \_\_\_\_\_ ft. 16.71  
 1Csg. Vol. (LWC\*C) = 16.71 X 0.163 = 2.72 gal.  
 3Csg. Volume = 3x 2.72 = 8.17 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Low \_\_\_\_\_ Medium \_\_\_\_\_ High \_\_\_\_\_

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						8:40
pH (s.u.)						6.09
O.R.P. (mV)						31
Temperature (°C)						20.65
Specific Cond. (mS/cm)						0.458
Dissolved Oxygen (mg/L)						1.06
Turbidity (NTU)						8.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type --  
 Method of Sample Collection: Bailer  Pump Type --

Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 = 4.66  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.01

A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # 07960-MW-5

Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469

Screen Interval 20 ft. to 40 ft.  
 Total Well Depth (TWD) 39.70 ft.  
 Depth to GW(DGW) 27.01 ft.  
 Depth to FP (Free product) ----- ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 12.69 ft.

1Csg. Vol. (LWC\*C)= 12.69 X 0.163 = 2.07 gal.  
 3Csg. Volume = 3x 2.07 = 6.21 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling ----- gal.  
 Well Yield Low Medium High

	Initial					
	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						9:30
pH (s.u.)						6.30
O.R.P. (mV)						81
Temperature (°C)						18.25
Specific Cond. (mS/cm)						0.760
Dissolved Oxygen (mg/L)						1.15
Turbidity (NTU)						31.1

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>07960-MW-6</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet _____	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>20.05</u> ft. to <u>35.05</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type _____		Total Well Depth (TWD) <u>35.00</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type _____		Depth to GW(DGW) <u>25.29</u> ft.	
Quality Assurance: Serial Number: <u>YTA6R6SE</u>		Depth to FP (Free product) _____ ft.	
Water Quality Meter: <u>Horiba U-52</u>		FP Thickness _____ ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>9.71</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Conductivity 4.49 = _____		1Csg. Vol. (LWC*C) = <u>9.71</u> X <u>0.163</u> = <u>1.58</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = _____		3Csg. Volume = 3x <u>1.58</u> = <u>4.75</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling _____ gal.	
Date/Time <u>7/30/14 17:15</u> ECS Office _____		Well Yield _____ High _____	
Relinquished by <u>A. Williamson</u> Received by _____		Low _____ Medium _____	
ECS Office Date/Time <u>7/31/14 16:40</u> Pace Analytical _____			
Relinquished by _____ Received by _____			

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						16:55
pH (s.u.)						8.45
O.R.P. (mV)						10
Temperature (°C)						21.01
Specific Cond. (mS/cm)						0.170
Dissolved Oxygen (mg/L)						2.09
Turbidity (NTU)						41.1

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type

Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =

Chain of Custody  
A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time  
ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time

Well # 07960-MW-7  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen interval 19.92 ft. to 34.92 ft.  
 Total Well Depth (TWD) 34.89 ft.  
 Depth to GW(DGW) 19.89 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 15.00 ft.

1Csg. Vol. (LWC\*C)= 15.00 X 0.163 = 2.45 gal.  
 3Csg. Volume = 3x 2.45 = 7.34 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Low \_\_\_\_\_ Medium \_\_\_\_\_ High \_\_\_\_\_

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						17:05
pH (s.u.)						5.68
O.R.P. (mV)						25
Temperature (°C)						21.48
Specific Cond. (mS/cm)						0.166
Dissolved Oxygen (mg/L)						0.52
Turbidity (NTU)						1.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/30/14</u>		Well # <u>07960-MW-8</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>		Screen Interval <u>20.08</u> ft. to <u>35.08</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Total Well Depth (TWD) <u>35.02</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type <u>--</u>		Depth to GW(DGW) <u>23.80</u> ft.	
Quality Assurance: Serial Number: <u>YTA6R6SE</u>		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba U-52</u>		FP Thickness <u>-----</u> ft.	
Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>11.22</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u>		1Csg. Vol. (LWC*C) = <u>11.22</u> X <u>0.163</u> = <u>1.83</u> gal.	
Turbidity 0.0 = <u>0.0</u>		3Csg. Volume = 3x <u>1.83</u> = <u>5.49</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
A. Williamson <u>7/30/14 17:15</u>		Well Yield <u>-----</u> Medium <input checked="" type="checkbox"/> High <u>-----</u>	
Relinquished by <u>A. Williamson</u>		Date/Time <u>7/30/14 17:15</u>	
ECS Office <u>7/31/14 16:40</u>		Date/Time <u>7/31/14 16:40</u>	
Relinquished by <u>ECS Office</u>		Date/Time <u>-----</u>	

Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
							0.00
							8:25
							6.18
							118
							21.68
							0.635
							1.07
							0.0

Volume Purged (gallons)	
Time (military)	
pH (s.u.)	
O.R.P. (mV)	
Temperature (°C)	
Specific Cond. (mS/cm)	
Dissolved Oxygen (mg/L)	
Turbidity (NTU)	

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14 Well # 07960-MW-9  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type ---  
 Method of Sample Collection: Bailer  Pump Type ---  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 = 4.66  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.01  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office 7/30/14 17:15  
 Relinquished by --- Date/Time --- Received by --- Date/Time ---  
 ECS Office 7/31/14 16:40 Pace Analytical 7/31/14 16:40  
 Relinquished by --- Date/Time --- Received by --- Date/Time ---

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)							0.00
Time (military)							11:00
pH (s.u.)							6.70
O.R.P. (mV)							114
Temperature (°C)							20.18
Specific Cond. (mS/cm)							1.010
Dissolved Oxygen (mg/L)							1.99
Turbidity (NTU)							7.1

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.





South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # 07960-MW-11  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen interval 20.23 ft. to 35.23 ft.  
 Total Well Depth (TWD) 35.20 ft.  
 Depth to GW(DGW) 25.23 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 9.97 ft.

1Csg. Vol. (LWC\*C) = 9.97 X 0.163 = 1.63 gal.  
 3Csg. Volume = 3x 1.63 = 4.88 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Low \_\_\_\_\_ Medium \_\_\_\_\_ High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						10:20
pH (s.u.)						6.00
O.R.P. (mV)						-32
Temperature (°C)						18.56
Specific Cond. (mS/cm)						0.948
Dissolved Oxygen (mg/L)						1.08
Turbidity (NTU)						21.2

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>07960-MW-12</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>19.99</u> ft. to <u>34.99</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type		Total Well Depth (TWD) <u>34.92</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type		Depth to GW(DGW) <u>24.89</u> ft.	
Water Quality Meter: Horiba U-52 Serial Number: <u>YTA6R6SE</u>		Depth to FP (Free product) <u>-----</u> ft.	
Calibration Measurement Results		FP Thickness <u>-----</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Conductivity 4.49 =		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 =		1Csg. Vol. (LWC*C) = <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Chain of Custody		3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
A. Williamson Date/Time <u>7/30/14 17:15</u> ECS Office		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
Relinquished by Date/Time <u>7/31/14 16:40</u> Pace Analytical		Well Yield <u>-----</u> High	
Relinquished by Date/Time <u>7/31/14 16:40</u> Received by		Low Medium High	

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)							0.00
Time (military)							11:55
pH (s.u.)							7.95
O.R.P. (mV)							69
Temperature (°C)							24.28
Specific Cond. (mS/cm)							0.486
Dissolved Oxygen (mg/L)							1.73
Turbidity (NTU)							44.2

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
07960-Duplicate 2 taken from 07962-MW12.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>07960-MW-13</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet _____	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>25.19</u> ft. to <u>40.19</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type _____		Total Well Depth (TWD) _____ ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type _____		Depth to GW(DGW) _____ ft.	
Quality Assurance: _____		Depth to FP (Free product) _____ ft.	
Water Quality Meter: <u>Horiba U-52</u> Serial Number: <u>YTA6R6SE</u>		FP Thickness _____ ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Conductivity <u>4.49</u> = _____		Length of Water Column (LWC=TWD-DGW) _____ ft.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen <u>8.52</u> = _____		1Csg. Vol. (LWC°C)= <u>17.18</u> X <u>0.163</u> = <u>2.80</u> gal.	
A. Williamson <u>7/30/14 17:15</u> ECS Office		3Csg. Volume = 3x <u>2.80</u> = <u>8.40</u> gals.(Std. Purge Vol)	
Relinquished by _____ Date/Time _____		Total Vol. of Water Purged Before Sampling _____	
ECS Office <u>7/31/14 16:40</u> Pace Analytical		Well Yield _____ Low _____ Medium _____ X _____ High _____	
Relinquished by _____ Date/Time _____			

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.80	2.80	2.80				0.00
Time (military)	12:36	12:40	12:45	12:51				13:25
pH (s.u.)	6.65	6.58	6.70	6.70				6.77
O.R.P. (mV)	-56	-43	-51	-60				5
Temperature (°C)	20.56	19.34	19.01	19.54				20.2
Specific Cond. (mS/cm)	1.040	1.070	1.070	1.090				1.030
Dissolved Oxygen (mg/L)	1.40	1.15	1.05	0.77				2.87
Turbidity (NTU)	>999	>999	>999	>999				13.8

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

Well purged dry after 3 well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

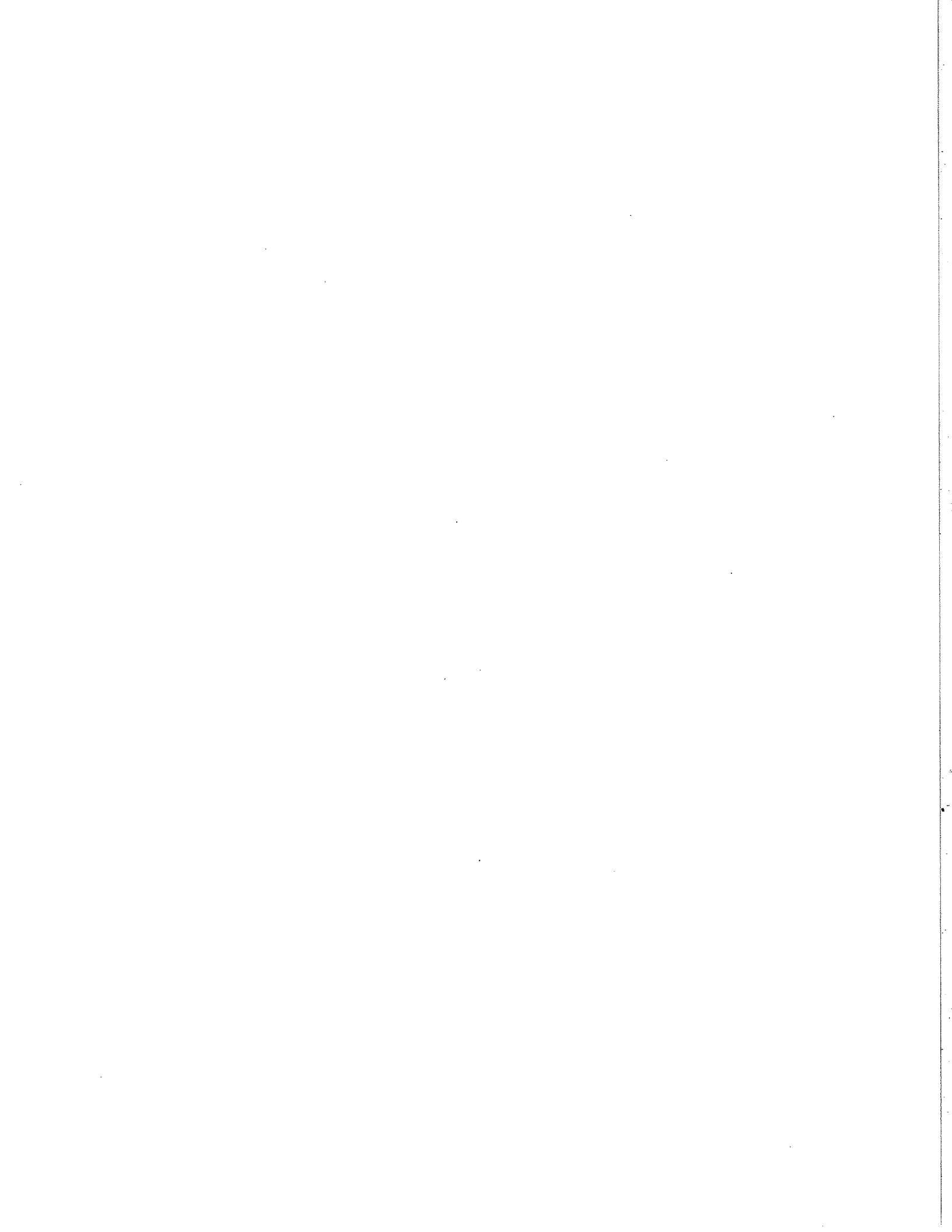
**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Relinquished by A. Williamson Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by ECS Office Date/Time 7/31/14 16:40 Pace Analytical

Well # 07960-MW-14  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143*(D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 24.74 ft. to 39.74 ft.  
 Total Well Depth (TWD) 39.70 ft.  
 Depth to GW(DGW) 28.00 ft.  
 Depth to FP (Free product) ----- ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 11.70 ft.  
 1Csg. Vol. (LWC\*C) = 11.70 X 0.163 = 1.91 gal.  
 3Csg. Volume = 3x 1.91 = 5.72 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling ----- gal.  
 Well Yield Low  Medium  High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						10:20
pH (s.u.)						6.10
O.R.P. (mV)						-31
Temperature (°C)						18.43
Specific Cond. (mS/cm)						0.508
Dissolved Oxygen (mg/L)						1.47
Turbidity (NTU)						35.3

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 = 4.66  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.01  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # 07960-MW-15  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 25.13 ft. to 40.13 ft.  
 Total Well Depth (TWD) 40.05 ft.  
 Depth to GW(DGW) 27.60 ft.  
 Depth to FP (Free product) ----- ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 12.45 ft.  
 1Csg. Vol. (LWC\*C)= 12.45 X 0.163 = 2.03 gal.  
 3Csg. Volume = 3x 2.03 = 6.09 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling ----- gal.  
 Well Yield Low Medium High

Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
							0.00
							13:10
							6.53
							4
							19.77
							0.550
							3.02
							66.0

Volume Purged (gallons)  
 Time (military)  
 pH (s.u.)  
 O.R.P. (mV)  
 Temperature (°C)  
 Specific Cond. (mS/cm)  
 Dissolved Oxygen (mg/L)  
 Turbidity (NTU)

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/28/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 80 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # 07960-MW-16  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 25.11 ft. to 40.11 ft.  
 Total Well Depth (TWD) 40.05 ft.  
 Depth to GW(DGW) 25.31 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 14.74 ft.  
 1Csg. Vol. (LWC\*C)= 14.74 X 0.163 = 2.40 gal.  
 3Csg. Volume = 3x 2.40 = 7.21 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Medium \_\_\_\_\_ High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						15:40
pH (s.u.)						6.65
O.R.P. (mV)						-67
Temperature (°C)						19.99
Specific Cond. (mS/cm)						1.15
Dissolved Oxygen (mg/L)						1.45
Turbidity (NTU)						0.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/28/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 80 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # 07960-MW-17  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143 \times (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 20.02 ft. to 35.02 ft.  
 Total Well Depth (TWD) 34.97 ft.  
 Depth to GW(DGW) 21.00 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 13.97 ft.  
 1Csg. Vol. (LWC\*C) = 13.97 X 0.163 = 2.28 gal.  
 3Csg. Volume = 3x 2.28 = 6.83 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Low \_\_\_\_\_ Medium \_\_\_\_\_ High

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)							0.00
Time (military)							11:55
pH (s.u.)							10.69
O.R.P. (mV)							-42
Temperature (°C)							22.07
Specific Cond. (mS/cm)							0.491
Dissolved Oxygen (mg/L)							2.67
Turbidity (NTU)							0.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba W22XD - U22 Serial Number: T908007  
 Calibration Measurement Results  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 = 8.61  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.61  
 Chain of Custody  
 A. Williamson Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time 7/31/14 16:40 Received by  
 ECS Office Date/Time 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time \_\_\_\_\_ Received by \_\_\_\_\_

Well # 07960-MW-18  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet \_\_\_\_\_  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 20.67 ft. to 35.67 ft.  
 Total Well Depth (TWD) 35.61 ft.  
 Depth to GW(DGW) 18.35 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 17.26 ft.  
 1Csg. Vol. (LWC\*C)= 17.26 X 0.163 = 2.81 gal.  
 3Csg. Volume = 3x 2.81 = 8.44 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield Low \_\_\_\_\_ Medium \_\_\_\_\_ High X

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Initial	0.00	2.81	1.50			0.00
Volume Purged (gallons)	16:14	16:19	16:24			16:32
Time (military)	6:76	6:35	6:18			6:25
pH (s.u.)	137	141	148			165
O.R.P. (mV)	20.20	19.02	18.74			21.38
Temperature (°C)	0.245	0.221	0.234			0.229
Specific Cond. (mS/cm)	5.98	6.05	5.98			7.69
Dissolved Oxygen (mg/L)	0.0	>999	693.0			848.0
Turbidity (NTU)						

Remarks  
 Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
 Well purged dry after 2 well volumes plus 1.5 gallon. 07960-FB2 taken in the vicinity of 07960-MW18 using clean gloves and DI water.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/28/14</u>		Well # <u>07960-MW-19</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>23.57</u> ft. to <u>38.57</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type		Total Well Depth (TWD) <u>38.49</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type		Depth to GW(DGW) <u>25.64</u> ft.	
Water Quality Meter: <u>Horiba U-52</u> Serial Number: <u>YTA6R6SE</u>		Depth to FP (Free product) <u>-----</u> ft.	
pH <u>4.0</u> @ <u>28°C</u> Conductivity <u>4.49</u> =		FP Thickness <u>-----</u> ft.	
Turbidity <u>0.0</u> Dissolved Oxygen <u>8.52</u> =		Length of Water Column (LWC=TWD-DGW) <u>12.85</u> ft.	
A. Williamson <u>7/30/14 17:15</u> ECS Office		1Csg. Vol. (LWC*C)= <u>12.85</u> X <u>0.163</u> = <u>2.09</u> gal.	
Relinquished by <u>7/31/14 16:40</u> Pace Analytical		3Csg. Volume = 3x <u>2.09</u> = <u>6.28</u> gals.(Std. Purge Vol)	
ECS Office <u>7/31/14 16:40</u> Received by		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
Relinquished by <u>7/31/14 16:40</u> Received by		Well Yield <u>-----</u> Medium <u>-----</u> High <u>-----</u>	

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)							0.00
Time (military)							13:10
pH (s.u.)							8.61
O.R.P. (mV)							76
Temperature (°C)							21.79
Specific Cond. (mS/cm)							0.189
Dissolved Oxygen (mg/L)							1.87
Turbidity (NTU)							0.8

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # 07960-MW-20  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 30.05 ft. to 45.05 ft.  
 Total Well Depth (TWD) 42.00 ft.  
 Depth to GW(DGW) 31.20 ft.  
 Depth to FP (Free product) ----- ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.  
 1Csg. Vol. (LWC\*C) = 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling ----- gal.  
 Well Yield Low Medium High

Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
						0.00
						9:20
						6.10
						77
						18.03
						0.419
						3.34
						69.6

Volume Purged (gallons)  
 Time (military)  
 pH (s.u.)  
 O.R.P. (mV)  
 Temperature (°C)  
 Specific Cond. (mS/cm)  
 Dissolved Oxygen (mg/L)  
 Turbidity (NTU)

Remarks  
 Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
 Stick up manhole approximately 3 feet above ground surface.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # 07960-MW-21  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143*(D/2)^2$  for a 2 inch well C=0.163  
 for a 4 inch well C=0.652 for a 6 inch well C=1.469  
 Screen Interval 25.16 ft. to 40.16 ft.  
 Total Well Depth (TWD) 40.10 ft.  
 Depth to GW(DGW) 24.15 ft.  
 Depth to FP (Free product) ----- ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 15.95 ft.

1Csg. Vol. (LWC\*C)= 15.95 X 0.163 = 2.60 gal.  
 3Csg. Volume = 3x 2.60 = 7.80 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling 6.80 gal.  
 Well Yield Low Medium X High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Initial	0.00	2.59	1.50			0.00
Volume Purged (gallons)	10:41	10:45	10:50			11:20
Time (military)	6.06	5.98	5.91			5.85
pH (s.u.)	-38	12	26			-8
O.R.P. (mV)	19.22	19.21	19.05			20.76
Temperature (°C)	0.638	0.590	0.515			0.564
Specific Cond. (mS/cm)	1.27	1.29	1.18			2.01
Dissolved Oxygen (mg/L)	>999	>999	>999			>999
Turbidity (NTU)						

Remarks  
 Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
 Well purged dry after 2 well volumes plus 1.5 gallon.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by 7/30/14 17:15 Date/Time  
 ECS Office 7/31/14 16:40 Received by  
 Relinquished by 7/31/14 16:40 Date/Time

Well # 07960-MW-22  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen interval 25.09 ft. to 40.09 ft.  
 Total Well Depth (TWD) 40.02 ft.  
 Depth to GW(DGW) 29.30 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.  
 1Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Low \_\_\_\_\_ Medium \_\_\_\_\_ High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)						0.00
Time (military)						14:05
pH (s.u.)						6.62
O.R.P. (mV)						-45
Temperature (°C)						19.54
Specific Cond. (mS/cm)						0.897
Dissolved Oxygen (mg/L)						1.07
Turbidity (NTU)						144.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/28/14</u>		Well # <u>07960-MW-23</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>22.24</u> ft. to <u>37.24</u> ft.	
Method of Well Purging: <u>Bailer</u> <input checked="" type="checkbox"/> <u>Pump Type</u>		Total Well Depth (TWD) <u>37.18</u> ft.	
Method of Sample Collection: <u>Bailer</u> <input checked="" type="checkbox"/> <u>Pump Type</u>		Depth to GW(DGW) <u>24.82</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba U-52</u> Serial Number: <u>YTA6R6SE</u>		FP Thickness <u>-----</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>12.36</u> ft.	
Turbidity 0.0 = <u>0.0</u> Conductivity <u>4.49</u> = <u>-----</u>		1Csg. Vol. (LWC*C)= <u>12.36</u> X <u>0.163</u> = <u>2.01</u> gal.	
Chain of Custody		3Csg. Volume = 3x <u>2.01</u> = <u>6.04</u> gals.(Std. Purge Vol)	
A. Williamson Date/Time <u>7/30/14 17:15</u> ECS Office		Total Vol. of Water Purged Before Sampling <u>-----</u> High	
Relinquished by Date/Time <u>7/31/14 16:40</u> Pace Analytical		Well Yield <u>-----</u> Medium	
Relinquished by Date/Time <u>7/31/14 16:40</u>			

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)							0.00
Time (military)							12:05
pH (s.u.)							9.07
O.R.P. (mV)							43
Temperature (°C)							23.15
Specific Cond. (mS/cm)							0.30
Dissolved Oxygen (mg/L)							2.87
Turbidity (NTU)							0.00

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

Water quality reading water spilled before all readings could be recorded.

South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/28/14</u>		Well # <u>07960-MW-24</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>25.13</u> ft. to <u>40.13</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type		Total Well Depth (TWD) <u>39.95</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type		Depth to GW(DGW) <u>26.45</u> ft.	
Quality Assurance:		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: Horiba U-52 Serial Number: <u>YTA6R6SE</u>		FP Thickness <u>-----</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Calibration Measurement Results		Length of Water Column (LWC=TWD-DGW) <u>13.50</u> ft.	
Turbidity 0.0 = <u>0.0</u> Conductivity 4.49 =		1Csg. Vol. (LWC*C) = <u>13.50</u> X <u>0.163</u> = <u>2.20</u> gal.	
Chain of Custody		3Csg. Volume = 3x <u>2.20</u> = <u>6.60</u> gals.(Std. Purge Vol)	
A. Williamson Date/Time <u>7/30/14 17:15</u> ECS Office		Total Vol. of Water Purged Before Sampling <u>-----</u> gal.	
Relinquished by Date/Time <u>7/31/14 16:40</u> Pace Analytical		Well Yield <u>Low</u> Medium High	
Relinquished by Date/Time <u>7/31/14 16:40</u>			

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)							0.00
Time (military)							17:20
pH (s.u.)							6.71
O.R.P. (mV)							50
Temperature (°C)							19.67
Specific Cond. (mS/cm)							0.355
Dissolved Oxygen (mg/L)							1.69
Turbidity (NTU)							88.7

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
07960-FB1 takes by B.P. near 07960-MW24



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/28/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 80 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 Conductivity 4.49 =  
 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by A. Williamson Received by  
 Date/Time 7/31/14 16:40 Pace Analytical  
 Relinquished by ECS Office Received by  
 Date/Time \_\_\_\_\_

Well # 07960-MW-25  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 24.98 ft. to 39.91 ft.  
 Total Well Depth (TWD) 39.91 ft.  
 Depth to GW(DGW) 25.45 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 14.46 ft.  
 1Csg. Vol. (LWC\*C)= 14.46 X 0.163 = 2.36 gal.  
 3Csg. Volume = 3x 2.36 = 7.07 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling 5.04 gal.  
 Well Yield Low Medium High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Initial							
Volume Purged (gallons)							0.00
Time (military)							16:35
pH (s.u.)							6.73
O.R.P. (mV)							-20
Temperature (°C)							19.99
Specific Cond. (mS/cm)							1.360
Dissolved Oxygen (mg/L)							0.53
Turbidity (NTU)							159.0

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/28/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 80 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C  
 Conductivity 4.49 = 4.66  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.01  
 Chain of Custody  
A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time  
ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time

Well # 07960-MW-26  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 23.74 ft. to 38.74 ft.  
 Total Well Depth (TWD) 38.66 ft.  
 Depth to GW(DGW) 18.25 ft.  
 Depth to FP (Free product) 0.00 ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 20.41 ft.  
 1Csg. Vol. (LWC\*C) = 20.41 X 0.163 = 3.33 gal.  
 3Csg. Volume = 3x 3.33 = 9.98 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling 6.66 gal.  
 Well Yield \_\_\_\_\_ Low \_\_\_\_\_ Medium \_\_\_\_\_ High \_\_\_\_\_

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Initial	0.00	3.33				0.00
Volume Purged (gallons)	17:03	17:14				17:35
Time (military)	6.52	6.51				6.54
pH (s.u.)	15	38				61
O.R.P. (mV)	19.62	18.70				18.79
Temperature (°C)	0.521	0.477				0.468
Specific Cond. (mS/cm)	1.40	2.07				1.25
Dissolved Oxygen (mg/L)	>999	>999				>999
Turbidity (NTU)						

Remarks  
 Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
 Well purged dry after 2 well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/30/14</u>	Well # <u>07960-MW-27</u>		
Field Personnel <u>A. Williamson</u>	Well Diameter (D) <u>2.0</u> inch	or feet	
General Weather Conditions <u>Sunny</u>	conversion factor(C): $3.143 \cdot (D/2)^2$	for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F	for a 4 inch well C= <u>0.652</u>	for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Screen Interval <u>20.10</u> ft.	to <u>35.10</u> ft.	
Method of Well Purging: <u>Bailer</u> <input checked="" type="checkbox"/> <u>X</u>	Total Well Depth (TWD) <u>35.02</u> ft.		
Method of Sample Collection: <u>Bailer</u> <input checked="" type="checkbox"/> <u>X</u>	Depth to GW(DGW) <u>22.75</u> ft.		
Water Quality Meter: <u>Horiba U-52</u>	Depth to FP (Free product) <u>-----</u> ft.		
pH 4.0 = <u>4.0 @ 28°C</u>	FP Thickness <u>-----</u> ft.		
Turbidity 0.0 = <u>0.0</u>	Length of Water Column (LWC=TWD-DGW) <u>12.27</u> ft.		
Relinquished by <u>A. Williamson</u>	1Csg. Vol. (LWC*C)= <u>12.27</u> X <u>0.163</u> = <u>2.00</u> gal.		
ECSC Office <u>7/30/14 17:15</u>	3Csg. Volume = 3x <u>2.00</u> = <u>6.00</u> gals.(Std. Purge Vol)		
Date/Time <u>7/31/14 16:40</u>	Total Vol. of Water Purged Before Sampling <u>-----</u> gal.		
Relinquished by <u>ECSC Office</u>	Well Yield <u>-----</u> Medium <u>-----</u> High <u>-----</u>		

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)							0.00
Time (military)							9:55
pH (s.u.)							6.08
O.R.P. (mV)							80
Temperature (°C)							18.64
Specific Cond. (mS/cm)							0.389
Dissolved Oxygen (mg/L)							2.17
Turbidity (NTU)							47.1

Remarks Non-purge well sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/30/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number:  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by 7/30/14 17:15 Date/Time  
 ECS Office Received by  
 Relinquished by 7/31/14 16:40 Date/Time  
 Pace Analytical Received by  
 Date/Time

Well # 07960-MW-28  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143*(D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 25.03 ft. to 40.03 ft.  
 Total Well Depth (TWD) 39.97 ft.  
 Depth to GW(DGW) 22.05 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 17.92 ft.  
 1Csg. Vol. (LWC\*C)= 17.92 X 0.163 = 2.92 gal.  
 3Csg. Volume = 3x 2.92 = 8.76 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Medium \_\_\_\_\_ High \_\_\_\_\_  
 Low \_\_\_\_\_

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	0.00	2.92	2.00			0.00
Time (military)	8:51	8:55	9:00			9:45
pH (s.u.)	6.08	6.04	6.02			6.05
O.R.P. (mV)	47	65	74			83
Temperature (°C)	19.03	18.36	18.17			18.29
Specific Cond. (mS/cm)	0.265	0.254	0.241			0.277
Dissolved Oxygen (mg/L)	0.92	1.00	1.16			2.17
Turbidity (NTU)	870.0	>999	>999			823.0

Remarks  
Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after 2 well volumes plus 2 gallon.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/30/14</u>		Well # <u>07960-MW-29</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>25.15</u> ft. to <u>40.15</u> ft.	
Method of Well Purging: <u>Bailer</u> <input checked="" type="checkbox"/> <u>Bailer</u> <input checked="" type="checkbox"/>	Pump Type <u>---</u>	Total Well Depth (TWD) <u>40.05</u> ft.	
Method of Sample Collection: <u>Bailer</u> <input checked="" type="checkbox"/>	Pump Type <u>---</u>	Depth to GW(DGW) <u>23.25</u> ft.	
Water Quality Meter: <u>Horiba U-52</u>	Serial Number: <u>YTA6R6SE</u>	Depth to FP (Free product) <u>-----</u> ft.	
Calibration Measurement Results	Quality Assurance:	FP Thickness <u>-----</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u>	Conductivity 4.49 = <u>4.66</u>	Length of Water Column (LWC=TWD-DGW) <u>16.80</u> ft.	
Turbidity 0.0 = <u>0.0</u>	Dissolved Oxygen 8.52 = <u>8.01</u>	1Csg. Vol. (LWC*C) = <u>16.80</u> X <u>0.163</u> = <u>2.74</u> gal.	
A. Williamson	Chain of Custody	3Csg. Volume = 3x <u>2.74</u> = <u>8.22</u> gals.(Std. Purge Vol)	
Relinquished by <u>A. Williamson</u>	<u>7/30/14 17:15</u>	Total Vol. of Water Purged Before Sampling <u>7.90</u> gal.	
ECS Office	Date/Time <u>7/31/14 16:40</u>	Well Yield <u>Low</u> Medium <input checked="" type="checkbox"/> High <input type="checkbox"/>	
Relinquished by	Date/Time		

Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
0.00	2.63	2.63	2.63			0.00
						13:25

Volume Purged (gallons)

Time (military)

pH (s.u.)

O.R.P. (mV)

Temperature (°C)

Specific Cond. (mS/cm)

Dissolved Oxygen (mg/L)

Turbidity (NTU)

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>07960-MW-30</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet _____	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>		Screen Interval <u>30.05</u> ft. to <u>45.05</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type _____		Total Well Depth (TWD) <u>44.95</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type _____		Depth to GW(DGW) <u>26.14</u> ft.	
Quality Assurance: _____		Depth to FP (Free product) _____ ft.	
Water Quality Meter: <u>Horiba U-52</u> Serial Number: <u>YTA6R6SE</u>		FP Thickness _____ ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Conductivity 4.49 = _____		Length of Water Column (LWC=TWD-DGW) <u>18.81</u> ft.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = _____		1Csg. Vol. (LWC*C) = <u>18.81</u> X <u>0.163</u> = <u>3.07</u> gal.	
Chain of Custody _____		3Csg. Volume = 3x <u>3.07</u> = <u>9.20</u> gals.(Std. Purge Vol)	
A. Williamson <u>7/30/14 17:15</u> ECS Office _____		Total Vol. of Water Purged Before Sampling _____	
Relinquished by Date/Time _____		Well Yield _____ Low _____ Medium _____ High _____	
ECS Office <u>7/31/14 16:40</u> Pace Analytical _____			
Relinquished by Date/Time _____			

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	0.00	3.06	3.06	3.06			0.00
Time (military)	13:39	13:43	13:49	13:55			14:20
pH (s.u.)	6.88	6.83	6.98	6.99			6.92
O.R.P. (mV)	-53	-66	-79	-85			-73
Temperature (°C)	20.15	19.45	19.26	19.59			19.66
Specific Cond. (mS/cm)	0.877	0.973	0.849	0.859			0.826
Dissolved Oxygen (mg/L)	0.78	0.94	0.97	1.04			0.90
Turbidity (NTU)	81.4	641.0	690.0	>999			390.0

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

Well purged dry after 3 well volumes.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/28/14</u>		Well # <u>07960-MW-31</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet _____	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>80</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>28.96</u> ft. to <u>43.96</u> ft.	
Method of Well Purging: Bailer <input checked="" type="checkbox"/> Pump Type _____		Total Well Depth (TWD) <u>43.89</u> ft.	
Method of Sample Collection: Bailer <input checked="" type="checkbox"/> Pump Type _____		Depth to GW(DGW) <u>24.80</u> ft.	
Quality Assurance: _____		Depth to FP (Free product) _____ ft.	
Water Quality Meter: <u>Horiba U-52</u> Serial Number: <u>YTA6R6SE</u>		FP Thickness _____ ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Calibration Measurement Results _____		Length of Water Column (LWC=TWD-DGW) <u>19.09</u> ft.	
Turbidity 0.0 = <u>0.0</u> Conductivity 4.49 = _____		1Csg. Vol. (LWC*C) = <u>19.09</u> X <u>0.163</u> = <u>3.11</u> gal.	
_____ Dissolved Oxygen 8.52 = _____		3Csg. Volume = 3x <u>3.11</u> = <u>9.34</u> gals.(Std. Purge Vol)	
Chain of Custody _____		Total Vol. of Water Purged Before Sampling _____	
Date/Time <u>7/30/14 17:15</u> ECS Office _____		Well Yield _____ Low _____ Medium _____ X _____ High _____	
Relinquished by _____			
Date/Time <u>7/31/14 16:40</u> Pace Analytical _____			
Relinquished by _____			
Date/Time _____			

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Initial	0.00	3.11	2.00				0.00
Volume Purged (gallons)	16:14	16:19	16:24				16:50
Time (military)	6:56	6:54	6:54				6:57
pH (s.u.)	-45	-53	-42				-22
O.R.P. (mV)	20.86	19.48	19.10				19.99
Temperature (°C)	1.27	1.35	1.32				1.24
Specific Cond. (mS/cm)	0.41	0.60	0.88				0.67
Dissolved Oxygen (mg/L)	113.0	577.0	>999				305.0
Turbidity (NTU)							

Remarks Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.

Well purged dry after 3 well volumes plus 1.25 gallons. 07962-Duplicate 1 taken from 07962-MW31.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>07960-TW-1</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>58.27</u> ft. to <u>63.27</u> ft.	
Method of Well Purging: <u>Bailer</u>	Pump Type <u>Monsoon</u>	Total Well Depth (TWD) <u>63.22</u> ft.	
Method of Sample Collection: <u>Bailer</u>	Pump Type <u>Monsoon</u>	Depth to GW(DGW) <u>25.55</u> ft.	
Water Quality Meter: <u>Horiba U-52</u>	Serial Number: <u>YTA6R6SE</u>	Depth to FP (Free product) <u>-----</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u>	Quality Assurance:	FP Thickness <u>-----</u> ft.	
Turbidity 0.0 = <u>0.0</u>	Calibration Measurement Results	Length of Water Column (LWC=TWD-DGW) <u>37.67</u> ft.	
	Conductivity <u>4.49</u> =	1Csg. Vol. (LWC*C)= <u>37.67</u> X <u>0.163</u> = <u>6.14</u> gal.	
	Dissolved Oxygen <u>8.52</u> =	3Csg. Volume = 3x <u>6.14</u> = <u>18.42</u> gals.(Std. Purge Vol)	
	Chain of Custody	Total Vol. of Water Purged Before Sampling <u>24.76</u> gal.	
A. Williamson	7/30/14 17:15	Well Yield <u>Low</u> Medium High X	
Relinquished by	Date/Time	1Csg. Vol. (LWC*C)= <u>37.67</u> X <u>0.163</u> = <u>6.14</u> gal.	
ECS Office	7/31/14 16:40	3Csg. Volume = 3x <u>6.14</u> = <u>18.42</u> gals.(Std. Purge Vol)	
Relinquished by	Date/Time	Total Vol. of Water Purged Before Sampling <u>24.76</u> gal.	

Initial	1st vol.	2nd vol.	2.5 vol.	3rd vol.	3.5 vol.	Post	Sampling
0.00	6.14	6.14	3.07	3.07	3.07		0.00
15:53	15:59	16:06	16:11	16:15	16:19		16:25
8.17	7.44	7.13	7.01	6.94	6.97		6.92
53	-89	-92	-77	-72	-73		-69
22.98	21.21	21.17	20.26	20.2	19.9		20.38
0.399	0.414	0.411	0.408	0.409	0.408		0.808
3.36	1.01	1.41	1.56	1.48	1.35		1.22
0.0	31.3	0.0	0.0	0.0	0.0		0.0

Volume Purged (gallons)

Time (military)

pH (s.u.)

O.R.P. (mV)

Temperature (°C)

Specific Cond. (mS/cm)

Dissolved Oxygen (mg/L)

Turbidity (NTU)

Remarks

Purged and sampled using stainless steel Monsoon down hole pump (SIN 2142/70370) with new, clean, disposable polyethylene tubing.

Well purged dry after 3 well volumes and 3.07 gallons.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>07960-TW-2</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Ambient Air Temperature <u>90</u> F		Screen Interval <u>75.23</u> ft. to <u>80.23</u> ft.	
Facility Name <u>378 Truck Stop</u>		Total Well Depth (TWD) <u>80.19</u> ft.	
Method of Well Purging: <u>Bailer</u>		Depth to GW(DGW) <u>24.59</u> ft.	
Method of Sample Collection: <u>Bailer</u>		Depth to FP (Free product) <u>-----</u> ft.	
Quality Assurance: <u>YTA6R6SE</u>		FP Thickness <u>-----</u> ft.	
Water Quality Meter: <u>Horiba U-52</u>		Length of Water Column (LWC=TWD-DGW) <u>55.60</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u>		1Csg. Vol. (LWC*C) = <u>55.60</u> X <u>0.163</u> = <u>9.06</u> gal.	
Turbidity 0.0 = <u>0.0</u>		3Csg. Volume = 3x <u>9.06</u> = <u>27.19</u> gals.(Std. Purge Vol)	
Chain of Custody		Total Vol. of Water Purged Before Sampling <u>10.13</u> gal.	
Date/Time <u>7/30/14 17:15</u>		Well Yield <u>Low</u> X <u>Medium</u> High	
Relinquished by <u>A. Williamson</u>			
ECS Office <u>7/31/14 16:40</u>			
Relinquished by <u>-----</u>			
Date/Time <u>7/31/14 16:40</u>			
Date/Time <u>-----</u>			

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	0.50					0.00
Time (military)	14:34	14:45					15:25
pH (s.u.)	11.26	11.15					10.36
O.R.P. (mV)	-115	-82					-132
Temperature (°C)	21.18	21.67					22.54
Specific Cond. (mS/cm)	0.566	0.558					0.474
Dissolved Oxygen (mg/L)	2.83	3.06					3.46
Turbidity (NTU)	101.0	22.6					1.2

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N 214270370) with new, clean, disposable polyethylene tubing.  
Well purged dry after one well volume plus .5 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>07960-TW-3</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch _____ or feet _____	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u>	Site ID# <u>07960</u>	Screen Interval <u>75.62</u> ft. to <u>80.62</u> ft.	
Method of Well Purging: <u>Bailer</u>	Pump Type <u>Monsoon</u>	Total Well Depth (TWD) <u>80.59</u> ft.	
Method of Sample Collection: <u>Bailer</u>	Pump Type <u>Monsoon</u>	Depth to GW(DGW) <u>22.50</u> ft.	
Water Quality Meter: <u>Horiba U-52</u>	Serial Number: <u>YTA6R6SE</u>	Depth to FP (Free product) <u>-----</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u>	Quality Assurance:	FP Thickness <u>-----</u> ft.	
Turbidity 0.0 = <u>0.0</u>	Calibration Measurement Results	Length of Water Column (LWC=TWD-DGW) <u>58.09</u> ft.	
	Conductivity 4.49 = _____		
	Dissolved Oxygen 8.52 = _____		
	Chain of Custody		
Relinquished by <u>A. Williamson</u>	Date/Time <u>7/30/14 17:15</u>	1Csg. Vol. (LWC*C) = <u>58.09</u> X <u>0.163</u> = <u>9.47</u> gal.	
ECS Office	Date/Time <u>7/31/14 16:40</u>	3Csg. Volume = 3x <u>9.47</u> = <u>28.41</u> gals.(Std. Purge Vol)	
Relinquished by _____	Date/Time _____	Total Vol. of Water Purged Before Sampling _____	
		Well Yield _____ Low _____ Medium _____ High _____	

	1st vol.	2nd vol.	2.5 vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	0.00	9.46	4.73	1.27		0.00
Time (military)	10:11	10:25	10:37	10:47		11:05
pH (s.u.)	11.01	10.03	9.20	8.52		7.54
O.R.P. (mV)	-213	-36	-79	9		45
Temperature (°C)	21.05	19.98	20.59	20.88		20.53
Specific Cond. (mS/cm)	0.589	0.407	0.468	0.514		0.549
Dissolved Oxygen (mg/L)	1.36	0.73	0.50	3.86		2.86
Turbidity (NTU)	15.8	68.5	8.5	347.0		42.2

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N 2142/70370) with new, clean, disposable polyethylene tubing.  
Well purged dry after two well volumes plus 4.73 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer  Pump Type  
 Method of Sample Collection: Bailer  Pump Type  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by 7/31/14 16:40 Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by 7/31/14 16:40 Received by

Well # 07960-TW-4  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 63.56 ft. to 68.56 ft.  
 Total Well Depth (TWD) 68.50 ft.  
 Depth to GW(DGW) 22.19 ft.  
 Depth to FP (Free product) 0.00 ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 46.31 ft.

1Csg. Vol. (LWC\*C)= 46.31 X 0.163 = 7.55 gal.  
 3Csg. Volume = 3x 7.55 = 22.65 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling 8.36 gal.  
 Well Yield Low  Medium  High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Initial	0.00	2.00				0.00
Volume Purged (gallons)	7.55					
Time (military)	8:51					9:45
pH (s.u.)	8.93					11.87
O.R.P. (mV)	41					-62
Temperature (°C)	19.83					19.13
Specific Cond. (mS/cm)	0.409					1.880
Dissolved Oxygen (mg/L)	3.37					3.06
Turbidity (NTU)	6.5					110.0

Remarks  
Purged and sampled using a new, clean, disposable polyethylene bailer and nitrile gloves.  
Well purged dry after one well volume plus 2 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>07960-TW-5</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>53.38</u> ft. to <u>58.38</u> ft.	
Method of Well Purging: Bailer <u>---</u> Pump Type <u>Monsoon</u>		Total Well Depth (TWD) <u>58.32</u> ft.	
Method of Sample Collection: Bailer <u>---</u> Pump Type <u>Monsoon</u>		Depth to GW(DGW) <u>26.91</u> ft.	
Water Quality Meter: Horiba U-52 Serial Number: <u>YTA6R6SE</u>		Depth to FP (Free product) <u>-----</u> ft.	
Calibration Measurement Results		FP Thickness <u>-----</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Conductivity 4.49 = <u>4.66</u>		Length of Water Column (LWC=TWD-DGW) <u>31.41</u> ft.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.01</u>		1Csg. Vol. (LWC*C) = <u>31.41</u> X <u>0.163</u> = <u>5.12</u> gal.	
A. Williamson Date/Time <u>7/30/14 17:15</u> ECS Office		3Csg. Volume = 3x <u>5.12</u> = <u>15.36</u> gals.(Std. Purge Vol)	
Relinquished by Date/Time <u>7/31/14 16:40</u> Pace Analytical		Total Vol. of Water Purged Before Sampling <u>8.22</u> gal.	
ECS Office Date/Time <u>7/31/14 16:40</u> Received by		Well Yield Low <u>X</u> Medium <u>  </u> High <u>  </u>	
Relinquished by			

Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
0.00	5.12	2.00					0.00
11:35	11:44						12:15
7.93	8.01						8.09
68	58						25
23.29	21.29						22.84
0.480	0.470						0.486
2.72	2.60						2.99
4.1	11.4						284.0

Volume Purged (gallons)

Time (military)

pH (s.u.)

O.R.P. (mV)

Temperature (°C)

Specific Cond. (mS/cm)

Dissolved Oxygen (mg/L)

Turbidity (NTU)

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N 2142/70370) with new, clean, disposable polyethylene tubing.  
Well purged dry after one well volume plus 2 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/28/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 80 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type Monsoon  
 Method of Sample Collection: Bailer Pump Type Monsoon  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 Conductivity 4.49 =  
 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by A. Williamson Date/Time 7/30/14 17:15  
 ECS Office Date/Time 7/31/14 16:40  
 Relinquished by ECS Office Date/Time 7/31/14 16:40

Well # 07960-TW-6  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 53.55 ft. to 58.55 ft.  
 Total Well Depth (TWD) 58.50 ft.  
 Depth to GW(DGW) 27.55 ft.  
 Depth to FP (Free product) ----- ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 30.95 ft.  
 1Csg. Vol. (LWC\*C)= 30.95 X 0.163 = 5.04 gal.  
 3Csg. Volume = 3x 5.04 = 15.13 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling 8.20 gal.  
 Well Yield Low X Medium    High   

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	0.00	5.04	2.50					0.00
Time (military)	15:19	14:23						15:55
pH (s.u.)	7.20	6.97						7.24
O.R.P. (mV)	112	157						-92
Temperature (°C)	23.77	19.43						20.31
Specific Cond. (mS/cm)	0.024	0.398						0.699
Dissolved Oxygen (mg/L)	3.29	2.14						0.51
Turbidity (NTU)	7.9	54.2						0.0

Remarks  
 Purged and sampled using stainless steel Monsoon down hole pump (S/N 2142/70370) with new, clean, disposable polyethylene tubing.  
 Well purged dry after one well volume plus 2.5 gallons.

South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/28/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 80 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type --  
 Method of Sample Collection: Bailer Pump Type --  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 Conductivity 4.49 =  
 Dissolved Oxygen 8.52 =  
 pH 4.0 = 4.0 @ 28°C  
 Turbidity 0.0 = 0.0  
 Chain of Custody  
 Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by A. Williamson Date/Time 7/30/14 17:15 Received by  
 ECS Office Date/Time 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time \_\_\_\_\_ Received by \_\_\_\_\_

Well # 07960-TW-7  
 Well Diameter (D) 2.0 inch \_\_\_\_\_ or feet \_\_\_\_\_  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 53.94 ft. to 58.94 ft.  
 Total Well Depth (TWD) 58.92 ft.  
 Depth to GW(DGW) 15.79 ft.  
 Depth to FP (Free product) \_\_\_\_\_ ft.  
 FP Thickness \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 43.13 ft.  
 1Csg. Vol. (LWC\*C)= 43.13 X 0.163 = 7.03 gal.  
 3Csg. Volume = 3x 7.03 = 21.09 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield Low X Medium \_\_\_\_\_ High \_\_\_\_\_

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	0.00	7.03	3.00				0.00
Time (military)	10:31	10:40					12:15
pH (s.u.)	12.55	13.61					12.50
O.R.P. (mV)	-177	-120					-102
Temperature (°C)	23.26	22.05					22.17
Specific Cond. (mS/cm)	9.760	9.440					8.580
Dissolved Oxygen (mg/L)	3.86	3.64					3.89
Turbidity (NTU)	0.0	0.0					0.0

Remarks  
Purged and sampled using stainless steel Monsoon down hole pump (SIN 2142/70370) with new, clean, disposable polyethylene tubing.  
Well purged dry after 1 well volume plus 3 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/28/14  
 Field Personnel A. Williamson  
 General Weather Conditions Sunny  
 Ambient Air Temperature 80 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type Monsoon  
 Method of Sample Collection: Bailer Pump Type Monsoon  
 Water Quality Meter: Horiba U-52 Serial Number: YTA6R6SE  
 Calibration Measurement Results  
 pH 4.0 = 4.0 @ 28°C Conductivity 4.49 = 4.66  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.01  
 Chain of Custody  
 Relinquished by A. Williamson Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by ECS Office Date/Time 7/31/14 16:40 Pace Analytical  
 Relinquished by ECS Office Date/Time 7/31/14 16:40 Received by

Well # 07960-TW-8  
 Well Diameter (D) 2.0 inch or feet  
 conversion factor(C):  $3.143 \times (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval 53.53 ft. to 58.53 ft.  
 Total Well Depth (TWD) 58.47 ft.  
 Depth to GW(DGW) 25.57 ft.  
 Depth to FP (Free product) ----- ft.  
 FP Thickness ----- ft.  
 Length of Water Column (LWC=TWD-DGW) 32.90 ft.  
 1Csg. Vol. (LWC\*C)= 32.90 X 0.163 = 5.36 gal.  
 3Csg. Volume = 3x 5.36 = 16.09 gals (Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling 8.64 gal.  
 Well Yield Low X Medium X High -----

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Initial	0.00					0.00
Volume Purged (gallons)	12:48	3.00				13:35
Time (military)	11.31					12.09
pH (s.u.)	-61					-90
O.R.P. (mV)	26.01					23.45
Temperature (°C)	0.959					2.650
Specific Cond. (mS/cm)	4.43					2.89
Dissolved Oxygen (mg/L)	0.0					0.0
Turbidity (NTU)						

Remarks  
 Purged and sampled using stainless steel Monsoon down hole pump (S/N 214270370) with new, clean, disposable polyethylene tubing.  
 Well purged dry after 1 well volume plus 3 gallons.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/28/14</u>		Well # <u>07960-TW-9</u>	
Field Personnel <u>A. Williamson</u>		Well Diameter (D) <u>2.0</u> inch or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Ambient Air Temperature <u>80</u> F		Screen Interval <u>75.12</u> ft. to <u>80.12</u> ft.	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Total Well Depth (TWD) <u>80.00</u> ft.	
Method of Well Purging: <u>Bailer</u> Pump Type <u>Monsoon</u>		Depth to GW(DGW) <u>23.95</u> ft.	
Method of Sample Collection: <u>Bailer</u> Pump Type <u>Monsoon</u>		Depth to FP (Free product) <u>-----</u> ft.	
Water Quality Meter: <u>Horiba U-52</u> Serial Number: <u>YTA6R6SE</u>		FP Thickness <u>-----</u> ft.	
pH 4.0 = <u>4.0 @ 28°C</u> Calibration Measurement Results <u>4.66</u>		Length of Water Column (LWC=TWD-DGW) <u>56.05</u> ft.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>8.01</u>		1 Csg. Vol. (LWC°C) = <u>56.05</u> X <u>0.163</u> = <u>9.14</u> gal.	
A. Williamson <u>7/30/14 17:15</u> ECS Office		3 Csg. Volume = 3x <u>9.14</u> = <u>27.41</u> gals.(Std. Purge Vol)	
Relinquished by <u>Date/Time</u>		Total Vol. of Water Purged Before Sampling <u>28.15</u> gal.	
ECS Office <u>7/31/14 16:40</u> Pace Analytical		Well Yield <u>Low</u> Medium <u>X</u> High <u>-----</u>	
Relinquished by <u>Date/Time</u>		Well Yield <u>Low</u> Medium <u>X</u> High <u>-----</u>	

Initial	1st vol.	2nd vol.	2.5 vol.	3rd vol.	3.5 vol.	Post	Sampling
0.00	9.14	9.14	4.69	4.69	4.69		0.00
14:08	14:20	14:31	14:36	14:41	14:46		14:50
9.74	7.67	7.41	7.25	7.25	7.21		7.18
5	94	113	121	119	110		103
26.12	22.22	20.77	20.31	20.0	19.9		19.64
0.330	0.622	0.627	0.626	0.642	0.630		0.649
2.62	0.39	0.44	0.50	0.32	0.29		0.25
9.6	0.0	0.0	0.0	0.0	0.0		0.0

Volume Purged (gallons)

Time (military)

pH (s.u.)

O.R.P. (mV)

Temperature (°C)

Specific Cond. (mS/cm)

Dissolved Oxygen (mg/L)

Turbidity (NTU)

Remarks Purged and sampled using stainless steel Monsoon down hole pump (S/N 2142/70370) with new, clean, disposable polyethylene tubing.  
Water quality stable after 3.5 well volumes.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type WSW\_pump  
 Method of Sample Collection: Bailer Pump Type WSW\_pump  
 Quality Assurance: T908009  
 Water Quality Meter: Horiba W22XD - U22 Serial Number: 4.49  
 Calibration Measurement Results 8.61  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 = 4.49  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.61  
 Chain of Custody 7/30/14 17:15 ECS Office 7/30/14 17:15  
 Relinquished by A. Williamson Date/Time 7/30/14 17:15 Received by ECS Office  
 ECS Office 7/31/14 16:40 Pace Analytical 7/31/14 16:40  
 Relinquished by ECS Office Date/Time 7/31/14 16:40 Received by ECS Office

Well # WSW-1 Pre GAC  
 Well Diameter (D) 6.0 inch \_\_\_\_\_ or feet \_\_\_\_\_  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Total Well Depth (TWD) \_\_\_\_\_ ft. 280  
 Depth to GW(DGW) \_\_\_\_\_ ft. --  
 Length of Water Column (LWC=TWD-DGW) \_\_\_\_\_ ft. 0.00  
 1Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Low \_\_\_\_\_ Medium \_\_\_\_\_ High \_\_\_\_\_

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	--						--
Time (military)	11:28						11:38
pH (s.u.)	7.50						7.47
O.R.P. (mV)	32						37
Temperature (°C)	25.39						25.74
Specific Cond. (mS/cm)	0.492						0.511
Dissolved Oxygen (mg/L)	9.34						4.18
Turbidity (NTU)	0.0						0.0

Remarks  
 Sample collected from "Pre" sample port inside GAC unit building next to well house, prior to GAC treatment, after purging for 10 minutes.  
 Total well depth as indicated on well ID tag. 730 Hwy 378 E.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type WSW pump  
 Method of Sample Collection: Bailer Pump Type WSW pump  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 503058  
 Calibration Measurement Results  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 = 4.49  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.61  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # WSW-1 Post GAC  
 Well Diameter (D) 6.0 inch \_\_\_\_\_ or feet  
 conversion factor(C):  $3.143 \times (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Total Well Depth (TWD) 280 ft.  
 Depth to GW(DGW) \_\_\_\_\_ ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.

1Csg. Vol. (LWC\*C) = 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume =  $3x$  0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Medium \_\_\_\_\_ High \_\_\_\_\_

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	--						--
Time (military)	11:32						11:42
pH (s.u.)	7.57						7.52
O.R.P. (mV)	37						31
Temperature (°C)	22.36						21.46
Specific Cond. (mS/cm)	0.500						0.505
Dissolved Oxygen (mg/L)	7.45						3.98
Turbidity (NTU)	0.0						0.0

Remarks  
 Sample collected from "Post" sample port inside GAC building next to well house, after GAC treatment, after purging 10 for minutes.  
 Total well depth as indicated on well ID tag. 730 Hwy 378 E.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>WSW-2</u>	
Field Personnel <u>B. Peay</u>		Well Diameter (D) <u>   </u> inch <u>   </u> or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 * (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>   </u> ft. to <u>   </u> ft.	
Method of Well Purging: <u>   </u> Bailer <u>   </u> Pump Type <u>   </u>		Total Well Depth (TWD) <u>   </u> ft.	
Method of Sample Collection: <u>   </u> Bailer <u>   </u> Pump Type <u>   </u>		Depth to GW(DGW) <u>   </u> ft.	
Water Quality Meter: <u>Horiba W22XD - U226</u> Serial Number: <u>503058</u>		Length of Water Column (LWC=TWD-DGW) <u>   </u> ft.	
pH 4.0 = <u>4.01 @ 23.48°C</u> Conductivity <u>4.49</u> =		1Csg. Vol. (LWC*C) = <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen <u>8.52</u> =		3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
A. Williamson <u>7/30/14 17:15</u> ECS Office		Total Vol. of Water Purged Before Sampling <u>   </u>	
Relinquished by <u>   </u> Date/Time <u>7/31/14 16:40</u>		Well Yield <u>   </u> Low <u>   </u> Medium <u>   </u> High <u>   </u>	
Relinquished by <u>   </u> Date/Time <u>   </u>			

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	--							--
Time (military)	10:54							11:04
pH (s.u.)	7.10							7.05
O.R.P. (mV)	113							113
Temperature (°C)	23.64							22.81
Specific Cond. (mS/cm)	0.500							0.506
Dissolved Oxygen (mg/L)	7.16							5.31
Turbidity (NTU)	0.0							0.0

Remarks Sampled from spigot inside well house after purging for 10 minutes.  
736 Hwy 378 E.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer -- Pump Type WSW pump  
 Method of Sample Collection: Bailer -- Pump Type WSW pump  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 503058  
 Calibration Measurement Results  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office 7/30/14 17:15  
 Relinquished by Date/Time Received by Date/Time  
 ECS Office 7/31/14 16:40 Pace Analytical 7/31/14 16:40  
 Relinquished by Date/Time Received by Date/Time

Well # WSW-3  
 Well Diameter (D) 6.0 inch -- or feet  
 conversion factor(C):  $3.143*(D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval -- ft. to -- ft.  
 Total Well Depth (TWD) -- ft.  
 Depth to GW(DGW) -- ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.  
 1Csg. Vol. (LWC\*C) = 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling -- gal.  
 Well Yield Low -- Medium -- High --

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	--						--
Time (military)	9:55						10:05
pH (s.u.)	6.50						6.32
O.R.P. (mV)	-36						-34
Temperature (°C)	18.26						18.48
Specific Cond. (mS/cm)	0.190						0.179
Dissolved Oxygen (mg/L)	4.93						5.77
Turbidity (NTU)	0.0						0.0

Remarks Sampled from open hole inside well house using a bailer. No purge.  
744 Hwy 378 E.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type WSW pump  
 Method of Sample Collection: Bailer Pump Type WSW pump  
 Quality Assurance: 503058  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 4.49  
 Calibration Measurement Results  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 = 8.61  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 7/30/14 17:15  
 Chain of Custody  
 Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by A. Williamson Received by  
 ECS Office Date/Time 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time 7/31/14 16:40 Received by

Well # WSW-4  
 Well Diameter (D)     inch     or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval     ft. to     ft.  
 Total Well Depth (TWD)     ft.  
 Depth to GW(DGW)     ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.

1Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling     gal.  
 Well Yield Low     Medium     High    

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Initial	--					--
Volume Purged (gallons)	8:48					8:58
Time (military)	6:51					7:03
pH (s.u.)	208					160
O.R.P. (mV)	24.37					24.52
Temperature (°C)	0.832					0.805
Specific Cond. (mS/cm)	6.93					7.45
Dissolved Oxygen (mg/L)	0.0					0.0
Turbidity (NTU)						

Remarks Sampled from spigot on side of house after purging for 10 minutes.  
752 Hwy 378 E.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type --  
 Method of Sample Collection: Bailer Pump Type --  
 Quality Assurance:  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 503058  
 Calibration Measurement Results  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by

Well # WSW-5  
 Well Diameter (D) 6.0 inch \_\_\_\_\_ or feet \_\_\_\_\_  
 conversion factor(C):  $3.143 \times (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Total Well Depth (TWD) 300 ft.  
 Depth to GW(DGW) -- ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.

1Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling \_\_\_\_\_ gal.  
 Well Yield \_\_\_\_\_ Medium \_\_\_\_\_ High \_\_\_\_\_

Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
--						--
9:35						9:45
7.14						6.84
95						103
20.50						19.14
0.342						0.325
5.29						4.44
0.0						0.0

Volume Purged (gallons)  
 Time (military)  
 pH (s.u.)  
 O.R.P. (mV)  
 Temperature (°C)  
 Specific Cond. (mS/cm)  
 Dissolved Oxygen (mg/L)  
 Turbidity (NTU)

Remarks  
Sampled from spigot on well head after purging for 10 minutes.  
Total well depth as indicated on well ID tag. 745 Hwy 378 E.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer -- Pump Type WSW pump  
 Method of Sample Collection: Bailer -- Pump Type WSW pump  
 Quality Assurance: 503058  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 4.49  
 Calibration Measurement Results 8.61  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by 7/30/14 17:15 Date/Time  
 ECS Office  
 Relinquished by 7/31/14 16:40 Date/Time  
 ECS Office  
 Relinquished by 7/31/14 16:40 Date/Time

Well # WSW-6  
 Well Diameter (D) 6.0 inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval -- ft. to 400 ft.  
 Total Well Depth (TWD) -- ft.  
 Depth to GW(DGW) -- ft.

Length of Water Column (LWC=TWD-DGW) 0.00 ft.  
 1Csg. Vol. (LWC\*C) = 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling -- gal.  
 Well Yield Low Medium High

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	--							--
Time (military)	10:25							10:35
pH (s.u.)	6.74							6.81
O.R.P. (mV)	66							74
Temperature (°C)	24.74							21.01
Specific Cond. (mS/cm)	0.299							0.302
Dissolved Oxygen (mg/L)	5.97							4.36
Turbidity (NTU)	0.0							0.0

Remarks  
 Sampled from spigot on well head after purging for 10 minutes.  
 Total well depth as indicated on ID tag.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u> Field Personnel <u>B. Peay</u> General Weather Conditions <u>Sunny</u> Ambient Air Temperature <u>90</u> F Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u> Method of Well Purging: <u>Bailer</u> Pump Type <u>WSW pump</u> Method of Sample Collection: <u>Bailer</u> Pump Type <u>WSW pump</u> Water Quality Meter: <u>Horiba W22XD - U226</u> Serial Number: <u>503058</u> pH 4.0 = <u>4.01 @ 23.48°C</u> Conductivity <u>4.49</u> = Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen <u>8.52</u> = Relinquished by <u>A. Williamson</u> Date/Time <u>7/30/14 17:15</u> ECS Office Relinquished by <u>ECS Office</u> Date/Time <u>7/31/14 16:40</u> Pace Analytical Relinquished by <u>ECS Office</u> Date/Time <u>7/31/14 16:40</u>	Well # <u>WSW-7</u> Well Diameter (D) <u>--</u> inch <u>--</u> or feet conversion factor(C): $3.143*(D/2)^2$ for a 2 inch well C= <u>0.163</u> for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u> Screen Interval <u>--</u> ft. to <u>--</u> ft. Total Well Depth (TWD) <u>--</u> ft. Depth to GW(DGW) <u>--</u> ft. Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft. 1Csg. Vol. (LWC*C)= <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal. 3Csg. Volume = 3x <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol) Total Vol. of Water Purged Before Sampling <u>--</u> gal. Well Yield Low <u>--</u> Medium <u>--</u> High <u>--</u>	
Volume Purged (gallons) Time (military) pH (s.u.) O.R.P. (mV) Temperature (°C) Specific Cond. (mS/cm) Dissolved Oxygen (mg/L) Turbidity (NTU)	1st vol. 2nd vol. 3rd vol. 4th vol. 5th vol. Post Sampling -- -- -- -- -- -- 13:01 -- -- -- -- -- 13:09 7.64 -- -- -- -- -- 7.74 71 -- -- -- -- -- 69 27.36 -- -- -- -- -- 25.58 0.313 -- -- -- -- -- 0.321 6.58 -- -- -- -- -- 6.46 0.0 -- -- -- -- -- 0.0	Remarks Sampled from spigot on back side of Northside VFD after purging for 10 minutes. 719 Hwy 378 E.



South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type WSW pump  
 Method of Sample Collection: Bailer Pump Type WSW pump  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 503058  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by 7/30/14 17:15 Date/Time  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by 7/31/14 16:40 Date/Time

Well # WSW-8 Pre GAC  
 Well Diameter (D) -- inch -- or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval -- ft. to -- ft.  
 Total Well Depth (TWD) -- ft.  
 Depth to GW(DGW) -- ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.  
 1Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling -- gal.  
 Well Yield Low Medium High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Initial	--					--
Volume Purged (gallons)	12:20					12:30
Time (military)	7:36					7:41
pH (s.u.)	92					98
O.R.P. (mV)	25.76					20.65
Temperature (°C)	0.477					0.504
Specific Cond. (mS/cm)	8.53					8.28
Dissolved Oxygen (mg/L)	0.0					0.0
Turbidity (NTU)						

Remarks Sampled from "Pre" sample port inside GAC building next to well house, prior to GAC treatment, after purging for 10 minutes.  
724 Hwy 378 E.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>WSW-8 Post GAC</u>	
Field Personnel <u>B. Peay</u>		Well Diameter (D) <u>--</u> inch <u>--</u> or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>--</u> ft. to <u>--</u> ft.	
Method of Well Purging: <u>Bailer</u> <u>--</u> Pump Type		Total Well Depth (TWD) <u>--</u> ft.	
Method of Sample Collection: <u>Bailer</u> <u>--</u> Pump Type		Depth to GW(DGW) <u>--</u> ft.	
Water Quality Meter: <u>Horiba W22XD - U226</u> Serial Number: <u>503058</u>		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
pH 4.0 = <u>4.01 @ 23.48°C</u> Conductivity <u>4.49</u> =		1Csg. Vol. (LWC*C) = <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen <u>8.52</u> =		3Csg. Volume = $3 \times$ <u>0.00</u> = <u>0.00</u> gals. (Std. Purge Vol)	
A. Williamson <u>7/30/14 17:15</u> ECS Office		Total Vol. of Water Purged Before Sampling <u>--</u> High	
Relinquished by <u>7/31/14 16:40</u> Pace Analytical		Well Yield <u>Low</u> Medium High	
Relinquished by <u>7/31/14 16:40</u> Date/Time			

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	--							--
Time (military)	12:22							12:32
pH (s.u.)	7.30							7.15
O.R.P. (mV)	95							99
Temperature (°C)	22.94							22.03
Specific Cond. (mS/cm)	0.480							0.495
Dissolved Oxygen (mg/L)	7.31							6.50
Turbidity (NTU)	0.0							0.0

Remarks Sample collected from "Post" sample port inside GAC building next to well house, after GAC treatment, after purging for 10 minutes.  
724 Hwy 378 E.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type WSW pump  
 Method of Sample Collection: Bailer Pump Type WSW pump  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 503058  
 pH 4.0 = 4.01 @ 23.48°C Calibration Measurement Results  
 Conductivity 4.49  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by 7/30/14 17:15 Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by 7/31/14 16:40 Received by

Well # WSW-9  
 Well Diameter (D) -- inch -- or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval -- ft. to -- ft.  
 Total Well Depth (TWD) -- ft.  
 Depth to GW(DGW) -- ft.

Length of Water Column (LWC=TWD-DGW) 0.00 ft.  
 1Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling -- gal.  
 Well Yield Low Medium -- High

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Initial	--					--
Volume Purged (gallons)	13:25					13:35
Time (military)	7.12					6.72
pH (s.u.)	-96					0
O.R.P. (mV)	26.22					21.49
Temperature (°C)	0.372					0.357
Specific Cond. (mS/cm)	4.30					4.15
Dissolved Oxygen (mg/L)	28.4					0.0
Turbidity (NTU)						

Remarks  
 Sampled from spigot on side of well house after purging for 10 minutes.  
 71 Faulkner Mountain Road.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/29/14</u>		Well # <u>WSW-10</u>	
Field Personnel <u>B. Peay</u>		Well Diameter (D) <u>    </u> inch <u>    </u> or feet	
General Weather Conditions <u>Sunny</u>		conversion factor(C): $3.143 \times (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90 F</u>		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>    </u> ft. to <u>    </u> ft.	
Method of Well Purging: <u>    </u> Bailer <u>    </u> Pump Type <u>    </u>		Total Well Depth (TWD) <u>    </u> ft.	
Method of Sample Collection: <u>    </u> Bailer <u>    </u> Pump Type <u>    </u>		Depth to GW(DGW) <u>    </u> ft.	
Water Quality Meter: <u>Horiba W22XD - U226</u> Serial Number: <u>503058</u>		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
pH 4.0 = <u>4.01 @ 23.48°C</u> Calibration Measurement Results		1Csg. Vol. (LWC*C) = <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Turbidity 0.0 = <u>0.0</u> Conductivity <u>4.49</u> = <u>    </u>		3Csg. Volume = $3 \times$ <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
A. Williamson Date/Time <u>7/30/14 17:15</u> ECS Office		Total Vol. of Water Purged Before Sampling <u>    </u> gal.	
Relinquished by <u>    </u> Date/Time <u>7/31/14 16:40</u> Pace Analytical		Well Yield <u>    </u> Low <u>    </u> Medium <u>    </u> High <u>    </u>	
Relinquished by <u>    </u> Date/Time <u>    </u>			

	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	--						--
Time (military)	13:47						13:57
pH (s.u.)	7.13						7.35
O.R.P. (mV)	64						74
Temperature (°C)	26.63						23.21
Specific Cond. (mS/cm)	0.563						0.553
Dissolved Oxygen (mg/L)	7.04						6.90
Turbidity (NTU)	0.0						0.0

Remarks Sampled from spigot inside well house after purging for 10 minutes.  
68 Faulkner Mountain Road.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type --  
 Method of Sample Collection: Bailer Pump Type --  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 503058  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 = 4.49  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.61  
 Relinquished by A. Williamson Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by ECS Office Date/Time 7/31/14 16:40 Pace Analytical  
 Relinquished by \_\_\_\_\_ Date/Time \_\_\_\_\_ Received by \_\_\_\_\_

Well # WSW-11  
 Well Diameter (D) -- inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval -- ft. to -- ft.  
 Total Well Depth (TWD) -- ft.  
 Depth to GW(DGW) -- ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.  
 1 Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3 Csg. Volume = 3x 0.00 = 0.00 gals. (Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling -- High  
 Well Yield Low Medium

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post	Sampling
Volume Purged (gallons)	--							--
Time (military)	14:16							14:26
pH (s.u.)	7.11							678.00
O.R.P. (mV)	134							121
Temperature (°C)	27.56							20.78
Specific Cond. (mS/cm)	0.525							0.518
Dissolved Oxygen (mg/L)	5.44							5.44
Turbidity (NTU)	0.0							0.0

Remarks Sampled from spigot on side of well house after purging for 10 minutes.  
66 Faulkner Mountain Road.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer -- Pump Type WSW pump  
 Method of Sample Collection: Bailer -- Pump Type WSW pump  
 Water Quality Meter: Horiba W22XD - U226 Serial Number: 503058  
 Calibration Measurement Results  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 = 4.49  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 = 8.61  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by Date/Time Received by Date/Time  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by Date/Time Received by Date/Time

Well # WSW-12  
 Well Diameter (D) -- inch -- or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval -- ft. to -- ft.  
 Total Well Depth (TWD) -- ft.  
 Depth to GW(DGW) -- ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.

1Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling -- gal.  
 Well Yield Low Medium High

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	--						--
Time (military)	14:20						14:30
pH (s.u.)	7.31						7.08
O.R.P. (mV)	117						108
Temperature (°C)	20.75						19.47
Specific Cond. (mS/cm)	0.525						0.507
Dissolved Oxygen (mg/L)	8.22						6.50
Turbidity (NTU)	0.0						0.0

Remarks Sampled from spigot on side of well house after purging for 10 minutes.  
64 Faulkner Mountain Road.

South Carolina Department of Health and Environmental Control  
Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) <u>07/28/14</u>		Well # <u>WSW-13</u>	
Field Personnel <u>B. Peay</u>		Well Diameter (D) <u>    </u> inch <u>    </u> or feet	
General Weather Conditions <u>Sunny,</u>		conversion factor(C): $3.143 \cdot (D/2)^2$ for a 2 inch well C= <u>0.163</u>	
Ambient Air Temperature <u>90</u> F		for a 4 inch well C= <u>0.652</u> for a 6 inch well C= <u>1.469</u>	
Facility Name <u>378 Truck Stop</u> Site ID# <u>07960</u>		Screen Interval <u>    </u> ft. to <u>    </u> ft.	
Method of Well Purging: <u>    </u> Bailer <u>    </u> Pump Type		Total Well Depth (TWD) <u>    </u> ft.	
Method of Sample Collection: <u>    </u> Bailer <u>    </u> Pump Type		Depth to GW(DGW) <u>    </u> ft.	
Water Quality Meter: <u>Horiba W22XD - U226</u> Serial Number: <u>503058</u>		Length of Water Column (LWC=TWD-DGW) <u>0.00</u> ft.	
pH 4.0 = <u>4.01 @ 23.48°C</u> Conductivity 4.49 = <u>    </u>		1Csg. Vol. (LWC*C) = <u>0.00</u> X <u>0.163</u> = <u>0.00</u> gal.	
Turbidity 0.0 = <u>0.0</u> Dissolved Oxygen 8.52 = <u>    </u>		3Csg. Volume = $3x$ <u>0.00</u> = <u>0.00</u> gals.(Std. Purge Vol)	
A. Williamson <u>7/30/14 17:15</u> Chain of Custody		Total Vol. of Water Purged Before Sampling <u>    </u> gal.	
Relinquished by <u>    </u> Date/Time <u>    </u>		Well Yield <u>    </u> Low <u>    </u> Medium <u>    </u> High	
ECS Office <u>7/31/14 16:40</u>			
Relinquished by <u>    </u> Date/Time <u>    </u>			
Pace Analytical <u>7/31/14 16:40</u>			
Received by <u>    </u> Date/Time <u>    </u>			
Received by <u>    </u> Date/Time <u>    </u>			

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	--						--
Time (military)	14:50						15:00
pH (s.u.)	7.03						6.97
O.R.P. (mV)	109						106
Temperature (°C)	24.85						22.31
Specific Cond. (mS/cm)	0.615						0.618
Dissolved Oxygen (mg/L)	5.72						6.02
Turbidity (NTU)	0.0						0.0

Remarks	Sampled from spigot on back of house after purging for 10 minutes. 62 Faulkner Mountain Road.
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South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F

Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer Pump Type  
 Method of Sample Collection: Bailer Pump Type

Water Quality Meter: Horiba W22XD - U226 Serial Number: 503058  
 Calibration Measurement Results  
 pH 4.0 = 4.01 @ 23.48°C Conductivity 4.49 =  
 Turbidity 0.0 = 0.0 Dissolved Oxygen 8.52 =

Relinquished by A. Williamson Date/Time 7/30/14 17:15 ECS Office  
 Relinquished by ECS Office Date/Time 7/31/14 16:40 Pace Analytical  
 Relinquished by \_\_\_\_\_ Date/Time \_\_\_\_\_

Well # WSW-14  
 Well Diameter (D)     inch     or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval     ft. to     ft.  
 Total Well Depth (TWD)     ft.  
 Depth to GW(DGW)     ft.

Length of Water Column (LWC=TWD-DGW)     ft.  
 1Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling     gal.  
 Well Yield Low Medium High

	Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
Volume Purged (gallons)	--						--
Time (military)	15:11						15:21
pH (s.u.)	7.40						7.53
O.R.P. (mV)	93						98
Temperature (°C)	23.07						21.91
Specific Cond. (mS/cm)	0.658						0.658
Dissolved Oxygen (mg/L)	9.30						9.44
Turbidity (NTU)	0.0						0.0

Remarks Sampled from spigot inside well house after purging for 10 minutes.  
54 Faulkner Mountain Road.



South Carolina Department of Health and Environmental Control  
 Bureau of Underground Storage Tank Management

**Field Data Information Sheet for Ground Water Sampling**

Date(mm/dd/yy) 07/29/14  
 Field Personnel B. Peay  
 General Weather Conditions Sunny  
 Ambient Air Temperature 90 F  
 Facility Name 378 Truck Stop Site ID# 07960  
 Method of Well Purging: Bailer -- Pump Type WSW pump  
 Method of Sample Collection: Bailer -- Pump Type WSW pump  
 Quality Assurance: Serial Number: 503058  
 Water Quality Meter: Horiba W22XD - U226  
 Calibration Measurement Results  
 Conductivity 4.49 =  
 Dissolved Oxygen 8.52 =  
 pH 4.0 =  
 Turbidity 0.0 =  
 Chain of Custody  
 A. Williamson 7/30/14 17:15 ECS Office  
 Relinquished by 7/30/14 17:15 Received by  
 ECS Office 7/31/14 16:40 Pace Analytical  
 Relinquished by 7/31/14 16:40 Received by

Well # WSW-15  
 Well Diameter (D) -- inch or feet  
 conversion factor(C):  $3.143 \cdot (D/2)^2$  for a 2 inch well C= 0.163  
 for a 4 inch well C= 0.652 for a 6 inch well C= 1.469  
 Screen Interval -- ft. to -- ft.  
 Total Well Depth (TWD) -- ft.  
 Depth to GW(DGW) -- ft.  
 Length of Water Column (LWC=TWD-DGW) 0.00 ft.  
 1 Csg. Vol. (LWC\*C)= 0.00 X 0.163 = 0.00 gal.  
 3 Csg. Volume = 3x 0.00 = 0.00 gals.(Std. Purge Vol)  
 Total Vol. of Water Purged Before Sampling -- High  
 Well Yield Low Medium

Initial	1st vol.	2nd vol.	3rd vol.	4th vol.	5th vol.	Post Sampling
--						--
15:37						15:47
7:38						7:34
99						78
26.15						23.14
1.080						0.930
6.59						4.45
0.0						0.0

Volume Purged (gallons)  
 Time (military)  
 pH (s.u.)  
 O.R.P. (mV)  
 Temperature (°C)  
 Specific Cond. (mS/cm)  
 Dissolved Oxygen (mg/L)  
 Turbidity (NTU)

Remarks Sampled from spigot on side of well house after purging for 10 minutes.  
57 Faulkner Mountain Raod.

**APPENDIX B**  
**QUALITY ASSURANCE AND QUALITY CONTROL EVALUATION**  
**LABORATORY ACCURACY - PACE ANALYTICAL SERVICES**

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	1,2-DCA (µg/L)	TAA (µg/L)	TAME (µg/L)	TBA (µg/L)	TBF (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	ETBE (µg/L)	3,3-Dimethyl-1-butanol (µg/L)
07960-FIELD BLANK 1	7/28/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<100	<10.0	<100	<50.0	<5.0	<200	<10.0	<100
07960-FIELD BLANK 2	7/31/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<100	<10.0	<100	<50.0	<5.0	<200	<10.0	<100
07960-FIELD BLANK 3	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<100	<10.0	<100	<50.0	<5.0	<200	<10.0	<100
TRIP BLANK	7/30/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<100	<10.0	<100	<50.0	<5.0	<200	<10.0	<100
TRIP BLANK	7/31/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<100	<10.0	<100	<50.0	<5.0	<200	<10.0	<100
TRIP BLANK	7/29/2014	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<100	<10.0	<100	<50.0	<5.0	<200	<10.0	<100

Duplicate samples were collected during the sampling event. Below is a comparison of the laboratory analytical results from the duplicate samples.

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	1,2-DCA (µg/L)	TAA (µg/L)	TAME (µg/L)	TBA (µg/L)	TBF (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	ETBE (µg/L)	3,3-Dimethyl-1-butanol (µg/L)
07960-MW31	7/28/2014	394	78.9	71.3	182.13	<12.5	51.0	36.6	678	<25.0	<250	<125	<12.5	<500	<25.0	<250
07960-Duplicate 1	7/28/2014	402	90.6	83.6	210.3	<5.0	50.8	40.8	664	<10.0	<100	<50.0	<5.0	<200	<10.0	<100
<b>Relative Percent Difference</b>		<b>2.01%</b>	<b>13.81%</b>	<b>15.88%</b>	<b>14.36%</b>	--	<b>0.39%</b>	<b>10.85%</b>	<b>2.09%</b>	--	--	--	--	--	--	--
<b>Average Relative Percent Difference</b>																<b>8.48%</b>

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	1,2-DCA (µg/L)	TAA (µg/L)	TAME (µg/L)	TBA (µg/L)	TBF (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	ETBE (µg/L)	3,3-Dimethyl-1-butanol (µg/L)
07960-MW12	7/29/2014	2,530	121	526	1,282	<100	235	161	4,100	<200	<2,000	<1,000	<100	<4,000	<200	<2,000
07960-Duplicate 2	7/29/2014	2,190	104	548	1,106	<100	203	139	3,530	<200	<2,000	<1,000	<100	<4,000	<200	<2,000
<b>Relative Percent Difference</b>		<b>14.41%</b>	<b>15.11%</b>	<b>4.10%</b>	<b>14.74%</b>	--	<b>14.61%</b>	<b>14.67%</b>	<b>14.94%</b>	--	--	--	--	--	--	--
<b>Average Relative Percent Difference</b>																<b>13.22%</b>

Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	1,2-DCA (µg/L)	TAA (µg/L)	TAME (µg/L)	TBA (µg/L)	TBF (µg/L)	DIPE (µg/L)	Ethanol (µg/L)	ETBE (µg/L)	3,3-Dimethyl-1-butanol (µg/L)
07960-MW1	7/30/2014	1,080	830	1,680	7,440	<50.0	619	78.0	2,500	<100	<1,000	<500	<50.0	<2,000	<100	<1,000
07960-Duplicate 3	7/30/2014	1,290	899	1,560	7,700	<100	536	82.8	2,370	<200	<2,000	<1,000	<100	<4,000	<200	<2,000
<b>Relative Percent Difference</b>		<b>17.72%</b>	<b>7.98%</b>	<b>7.41%</b>	<b>3.43%</b>	--	<b>14.37%</b>	<b>5.97%</b>	<b>5.34%</b>	--	--	--	--	--	--	--
<b>Average Relative Percent Difference</b>																<b>8.89%</b>

FB - Field Blank  
 Results in micrograms per liter ug/L.

August 07, 2014

Noelle France  
Environmental Compliance Services  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 TRUCK STOP 14-214210  
Pace Project No.: 92211558

Dear Noelle France:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Nicole Benjamin  
nicole.benjamin@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

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### Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92211558001	07960-MW13	Water	07/29/14 13:25	07/31/14 16:40
92211558002	07960-MW15	Water	07/29/14 13:10	07/31/14 16:40
92211558003	07960-MW30	Water	07/29/14 14:20	07/31/14 16:40
92211558004	07960-MW22	Water	07/29/14 14:05	07/31/14 16:40
92211558005	07960-TW2	Water	07/29/14 15:25	07/31/14 16:40
92211558006	07960-MW3	Water	07/29/14 15:05	07/31/14 16:40
92211558007	07960-TW1	Water	07/29/14 16:25	07/31/14 16:40
92211558008	07960-MW6	Water	07/29/14 16:55	07/31/14 16:40
92211558009	07960-MW7	Water	07/29/14 17:05	07/31/14 16:40
92211558010	07960-MW8	Water	07/30/14 08:25	07/31/14 16:40
92211558011	07960-MW4	Water	07/30/14 08:40	07/31/14 16:40
92211558012	07960-MW28	Water	07/30/14 09:45	07/31/14 16:40
92211558013	07960-MW20	Water	07/30/14 09:20	07/31/14 16:40
92211558014	07960-MW5	Water	07/30/14 09:30	07/31/14 16:40
92211558015	07960-MW27	Water	07/30/14 09:55	07/31/14 16:40
92211558016	07960-MW21	Water	07/30/14 11:20	07/31/14 16:40
92211558017	07960-MW14	Water	07/30/14 10:10	07/31/14 16:40
92211558018	07960-MW11	Water	07/30/14 10:20	07/31/14 16:40
92211558019	07960-MW1	Water	07/30/14 11:35	07/31/14 16:40
92211558020	07960-MW2	Water	07/30/14 12:25	07/31/14 16:40
92211558021	07960-MW29	Water	07/30/14 13:25	07/31/14 16:40
92211558022	07960-DUPLICATE 3	Water	07/30/14 00:00	07/31/14 16:40
92211558023	07960-FB3	Water	07/30/14 13:10	07/31/14 16:40
92211558024	TRIP BLANK	Water	07/30/14 00:00	07/31/14 16:40

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92211558001	07960-MW13	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558002	07960-MW15	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558003	07960-MW30	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558004	07960-MW22	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558005	07960-TW2	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558006	07960-MW3	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558007	07960-TW1	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558008	07960-MW6	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558009	07960-MW7	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558010	07960-MW8	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558011	07960-MW4	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558012	07960-MW28	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558013	07960-MW20	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558014	07960-MW5	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558015	07960-MW27	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558016	07960-MW21	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558017	07960-MW14	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558018	07960-MW11	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211558019	07960-MW1	EPA 8011	JMC	2	PASI-C

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92211558020	07960-MW2	EPA 8260	MCK	19	PASI-C
		EPA 8011	JMC	2	PASI-C
92211558021	07960-MW29	EPA 8260	MCK	19	PASI-C
		EPA 8011	JMC	2	PASI-C
92211558022	07960-DUPLICATE 3	EPA 8260	MCK	19	PASI-C
		EPA 8011	JMC	2	PASI-C
92211558023	07960-FB3	EPA 8260	MCK	19	PASI-C
		EPA 8011	JMC	2	PASI-C
92211558024	TRIP BLANK	EPA 8260	MCK	19	PASI-C
		EPA 8260	MCK	19	PASI-C

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW13		Lab ID: 92211558001	Collected: 07/29/14 13:25	Received: 07/31/14 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:48	08/03/14 21:53	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	130	%	60-140		1	08/03/14 18:48	08/03/14 21:53	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	2090	ug/L	500	384	5		08/02/14 05:32	75-85-4	
tert-Amylmethyl ether	ND	ug/L	50.0	17.0	5		08/02/14 05:32	994-05-8	
Benzene	881	ug/L	25.0	8.5	5		08/02/14 05:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	500	160	5		08/02/14 05:32	624-95-3	
tert-Butyl Alcohol	ND	ug/L	500	288	5		08/02/14 05:32	75-65-0	
tert-Butyl Formate	ND	ug/L	250	36.5	5		08/02/14 05:32	762-75-4	
1,2-Dichloroethane	57.6	ug/L	25.0	9.0	5		08/02/14 05:32	107-06-2	
Diisopropyl ether	ND	ug/L	25.0	8.5	5		08/02/14 05:32	108-20-3	
Ethanol	ND	ug/L	1000	689	5		08/02/14 05:32	64-17-5	
Ethylbenzene	30.6	ug/L	25.0	8.0	5		08/02/14 05:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	50.0	18.0	5		08/02/14 05:32	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	25.0	8.5	5		08/02/14 05:32	1634-04-4	
Naphthalene	85.7	ug/L	25.0	10.0	5		08/02/14 05:32	91-20-3	
Toluene	25.1	ug/L	25.0	8.0	5		08/02/14 05:32	108-88-3	
m&p-Xylene	153	ug/L	50.0	15.5	5		08/02/14 05:32	179601-23-1	
o-Xylene	58.7	ug/L	25.0	8.0	5		08/02/14 05:32	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		5		08/02/14 05:32	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		5		08/02/14 05:32	17060-07-0	
Toluene-d8 (S)	99	%	70-130		5		08/02/14 05:32	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW15      Lab ID: 92211558002      Collected: 07/29/14 13:10      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:48	08/03/14 22:13	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	112	%	60-140		1	08/03/14 18:48	08/03/14 22:13	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 03:42	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 03:42	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 03:42	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 03:42	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 03:42	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 03:42	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 03:42	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 03:42	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 03:42	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 03:42	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 03:42	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 03:42	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 03:42	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 03:42	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 03:42	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 03:42	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 03:42	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/02/14 03:42	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/02/14 03:42	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW30      Lab ID: 92211558003      Collected: 07/29/14 14:20      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:48	08/03/14 23:15	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	119	%	60-140		1	08/03/14 18:48	08/03/14 23:15	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	1690	ug/L	500	384	5		08/02/14 10:14	75-85-4	
tert-Amylmethyl ether	ND	ug/L	50.0	17.0	5		08/02/14 10:14	994-05-8	
Benzene	700	ug/L	25.0	8.5	5		08/02/14 10:14	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	500	160	5		08/02/14 10:14	624-95-3	
tert-Butyl Alcohol	ND	ug/L	500	288	5		08/02/14 10:14	75-65-0	
tert-Butyl Formate	ND	ug/L	250	36.5	5		08/02/14 10:14	762-75-4	
1,2-Dichloroethane	33.6	ug/L	25.0	9.0	5		08/02/14 10:14	107-06-2	
Diisopropyl ether	ND	ug/L	25.0	8.5	5		08/02/14 10:14	108-20-3	
Ethanol	ND	ug/L	1000	689	5		08/02/14 10:14	64-17-5	
Ethylbenzene	14.1J	ug/L	25.0	8.0	5		08/02/14 10:14	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	50.0	18.0	5		08/02/14 10:14	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	25.0	8.5	5		08/02/14 10:14	1634-04-4	
Naphthalene	69.9	ug/L	25.0	10.0	5		08/02/14 10:14	91-20-3	
Toluene	14.8J	ug/L	25.0	8.0	5		08/02/14 10:14	108-88-3	
m&p-Xylene	54.5	ug/L	50.0	15.5	5		08/02/14 10:14	179601-23-1	
o-Xylene	17.2J	ug/L	25.0	8.0	5		08/02/14 10:14	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		5		08/02/14 10:14	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		5		08/02/14 10:14	17060-07-0	
Toluene-d8 (S)	96	%	70-130		5		08/02/14 10:14	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW22      Lab ID: 92211558004      Collected: 07/29/14 14:05      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	53.4	ug/L	2.0	2.0	100	08/03/14 18:48	08/06/14 00:05	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	0	%	60-140		100	08/03/14 18:48	08/06/14 00:05	301-79-56	S4
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	25000	19200	250		08/02/14 11:17	75-85-4	
tert-Amylmethyl ether	ND	ug/L	2500	850	250		08/02/14 11:17	994-05-8	
Benzene	9910	ug/L	1250	425	250		08/02/14 11:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	25000	8020	250		08/02/14 11:17	624-95-3	
tert-Butyl Alcohol	ND	ug/L	25000	14400	250		08/02/14 11:17	75-65-0	
tert-Butyl Formate	ND	ug/L	12500	1820	250		08/02/14 11:17	762-75-4	
1,2-Dichloroethane	ND	ug/L	1250	450	250		08/02/14 11:17	107-06-2	
Diisopropyl ether	ND	ug/L	1250	425	250		08/02/14 11:17	108-20-3	
Ethanol	ND	ug/L	50000	34400	250		08/02/14 11:17	64-17-5	
Ethylbenzene	1970	ug/L	1250	400	250		08/02/14 11:17	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	2500	900	250		08/02/14 11:17	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1250	425	250		08/02/14 11:17	1634-04-4	
Naphthalene	926J	ug/L	1250	500	250		08/02/14 11:17	91-20-3	
Toluene	25800	ug/L	1250	400	250		08/02/14 11:17	108-88-3	
m&p-Xylene	10800	ug/L	2500	775	250		08/02/14 11:17	179601-23-1	
o-Xylene	5050	ug/L	1250	400	250		08/02/14 11:17	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		250		08/02/14 11:17	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		250		08/02/14 11:17	17060-07-0	
Toluene-d8 (S)	96	%	70-130		250		08/02/14 11:17	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-TW2      Lab ID: 92211558005      Collected: 07/29/14 15:25      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:48	08/04/14 00:16	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	08/03/14 18:48	08/04/14 00:16	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	77.9J	ug/L	100	76.8	1		08/02/14 08:55	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 08:55	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 08:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 08:55	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 08:55	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 08:55	762-75-4	
1,2-Dichloroethane	2.2J	ug/L	5.0	1.8	1		08/02/14 08:55	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 08:55	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 08:55	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 08:55	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 08:55	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 08:55	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 08:55	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 08:55	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 08:55	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 08:55	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/02/14 08:55	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/02/14 08:55	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/02/14 08:55	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW3      Lab ID: 92211558006      Collected: 07/29/14 15:05      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	1.5	ug/L	0.079	0.079	4	08/03/14 18:48	08/06/14 00:26	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	114	%	60-140		4	08/03/14 18:48	08/06/14 00:26	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	10600	ug/L	5000	3840	50		08/02/14 11:01	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	170	50		08/02/14 11:01	994-05-8	
Benzene	6960	ug/L	250	85.0	50		08/02/14 11:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	1600	50		08/02/14 11:01	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	2880	50		08/02/14 11:01	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	365	50		08/02/14 11:01	762-75-4	
1,2-Dichloroethane	521	ug/L	250	90.0	50		08/02/14 11:01	107-06-2	
Diisopropyl ether	ND	ug/L	250	85.0	50		08/02/14 11:01	108-20-3	
Ethanol	ND	ug/L	10000	6890	50		08/02/14 11:01	64-17-5	
Ethylbenzene	1180	ug/L	250	80.0	50		08/02/14 11:01	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	180	50		08/02/14 11:01	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	85.0	50		08/02/14 11:01	1634-04-4	
Naphthalene	469	ug/L	250	100	50		08/02/14 11:01	91-20-3	
Toluene	684	ug/L	250	80.0	50		08/02/14 11:01	108-88-3	
m&p-Xylene	3620	ug/L	500	155	50		08/02/14 11:01	179601-23-1	
o-Xylene	1910	ug/L	250	80.0	50		08/02/14 11:01	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		50		08/02/14 11:01	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		50		08/02/14 11:01	17060-07-0	
Toluene-d8 (S)	96	%	70-130		50		08/02/14 11:01	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-TW1      Lab ID: 92211558007      Collected: 07/29/14 16:25      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:48	08/04/14 00:57	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	112	%	60-140		1	08/03/14 18:48	08/04/14 00:57	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	1230	ug/L	100	76.8	1		08/02/14 09:11	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 09:11	994-05-8	
Benzene	7.0	ug/L	5.0	1.7	1		08/02/14 09:11	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 09:11	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 09:11	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 09:11	762-75-4	
1,2-Dichloroethane	60.5	ug/L	5.0	1.8	1		08/02/14 09:11	107-06-2	
Diisopropyl ether	1.8J	ug/L	5.0	1.7	1		08/02/14 09:11	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 09:11	64-17-5	
Ethylbenzene	1.8J	ug/L	5.0	1.6	1		08/02/14 09:11	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 09:11	637-92-3	
Methyl-tert-butyl ether	5.9	ug/L	5.0	1.7	1		08/02/14 09:11	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 09:11	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 09:11	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 09:11	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 09:11	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/02/14 09:11	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/02/14 09:11	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 09:11	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW6      Lab ID: 92211558008      Collected: 07/29/14 16:55      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:48	08/04/14 01:17	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	112	%	60-140		1	08/03/14 18:48	08/04/14 01:17	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 06:19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 06:19	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 06:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 06:19	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 06:19	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 06:19	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 06:19	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 06:19	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 06:19	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 06:19	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 06:19	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 06:19	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 06:19	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 06:19	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 06:19	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 06:19	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		08/02/14 06:19	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		08/02/14 06:19	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/02/14 06:19	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW7      Lab ID: 92211558009      Collected: 07/29/14 17:05      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	8.1	ug/L	0.20	0.20	10	08/03/14 18:48	08/06/14 00:46	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	0	%	60-140		10	08/03/14 18:48	08/06/14 00:46	301-79-56	S4
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	4760J	ug/L	5000	3840	50		08/05/14 23:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 09:27	994-05-8	
Benzene	2200	ug/L	250	85.0	50		08/05/14 23:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 09:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 09:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 09:27	762-75-4	
1,2-Dichloroethane	147	ug/L	5.0	1.8	1		08/02/14 09:27	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 09:27	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 09:27	64-17-5	
Ethylbenzene	623	ug/L	250	80.0	50		08/05/14 23:12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 09:27	637-92-3	
Methyl-tert-butyl ether	3.0J	ug/L	5.0	1.7	1		08/02/14 09:27	1634-04-4	
Naphthalene	250J	ug/L	250	100	50		08/05/14 23:12	91-20-3	
Toluene	13.1	ug/L	5.0	1.6	1		08/02/14 09:27	108-88-3	
m&p-Xylene	1880	ug/L	500	155	50		08/05/14 23:12	179601-23-1	
o-Xylene	639	ug/L	250	80.0	50		08/05/14 23:12	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/02/14 09:27	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/02/14 09:27	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/02/14 09:27	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW8      Lab ID: 92211558010      Collected: 07/30/14 08:25      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/03/14 18:49	08/04/14 01:58	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	114	%	60-140		1	08/03/14 18:49	08/04/14 01:58	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 06:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 06:34	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 06:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 06:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 06:34	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 06:34	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 06:34	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 06:34	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 06:34	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 06:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 06:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 06:34	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 06:34	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 06:34	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 06:34	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 06:34	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 06:34	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		08/02/14 06:34	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 06:34	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW4      Lab ID: 92211558011      Collected: 07/30/14 08:40      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:49	08/04/14 02:19	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	114	%	60-140		1	08/03/14 18:49	08/04/14 02:19	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	115	ug/L	100	76.8	1		08/02/14 06:50	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 06:50	994-05-8	
Benzene	11.4	ug/L	5.0	1.7	1		08/02/14 06:50	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 06:50	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 06:50	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 06:50	762-75-4	
1,2-Dichloroethane	2.2J	ug/L	5.0	1.8	1		08/02/14 06:50	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 06:50	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 06:50	64-17-5	
Ethylbenzene	2.8J	ug/L	5.0	1.6	1		08/02/14 06:50	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 06:50	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 06:50	1634-04-4	
Naphthalene	3.4J	ug/L	5.0	2.0	1		08/02/14 06:50	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 06:50	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 06:50	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 06:50	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 06:50	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		08/02/14 06:50	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 06:50	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW28      Lab ID: 92211558012      Collected: 07/30/14 09:45      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:49	08/04/14 02:39	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	109 %		60-140		1	08/03/14 18:49	08/04/14 02:39	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 07:06	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 07:06	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 07:06	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 07:06	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 07:06	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 07:06	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 07:06	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 07:06	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 07:06	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 07:06	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 07:06	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 07:06	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 07:06	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 07:06	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 07:06	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 07:06	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		70-130		1		08/02/14 07:06	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		08/02/14 07:06	17060-07-0	
Toluene-d8 (S)	97 %		70-130		1		08/02/14 07:06	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW20      Lab ID: 92211558013      Collected: 07/30/14 09:20      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/03/14 18:49	08/04/14 02:59	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	08/03/14 18:49	08/04/14 02:59	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 07:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 07:21	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 07:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 07:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 07:21	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 07:21	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 07:21	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 07:21	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 07:21	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 07:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 07:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 07:21	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 07:21	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 07:21	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 07:21	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 07:21	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/02/14 07:21	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		08/02/14 07:21	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/02/14 07:21	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW5		Lab ID: 92211558014	Collected: 07/30/14 09:30	Received: 07/31/14 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:49	08/04/14 03:20	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	114 %		60-140		1	08/03/14 18:49	08/04/14 03:20	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 07:37	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 07:37	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 07:37	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 07:37	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 07:37	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 07:37	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 07:37	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 07:37	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 07:37	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 07:37	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 07:37	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 07:37	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 07:37	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 07:37	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 07:37	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 07:37	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		1		08/02/14 07:37	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		08/02/14 07:37	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		08/02/14 07:37	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW27      Lab ID: 92211558015      Collected: 07/30/14 09:55      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:49	08/04/14 03:40	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	08/03/14 18:49	08/04/14 03:40	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 07:53	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 07:53	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 07:53	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 07:53	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 07:53	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 07:53	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 07:53	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 07:53	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 07:53	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 07:53	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 07:53	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 07:53	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 07:53	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 07:53	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 07:53	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 07:53	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 07:53	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/02/14 07:53	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 07:53	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW21      Lab ID: 92211558016      Collected: 07/30/14 11:20      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:49	08/04/14 04:01	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107 %		60-140		1	08/03/14 18:49	08/04/14 04:01	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 08:08	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 08:08	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 08:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 08:08	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 08:08	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 08:08	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 08:08	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 08:08	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 08:08	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 08:08	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 08:08	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 08:08	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 08:08	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 08:08	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 08:08	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 08:08	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		1		08/02/14 08:08	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130		1		08/02/14 08:08	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		08/02/14 08:08	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW14      Lab ID: 92211558017      Collected: 07/30/14 10:10      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:49	08/04/14 04:21	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	112	%	60-140		1	08/03/14 18:49	08/04/14 04:21	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 08:24	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 08:24	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 08:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 08:24	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 08:24	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 08:24	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 08:24	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 08:24	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 08:24	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 08:24	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 08:24	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 08:24	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 08:24	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 08:24	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 08:24	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 08:24	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		1		08/02/14 08:24	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		08/02/14 08:24	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 08:24	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW11      Lab ID: 92211558018      Collected: 07/30/14 10:20      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 18:49	08/04/14 04:41	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	113	%	60-140		1	08/03/14 18:49	08/04/14 04:41	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	357	ug/L	100	76.8	1		08/02/14 08:40	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 08:40	994-05-8	
Benzene	12.9	ug/L	5.0	1.7	1		08/02/14 08:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 08:40	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 08:40	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 08:40	762-75-4	
1,2-Dichloroethane	5.1	ug/L	5.0	1.8	1		08/02/14 08:40	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 08:40	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 08:40	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 08:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 08:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 08:40	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 08:40	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 08:40	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 08:40	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 08:40	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		08/02/14 08:40	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		08/02/14 08:40	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 08:40	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW1      Lab ID: 92211558019      Collected: 07/30/14 11:35      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	3.6	ug/L	0.10	0.10	5	08/03/14 18:49	08/06/14 01:06	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	100	%	60-140		5	08/03/14 18:49	08/06/14 01:06	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	2500	ug/L	1000	768	10		08/02/14 10:29	75-85-4	
tert-Amylmethyl ether	ND	ug/L	100	34.0	10		08/02/14 10:29	994-05-8	
Benzene	1080	ug/L	50.0	17.0	10		08/02/14 10:29	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		08/02/14 10:29	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		08/02/14 10:29	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73.0	10		08/02/14 10:29	762-75-4	
1,2-Dichloroethane	78.0	ug/L	50.0	18.0	10		08/02/14 10:29	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		08/02/14 10:29	108-20-3	
Ethanol	ND	ug/L	2000	1380	10		08/02/14 10:29	64-17-5	
Ethylbenzene	1680	ug/L	50.0	16.0	10		08/02/14 10:29	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36.0	10		08/02/14 10:29	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	50.0	17.0	10		08/02/14 10:29	1634-04-4	
Naphthalene	619	ug/L	50.0	20.0	10		08/02/14 10:29	91-20-3	
Toluene	830	ug/L	50.0	16.0	10		08/02/14 10:29	108-88-3	
m&p-Xylene	5370	ug/L	500	155	50		08/05/14 23:27	179601-23-1	
o-Xylene	2070	ug/L	250	80.0	50		08/05/14 23:27	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	70-130		10		08/02/14 10:29	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		10		08/02/14 10:29	17060-07-0	
Toluene-d8 (S)	97	%	70-130		10		08/02/14 10:29	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW2		Lab ID: 92211558020	Collected: 07/30/14 12:25	Received: 07/31/14 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 06:43	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	109	%	60-140		1	08/03/14 19:03	08/04/14 06:43	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	140	ug/L	100	76.8	1		08/06/14 03:06	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/06/14 03:06	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/06/14 03:06	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/06/14 03:06	624-95-3	
tert-Butyl Alcohol	149	ug/L	100	57.7	1		08/06/14 03:06	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/06/14 03:06	762-75-4	
1,2-Dichloroethane	22.1	ug/L	5.0	1.8	1		08/06/14 03:06	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/06/14 03:06	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/06/14 03:06	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/06/14 03:06	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/06/14 03:06	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/06/14 03:06	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/06/14 03:06	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/06/14 03:06	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/06/14 03:06	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/06/14 03:06	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		08/06/14 03:06	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		08/06/14 03:06	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/06/14 03:06	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-MW29      Lab ID: 92211558021      Collected: 07/30/14 13:25      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 07:03	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	129	%	60-140		1	08/03/14 19:03	08/04/14 07:03	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	4050	ug/L	500	384	5		08/06/14 11:44	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 09:58	994-05-8	
Benzene	199	ug/L	5.0	1.7	1		08/02/14 09:58	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 09:58	624-95-3	
tert-Butyl Alcohol	147	ug/L	100	57.7	1		08/02/14 09:58	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 09:58	762-75-4	
1,2-Dichloroethane	65.2	ug/L	5.0	1.8	1		08/02/14 09:58	107-06-2	
Diisopropyl ether	2.3J	ug/L	5.0	1.7	1		08/02/14 09:58	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 09:58	64-17-5	
Ethylbenzene	29.6	ug/L	5.0	1.6	1		08/02/14 09:58	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 09:58	637-92-3	
Methyl-tert-butyl ether	1.7J	ug/L	5.0	1.7	1		08/02/14 09:58	1634-04-4	
Naphthalene	9.2	ug/L	5.0	2.0	1		08/02/14 09:58	91-20-3	
Toluene	8.4	ug/L	5.0	1.6	1		08/02/14 09:58	108-88-3	
m&p-Xylene	70.8	ug/L	10.0	3.1	1		08/02/14 09:58	179601-23-1	
o-Xylene	34.8	ug/L	5.0	1.6	1		08/02/14 09:58	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 09:58	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		08/02/14 09:58	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/02/14 09:58	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-DUPLICATE 3      Lab ID: 92211558022      Collected: 07/30/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	3.4	ug/L	0.099	0.099	5	08/03/14 19:03	08/06/14 01:27	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	0	%	60-140		5	08/03/14 19:03	08/06/14 01:27	301-79-56	S4
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	2370	ug/L	2000	1540	20		08/02/14 10:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	200	68.0	20		08/02/14 10:45	994-05-8	
Benzene	1290	ug/L	100	34.0	20		08/02/14 10:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2000	642	20		08/02/14 10:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2000	1150	20		08/02/14 10:45	75-65-0	
tert-Butyl Formate	ND	ug/L	1000	146	20		08/02/14 10:45	762-75-4	
1,2-Dichloroethane	82.8J	ug/L	100	36.0	20		08/02/14 10:45	107-06-2	
Diisopropyl ether	ND	ug/L	100	34.0	20		08/02/14 10:45	108-20-3	
Ethanol	ND	ug/L	4000	2760	20		08/02/14 10:45	64-17-5	
Ethylbenzene	1560	ug/L	100	32.0	20		08/02/14 10:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	200	72.0	20		08/02/14 10:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	100	34.0	20		08/02/14 10:45	1634-04-4	
Naphthalene	536	ug/L	100	40.0	20		08/02/14 10:45	91-20-3	
Toluene	899	ug/L	100	32.0	20		08/02/14 10:45	108-88-3	
m&p-Xylene	5680	ug/L	200	62.0	20		08/02/14 10:45	179601-23-1	
o-Xylene	2120	ug/L	100	32.0	20		08/02/14 10:45	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		20		08/02/14 10:45	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		20		08/02/14 10:45	17060-07-0	
Toluene-d8 (S)	97	%	70-130		20		08/02/14 10:45	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: 07960-FB3      Lab ID: 92211558023      Collected: 07/30/14 13:10      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 07:44	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	08/03/14 19:03	08/04/14 07:44	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 01:06	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 01:06	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 01:06	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 01:06	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 01:06	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 01:06	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 01:06	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 01:06	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 01:06	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 01:06	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 01:06	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 01:06	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 01:06	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 01:06	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 01:06	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 01:06	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 01:06	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		08/02/14 01:06	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/02/14 01:06	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

Sample: TRIP BLANK		Lab ID: 92211558024	Collected: 07/30/14 00:00	Received: 07/31/14 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 01:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 01:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 01:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 01:22	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 01:22	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 01:22	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 01:22	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 01:22	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 01:22	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 01:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 01:22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 01:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 01:22	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 01:22	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 01:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 01:22	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		70-130		1		08/02/14 01:22	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		08/02/14 01:22	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		08/02/14 01:22	2037-26-5	

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-214210  
Pace Project No.: 92211558

QC Batch: MSV/27799 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92211558001, 92211558002, 92211558023, 92211558024

METHOD BLANK: 1255057 Matrix: Water  
Associated Lab Samples: 92211558001, 92211558002, 92211558023, 92211558024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/02/14 00:35	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	08/02/14 00:35	
Benzene	ug/L	ND	5.0	08/02/14 00:35	
Diisopropyl ether	ug/L	ND	5.0	08/02/14 00:35	
Ethanol	ug/L	ND	200	08/02/14 00:35	
Ethyl-tert-butyl ether	ug/L	ND	10.0	08/02/14 00:35	
Ethylbenzene	ug/L	ND	5.0	08/02/14 00:35	
m&p-Xylene	ug/L	ND	10.0	08/02/14 00:35	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/02/14 00:35	
Naphthalene	ug/L	ND	5.0	08/02/14 00:35	
o-Xylene	ug/L	ND	5.0	08/02/14 00:35	
tert-Amyl Alcohol	ug/L	ND	100	08/02/14 00:35	
tert-Amylmethyl ether	ug/L	ND	10.0	08/02/14 00:35	
tert-Butyl Alcohol	ug/L	ND	100	08/02/14 00:35	
tert-Butyl Formate	ug/L	ND	50.0	08/02/14 00:35	
Toluene	ug/L	ND	5.0	08/02/14 00:35	
1,2-Dichloroethane-d4 (S)	%	100	70-130	08/02/14 00:35	
4-Bromofluorobenzene (S)	%	98	70-130	08/02/14 00:35	
Toluene-d8 (S)	%	96	70-130	08/02/14 00:35	

LABORATORY CONTROL SAMPLE: 1255058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	44.8	90	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	928	93	70-130	
Benzene	ug/L	50	45.9	92	70-130	
Diisopropyl ether	ug/L	50	43.1	86	70-130	
Ethanol	ug/L	2000	1810	90	70-130	
Ethyl-tert-butyl ether	ug/L	100	78.3	78	70-130	
Ethylbenzene	ug/L	50	46.8	94	70-130	
m&p-Xylene	ug/L	100	96.0	96	70-130	
Methyl-tert-butyl ether	ug/L	50	43.1	86	70-130	
Naphthalene	ug/L	50	47.1	94	70-130	
o-Xylene	ug/L	50	47.0	94	70-130	
tert-Amyl Alcohol	ug/L	1000	932	93	70-130	
tert-Amylmethyl ether	ug/L	100	93.8	94	70-130	
tert-Butyl Alcohol	ug/L	500	465	93	70-130	
tert-Butyl Formate	ug/L	400	389	97	70-130	
Toluene	ug/L	50	44.5	89	70-130	
1,2-Dichloroethane-d4 (S)	%			95	70-130	

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

LABORATORY CONTROL SAMPLE: 1255058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255883 1255884

Parameter	Units	92211539011		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec				
1,2-Dichloroethane	ug/L	ND	50	50	48.0	52.4	96	105	70-130	9	30		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	930	960	93	96	70-130	3	30		
Benzene	ug/L	ND	50	50	48.2	51.8	96	104	70-130	7	30		
Diisopropyl ether	ug/L	ND	50	50	45.9	48.8	92	98	70-130	6	30		
Ethanol	ug/L	ND	2000	2000	1920	2050	96	103	70-130	7	30		
Ethyl-tert-butyl ether	ug/L	ND	100	100	84.8	91.4	85	91	70-130	8	30		
Ethylbenzene	ug/L	ND	50	50	49.3	52.8	99	106	70-130	7	30		
m&p-Xylene	ug/L	ND	100	100	99.9	106	100	106	70-130	6	30		
Methyl-tert-butyl ether	ug/L	ND	50	50	46.2	49.9	92	100	70-130	8	30		
Naphthalene	ug/L	ND	50	50	49.3	52.5	99	105	70-130	6	30		
o-Xylene	ug/L	ND	50	50	48.4	51.8	97	104	70-130	7	30		
tert-Amyl Alcohol	ug/L	ND	1000	1000	1110	1190	111	119	70-130	7	30		
tert-Amylmethyl ether	ug/L	ND	100	100	100	108	100	108	70-130	7	30		
tert-Butyl Alcohol	ug/L	ND	500	500	389	423	78	85	70-130	8	30		
tert-Butyl Formate	ug/L	ND	400	400	78.8	79.4	20	20	70-130	1	30 P5		
Toluene	ug/L	ND	50	50	47.6	50.6	95	101	70-130	6	30		
1,2-Dichloroethane-d4 (S)	%						103	104	70-130				
4-Bromofluorobenzene (S)	%						98	99	70-130				
Toluene-d8 (S)	%						98	98	70-130				

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

QC Batch: MSV/27805 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
 Associated Lab Samples: 92211558003, 92211558004, 92211558005, 92211558006, 92211558007, 92211558008, 92211558009,  
 92211558010, 92211558011, 92211558012, 92211558013, 92211558014, 92211558015, 92211558016,  
 92211558017, 92211558018, 92211558019, 92211558021, 92211558022

METHOD BLANK: 1255109

Matrix: Water

Associated Lab Samples: 92211558003, 92211558004, 92211558005, 92211558006, 92211558007, 92211558008, 92211558009,  
 92211558010, 92211558011, 92211558012, 92211558013, 92211558014, 92211558015, 92211558016,  
 92211558017, 92211558018, 92211558019, 92211558021, 92211558022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/02/14 00:51	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	08/02/14 00:51	
Benzene	ug/L	ND	5.0	08/02/14 00:51	
Diisopropyl ether	ug/L	ND	5.0	08/02/14 00:51	
Ethanol	ug/L	ND	200	08/02/14 00:51	
Ethyl-tert-butyl ether	ug/L	ND	10.0	08/02/14 00:51	
Ethylbenzene	ug/L	ND	5.0	08/02/14 00:51	
m&p-Xylene	ug/L	ND	10.0	08/02/14 00:51	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/02/14 00:51	
Naphthalene	ug/L	ND	5.0	08/02/14 00:51	
o-Xylene	ug/L	ND	5.0	08/02/14 00:51	
tert-Amyl Alcohol	ug/L	ND	100	08/02/14 00:51	
tert-Amylmethyl ether	ug/L	ND	10.0	08/02/14 00:51	
tert-Butyl Alcohol	ug/L	ND	100	08/02/14 00:51	
tert-Butyl Formate	ug/L	ND	50.0	08/02/14 00:51	
Toluene	ug/L	ND	5.0	08/02/14 00:51	
1,2-Dichloroethane-d4 (S)	%	99	70-130	08/02/14 00:51	
4-Bromofluorobenzene (S)	%	97	70-130	08/02/14 00:51	
Toluene-d8 (S)	%	97	70-130	08/02/14 00:51	

LABORATORY CONTROL SAMPLE: 1255110

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	44.4	89	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	911	91	70-130	
Benzene	ug/L	50	45.4	91	70-130	
Diisopropyl ether	ug/L	50	42.9	86	70-130	
Ethanol	ug/L	2000	1750	88	70-130	
Ethyl-tert-butyl ether	ug/L	100	76.7	77	70-130	
Ethylbenzene	ug/L	50	47.0	94	70-130	
m&p-Xylene	ug/L	100	96.1	96	70-130	
Methyl-tert-butyl ether	ug/L	50	41.7	83	70-130	
Naphthalene	ug/L	50	45.9	92	70-130	
o-Xylene	ug/L	50	46.7	93	70-130	
tert-Amyl Alcohol	ug/L	1000	941	94	70-130	
tert-Amylmethyl ether	ug/L	100	92.9	93	70-130	

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

LABORATORY CONTROL SAMPLE: 1255110

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Alcohol	ug/L	500	501	100	70-130	
tert-Butyl Formate	ug/L	400	373	93	70-130	
Toluene	ug/L	50	44.9	90	70-130	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255881 1255882

Parameter	Units	92211558014		MSD		MSD		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
1,2-Dichloroethane	ug/L	ND	50	50	48.6	49.5	97	99	70-130	2	30		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	1040	1100	104	110	70-130	6	30		
Benzene	ug/L	ND	50	50	49.5	49.0	99	98	70-130	1	30		
Diisopropyl ether	ug/L	ND	50	50	46.3	46.6	93	93	70-130	1	30		
Ethanol	ug/L	ND	2000	2000	1820	1960	91	98	70-130	8	30		
Ethyl-tert-butyl ether	ug/L	ND	100	100	85.5	86.4	86	86	70-130	1	30		
Ethylbenzene	ug/L	ND	50	50	50.8	50.6	102	101	70-130	0	30		
m&p-Xylene	ug/L	ND	100	100	104	101	104	101	70-130	2	30		
Methyl-tert-butyl ether	ug/L	ND	50	50	46.6	46.7	93	93	70-130	0	30		
Naphthalene	ug/L	ND	50	50	49.0	50.3	98	101	70-130	3	30		
o-Xylene	ug/L	ND	50	50	49.8	49.4	100	99	70-130	1	30		
tert-Amyl Alcohol	ug/L	ND	1000	1000	1040	1110	104	111	70-130	7	30		
tert-Amylmethyl ether	ug/L	ND	100	100	101	102	101	102	70-130	1	30		
tert-Butyl Alcohol	ug/L	ND	500	500	374	386	75	77	70-130	3	30		
tert-Butyl Formate	ug/L	ND	400	400	95.7	82.3	24	21	70-130	15	30	P5	
Toluene	ug/L	ND	50	50	48.0	48.1	96	96	70-130	0	30		
1,2-Dichloroethane-d4 (S)	%						100	104	70-130				
4-Bromofluorobenzene (S)	%						99	99	70-130				
Toluene-d8 (S)	%						97	98	70-130				

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-214210  
Pace Project No.: 92211558

QC Batch: MSV/27815 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92211558020

METHOD BLANK: 1256108 Matrix: Water  
Associated Lab Samples: 92211558020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/06/14 01:01	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	08/06/14 01:01	
Benzene	ug/L	ND	5.0	08/06/14 01:01	
Diisopropyl ether	ug/L	ND	5.0	08/06/14 01:01	
Ethanol	ug/L	ND	200	08/06/14 01:01	
Ethyl-tert-butyl ether	ug/L	ND	10.0	08/06/14 01:01	
Ethylbenzene	ug/L	ND	5.0	08/06/14 01:01	
m&p-Xylene	ug/L	ND	10.0	08/06/14 01:01	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/06/14 01:01	
Naphthalene	ug/L	ND	5.0	08/06/14 01:01	
o-Xylene	ug/L	ND	5.0	08/06/14 01:01	
tert-Amyl Alcohol	ug/L	ND	100	08/06/14 01:01	
tert-Amylmethyl ether	ug/L	ND	10.0	08/06/14 01:01	
tert-Butyl Alcohol	ug/L	ND	100	08/06/14 01:01	
tert-Butyl Formate	ug/L	ND	50.0	08/06/14 01:01	
Toluene	ug/L	ND	5.0	08/06/14 01:01	
1,2-Dichloroethane-d4 (S)	%	99	70-130	08/06/14 01:01	
4-Bromofluorobenzene (S)	%	99	70-130	08/06/14 01:01	
Toluene-d8 (S)	%	98	70-130	08/06/14 01:01	

LABORATORY CONTROL SAMPLE: 1256109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.2	98	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	873	87	70-130	
Benzene	ug/L	50	51.3	103	70-130	
Diisopropyl ether	ug/L	50	47.3	95	70-130	
Ethanol	ug/L	2000	1790	89	70-130	
Ethyl-tert-butyl ether	ug/L	100	82.7	83	70-130	
Ethylbenzene	ug/L	50	51.8	104	70-130	
m&p-Xylene	ug/L	100	104	104	70-130	
Methyl-tert-butyl ether	ug/L	50	46.0	92	70-130	
Naphthalene	ug/L	50	48.9	98	70-130	
o-Xylene	ug/L	50	51.5	103	70-130	
tert-Amyl Alcohol	ug/L	1000	939	94	70-130	
tert-Amylmethyl ether	ug/L	100	102	102	70-130	
tert-Butyl Alcohol	ug/L	500	513	103	70-130	
tert-Butyl Formate	ug/L	400	382	96	70-130	
Toluene	ug/L	50	51.5	103	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

LABORATORY CONTROL SAMPLE: 1256109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1257675 1257676

Parameter	Units	92211706002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec				
1,2-Dichloroethane	ug/L	ND	50	50	47.4	50.9	95	102	70-130	7	30		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	849	929	85	93	70-130	9	30		
Benzene	ug/L	ND	50	50	51.5	55.0	103	110	70-130	7	30		
Diisopropyl ether	ug/L	ND	50	50	45.3	48.7	91	97	70-130	7	30		
Ethanol	ug/L	ND	2000	2000	1690	1730	85	87	70-130	2	30		
Ethyl-tert-butyl ether	ug/L	ND	100	100	80.7	85.9	81	86	70-130	6	30		
Ethylbenzene	ug/L	ND	50	50	52.1	56.3	104	113	70-130	8	30		
m&p-Xylene	ug/L	ND	100	100	104	112	104	112	70-130	7	30		
Methyl-tert-butyl ether	ug/L	ND	50	50	45.0	47.6	90	95	70-130	6	30		
Naphthalene	ug/L	ND	50	50	46.0	50.0	92	100	70-130	8	30		
o-Xylene	ug/L	ND	50	50	51.1	55.1	102	110	70-130	7	30		
tert-Amyl Alcohol	ug/L	ND	1000	1000	912	962	91	96	70-130	5	30		
tert-Amylmethyl ether	ug/L	ND	100	100	98.8	106	99	106	70-130	7	30		
tert-Butyl Alcohol	ug/L	ND	500	500	365	409	73	82	70-130	11	30		
tert-Butyl Formate	ug/L	ND	400	400	72.9	97.9	18	24	70-130	29	30	P5	
Toluene	ug/L	ND	50	50	51.1	54.7	102	109	70-130	7	30		
1,2-Dichloroethane-d4 (S)	%						96	96	70-130				
4-Bromofluorobenzene (S)	%						102	102	70-130				
Toluene-d8 (S)	%						99	99	70-130				

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-214210  
Pace Project No.: 92211558

QC Batch: OEXT/29178 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92211558001, 92211558002, 92211558003, 92211558004, 92211558005, 92211558006, 92211558007, 92211558008, 92211558009, 92211558010, 92211558011, 92211558012, 92211558013, 92211558014, 92211558015, 92211558016, 92211558017, 92211558018, 92211558019

METHOD BLANK: 1255702 Matrix: Water  
Associated Lab Samples: 92211558001, 92211558002, 92211558003, 92211558004, 92211558005, 92211558006, 92211558007, 92211558008, 92211558009, 92211558010, 92211558011, 92211558012, 92211558013, 92211558014, 92211558015, 92211558016, 92211558017, 92211558018, 92211558019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	08/03/14 20:32	
1-Chloro-2-bromopropane (S)	%	110	60-140	08/03/14 20:32	

LABORATORY CONTROL SAMPLE & LCSD: 1255703 1255704

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.29	0.30	100	104	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				109	112	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255705 1255706

Parameter	Units	92211558002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.28	0.30	100	106	60-140	6	20	
1-Chloro-2-bromopropane (S)	%						109	113	60-140			

SAMPLE DUPLICATE: 1255707

Parameter	Units	92211558003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	119	137	14		

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-214210  
Pace Project No.: 92211558

QC Batch: OEXT/29179 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92211558020, 92211558021, 92211558022, 92211558023

METHOD BLANK: 1255708 Matrix: Water  
Associated Lab Samples: 92211558020, 92211558021, 92211558022, 92211558023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	08/04/14 05:42	
1-Chloro-2-bromopropane (S)	%	110	60-140	08/04/14 05:42	

LABORATORY CONTROL SAMPLE & LCSD: 1255709

Parameter	Units	1255710								Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	
1,2-Dibromoethane (EDB)	ug/L	.28	0.31	0.29	108	104	60-140	5	20	
1-Chloro-2-bromopropane (S)	%				111	109	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255711

Parameter	Units	1255712										
		92211560004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.30	0.28	104	100	60-140	4	20	
1-Chloro-2-bromopropane (S)	%						109	111	60-140			

SAMPLE DUPLICATE: 1255713

Parameter	Units	92211560005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	110	109	0		

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## QUALIFIERS

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 378 TRUCK STOP 14-214210  
Pace Project No.: 92211558

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92211558001	07960-MW13	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558002	07960-MW15	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558003	07960-MW30	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558004	07960-MW22	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558005	07960-TW2	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558006	07960-MW3	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558007	07960-TW1	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558008	07960-MW6	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558009	07960-MW7	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558010	07960-MW8	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558011	07960-MW4	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558012	07960-MW28	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558013	07960-MW20	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558014	07960-MW5	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558015	07960-MW27	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558016	07960-MW21	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558017	07960-MW14	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558018	07960-MW11	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558019	07960-MW1	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211558020	07960-MW2	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211558021	07960-MW29	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211558022	07960-DUPLICATE 3	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211558023	07960-FB3	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211558001	07960-MW13	EPA 8260	MSV/27799		
92211558002	07960-MW15	EPA 8260	MSV/27799		
92211558003	07960-MW30	EPA 8260	MSV/27805		
92211558004	07960-MW22	EPA 8260	MSV/27805		
92211558005	07960-TW2	EPA 8260	MSV/27805		
92211558006	07960-MW3	EPA 8260	MSV/27805		
92211558007	07960-TW1	EPA 8260	MSV/27805		
92211558008	07960-MW6	EPA 8260	MSV/27805		
92211558009	07960-MW7	EPA 8260	MSV/27805		
92211558010	07960-MW8	EPA 8260	MSV/27805		
92211558011	07960-MW4	EPA 8260	MSV/27805		
92211558012	07960-MW28	EPA 8260	MSV/27805		
92211558013	07960-MW20	EPA 8260	MSV/27805		
92211558014	07960-MW5	EPA 8260	MSV/27805		
92211558015	07960-MW27	EPA 8260	MSV/27805		
92211558016	07960-MW21	EPA 8260	MSV/27805		
92211558017	07960-MW14	EPA 8260	MSV/27805		
92211558018	07960-MW11	EPA 8260	MSV/27805		
92211558019	07960-MW1	EPA 8260	MSV/27805		
92211558020	07960-MW2	EPA 8260	MSV/27815		
92211558021	07960-MW29	EPA 8260	MSV/27805		
92211558022	07960-DUPLICATE 3	EPA 8260	MSV/27805		
92211558023	07960-FB3	EPA 8260	MSV/27799		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 378 TRUCK STOP 14-214210

Pace Project No.: 92211558

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92211558024	TRIP BLANK	EPA 8260	MSV/27799		

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### REPORT OF LABORATORY ANALYSIS

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Client Name: ECS

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1102 T1401    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor    T1102: No Correction    T1301: No Correction

Corrected Cooler Temp.: 4.1 °C    Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: afw 7-31-19

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>no</u>
Pace Trip Blank Lot # (if purchased):		<u>Date/time on coc/vials</u>

Client Notification/ Resolution:

Field Data Required?    Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review:	<u>NS</u>	Date:	<u>2/31/14</u>
SRF Review:	<u>NS</u>	Date:	<u>2/4/14</u>

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92211558



(if no label available)





August 07, 2014

Noelle France  
Environmental Compliance Services  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

Dear Noelle France:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Nicole Benjamin  
nicole.benjamin@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

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### Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92211560001	07960-WSW4	Water	07/29/14 00:00	07/31/14 16:40
92211560002	07960-WSW5	Water	07/29/14 00:00	07/31/14 16:40
92211560003	07960-WSW3	Water	07/29/14 00:00	07/31/14 16:40
92211560004	07960-WSW2	Water	07/29/14 00:00	07/31/14 16:40
92211560005	07960-WSW6	Water	07/29/14 00:00	07/31/14 16:40
92211560006	07960-WSW1 PRE	Water	07/29/14 00:00	07/31/14 16:40
92211560007	07960-WSW1 POST	Water	07/29/14 00:00	07/31/14 16:40
92211560008	07960-WSW8 PRE	Water	07/29/14 00:00	07/31/14 16:40
92211560009	07960-WSW8 POST	Water	07/29/14 00:00	07/31/14 16:40
92211560010	07960-WSW7	Water	07/29/14 00:00	07/31/14 16:40
92211560011	07960-WSW9	Water	07/29/14 00:00	07/31/14 16:40
92211560012	07960-WSW10	Water	07/29/14 00:00	07/31/14 16:40
92211560013	07960-WSW11	Water	07/29/14 14:26	07/31/14 16:40
92211560014	07960-WSW12	Water	07/29/14 14:30	07/31/14 16:40
92211560015	07960-WSW13	Water	07/29/14 15:00	07/31/14 16:40
92211560016	07960-WSW14	Water	07/29/14 15:21	07/31/14 16:40
92211560017	07960-WSW15	Water	07/29/14 15:47	07/31/14 16:40
92211560018	07960-MW18	Water	07/29/14 16:32	07/31/14 16:40
92211560019	07960-FB2	Water	07/29/14 16:45	07/31/14 16:40
92211560020	TRIP BLANK	Water	07/29/14 00:00	07/31/14 16:40

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### SAMPLE ANALYTE COUNT

Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92211560001	07960-WSW4	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560002	07960-WSW5	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560003	07960-WSW3	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560004	07960-WSW2	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560005	07960-WSW6	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560006	07960-WSW1 PRE	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560007	07960-WSW1 POST	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560008	07960-WSW8 PRE	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560009	07960-WSW8 POST	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560010	07960-WSW7	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560011	07960-WSW9	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560012	07960-WSW10	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560013	07960-WSW11	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560014	07960-WSW12	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560015	07960-WSW13	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560016	07960-WSW14	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560017	07960-WSW15	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560018	07960-MW18	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211560019	07960-FB2	EPA 8011	JMC	2	PASI-C

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### SAMPLE ANALYTE COUNT

Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92211560020	TRIP BLANK	EPA 8260	MCK	19	PASI-C
		EPA 8260	MCK	19	PASI-C

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW4		Lab ID: 92211560001	Collected: 07/29/14 00:00	Received: 07/31/14 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 08:04	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	112 %		60-140		1	08/03/14 19:03	08/04/14 08:04	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/04/14 15:17	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/04/14 15:17	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/04/14 15:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/04/14 15:17	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/04/14 15:17	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/04/14 15:17	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/04/14 15:17	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/04/14 15:17	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/04/14 15:17	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/04/14 15:17	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/04/14 15:17	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/04/14 15:17	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/04/14 15:17	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/04/14 15:17	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/04/14 15:17	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/04/14 15:17	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96 %		70-130		1		08/04/14 15:17	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		70-130		1		08/04/14 15:17	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		08/04/14 15:17	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW5		Lab ID: 92211560002	Collected: 07/29/14 00:00	Received: 07/31/14 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 08:24	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	112	%	60-140		1	08/03/14 19:03	08/04/14 08:24	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/04/14 15:33	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/04/14 15:33	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/04/14 15:33	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/04/14 15:33	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/04/14 15:33	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/04/14 15:33	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/04/14 15:33	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/04/14 15:33	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/04/14 15:33	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/04/14 15:33	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/04/14 15:33	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/04/14 15:33	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/04/14 15:33	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/04/14 15:33	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/04/14 15:33	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/04/14 15:33	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/04/14 15:33	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		08/04/14 15:33	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/04/14 15:33	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW3		Lab ID: 92211560003		Collected: 07/29/14 00:00		Received: 07/31/14 16:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 08:45	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	114	%	60-140		1	08/03/14 19:03	08/04/14 08:45	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/04/14 15:49	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/04/14 15:49	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/04/14 15:49	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/04/14 15:49	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/04/14 15:49	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/04/14 15:49	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/04/14 15:49	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/04/14 15:49	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/04/14 15:49	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/04/14 15:49	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/04/14 15:49	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/04/14 15:49	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/04/14 15:49	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/04/14 15:49	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/04/14 15:49	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/04/14 15:49	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/04/14 15:49	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		08/04/14 15:49	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/04/14 15:49	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW2		Lab ID: 92211560004		Collected: 07/29/14 00:00		Received: 07/31/14 16:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 09:05	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	08/03/14 19:03	08/04/14 09:05	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/04/14 16:05	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/04/14 16:05	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/04/14 16:05	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/04/14 16:05	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/04/14 16:05	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/04/14 16:05	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/04/14 16:05	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/04/14 16:05	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/04/14 16:05	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/04/14 16:05	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/04/14 16:05	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/04/14 16:05	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/04/14 16:05	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/04/14 16:05	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/04/14 16:05	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/04/14 16:05	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/04/14 16:05	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		08/04/14 16:05	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/04/14 16:05	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW6      Lab ID: 92211560005      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 10:07	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	08/03/14 19:03	08/04/14 10:07	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 17:58	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 17:58	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 17:58	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 17:58	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 17:58	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 17:58	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 17:58	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 17:58	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 17:58	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 17:58	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 17:58	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 17:58	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 17:58	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 17:58	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 17:58	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 17:58	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		08/05/14 17:58	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/05/14 17:58	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/05/14 17:58	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW1 PRE      Lab ID: 92211560006      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 10:48	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	109 %		60-140		1	08/03/14 19:03	08/04/14 10:48	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 18:14	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 18:14	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 18:14	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 18:14	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 18:14	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 18:14	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 18:14	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 18:14	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 18:14	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 18:14	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 18:14	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 18:14	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 18:14	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 18:14	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 18:14	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 18:14	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		08/05/14 18:14	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %		70-130		1		08/05/14 18:14	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		08/05/14 18:14	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW1 POST      Lab ID: 92211560007      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 11:09	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107 %		60-140		1	08/03/14 19:03	08/04/14 11:09	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 18:30	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 18:30	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 18:30	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 18:30	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 18:30	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 18:30	762-75-4	
1,2-Dichloroethane	3.5J	ug/L	5.0	1.8	1		08/05/14 18:30	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 18:30	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 18:30	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 18:30	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 18:30	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 18:30	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 18:30	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 18:30	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 18:30	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 18:30	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		08/05/14 18:30	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		70-130		1		08/05/14 18:30	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		08/05/14 18:30	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW8 PRE      Lab ID: 92211560008      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 11:29	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	113	%	60-140		1	08/03/14 19:03	08/04/14 11:29	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 18:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 18:45	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 18:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 18:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 18:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 18:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 18:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 18:45	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 18:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 18:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 18:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 18:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 18:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 18:45	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 18:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 18:45	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/05/14 18:45	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/05/14 18:45	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/05/14 18:45	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW8 POST      Lab ID: 92211560009      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 11:50	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	08/03/14 19:03	08/04/14 11:50	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 19:01	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 19:01	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 19:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 19:01	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 19:01	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 19:01	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 19:01	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 19:01	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 19:01	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 19:01	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 19:01	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 19:01	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 19:01	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 19:01	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 19:01	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 19:01	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		08/05/14 19:01	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		08/05/14 19:01	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		08/05/14 19:01	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW7      Lab ID: 92211560010      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:03	08/04/14 12:11	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	08/03/14 19:03	08/04/14 12:11	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 19:17	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 19:17	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 19:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 19:17	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 19:17	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 19:17	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 19:17	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 19:17	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 19:17	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 19:17	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 19:17	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 19:17	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 19:17	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 19:17	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 19:17	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 19:17	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/05/14 19:17	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		08/05/14 19:17	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/05/14 19:17	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW9      Lab ID: 92211560011      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:04	08/04/14 12:32	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	08/03/14 19:04	08/04/14 12:32	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 19:32	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 19:32	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 19:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 19:32	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 19:32	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 19:32	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 19:32	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 19:32	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 19:32	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 19:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 19:32	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 19:32	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 19:32	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 19:32	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 19:32	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 19:32	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		08/05/14 19:32	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/05/14 19:32	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/05/14 19:32	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW10		Lab ID: 92211560012		Collected: 07/29/14 00:00		Received: 07/31/14 16:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:04	08/04/14 12:53	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	115 %		60-140		1	08/03/14 19:04	08/04/14 12:53	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 19:48	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 19:48	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 19:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 19:48	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 19:48	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 19:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 19:48	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 19:48	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 19:48	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 19:48	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 19:48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 19:48	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 19:48	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 19:48	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 19:48	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 19:48	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		08/05/14 19:48	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %		70-130		1		08/05/14 19:48	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		08/05/14 19:48	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW11      Lab ID: 92211560013      Collected: 07/29/14 14:26      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:04	08/04/14 13:13	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	08/03/14 19:04	08/04/14 13:13	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 20:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 20:04	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 20:04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 20:04	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 20:04	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 20:04	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 20:04	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 20:04	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 20:04	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 20:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 20:04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 20:04	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 20:04	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 20:04	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 20:04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 20:04	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		08/05/14 20:04	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/05/14 20:04	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/05/14 20:04	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW12		Lab ID: 92211560014		Collected: 07/29/14 14:30		Received: 07/31/14 16:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:04	08/04/14 13:34	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	108 %		60-140		1	08/03/14 19:04	08/04/14 13:34	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 20:19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 20:19	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 20:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 20:19	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 20:19	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 20:19	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 20:19	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 20:19	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 20:19	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 20:19	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 20:19	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 20:19	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 20:19	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 20:19	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 20:19	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 20:19	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99 %		70-130		1		08/05/14 20:19	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		08/05/14 20:19	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		08/05/14 20:19	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW13      Lab ID: 92211560015      Collected: 07/29/14 15:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:04	08/04/14 13:55	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	108 %		60-140		1	08/03/14 19:04	08/04/14 13:55	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 20:35	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 20:35	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 20:35	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 20:35	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 20:35	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 20:35	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 20:35	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 20:35	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 20:35	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 20:35	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 20:35	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 20:35	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 20:35	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 20:35	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 20:35	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 20:35	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		70-130		1		08/05/14 20:35	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		08/05/14 20:35	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		08/05/14 20:35	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW14      Lab ID: 92211560016      Collected: 07/29/14 15:21      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/03/14 19:04	08/04/14 14:16	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	08/03/14 19:04	08/04/14 14:16	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 20:51	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 20:51	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 20:51	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 20:51	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 20:51	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 20:51	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 20:51	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 20:51	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 20:51	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 20:51	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 20:51	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 20:51	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 20:51	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 20:51	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 20:51	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 20:51	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		08/05/14 20:51	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/05/14 20:51	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/05/14 20:51	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-WSW15      Lab ID: 92211560017      Collected: 07/29/14 15:47      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/05/14 11:21	08/05/14 15:27	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	08/05/14 11:21	08/05/14 15:27	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 21:07	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 21:07	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 21:07	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 21:07	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 21:07	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 21:07	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 21:07	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 21:07	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 21:07	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 21:07	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 21:07	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 21:07	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 21:07	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 21:07	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 21:07	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 21:07	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		08/05/14 21:07	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/05/14 21:07	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/05/14 21:07	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-MW18      Lab ID: 92211560018      Collected: 07/29/14 16:32      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/05/14 11:21	08/05/14 15:48	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	08/05/14 11:21	08/05/14 15:48	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 21:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 21:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 21:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 21:22	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 21:22	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 21:22	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 21:22	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 21:22	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 21:22	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 21:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 21:22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 21:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 21:22	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 21:22	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 21:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 21:22	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		08/05/14 21:22	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/05/14 21:22	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/05/14 21:22	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Sample: 07960-FB2      Lab ID: 92211560019      Collected: 07/29/14 16:45      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/05/14 11:21	08/05/14 16:08	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	08/05/14 11:21	08/05/14 16:08	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/05/14 21:38	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/05/14 21:38	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/05/14 21:38	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/05/14 21:38	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/05/14 21:38	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/05/14 21:38	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/05/14 21:38	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/05/14 21:38	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/05/14 21:38	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/05/14 21:38	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/05/14 21:38	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/05/14 21:38	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/05/14 21:38	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/05/14 21:38	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/05/14 21:38	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/05/14 21:38	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		08/05/14 21:38	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/05/14 21:38	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/05/14 21:38	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

**Sample: TRIP BLANK**      **Lab ID: 92211560020**      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND ug/L		100	76.8	1		08/05/14 21:54	75-85-4	
tert-Amylmethyl ether	ND ug/L		10.0	3.4	1		08/05/14 21:54	994-05-8	
Benzene	ND ug/L		5.0	1.7	1		08/05/14 21:54	71-43-2	
3,3-Dimethyl-1-Butanol	ND ug/L		100	32.1	1		08/05/14 21:54	624-95-3	
tert-Butyl Alcohol	ND ug/L		100	57.7	1		08/05/14 21:54	75-65-0	
tert-Butyl Formate	ND ug/L		50.0	7.3	1		08/05/14 21:54	762-75-4	
1,2-Dichloroethane	ND ug/L		5.0	1.8	1		08/05/14 21:54	107-06-2	
Diisopropyl ether	ND ug/L		5.0	1.7	1		08/05/14 21:54	108-20-3	
Ethanol	ND ug/L		200	138	1		08/05/14 21:54	64-17-5	
Ethylbenzene	ND ug/L		5.0	1.6	1		08/05/14 21:54	100-41-4	
Ethyl-tert-butyl ether	ND ug/L		10.0	3.6	1		08/05/14 21:54	637-92-3	
Methyl-tert-butyl ether	ND ug/L		5.0	1.7	1		08/05/14 21:54	1634-04-4	
Naphthalene	ND ug/L		5.0	2.0	1		08/05/14 21:54	91-20-3	
Toluene	ND ug/L		5.0	1.6	1		08/05/14 21:54	108-88-3	
m&p-Xylene	ND ug/L		10.0	3.1	1		08/05/14 21:54	179601-23-1	
o-Xylene	ND ug/L		5.0	1.6	1		08/05/14 21:54	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96 %		70-130		1		08/05/14 21:54	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		08/05/14 21:54	17060-07-0	
Toluene-d8 (S)	99 %		70-130		1		08/05/14 21:54	2037-26-5	

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

QC Batch: MSV/27808 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92211560005, 92211560006, 92211560007, 92211560008, 92211560009, 92211560010, 92211560011, 92211560012, 92211560013, 92211560014, 92211560015, 92211560016, 92211560017, 92211560018, 92211560019, 92211560020

METHOD BLANK: 1255916 Matrix: Water  
Associated Lab Samples: 92211560005, 92211560006, 92211560007, 92211560008, 92211560009, 92211560010, 92211560011, 92211560012, 92211560013, 92211560014, 92211560015, 92211560016, 92211560017, 92211560018, 92211560019, 92211560020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/05/14 15:04	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	08/05/14 15:04	
Benzene	ug/L	ND	5.0	08/05/14 15:04	
Diisopropyl ether	ug/L	ND	5.0	08/05/14 15:04	
Ethanol	ug/L	ND	200	08/05/14 15:04	
Ethyl-tert-butyl ether	ug/L	ND	10.0	08/05/14 15:04	
Ethylbenzene	ug/L	ND	5.0	08/05/14 15:04	
m&p-Xylene	ug/L	ND	10.0	08/05/14 15:04	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/05/14 15:04	
Naphthalene	ug/L	ND	5.0	08/05/14 15:04	
o-Xylene	ug/L	ND	5.0	08/05/14 15:04	
tert-Amyl Alcohol	ug/L	ND	100	08/05/14 15:04	
tert-Amylmethyl ether	ug/L	ND	10.0	08/05/14 15:04	
tert-Butyl Alcohol	ug/L	ND	100	08/05/14 15:04	
tert-Butyl Formate	ug/L	ND	50.0	08/05/14 15:04	
Toluene	ug/L	ND	5.0	08/05/14 15:04	
1,2-Dichloroethane-d4 (S)	%	99	70-130	08/05/14 15:04	
4-Bromofluorobenzene (S)	%	97	70-130	08/05/14 15:04	
Toluene-d8 (S)	%	99	70-130	08/05/14 15:04	

LABORATORY CONTROL SAMPLE: 1255917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.8	100	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	827	83	70-130	
Benzene	ug/L	50	51.6	103	70-130	
Diisopropyl ether	ug/L	50	49.2	98	70-130	
Ethanol	ug/L	2000	1920	96	70-130	
Ethyl-tert-butyl ether	ug/L	100	87.1	87	70-130	
Ethylbenzene	ug/L	50	52.7	105	70-130	
m&p-Xylene	ug/L	100	106	106	70-130	
Methyl-tert-butyl ether	ug/L	50	48.9	98	70-130	
Naphthalene	ug/L	50	50.0	100	70-130	
o-Xylene	ug/L	50	52.0	104	70-130	
tert-Amyl Alcohol	ug/L	1000	1040	104	70-130	
tert-Amylmethyl ether	ug/L	100	105	105	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

LABORATORY CONTROL SAMPLE: 1255917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Alcohol	ug/L	500	473	95	70-130	
tert-Butyl Formate	ug/L	400	437	109	70-130	
Toluene	ug/L	50	51.8	104	70-130	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1257673 1257674

Parameter	Units	92211560005		MSD		MSD		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
1,2-Dichloroethane	ug/L	ND	50	50	50.9	48.6	102	97	70-130	5	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	912	907	91	91	70-130	0	30	
Benzene	ug/L	ND	50	50	53.6	52.8	107	106	70-130	2	30	
Diisopropyl ether	ug/L	ND	50	50	48.5	46.4	97	93	70-130	5	30	
Ethanol	ug/L	ND	2000	2000	1860	1730	93	86	70-130	7	30	
Ethyl-tert-butyl ether	ug/L	ND	100	100	86.1	82.8	86	83	70-130	4	30	
Ethylbenzene	ug/L	ND	50	50	54.1	53.6	108	107	70-130	1	30	
m&p-Xylene	ug/L	ND	100	100	108	107	108	107	70-130	1	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	48.0	46.3	96	93	70-130	4	30	
Naphthalene	ug/L	ND	50	50	49.3	49.1	99	98	70-130	0	30	
o-Xylene	ug/L	ND	50	50	53.0	52.2	106	104	70-130	2	30	
tert-Amyl Alcohol	ug/L	ND	1000	1000	1000	959	100	96	70-130	4	30	
tert-Amylmethyl ether	ug/L	ND	100	100	106	103	106	103	70-130	3	30	
tert-Butyl Alcohol	ug/L	ND	500	500	394	383	79	77	70-130	3	30	
tert-Butyl Formate	ug/L	ND	400	400	102	81.7	26	20	70-130	22	30	P5
Toluene	ug/L	ND	50	50	53.9	52.5	108	105	70-130	3	30	
1,2-Dichloroethane-d4 (S)	%						97	96	70-130			
4-Bromofluorobenzene (S)	%						101	101	70-130			
Toluene-d8 (S)	%						100	100	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

QC Batch: MSV/27842 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92211560001, 92211560002, 92211560003, 92211560004

METHOD BLANK: 1257679 Matrix: Water  
Associated Lab Samples: 92211560001, 92211560002, 92211560003, 92211560004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/04/14 15:01	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	08/04/14 15:01	
Benzene	ug/L	ND	5.0	08/04/14 15:01	
Diisopropyl ether	ug/L	ND	5.0	08/04/14 15:01	
Ethanol	ug/L	ND	200	08/04/14 15:01	
Ethyl-tert-butyl ether	ug/L	ND	10.0	08/04/14 15:01	
Ethylbenzene	ug/L	ND	5.0	08/04/14 15:01	
m&p-Xylene	ug/L	ND	10.0	08/04/14 15:01	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/04/14 15:01	
Naphthalene	ug/L	ND	5.0	08/04/14 15:01	
o-Xylene	ug/L	ND	5.0	08/04/14 15:01	
tert-Amyl Alcohol	ug/L	ND	100	08/04/14 15:01	
tert-Amylmethyl ether	ug/L	ND	10.0	08/04/14 15:01	
tert-Butyl Alcohol	ug/L	ND	100	08/04/14 15:01	
tert-Butyl Formate	ug/L	ND	50.0	08/04/14 15:01	
Toluene	ug/L	ND	5.0	08/04/14 15:01	
1,2-Dichloroethane-d4 (S)	%	107	70-130	08/04/14 15:01	
4-Bromofluorobenzene (S)	%	98	70-130	08/04/14 15:01	
Toluene-d8 (S)	%	97	70-130	08/04/14 15:01	

LABORATORY CONTROL SAMPLE: 1257680

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	46.3	93	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1090	109	70-130	
Benzene	ug/L	50	47.5	95	70-130	
Diisopropyl ether	ug/L	50	45.1	90	70-130	
Ethanol	ug/L	2000	1900	95	70-130	
Ethyl-tert-butyl ether	ug/L	100	82.9	83	70-130	
Ethylbenzene	ug/L	50	49.0	98	70-130	
m&p-Xylene	ug/L	100	99.0	99	70-130	
Methyl-tert-butyl ether	ug/L	50	45.8	92	70-130	
Naphthalene	ug/L	50	51.0	102	70-130	
o-Xylene	ug/L	50	48.5	97	70-130	
tert-Amyl Alcohol	ug/L	1000	1110	111	70-130	
tert-Amylmethyl ether	ug/L	100	101	101	70-130	
tert-Butyl Alcohol	ug/L	500	449	90	70-130	
tert-Butyl Formate	ug/L	400	447	112	70-130	
Toluene	ug/L	50	46.3	93	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

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LABORATORY CONTROL SAMPLE: 1257680

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			98	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

QC Batch: OEXT/29179 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92211560001, 92211560002, 92211560003, 92211560004, 92211560005, 92211560006, 92211560007, 92211560008, 92211560009, 92211560010, 92211560011, 92211560012, 92211560013, 92211560014, 92211560015, 92211560016

METHOD BLANK: 1255708 Matrix: Water  
Associated Lab Samples: 92211560001, 92211560002, 92211560003, 92211560004, 92211560005, 92211560006, 92211560007, 92211560008, 92211560009, 92211560010, 92211560011, 92211560012, 92211560013, 92211560014, 92211560015, 92211560016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	08/04/14 05:42	
1-Chloro-2-bromopropane (S)	%	110	60-140	08/04/14 05:42	

LABORATORY CONTROL SAMPLE & LCSD: 1255709 1255710

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.31	0.29	108	104	60-140	5	20	
1-Chloro-2-bromopropane (S)	%				111	109	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255711 1255712

Parameter	Units	92211560004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.30	0.28	104	100	60-140	4	20	
1-Chloro-2-bromopropane (S)	%						109	111	60-140			

SAMPLE DUPLICATE: 1255713

Parameter	Units	92211560005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	110	109	0		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 378 TRUCK STOP 14-21421  
Pace Project No.: 92211560

QC Batch: OEXT/29211 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92211560017, 92211560018, 92211560019

METHOD BLANK: 1256443 Matrix: Water  
Associated Lab Samples: 92211560017, 92211560018, 92211560019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.021	08/05/14 14:24	
1-Chloro-2-bromopropane (S)	%	94	60-140	08/05/14 14:24	

LABORATORY CONTROL SAMPLE & LCSD: 1256444

Parameter	Units	1256445								Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	
1,2-Dibromoethane (EDB)	ug/L	.28	0.28	0.30	100	104	60-140	4	20	
1-Chloro-2-bromopropane (S)	%				110	109	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1256446 1256447

Parameter	Units	1256447										
		92211706009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.29	0.30	104	106	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						116	116	60-140			

SAMPLE DUPLICATE: 1256448

Parameter	Units	92211706010 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	115	113	2		

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 378 TRUCK STOP 14-21421

Pace Project No.: 92211560

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92211560001	07960-WSW4	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560002	07960-WSW5	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560003	07960-WSW3	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560004	07960-WSW2	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560005	07960-WSW6	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560006	07960-WSW1 PRE	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560007	07960-WSW1 POST	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560008	07960-WSW8 PRE	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560009	07960-WSW8 POST	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560010	07960-WSW7	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560011	07960-WSW9	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560012	07960-WSW10	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560013	07960-WSW11	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560014	07960-WSW12	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560015	07960-WSW13	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560016	07960-WSW14	EPA 8011	OEXT/29179	EPA 8011	GCSV/18423
92211560017	07960-WSW15	EPA 8011	OEXT/29211	EPA 8011	GCSV/18443
92211560018	07960-MW18	EPA 8011	OEXT/29211	EPA 8011	GCSV/18443
92211560019	07960-FB2	EPA 8011	OEXT/29211	EPA 8011	GCSV/18443
92211560001	07960-WSW4	EPA 8260	MSV/27842		
92211560002	07960-WSW5	EPA 8260	MSV/27842		
92211560003	07960-WSW3	EPA 8260	MSV/27842		
92211560004	07960-WSW2	EPA 8260	MSV/27842		
92211560005	07960-WSW6	EPA 8260	MSV/27808		
92211560006	07960-WSW1 PRE	EPA 8260	MSV/27808		
92211560007	07960-WSW1 POST	EPA 8260	MSV/27808		
92211560008	07960-WSW8 PRE	EPA 8260	MSV/27808		
92211560009	07960-WSW8 POST	EPA 8260	MSV/27808		
92211560010	07960-WSW7	EPA 8260	MSV/27808		
92211560011	07960-WSW9	EPA 8260	MSV/27808		
92211560012	07960-WSW10	EPA 8260	MSV/27808		
92211560013	07960-WSW11	EPA 8260	MSV/27808		
92211560014	07960-WSW12	EPA 8260	MSV/27808		
92211560015	07960-WSW13	EPA 8260	MSV/27808		
92211560016	07960-WSW14	EPA 8260	MSV/27808		
92211560017	07960-WSW15	EPA 8260	MSV/27808		
92211560018	07960-MW18	EPA 8260	MSV/27808		
92211560019	07960-FB2	EPA 8260	MSV/27808		
92211560020	TRIP BLANK	EPA 8260	MSV/27808		

### REPORT OF LABORATORY ANALYSIS

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Document Name: **Sample Condition Upon Receipt (SCUR)**

Document Number: **F-CHR-CS-003-rev.14**

Page 1 of 2  
Issuing Authority:  
Pace Huntersville Quality Office

Client Name: ECS

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1102 T1401 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 4.7 °C

Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: 7/13/14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. No Date/Time on TB
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review:	<u>NS</u>	Date:	<u>8/1/14</u>
SRF Review:	<u>RR</u>	Date:	<u>8/4/14</u>

WO#: 92211560



Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

(if no label available)



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2  
**1842612**

<b>Section A</b> Required Client Information: Company: <b>ECS</b> Address: <b>13504 South Point Blvd</b> <b>Charlotte, NC 28273</b> Email: <b>N.Horne@ecsconsult.com</b> Phone: <b>704-583-2711</b> Fax: _____ Requested Due Date/TAT: _____		<b>Section B</b> Required Project Information: Report To: <b>Noelle France</b> Copy To: _____ Purchase Order No.: <b>14-214210</b> Project Name: <b>378 Trail Stop</b> Project Number: <b>14-214210</b>		<b>Section C</b> Invoice Information: Attention: <b>Accounting</b> Company Name: <b>ECS</b> Address: <b>on file</b> POC Name: _____ Reference: _____ Pace Project Manager: _____ Pace Profile #: _____	
<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____		Site Location STATE: <b>SC</b>		Requested Analysis Filtered (Y/N)	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol			
1	07960-WSW4	Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Tissue Other	DATE	TIME	DATE	TIME	6									922 11560001
2	07960-WSW5															
3	07960-WSW3															
4	07960-WSW2															
5	07960-WSW6															
6	07960-WSW1 Pre															
7	07960-WSW1 Post															
8	07960-WSW8 Pre															
9	07960-WSW8 Post															
10	07960-WSW7															
11	07960-WSW9															
12	07960-WSW10															

**ADDITIONAL COMMENTS**  
 Please report S-values.  
 A. Williamson / ECS  
 ECS office  
 B. Moody

**REINQUISHED BY / AFFILIATION**  
 DATE: 7/30/14  
 TIME: 1715

**ACCEPTED BY / AFFILIATION**  
 DATE: 7/31/14  
 TIME: 1715

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: **Aaron Williamson, Brian Peard**  
 SIGNATURE OF SAMPLER: *Aaron Williamson*  
 DATE Signed (MM/DD/YY): **7/30/14**

Temp in °C: 47  
 Received on Ice (Y/N): Y  
 Custody Sealed Cooler (Y/N): N  
 Samples Intact (Y/N): Y

**ORIGINAL**

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
 F-ALL-Q-020rev.07, 15-May-2007



**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
Required Client Information:

Company: **ECS**  
Address: **13504 South Paints Blvd**  
**Charlotte, NC 28273**  
Email To: **Ntance@ecsonsu.h.com**  
Phone: **704-583-2711** Fax:  
Requested Due Date/AT: **Standard**

**Section B**  
Required Project Information:

Report To: **Noelle France**  
Copy To:  
Purchase Order No.: **14-214210**  
Project Name: **378 Touch Stop**  
Project Number: **14-214210**

**Section C**  
Invoice Information:

Attention: **Accounting**  
Company Name: **ECS**  
Address: **On file**  
Pace Quote Reference:  
Pace Project Manager:  
Pace Profile #:

**REGULATORY AGENCY**

NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

Site Location STATE: **SC**

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test ↓	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol				
1	07960-WSW11	DW WT WW	WT	WT	7/21/14	1426	1430	6											02211500013
2	07960-WSW12	DW WT WW	WT	WT	7/21/14	1500	1500	1											014
3	07960-WSW13	DW WT WW	WT	WT	7/21/14	1521	1521	1											015
4	07960-WSW14	DW WT WW	WT	WT	7/21/14	1547	1547	1											016
5	07960-WSW15	DW WT WW	WT	WT	7/21/14	1632	1632	1											017
6	07960-WSW18	DW WT WW	WT	WT	7/21/14	1645	1645	1											018
7	07960-F132	DW WT WW	WT	WT	7/21/14	1645	1645	1											019
8	Inp Blank	DW WT WW	WT	WT	7/21/14	1645	1645	2											020
9																			
10																			
11																			
12																			

ADDITIONAL COMMENTS: **Please report 5-values**

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<b>A. Williamson ECS</b>	<b>7/30/14</b>	<b>1715</b>	<b>ECS Office</b>	<b>7/30/14</b>	<b>1715</b>	
<b>ECS Advisor</b>	<b>7/31/14</b>	<b>16:40</b>	<b>Brewery-Pace</b>	<b>7/31/14</b>	<b>15:00</b>	
<b>Bmaddy</b>	<b>7/31/14</b>	<b>16:40</b>	<b>MALE</b>	<b>7/31/14</b>	<b>1640</b>	<b>4.7</b>

**ORIGINAL**

SAMPLER NAME AND SIGNATURE		DATE Signed (MM/DD/YY)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
<b>A. Williamson, Brian Pace</b>		<b>7/30/14</b>				
<b>Brian Pace</b>		<b>7/30/14</b>				

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
F-ALL-Q-020rev.07, 15-May-2007

August 07, 2014

Noelle France  
Environmental Compliance Services  
13504 South Point Blvd.  
Unit F  
Charlotte, NC 28273

RE: Project: 378 TRUCK - 14-214210  
Pace Project No.: 92211539

Dear Noelle France:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Nicole Benjamin  
nicole.benjamin@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 378 TRUCK - 14-214210  
Pace Project No.: 92211539

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### Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92211539001	07960-TW7	Water	07/28/14 12:15	07/31/14 16:40
92211539002	07960-MW17	Water	07/28/14 11:55	07/31/14 16:40
92211539003	07960-MW23	Water	07/28/14 12:05	07/31/14 16:40
92211539004	07960-TW8	Water	07/28/14 13:35	07/31/14 16:40
92211539005	07960-MW19	Water	07/28/14 13:10	07/31/14 16:40
92211539006	07960-TW9	Water	07/28/14 14:50	07/31/14 16:40
92211539007	07960-TW6	Water	07/28/14 15:55	07/31/14 16:40
92211539008	07960-MW16	Water	07/28/14 15:40	07/31/14 16:40
92211539009	07960-MW31	Water	07/28/14 16:50	07/31/14 16:40
92211539010	07960-MW25	Water	07/28/14 16:35	07/31/14 16:40
92211539011	07960-MW26	Water	07/28/14 17:35	07/31/14 16:40
92211539012	07960-MW24	Water	07/28/14 17:20	07/31/14 16:40
92211539013	07960-FB1	Water	07/28/14 17:30	07/31/14 16:40
92211539014	07960-DUPLICATE1	Water	07/28/14 00:00	07/31/14 16:40
92211539015	07960-TW4	Water	07/29/14 09:45	07/31/14 16:40
92211539016	07960-MW10	Water	07/29/14 09:25	07/31/14 16:40
92211539017	07960-TW3	Water	07/29/14 11:05	07/31/14 16:40
92211539018	07960-MW9	Water	07/29/14 11:00	07/31/14 16:40
92211539019	07960-TW5	Water	07/29/14 12:15	07/31/14 16:40
92211539020	07960-MW12	Water	07/29/14 11:55	07/31/14 16:40
92211539021	07960-DUPLICATE2	Water	07/29/14 00:00	07/31/14 16:40
92211539022	TRIP BLANK	Water	07/29/14 00:00	07/31/14 16:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92211539001	07960-TW7	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539002	07960-MW17	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539003	07960-MW23	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539004	07960-TW8	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539005	07960-MW19	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539006	07960-TW9	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539007	07960-TW6	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539008	07960-MW16	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539009	07960-MW31	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539010	07960-MW25	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539011	07960-MW26	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539012	07960-MW24	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539013	07960-FB1	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539014	07960-DUPLICATE1	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539015	07960-TW4	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539016	07960-MW10	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539017	07960-TW3	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539018	07960-MW9	EPA 8011	JMC	2	PASI-C
		EPA 8260	MCK	19	PASI-C
92211539019	07960-TW5	EPA 8011	JMC	2	PASI-C

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92211539020	07960-MW12	EPA 8260	MCK	19	PASI-C
		EPA 8011	JMC	2	PASI-C
92211539021	07960-DUPLICATE2	EPA 8260	MCK	19	PASI-C
		EPA 8011	JMC	2	PASI-C
92211539022	TRIP BLANK	EPA 8260	MCK	19	PASI-C
		EPA 8260	MCK	19	PASI-C

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-TW7      Lab ID: 92211539001      Collected: 07/28/14 12:15      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:19	08/01/14 11:31	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105 %		60-140		1	08/01/14 09:19	08/01/14 11:31	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/01/14 16:15	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/01/14 16:15	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/01/14 16:15	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/01/14 16:15	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/01/14 16:15	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/01/14 16:15	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/01/14 16:15	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/01/14 16:15	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/01/14 16:15	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/01/14 16:15	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/01/14 16:15	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/01/14 16:15	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/01/14 16:15	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/01/14 16:15	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/01/14 16:15	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/01/14 16:15	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		1		08/01/14 16:15	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		70-130		1		08/01/14 16:15	17060-07-0	
Toluene-d8 (S)	97 %		70-130		1		08/01/14 16:15	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW17      Lab ID: 92211539002      Collected: 07/28/14 11:55      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:19	08/01/14 11:51	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	108 %		60-140		1	08/01/14 09:19	08/01/14 11:51	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/01/14 16:31	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/01/14 16:31	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/01/14 16:31	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/01/14 16:31	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/01/14 16:31	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/01/14 16:31	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/01/14 16:31	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/01/14 16:31	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/01/14 16:31	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/01/14 16:31	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/01/14 16:31	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/01/14 16:31	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/01/14 16:31	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/01/14 16:31	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/01/14 16:31	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/01/14 16:31	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		1		08/01/14 16:31	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		70-130		1		08/01/14 16:31	17060-07-0	
Toluene-d8 (S)	98 %		70-130		1		08/01/14 16:31	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW23      Lab ID: 92211539003      Collected: 07/28/14 12:05      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 12:53	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	08/01/14 09:20	08/01/14 12:53	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/01/14 16:46	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/01/14 16:46	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/01/14 16:46	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/01/14 16:46	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/01/14 16:46	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/01/14 16:46	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/01/14 16:46	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/01/14 16:46	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/01/14 16:46	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/01/14 16:46	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/01/14 16:46	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/01/14 16:46	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/01/14 16:46	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/01/14 16:46	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/01/14 16:46	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/01/14 16:46	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/01/14 16:46	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		08/01/14 16:46	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/01/14 16:46	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-TW8      Lab ID: 92211539004      Collected: 07/28/14 13:35      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 13:34	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	08/01/14 09:20	08/01/14 13:34	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/01/14 17:02	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/01/14 17:02	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/01/14 17:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/01/14 17:02	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/01/14 17:02	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/01/14 17:02	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/01/14 17:02	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/01/14 17:02	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/01/14 17:02	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/01/14 17:02	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/01/14 17:02	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/01/14 17:02	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/01/14 17:02	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/01/14 17:02	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/01/14 17:02	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/01/14 17:02	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/01/14 17:02	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		08/01/14 17:02	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/01/14 17:02	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW19      Lab ID: 92211539005      Collected: 07/28/14 13:10      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 13:55	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	107 %		60-140		1	08/01/14 09:20	08/01/14 13:55	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/01/14 17:18	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/01/14 17:18	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/01/14 17:18	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/01/14 17:18	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/01/14 17:18	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/01/14 17:18	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/01/14 17:18	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/01/14 17:18	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/01/14 17:18	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/01/14 17:18	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/01/14 17:18	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/01/14 17:18	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/01/14 17:18	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/01/14 17:18	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/01/14 17:18	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/01/14 17:18	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96 %		70-130		1		08/01/14 17:18	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130		1		08/01/14 17:18	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		08/01/14 17:18	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-TW9      Lab ID: 92211539006      Collected: 07/28/14 14:50      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 14:15	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	104	%	60-140		1	08/01/14 09:20	08/01/14 14:15	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/01/14 17:33	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/01/14 17:33	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/01/14 17:33	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/01/14 17:33	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/01/14 17:33	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/01/14 17:33	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/01/14 17:33	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/01/14 17:33	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/01/14 17:33	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/01/14 17:33	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/01/14 17:33	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/01/14 17:33	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/01/14 17:33	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/01/14 17:33	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/01/14 17:33	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/01/14 17:33	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/01/14 17:33	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		08/01/14 17:33	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/01/14 17:33	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-TW6      Lab ID: 92211539007      Collected: 07/28/14 15:55      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 14:36	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	105 %		60-140		1	08/01/14 09:20	08/01/14 14:36	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 02:09	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 02:09	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 02:09	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 02:09	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 02:09	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 02:09	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 02:09	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 02:09	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 02:09	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 02:09	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 02:09	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 02:09	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 02:09	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 02:09	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 02:09	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 02:09	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98 %		70-130		1		08/02/14 02:09	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		08/02/14 02:09	17060-07-0	
Toluene-d8 (S)	97 %		70-130		1		08/02/14 02:09	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW16      Lab ID: 92211539008      Collected: 07/28/14 15:40      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 14:56	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	119	%	60-140		1	08/01/14 09:20	08/01/14 14:56	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	168	ug/L	100	76.8	1		08/02/14 03:58	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 03:58	994-05-8	
Benzene	42.7	ug/L	5.0	1.7	1		08/02/14 03:58	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 03:58	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 03:58	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 03:58	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 03:58	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 03:58	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 03:58	64-17-5	
Ethylbenzene	3.5J	ug/L	5.0	1.6	1		08/02/14 03:58	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 03:58	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 03:58	1634-04-4	
Naphthalene	43.7	ug/L	5.0	2.0	1		08/02/14 03:58	91-20-3	
Toluene	2.3J	ug/L	5.0	1.6	1		08/02/14 03:58	108-88-3	
m&p-Xylene	88.4	ug/L	10.0	3.1	1		08/02/14 03:58	179601-23-1	
o-Xylene	6.0	ug/L	5.0	1.6	1		08/02/14 03:58	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 03:58	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/02/14 03:58	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/02/14 03:58	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW31      Lab ID: 92211539009      Collected: 07/28/14 16:50      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 15:17	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	08/01/14 09:20	08/01/14 15:17	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	678	ug/L	250	192	2.5		08/02/14 05:16	75-85-4	
tert-Amylmethyl ether	ND	ug/L	25.0	8.5	2.5		08/02/14 05:16	994-05-8	
Benzene	394	ug/L	12.5	4.2	2.5		08/02/14 05:16	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	250	80.2	2.5		08/02/14 05:16	624-95-3	
tert-Butyl Alcohol	ND	ug/L	250	144	2.5		08/02/14 05:16	75-65-0	
tert-Butyl Formate	ND	ug/L	125	18.2	2.5		08/02/14 05:16	762-75-4	
1,2-Dichloroethane	36.6	ug/L	12.5	4.5	2.5		08/02/14 05:16	107-06-2	
Diisopropyl ether	ND	ug/L	12.5	4.2	2.5		08/02/14 05:16	108-20-3	
Ethanol	ND	ug/L	500	344	2.5		08/02/14 05:16	64-17-5	
Ethylbenzene	71.3	ug/L	12.5	4.0	2.5		08/02/14 05:16	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	25.0	9.0	2.5		08/02/14 05:16	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	12.5	4.2	2.5		08/02/14 05:16	1634-04-4	
Naphthalene	51.0	ug/L	12.5	5.0	2.5		08/02/14 05:16	91-20-3	
Toluene	78.9	ug/L	12.5	4.0	2.5		08/02/14 05:16	108-88-3	
m&p-Xylene	120	ug/L	25.0	7.8	2.5		08/02/14 05:16	179601-23-1	
o-Xylene	62.3	ug/L	12.5	4.0	2.5		08/02/14 05:16	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		2.5		08/02/14 05:16	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		2.5		08/02/14 05:16	17060-07-0	
Toluene-d8 (S)	97	%	70-130		2.5		08/02/14 05:16	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW25      Lab ID: 92211539010      Collected: 07/28/14 16:35      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 15:38	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	08/01/14 09:20	08/01/14 15:38	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 04:14	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 04:14	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 04:14	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 04:14	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 04:14	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 04:14	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 04:14	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 04:14	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 04:14	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 04:14	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 04:14	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 04:14	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 04:14	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 04:14	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 04:14	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 04:14	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 04:14	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		08/02/14 04:14	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 04:14	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW26      Lab ID: 92211539011      Collected: 07/28/14 17:35      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 15:58	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	08/01/14 09:20	08/01/14 15:58	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 02:24	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 02:24	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 02:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 02:24	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 02:24	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 02:24	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 02:24	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 02:24	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 02:24	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 02:24	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 02:24	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 02:24	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 02:24	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 02:24	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 02:24	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 02:24	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 02:24	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		08/02/14 02:24	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/02/14 02:24	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW24      Lab ID: 92211539012      Collected: 07/28/14 17:20      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 16:19	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	113	%	60-140		1	08/01/14 09:20	08/01/14 16:19	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 02:40	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 02:40	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 02:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 02:40	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 02:40	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 02:40	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 02:40	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 02:40	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 02:40	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 02:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 02:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 02:40	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 02:40	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 02:40	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 02:40	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 02:40	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		08/02/14 02:40	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/02/14 02:40	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/02/14 02:40	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-FB1      Lab ID: 92211539013      Collected: 07/28/14 17:30      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/01/14 09:20	08/01/14 16:40	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	08/01/14 09:20	08/01/14 16:40	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 01:37	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 01:37	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 01:37	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 01:37	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 01:37	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 01:37	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 01:37	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 01:37	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 01:37	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 01:37	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 01:37	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 01:37	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 01:37	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 01:37	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 01:37	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 01:37	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 01:37	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		08/02/14 01:37	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 01:37	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-DUPLICATE1      Lab ID: 92211539014      Collected: 07/28/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 17:00	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	119	%	60-140		1	08/01/14 09:20	08/01/14 17:00	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	664	ug/L	100	76.8	1		08/02/14 05:01	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 05:01	994-05-8	
Benzene	402	ug/L	50.0	17.0	10		08/05/14 23:43	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 05:01	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 05:01	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 05:01	762-75-4	
1,2-Dichloroethane	40.8	ug/L	5.0	1.8	1		08/02/14 05:01	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 05:01	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 05:01	64-17-5	
Ethylbenzene	83.6	ug/L	5.0	1.6	1		08/02/14 05:01	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 05:01	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 05:01	1634-04-4	
Naphthalene	50.8	ug/L	5.0	2.0	1		08/02/14 05:01	91-20-3	
Toluene	90.6	ug/L	5.0	1.6	1		08/02/14 05:01	108-88-3	
m&p-Xylene	139	ug/L	10.0	3.1	1		08/02/14 05:01	179601-23-1	
o-Xylene	71.3	ug/L	5.0	1.6	1		08/02/14 05:01	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 05:01	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/02/14 05:01	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/02/14 05:01	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-TW4      Lab ID: 92211539015      Collected: 07/29/14 09:45      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 17:21	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	08/01/14 09:20	08/01/14 17:21	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 02:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 02:56	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 02:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 02:56	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 02:56	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 02:56	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 02:56	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 02:56	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 02:56	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 02:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 02:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 02:56	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 02:56	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 02:56	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 02:56	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 02:56	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		08/02/14 02:56	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		08/02/14 02:56	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 02:56	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW10      Lab ID: 92211539016      Collected: 07/29/14 09:25      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 17:41	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	104	%	60-140		1	08/01/14 09:20	08/01/14 17:41	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 03:11	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 03:11	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 03:11	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 03:11	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 03:11	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 03:11	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 03:11	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 03:11	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 03:11	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 03:11	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 03:11	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 03:11	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 03:11	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 03:11	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 03:11	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 03:11	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	70-130		1		08/02/14 03:11	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/02/14 03:11	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/02/14 03:11	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-TW3      Lab ID: 92211539017      Collected: 07/29/14 11:05      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 18:02	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	109 %		60-140		1	08/01/14 09:20	08/01/14 18:02	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 04:29	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 04:29	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 04:29	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 04:29	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 04:29	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 04:29	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 04:29	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 04:29	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 04:29	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 04:29	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 04:29	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 04:29	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 04:29	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 04:29	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 04:29	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 04:29	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		1		08/02/14 04:29	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		08/02/14 04:29	17060-07-0	
Toluene-d8 (S)	96 %		70-130		1		08/02/14 04:29	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW9      Lab ID: 92211539018      Collected: 07/29/14 11:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 18:23	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	08/01/14 09:20	08/01/14 18:23	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 03:27	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 03:27	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 03:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 03:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 03:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 03:27	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 03:27	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 03:27	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 03:27	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 03:27	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 03:27	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 03:27	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 03:27	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 03:27	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 03:27	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 03:27	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		08/02/14 03:27	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		08/02/14 03:27	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/02/14 03:27	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-TW5      Lab ID: 92211539019      Collected: 07/29/14 12:15      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/01/14 09:20	08/01/14 18:43	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	75 %		60-140		1	08/01/14 09:20	08/01/14 18:43	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 04:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 04:45	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 04:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 04:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 04:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 04:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 04:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 04:45	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 04:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 04:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 04:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 04:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 04:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 04:45	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 04:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 04:45	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96 %		70-130		1		08/02/14 04:45	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %		70-130		1		08/02/14 04:45	17060-07-0	
Toluene-d8 (S)	97 %		70-130		1		08/02/14 04:45	2037-26-5	

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## ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-MW12		Lab ID: 92211539020		Collected: 07/29/14 11:55		Received: 07/31/14 16:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b>		Analytical Method: EPA 8011		Preparation Method: EPA 8011					
1,2-Dibromoethane (EDB)	1.6	ug/L	0.080	0.080	4	08/01/14 09:21	08/04/14 14:57	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	119	%	60-140		4	08/01/14 09:21	08/04/14 14:57	301-79-56	
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	4100	ug/L	2000	1540	20		08/02/14 05:47	75-85-4	
tert-Amylmethyl ether	ND	ug/L	200	68.0	20		08/02/14 05:47	994-05-8	
Benzene	2530	ug/L	100	34.0	20		08/02/14 05:47	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2000	642	20		08/02/14 05:47	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2000	1150	20		08/02/14 05:47	75-65-0	
tert-Butyl Formate	ND	ug/L	1000	146	20		08/02/14 05:47	762-75-4	
1,2-Dichloroethane	161	ug/L	100	36.0	20		08/02/14 05:47	107-06-2	
Diisopropyl ether	ND	ug/L	100	34.0	20		08/02/14 05:47	108-20-3	
Ethanol	ND	ug/L	4000	2760	20		08/02/14 05:47	64-17-5	
Ethylbenzene	526	ug/L	100	32.0	20		08/02/14 05:47	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	200	72.0	20		08/02/14 05:47	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	100	34.0	20		08/02/14 05:47	1634-04-4	
Naphthalene	235	ug/L	100	40.0	20		08/02/14 05:47	91-20-3	
Toluene	121	ug/L	100	32.0	20		08/02/14 05:47	108-88-3	
m&p-Xylene	1030	ug/L	200	62.0	20		08/02/14 05:47	179601-23-1	
o-Xylene	252	ug/L	100	32.0	20		08/02/14 05:47	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		20		08/02/14 05:47	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		20		08/02/14 05:47	17060-07-0	
Toluene-d8 (S)	97	%	70-130		20		08/02/14 05:47	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: 07960-DUPLICATE2      Lab ID: 92211539021      Collected: 07/29/14 00:00      Received: 07/31/14 16:40      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8011 GCS EDB and DBCP</b> Analytical Method: EPA 8011      Preparation Method: EPA 8011									
1,2-Dibromoethane (EDB)	1.6	ug/L	0.079	0.079	4	08/03/14 18:48	08/05/14 23:45	106-93-4	
<b>Surrogates</b>									
1-Chloro-2-bromopropane (S)	118	%	60-140		4	08/03/14 18:48	08/05/14 23:45	301-79-56	
<b>8260 MSV</b> Analytical Method: EPA 8260									
tert-Amyl Alcohol	3530	ug/L	2000	1540	20		08/02/14 06:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	200	68.0	20		08/02/14 06:03	994-05-8	
Benzene	2190	ug/L	100	34.0	20		08/02/14 06:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2000	642	20		08/02/14 06:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2000	1150	20		08/02/14 06:03	75-65-0	
tert-Butyl Formate	ND	ug/L	1000	146	20		08/02/14 06:03	762-75-4	
1,2-Dichloroethane	139	ug/L	100	36.0	20		08/02/14 06:03	107-06-2	
Diisopropyl ether	ND	ug/L	100	34.0	20		08/02/14 06:03	108-20-3	
Ethanol	ND	ug/L	4000	2760	20		08/02/14 06:03	64-17-5	
Ethylbenzene	458	ug/L	100	32.0	20		08/02/14 06:03	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	200	72.0	20		08/02/14 06:03	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	100	34.0	20		08/02/14 06:03	1634-04-4	
Naphthalene	203	ug/L	100	40.0	20		08/02/14 06:03	91-20-3	
Toluene	104	ug/L	100	32.0	20		08/02/14 06:03	108-88-3	
m&p-Xylene	887	ug/L	200	62.0	20		08/02/14 06:03	179601-23-1	
o-Xylene	219	ug/L	100	32.0	20		08/02/14 06:03	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		20		08/02/14 06:03	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		20		08/02/14 06:03	17060-07-0	
Toluene-d8 (S)	97	%	70-130		20		08/02/14 06:03	2037-26-5	

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### ANALYTICAL RESULTS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

Sample: TRIP BLANK		Lab ID: 92211539022	Collected: 07/29/14 00:00	Received: 07/31/14 16:40	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		08/02/14 01:53	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		08/02/14 01:53	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		08/02/14 01:53	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		08/02/14 01:53	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		08/02/14 01:53	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		08/02/14 01:53	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		08/02/14 01:53	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		08/02/14 01:53	108-20-3	
Ethanol	ND	ug/L	200	138	1		08/02/14 01:53	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		08/02/14 01:53	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		08/02/14 01:53	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		08/02/14 01:53	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		08/02/14 01:53	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		08/02/14 01:53	108-88-3	
m&p-Xylene	ND	ug/L	10.0	3.1	1		08/02/14 01:53	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		08/02/14 01:53	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97 %		70-130		1		08/02/14 01:53	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130		1		08/02/14 01:53	17060-07-0	
Toluene-d8 (S)	97 %		70-130		1		08/02/14 01:53	2037-26-5	

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### QUALITY CONTROL DATA

Project: 378 TRUCK - 14-214210  
Pace Project No.: 92211539

QC Batch: MSV/27797 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92211539001, 92211539002, 92211539003, 92211539004, 92211539005, 92211539006

METHOD BLANK: 1254860 Matrix: Water  
Associated Lab Samples: 92211539001, 92211539002, 92211539003, 92211539004, 92211539005, 92211539006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/01/14 13:39	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	08/01/14 13:39	
Benzene	ug/L	ND	5.0	08/01/14 13:39	
Diisopropyl ether	ug/L	ND	5.0	08/01/14 13:39	
Ethanol	ug/L	ND	200	08/01/14 13:39	
Ethyl-tert-butyl ether	ug/L	ND	10.0	08/01/14 13:39	
Ethylbenzene	ug/L	ND	5.0	08/01/14 13:39	
m&p-Xylene	ug/L	ND	10.0	08/01/14 13:39	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/01/14 13:39	
Naphthalene	ug/L	ND	5.0	08/01/14 13:39	
o-Xylene	ug/L	ND	5.0	08/01/14 13:39	
tert-Amyl Alcohol	ug/L	ND	100	08/01/14 13:39	
tert-Amylmethyl ether	ug/L	ND	10.0	08/01/14 13:39	
tert-Butyl Alcohol	ug/L	ND	100	08/01/14 13:39	
tert-Butyl Formate	ug/L	ND	50.0	08/01/14 13:39	
Toluene	ug/L	ND	5.0	08/01/14 13:39	
1,2-Dichloroethane-d4 (S)	%	100	70-130	08/01/14 13:39	
4-Bromofluorobenzene (S)	%	97	70-130	08/01/14 13:39	
Toluene-d8 (S)	%	90	70-130	08/01/14 13:39	

LABORATORY CONTROL SAMPLE: 1254861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	45.3	91	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	815	82	70-130	
Benzene	ug/L	50	47.5	95	70-130	
Diisopropyl ether	ug/L	50	45.8	92	70-130	
Ethanol	ug/L	2000	1910	95	70-130	
Ethyl-tert-butyl ether	ug/L	100	82.5	82	70-130	
Ethylbenzene	ug/L	50	48.8	98	70-130	
m&p-Xylene	ug/L	100	99.7	100	70-130	
Methyl-tert-butyl ether	ug/L	50	45.4	91	70-130	
Naphthalene	ug/L	50	49.4	99	70-130	
o-Xylene	ug/L	50	47.6	95	70-130	
tert-Amyl Alcohol	ug/L	1000	1050	105	70-130	
tert-Amylmethyl ether	ug/L	100	99.1	99	70-130	
tert-Butyl Alcohol	ug/L	500	452	90	70-130	
tert-Butyl Formate	ug/L	400	413	103	70-130	
Toluene	ug/L	50	45.9	92	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	

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### QUALITY CONTROL DATA

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

LABORATORY CONTROL SAMPLE: 1254861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Bromofluorobenzene (S)	%			92	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255877 1255878

Parameter	Units	92211539003		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec				
1,2-Dichloroethane	ug/L	ND	50	50	44.0	50.5	88	101	70-130	14	30		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	837	1040	84	104	70-130	21	30		
Benzene	ug/L	ND	50	50	46.3	52.1	93	104	70-130	12	30		
Diisopropyl ether	ug/L	ND	50	50	41.9	48.7	84	97	70-130	15	30		
Ethanol	ug/L	ND	2000	2000	1610	1860	81	93	70-130	14	30		
Ethyl-tert-butyl ether	ug/L	ND	100	100	76.1	88.7	76	89	70-130	15	30		
Ethylbenzene	ug/L	ND	50	50	47.9	53.4	96	107	70-130	11	30		
m&p-Xylene	ug/L	ND	100	100	97.1	108	97	108	70-130	11	30		
Methyl-tert-butyl ether	ug/L	ND	50	50	41.7	48.1	83	96	70-130	14	30		
Naphthalene	ug/L	ND	50	50	44.5	51.4	89	103	70-130	14	30		
o-Xylene	ug/L	ND	50	50	46.9	52.7	94	105	70-130	12	30		
tert-Amyl Alcohol	ug/L	ND	1000	1000	903	1070	90	107	70-130	17	30		
tert-Amylmethyl ether	ug/L	ND	100	100	90.8	107	91	107	70-130	16	30		
tert-Butyl Alcohol	ug/L	ND	500	500	384	412	77	82	70-130	7	30		
tert-Butyl Formate	ug/L	ND	400	400	186	199	47	50	70-130	6	30 P5		
Toluene	ug/L	ND	50	50	44.9	50.5	90	101	70-130	12	30		
1,2-Dichloroethane-d4 (S)	%						100	100	70-130				
4-Bromofluorobenzene (S)	%						98	97	70-130				
Toluene-d8 (S)	%						98	98	70-130				

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### QUALITY CONTROL DATA

Project: 378 TRUCK - 14-214210  
Pace Project No.: 92211539

QC Batch: MSV/27799 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC  
Associated Lab Samples: 92211539007, 92211539008, 92211539009, 92211539010, 92211539011, 92211539012, 92211539013, 92211539014, 92211539015, 92211539016, 92211539017, 92211539018, 92211539019, 92211539020, 92211539021, 92211539022

METHOD BLANK: 1255057 Matrix: Water  
Associated Lab Samples: 92211539007, 92211539008, 92211539009, 92211539010, 92211539011, 92211539012, 92211539013, 92211539014, 92211539015, 92211539016, 92211539017, 92211539018, 92211539019, 92211539020, 92211539021, 92211539022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/02/14 00:35	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	08/02/14 00:35	
Benzene	ug/L	ND	5.0	08/02/14 00:35	
Diisopropyl ether	ug/L	ND	5.0	08/02/14 00:35	
Ethanol	ug/L	ND	200	08/02/14 00:35	
Ethyl-tert-butyl ether	ug/L	ND	10.0	08/02/14 00:35	
Ethylbenzene	ug/L	ND	5.0	08/02/14 00:35	
m&p-Xylene	ug/L	ND	10.0	08/02/14 00:35	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/02/14 00:35	
Naphthalene	ug/L	ND	5.0	08/02/14 00:35	
o-Xylene	ug/L	ND	5.0	08/02/14 00:35	
tert-Amyl Alcohol	ug/L	ND	100	08/02/14 00:35	
tert-Amylmethyl ether	ug/L	ND	10.0	08/02/14 00:35	
tert-Butyl Alcohol	ug/L	ND	100	08/02/14 00:35	
tert-Butyl Formate	ug/L	ND	50.0	08/02/14 00:35	
Toluene	ug/L	ND	5.0	08/02/14 00:35	
1,2-Dichloroethane-d4 (S)	%	100	70-130	08/02/14 00:35	
4-Bromofluorobenzene (S)	%	98	70-130	08/02/14 00:35	
Toluene-d8 (S)	%	96	70-130	08/02/14 00:35	

LABORATORY CONTROL SAMPLE: 1255058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	44.8	90	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	928	93	70-130	
Benzene	ug/L	50	45.9	92	70-130	
Diisopropyl ether	ug/L	50	43.1	86	70-130	
Ethanol	ug/L	2000	1810	90	70-130	
Ethyl-tert-butyl ether	ug/L	100	78.3	78	70-130	
Ethylbenzene	ug/L	50	46.8	94	70-130	
m&p-Xylene	ug/L	100	96.0	96	70-130	
Methyl-tert-butyl ether	ug/L	50	43.1	86	70-130	
Naphthalene	ug/L	50	47.1	94	70-130	
o-Xylene	ug/L	50	47.0	94	70-130	
tert-Amyl Alcohol	ug/L	1000	932	93	70-130	
tert-Amylmethyl ether	ug/L	100	93.8	94	70-130	

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### QUALITY CONTROL DATA

Project: 378 TRUCK - 14-214210  
Pace Project No.: 92211539

LABORATORY CONTROL SAMPLE: 1255058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Alcohol	ug/L	500	465	93	70-130	
tert-Butyl Formate	ug/L	400	389	97	70-130	
Toluene	ug/L	50	44.5	89	70-130	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255883 1255884

Parameter	Units	92211539011		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
1,2-Dichloroethane	ug/L	ND	50	50	48.0	52.4	96	105	70-130	9	30		
3,3-Dimethyl-1-Butanol	ug/L	ND	1000	1000	930	960	93	96	70-130	3	30		
Benzene	ug/L	ND	50	50	48.2	51.8	96	104	70-130	7	30		
Diisopropyl ether	ug/L	ND	50	50	45.9	48.8	92	98	70-130	6	30		
Ethanol	ug/L	ND	2000	2000	1920	2050	96	103	70-130	7	30		
Ethyl-tert-butyl ether	ug/L	ND	100	100	84.8	91.4	85	91	70-130	8	30		
Ethylbenzene	ug/L	ND	50	50	49.3	52.8	99	106	70-130	7	30		
m&p-Xylene	ug/L	ND	100	100	99.9	106	100	106	70-130	6	30		
Methyl-tert-butyl ether	ug/L	ND	50	50	46.2	49.9	92	100	70-130	8	30		
Naphthalene	ug/L	ND	50	50	49.3	52.5	99	105	70-130	6	30		
o-Xylene	ug/L	ND	50	50	48.4	51.8	97	104	70-130	7	30		
tert-Amyl Alcohol	ug/L	ND	1000	1000	1110	1190	111	119	70-130	7	30		
tert-Amylmethyl ether	ug/L	ND	100	100	100	108	100	108	70-130	7	30		
tert-Butyl Alcohol	ug/L	ND	500	500	389	423	78	85	70-130	8	30		
tert-Butyl Formate	ug/L	ND	400	400	78.8	79.4	20	20	70-130	1	30	P5	
Toluene	ug/L	ND	50	50	47.6	50.6	95	101	70-130	6	30		
1,2-Dichloroethane-d4 (S)	%						103	104	70-130				
4-Bromofluorobenzene (S)	%						98	99	70-130				
Toluene-d8 (S)	%						98	98	70-130				

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 378 TRUCK - 14-214210  
Pace Project No.: 92211539

QC Batch: OEXT/29146 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92211539001, 92211539002, 92211539003, 92211539004, 92211539005, 92211539006, 92211539007, 92211539008, 92211539009, 92211539010, 92211539011, 92211539012, 92211539013, 92211539014, 92211539015, 92211539016, 92211539017, 92211539018, 92211539019, 92211539020

METHOD BLANK: 1254557 Matrix: Water  
Associated Lab Samples: 92211539001, 92211539002, 92211539003, 92211539004, 92211539005, 92211539006, 92211539007, 92211539008, 92211539009, 92211539010, 92211539011, 92211539012, 92211539013, 92211539014, 92211539015, 92211539016, 92211539017, 92211539018, 92211539019, 92211539020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	08/01/14 10:28	
1-Chloro-2-bromopropane (S)	%	108	60-140	08/01/14 10:28	

LABORATORY CONTROL SAMPLE & LCSD: 1254558 1254559

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.29	0.28	102	100	60-140	2	20	
1-Chloro-2-bromopropane (S)	%				109	109	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1254560 1254561

Parameter	Units	92211539002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.29	.29	0.28	0.30	98	104	60-140	6	20	
1-Chloro-2-bromopropane (S)	%						107	112	60-140			

SAMPLE DUPLICATE: 1254562

Parameter	Units	92211539003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	111	105	7		

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### QUALITY CONTROL DATA

Project: 378 TRUCK - 14-214210  
Pace Project No.: 92211539

QC Batch: OEXT/29178 Analysis Method: EPA 8011  
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP  
Associated Lab Samples: 92211539021

METHOD BLANK: 1255702 Matrix: Water  
Associated Lab Samples: 92211539021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	08/03/14 20:32	
1-Chloro-2-bromopropane (S)	%	110	60-140	08/03/14 20:32	

LABORATORY CONTROL SAMPLE & LCSD: 1255703

Parameter	Units	1255704								
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.29	0.30	100	104	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				109	112	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1255705 1255706

Parameter	Units	1255706										
		92211558002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.28	0.30	100	106	60-140	6	20	
1-Chloro-2-bromopropane (S)	%						109	113	60-140			

SAMPLE DUPLICATE: 1255707

Parameter	Units	92211558003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	119	137	14		

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## QUALIFIERS

Project: 378 TRUCK - 14-214210

Pace Project No.: 92211539

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

P5 The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 378 TRUCK - 14-214210  
Pace Project No.: 92211539

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92211539001	07960-TW7	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539002	07960-MW17	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539003	07960-MW23	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539004	07960-TW8	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539005	07960-MW19	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539006	07960-TW9	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539007	07960-TW6	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539008	07960-MW16	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539009	07960-MW31	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539010	07960-MW25	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539011	07960-MW26	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539012	07960-MW24	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539013	07960-FB1	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539014	07960-DUPLICATE1	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539015	07960-TW4	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539016	07960-MW10	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539017	07960-TW3	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539018	07960-MW9	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539019	07960-TW5	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539020	07960-MW12	EPA 8011	OEXT/29146	EPA 8011	GCSV/18412
92211539021	07960-DUPLICATE2	EPA 8011	OEXT/29178	EPA 8011	GCSV/18422
92211539001	07960-TW7	EPA 8260	MSV/27797		
92211539002	07960-MW17	EPA 8260	MSV/27797		
92211539003	07960-MW23	EPA 8260	MSV/27797		
92211539004	07960-TW8	EPA 8260	MSV/27797		
92211539005	07960-MW19	EPA 8260	MSV/27797		
92211539006	07960-TW9	EPA 8260	MSV/27797		
92211539007	07960-TW6	EPA 8260	MSV/27799		
92211539008	07960-MW16	EPA 8260	MSV/27799		
92211539009	07960-MW31	EPA 8260	MSV/27799		
92211539010	07960-MW25	EPA 8260	MSV/27799		
92211539011	07960-MW26	EPA 8260	MSV/27799		
92211539012	07960-MW24	EPA 8260	MSV/27799		
92211539013	07960-FB1	EPA 8260	MSV/27799		
92211539014	07960-DUPLICATE1	EPA 8260	MSV/27799		
92211539015	07960-TW4	EPA 8260	MSV/27799		
92211539016	07960-MW10	EPA 8260	MSV/27799		
92211539017	07960-TW3	EPA 8260	MSV/27799		
92211539018	07960-MW9	EPA 8260	MSV/27799		
92211539019	07960-TW5	EPA 8260	MSV/27799		
92211539020	07960-MW12	EPA 8260	MSV/27799		
92211539021	07960-DUPLICATE2	EPA 8260	MSV/27799		
92211539022	TRIP BLANK	EPA 8260	MSV/27799		

### REPORT OF LABORATORY ANALYSIS

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Document Name: **Sample Condition Upon Receipt (SCUR)**  
 Document Number: **F-CHR-CS-003-rev.14**

Document Revised: April 07, 2014  
 Page 1 of 2  
 Issuing Authority:  
 Pace Huntersville Quality Office

Client Name: ECS

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1102 **T1401**    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor    T1102: No Correction    T1301: No Correction

Corrected Cooler Temp.: 5.2 °C    Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date:
Proj. Name:
Date and Initials of person examining contents: <u>JS 7-31-14</u>

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>7-31-14</u>	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. <u>no detection on coliforms</u>
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N  
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

SCURF Review: NS Date: 7/31/14  
 SRF Review: NS Date: 8/4/14

Place label here  
 OR  
 Handwrite project number  
 (if no label available)

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

92211539

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

92211534

**Section A** Required Client Information: Company: ECS Address: 13504 South Point Blvd Charlotte, NC 28273

**Section B** Required Project Information: Report To: Nelle France Copy To:  Purchase Order No.: 14-214210 Project Name: 378 Truck Project Number: 14-214210

**Section C** Invoice Information: Attention: Accounting Company Name: ECS Address: On File Pace Quote Reference:  Pace Project Manager:  Pace Profile #:

Page: 1 of 2  
**1842607**

**Section D** Required Client Information: Matrix Codes: Drinking Water (DW), Waste Water (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Other (OT)

**SAMPLE ID** (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE

**REGULATORY AGENCY:** NPDES  GROUND WATER  DRINKING WATER  UST  RCRA  OTHER

Site Location STATE: SC

ITEM #	Matrix Code	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME							
1	07960-TW7	WT	G	7/23/14	12:15		6		X			001
2	07960-MW17	WT	G		11:55				X			002
3	07960-MW23	WT	G		12:05				X			003
4	07960-TW8	WT	G		13:35				X			004
5	07960-MW19	WT	G		13:10				X			005
6	07960-TW9	WT	G		14:50				X			006
7	07960-TW6	WT	G		15:55				X			007
8	07960-MW16	WT	G		15:40				X			008
9	07960-MW31	WT	G		16:50				X			009
10	07960-MW25	WT	G		16:35				X			010
11	07960-MW26	WT	G		17:35				X			011
12	07960-MW24	WT	G		17:20				X			012

**ADDITIONAL COMMENTS:** Please report 5-values.

**RELINQUISHED BY / AFFILIATION:** A. Williamson / ECS

**ACCEPTED BY / AFFILIATION:** B. Moody - Pace / Pace Analytical

**DATE:** 7/31/14

**TIME:** 17:15

**DATE:** 7/31/14

**TIME:** 17:00

**Temp in °C:** 5.2

**Received on Ice (Y/N):** Y

**Custody Sealed Cooler (Y/N):** N

**Samples Intact (Y/N):** Y

**SAMPLER NAME AND SIGNATURE:** A. Williamson

**PRINT Name of SAMPLER:** A. Williamson

**SIGNATURE of SAMPLER:** [Signature]

**DATE Signed (MM/DD/YY):** 7/30/14

**ORIGINAL**

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



**APPENDIX G**

Disposal Manifest

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# MATERIAL MANIFEST



Manifest Document No. \_\_\_\_\_  
 Page 1 of 1  
 Zebra Job No. 41253

EMERGENCY PHONE NO. (336) 841-5276  
 POST OFFICE BOX 357 HIGH POINT, NC 27261  
 TEL (336) 841-5276 FAX (336) 841-5509

### GENERATOR INFORMATION

Name: 378 Truck Stop  
 Street Address: 731 Hwy 378, Edgefield SC  
 Mailing Address: \_\_\_\_\_  
 US EPA ID No. \_\_\_\_\_  
 Phone No. 704 583 2711  
 Contact: Nicole France

### DESCRIPTION OF MATERIALS

HM	USDOT Proper Shipping Name (Complete All Items for Hazardous Materials)	Hazard Class or Div	UN / NA ID No.	Packing Group	Containers Qty.	Containers Type	Total Quantity	Unit Wt./Vol.
a.	Non HAZ liquid NOS	NA	NA	NA	1	TI	1107	G
b.								
c.								

### ADDITIONAL INFORMATION

	ERG No.	Zebra Profile Code	Facility Use
a. Petroleum conduct water	NA		
b.			
c.			

### GENERATOR'S CERTIFICATION

This is to certify that the above-described materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40 CFR Part 261 or any applicable state law, and unless specifically identified above, the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2 ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

Printed / Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Mo. / Day / Yr. \_\_\_\_\_

### TRANSPORTER INFORMATION

Transporter: Zebra Environmental & Industrial Services Inc  
 Address: 901 East Springfield Road, High Point, NC 27263  
 I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.  
 Signature: \_\_\_\_\_ Shipment Date: 7-7-14  
 Transporter or EPA ID No.: NCO991302669 Unit No.: AT8 T2  
 I hereby acknowledge receipt of the above-described materials were received from the generator site and were transported to the facility listed below.  
 Phone: (336) 841-5276 Signature: \_\_\_\_\_ Delivery Date: 7/7/14

### FACILITY INFORMATION

Facility: Zebra Environmental & Industrial Services, Inc.  
 Address: 901 East Springfield Road, High Point, NC 27263  
 I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy noted below.  
 Signature: \_\_\_\_\_ Receipt Date: 7/7/14  
 Facility or EPA ID No.: NCO991302669  
 Discrepancies / Routing Codes / Handling Methods  
 Phone: (336) 841-5276  
 Contact: David Tedder

**APPENDIX K**

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Data Verification Checklist

## Contractor Checklist

For each report submitted to the UST Management Division, the contractor will be required to verify that all data elements for the required scope of work have been provided. For items not required for the scope of work, the N/A box should be checked. For items required and not completed or provided, the No box should be checked and a thorough description of the reason must be provided.

Item #	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	✓		
2	Is UST Owner/Operator name, address, & phone number provided?	✓		
3	Is name, address, & phone number of current property owner provided?	✓		
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	✓		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			✓
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	✓		
7	Has the facility history been summarized?	✓		
8	Has the regional geology and hydrogeology been described?	✓		
9	Are the receptor survey results provided as required?			✓
10	Has current use of the site and adjacent land been described?	✓		
11	Has the site-specific geology and hydrogeology been described?	✓		
12	Has the primary soil type been described?	✓		
13	Have field screening results been described?			✓
14	Has a description of the soil sample collection and preservation been detailed?			✓
15	Has the field screening methodology and procedure been detailed?			✓
16	Has the monitoring well installation and development dates been provided?			✓
17	Has the method of well development been detailed?			✓
18	Has justification been provided for the locations of the monitoring wells?			✓
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	✓		
20	Has the groundwater sampling methodology been detailed?	✓		
21	Have the groundwater sampling dates and groundwater measurements been provided?	✓		
22	Has the purging methodology been detailed?	✓		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete?	✓		
24	If free-product is present, has the thickness been provided?	✓		
25	Does the report include a brief discussion of the assessment done and the results?	✓		
26	Does the report include a brief discussion of the aquifer evaluation and results?			✓
27	Does the report include a brief discussion of the fate & transport models used?			✓

Item #	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			✓
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			✓
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			✓
31	Have recommendations for further action been provided and explained?	✓		
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			✓
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)	✓		
34	Has the current and historical laboratory data been provided in tabular format?	✓		
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			✓
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			✓
37	Has the topographic map been provided with all required elements? (Figure 1)	✓		
38	Has the site base map been provided with all required elements? (Figure 2)	✓		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)	✓		
40	Has the site potentiometric map been provided? (Figure 5)	✓		
41	Have the geologic cross-sections been provided? (Figure 6)			✓
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			✓
43	Has the site survey been provided and include all necessary elements? (Appendix A)			✓
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	✓		
45	Is the laboratory performing the analyses properly certified?	✓		
46	Has the tax map been included with all necessary elements? (Appendix C)			✓
47	Have the soil boring/field screening logs been provided? (Appendix D)			✓
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			✓
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			✓
50	Have the disposal manifests been provided? (Appendix G)	✓		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			✓
52	Has all fate and transport modeling been provided? (Appendix I)			✓
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			✓
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	✓		





## **APPENDIX L**

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**Aggressive Fluid Vapor Recovery Event Data  
Including: Before and After Data; Field Data Sheets; Air Flow  
Calculations; Pre-Treatment Emissions Calculations; Post-  
Treatment Emissions Calculations**





**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**AIR FLOW CALCULATIONS**

SITE NAME: 378 Truck Stop  
 UST PERMIT NUMBER: 07960  
 AVERAGE DEPTH TO GROUNDWATER: 21.34  
 DESCRIBE SOIL IN THE SATURATED ZONE: silty SAND  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): Unknown  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: 07690-RW1 & 07690-MW1  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM PUMP (cfm @ in.Hg): 275cfm @ 25 in Hg

**AIR FLOW CALCULATIONS**

Date	Time	Vacuum (in.Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>ws</sub> (Wt/Wt)	B <sub>ws</sub> (vol/vol)	Q <sub>std</sub> (DSCFM)
Start	12:45								
06/30/14	13:15	27.50	481	3	108.9	78.2	0.04380414195	0.0656	21
06/30/14	13:45	27.50	560	3	112.5	70.1	0.04380414195	0.0656	25
06/30/14	14:15	27.50	510	3	118.1	65.1	0.04768054666	0.0710	22
06/30/14	14:45	27.50	470	3	119.2	66.0	0.05002257301	0.0742	20
06/30/14	15:15	27.50	420	3	119.5	69.6	0.05346639454	0.0789	18
06/30/14	15:45	27.25	350	3	120.4	68.9	0.05433944101	0.0801	15
06/30/14	16:15	27.00	356	3	123.1	67.1	0.05725978593	0.0840	15
06/30/14	16:45	27.50	420	3	117.1	69.5	0.04963990653	0.0737	18
06/30/14	17:15	27.50	391	3	117.5	66.5	0.04791006380	0.0713	17
06/30/14	17:45	27.50	425	3	117.7	66.0	0.04781023683	0.0712	19
06/30/14	18:15	27.50	420	3	114.8	71.1	0.04743314556	0.0706	18
06/30/14	18:45	27.50	405	3	111.5	70.5	0.04248741936	0.0637	18
06/30/14	19:15	27.50	512	3	108.3	71.0	0.03878879336	0.0585	23
06/30/14	19:45	27.50	269	3	106.7	69.7	0.03619764678	0.0548	12
06/30/14	20:15	28.00	356	3	107.1	80.9	0.04294485509	0.0644	16
06/30/14	20:45	26.00	408	3	106.2	94.5	0.04932745715	0.0732	18
06/30/14	21:45	26.00	373	3	97.9	80.5	0.03194742860	0.0487	17
06/30/14	22:45	28.00	408	3	103.7	94.0	0.04530405610	0.0677	18
06/30/14	23:45	28.00	443	3	100.9	99.9	0.04421797975	0.0662	20
07/01/14	0:45	28.00	425	3	99.5	93.9	0.03957028447	0.0596	19
07/01/14	1:45	28.00	408	3	99.0	98.7	0.04106215326	0.0617	19
07/01/14	2:45	28.00	410	3	98.6	99.3	0.04079864548	0.0614	19
07/01/14	3:45	28.00	408	3	97.5	99.9	0.03962754433	0.0597	19
07/01/14	4:45	28.00	400	3	96.7	99.9	0.03861423021	0.0583	18
07/01/14	5:45	28.00	375	3	98.1	99.9	0.04040376009	0.0608	17
07/01/14	6:45	28.25	339	3	99.0	99.9	0.04159477439	0.0625	15
07/01/14	7:45	28.00	200	3	103.7	99.9	0.04836873240	0.0719	9
07/01/14	8:45	28.00	217	3	126.0	99.9	0.09777585935	0.1354	9
07/01/14	9:45	28.00	217	3	133.9	88.7	0.10887836666	0.1485	8
07/01/14	10:45	28.00	223	3	124.2	81.4	0.07327541659	0.1051	9
07/01/14	11:45	28.00	220	3	123.2	79.1	0.06883935512	0.0993	9
07/01/14	12:45	28.00	261	3	123.1	63.7	0.05410601221	0.0798	11
07/01/14	14:45	27.75	250	3	118.9	78.4	0.04971798716	0.0738	11
07/01/14	16:45	27.75	263	3	126.3	60.5	0.05625362074	0.0827	11
07/01/14	18:45	27.75	217	3	115.5	54.4	0.03640920220	0.0551	10
07/01/14	20:45	28.00	391	3	110.3	87.9	0.05189832745	0.0768	17
07/01/14	22:45	28.00	373	3	104.5	99.9	0.04962060309	0.0736	17
07/02/14	0:45	28.00	478	3	102.9	99.9	0.04714676675	0.0702	21
07/02/14	2:45	28.00	428	3	100.6	99.9	0.04379371974	0.0656	19
07/02/14	4:45	28.00	401	3	101.7	91.4	0.04125213059	0.0620	18
07/02/14	6:45	28.00	425	3	99.3	79.5	0.03296807175	0.0502	20
07/02/14	8:45	28.00	420	3	99.9	81.9	0.03467345798	0.0526	19
07/02/14	10:45	28.00	350	3	149.9	99.9	0.21004218789	0.2518	12
07/02/14	12:45	28.00	265	3	148.6	99.9	0.20121315759	0.2438	9
07/02/14	14:45	28.00	235	3	151.2	99.9	0.21931518591	0.2600	8
07/02/14	16:45	28.00	225	3	146.8	99.9	0.21931518591	0.2600	7
07/02/14	18:45	28.00	218	3	135.5	99.9	0.13191526585	0.1745	8
07/02/14	20:45	27.50	235	3	129.0	99.9	0.10744400066	0.1469	9
07/02/14	22:45	28.00	183	3	129.2	99.9	0.10812221713	0.1477	7
07/03/14	0:45	28.00	167	3	127.6	99.9	0.10281664093	0.1414	7

**APPENDIX L  
AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
AIR FLOW CALCULATIONS**

SITE NAME: 378 Truck Stop  
 UST PERMIT NUMBER: 07960  
 AVERAGE DEPTH TO GROUNDWATER: 21.34  
 DESCRIBE SOIL IN THE SATURATED ZONE: silty SAND  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): Unknown  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: 07690-RW1 & 07690-MW1  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM PUMP (cfm @ in.Hg): 275cfm @ 25 in Hg

**AIR FLOW CALCULATIONS**

Date	Time	Vacuum (in.Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>ws</sub> (Wt/Wt)	B <sub>ws</sub> (vol/vol)	Q <sub>std</sub> (DSCFM)
07/03/14	2:45	28.00	183	3	123.7	99.9	0.09096387845	0.1272	7
07/03/14	4:45	28.00	205	3	123.1	99.9	0.08926664841	0.1251	8
07/03/14	6:45	28.00	183	3	122.5	99.9	0.08760110342	0.1231	7
07/03/14	8:45	28.00	212	3	133.5	78.6	0.09345476933	0.1302	8
07/03/14	10:45	28.00	168	3	138.4	79.5	0.10989798890	0.1497	6
07/03/14	12:45	28.00	165	3	146.3	99.9	0.18659878531	0.2302	6
07/03/14	14:45	28.00	148	3	144.2	99.9	0.17428331842	0.2183	5
07/03/14	16:45	28.50	149	3	138.6	99.9	0.14558237723	0.1891	5
07/03/14	18:45	28.00	200	3	118.4	99.9	0.07701792981	0.1098	8
07/03/14	20:45	28.00	200	3	133.2	99.9	0.12265342734	0.1642	8
07/03/14	22:45	28.00	217	3	125.2	99.9	0.09535005455	0.1325	9
07/04/14	0:45	28.25	226	3	121.5	99.9	0.08489382673	0.1197	9
07/04/14	2:45	28.00	167	3	115.9	99.9	0.07119459249	0.1024	7
07/04/14	4:45	28.25	200	3	109.1	99.9	0.05743792084	0.0843	9
07/04/14	6:45	28.25	183	3	104.4	99.9	0.04946245853	0.0734	8
07/04/14	8:45	28.25	185	3	131.2	75.9	0.08376186907	0.1183	7
07/04/14	10:45	27.75	201	3	123.8	98.0	0.08926532956	0.1251	8
07/04/14	12:45	28.50	217	3	144.3	99.9	0.08926532956	0.1251	9
<b>Average</b>		<b>27.84</b>	<b>309.01</b>	<b>3.07</b>	<b>118.36</b>	<b>88.04</b>	<b>0.0757</b>	<b>0.10</b>	<b>13.24</b>

**NOTES**

Qstd = Flow at Dry Standard Cubic Feet Per Minute (DSCFM)  
 Vacuum = The level of vacuum being applied recorded from the liquid ring pump inlet in inches of Mercury (in.Hg)  
 Velocity = The rate at which air flows is measured at the blower discharge piping in feet per minute (fpm)  
 Pipe ID = The inside diameter of the blower discharge piping (from the vacuum pump) in inches (in)  
 Temperature = air stream temp exiting the blower discharge piping (dry bulb temp) in degrees Fahrenheit (°F)  
 Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping  
 B<sub>ws</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart (temp Vs relative humidity) based on an elevation of 458 feet above sea level.  
 B<sub>ws</sub> = water vapor % by volume

**EQUATIONS**

$$B_{ws} = (B_{ws}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{ws}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1 - \text{Water Vapor}) * \text{velocity} * (\text{PI} * (\text{diameter}/24)^2) * (528^\circ\text{R}/(\text{Temp} + 460))$$

**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**PRE-TREATMENT EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop

AFVR EVENT DATE: 6/30/14-7/4/14

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub> (ppm)	PPM <sub>dry</sub> (ppm)	RF	PPM <sub>conc</sub> (ppm)	C <sub>c:m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	
30	21	5,000	5,000	5,351	1.02	5,458	2,723	0.00017	0.22	0.25	0.13
60	25	6,000	6,000	6,421	1.02	6,550	3,268	0.00020	0.30	0.35	0.18
90	22	6,000	6,000	6,458	1.02	6,588	3,287	0.00021	0.27	0.32	0.16
120	20	6,000	6,000	6,481	1.02	6,611	3,298	0.00021	0.25	0.29	0.15
150	18	6,000	6,000	6,514	1.02	6,644	3,315	0.00021	0.22	0.26	0.13
180	15	6,000	6,000	6,522	1.02	6,653	3,320	0.00021	0.19	0.22	0.11
210	15	8,000	8,000	8,734	1.02	8,909	4,445	0.00028	0.25	0.29	0.15
240	18	7,500	7,500	8,097	1.02	8,258	4,121	0.00026	0.28	0.33	0.16
270	17	8,000	8,000	8,614	1.02	8,786	4,384	0.00027	0.28	0.32	0.16
300	19	6,500	6,500	6,998	1.02	7,138	3,562	0.00022	0.25	0.29	0.14
330	18	6,000	6,000	6,456	1.02	6,585	3,286	0.00021	0.23	0.26	0.13
360	18	6,000	6,000	6,408	1.02	6,537	3,262	0.00020	0.22	0.25	0.13
390	23	5,000	5,000	5,311	1.02	5,417	2,703	0.00017	0.23	0.27	0.13
420	12	6,000	6,000	6,348	1.02	6,475	3,231	0.00020	0.15	0.17	0.09
450	16	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
480	18	1,000	1,000	1,079	1.02	1,101	549	0.00003	0.04	0.04	0.02
540	17	540	540	568	1.02	579	289	0.00002	0.02	0.02	0.02
600	18	520	520	558	1.02	569	284	0.00002	0.02	0.02	0.02
660	20	600	600	643	1.02	655	327	0.00002	0.02	0.03	0.03
720	19	820	820	872	1.02	889	444	0.00003	0.03	0.04	0.04
780	19	780	780	831	1.02	848	423	0.00003	0.03	0.03	0.03
840	19	800	800	852	1.02	869	434	0.00003	0.03	0.04	0.04
900	19	720	720	766	1.02	781	390	0.00002	0.03	0.03	0.03
960	18	650	650	690	1.02	704	351	0.00002	0.02	0.03	0.03
1020	17	680	680	724	1.02	739	368	0.00002	0.02	0.03	0.03
1080	15	700	700	747	1.02	762	380	0.00002	0.02	0.03	0.03
1140	9	720	720	776	1.02	791	395	0.00002	0.01	0.02	0.02
1200	9	650	650	752	1.02	767	383	0.00002	0.01	0.01	0.01
1260	8	700	700	822	1.02	839	418	0.00003	0.01	0.02	0.02
1320	9	650	650	726	1.02	741	370	0.00002	0.01	0.01	0.01
1380	9	650	650	722	1.02	736	367	0.00002	0.01	0.01	0.01
1440	11	800	800	869	1.02	887	442	0.00003	0.02	0.02	0.02
1560	11	450	450	486	1.02	496	247	0.00002	0.01	0.01	0.02
1680	11	800	800	872	1.02	890	444	0.00003	0.02	0.02	0.04
1800	10	600	600	635	1.02	648	323	0.00002	0.01	0.01	0.03
1920	17	840	840	910	1.02	928	463	0.00003	0.03	0.03	0.07
2040	17	840	840	907	1.02	925	461	0.00003	0.03	0.03	0.07
2160	21	820	820	882	1.02	900	449	0.00003	0.04	0.04	0.08
2280	19	840	840	899	1.02	917	458	0.00003	0.03	0.04	0.08
2400	18	800	800	853	1.02	870	434	0.00003	0.03	0.03	0.07
2520	20	860	860	905	1.02	924	461	0.00003	0.03	0.04	0.08
2640	19	800	800	844	1.02	861	430	0.00003	0.03	0.04	0.07
2760	12	800	800	1,069	1.02	1,091	544	0.00003	0.02	0.03	0.05
2880	9	700	700	926	1.02	944	471	0.00003	0.02	0.02	0.04
3000	8	700	700	946	1.02	965	481	0.00003	0.01	0.02	0.03
3120	7	810	810	1,095	1.02	1,117	557	0.00003	0.02	0.02	0.04
3240	8	650	650	787	1.02	803	401	0.00003	0.01	0.01	0.03

**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**PRE-TREATMENT EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop

AFVR EVENT DATE: 6/30/14-7/4/14

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub> (ppm)	PPM <sub>dry</sub> (ppm)	RF	PPM <sub>conc</sub> (ppm)	C <sub>c:m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
3360	9	520	520	610	1.02	622	310	0.00002	0.01	0.01	0.02
3480	7	820	820	962	1.02	981	490	0.00003	0.01	0.02	0.03
3600	7	840	840	978	1.02	998	498	0.00003	0.01	0.01	0.03
3720	7	780	780	894	1.02	912	455	0.00003	0.01	0.01	0.03
3840	8	800	800	914	1.02	933	465	0.00003	0.01	0.02	0.03
3960	7	740	740	844	1.02	861	429	0.00003	0.01	0.01	0.03
4080	8	720	720	828	1.02	844	421	0.00003	0.01	0.02	0.03
4200	6	600	600	706	1.02	720	359	0.00002	0.01	0.01	0.02
4320	6	600	600	779	1.02	795	397	0.00002	0.01	0.01	0.02
4440	5	650	650	832	1.02	848	423	0.00003	0.01	0.01	0.02
4560	5	600	600	740	1.02	755	377	0.00002	0.01	0.01	0.02
4680	8	600	600	674	1.02	688	343	0.00002	0.01	0.01	0.02
4800	8	660	660	790	1.02	805	402	0.00003	0.01	0.01	0.03
4920	9	640	640	738	1.02	753	375	0.00002	0.01	0.01	0.03
5040	9	640	640	727	1.02	742	370	0.00002	0.01	0.01	0.03
5160	7	660	660	735	1.02	750	374	0.00002	0.01	0.01	0.02
5280	9	620	620	677	1.02	691	345	0.00002	0.01	0.01	0.03
5400	8	680	680	734	1.02	749	374	0.00002	0.01	0.01	0.03
5520	7	640	640	726	1.02	740	369	0.00002	0.01	0.01	0.02
5640	8	610	610	697	1.02	711	355	0.00002	0.01	0.01	0.03
5760	9	610	610	697	1.02	711	355	0.00002	0.01	0.01	0.03
<b>Average</b>	<b>13</b>	<b>1843</b>	<b>1843</b>	<b>2015</b>	<b>1</b>	<b>2055</b>	<b>1025</b>	<b>0.00006</b>	<b>0.06</b>	<b>0.07</b>	<b>0.05</b>

Total Pretreatment emissions in pounds: **3.68**  
 Total Pretreatment emissions in gallons: **0.61**

**NOTES**

PPM<sub>measured</sub> = Actual measurements taken with TLV at the blower discharge piping in Parts Per Million (ppm)  
 100,000 ppm applied in calculation where TLV measurement was greater than 100,000 ppm (when applicable)  
 PPM<sub>wet</sub> = "wet" concentration  
 PPM<sub>dry</sub> = "dry" concentration  
 RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.  
 K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)  
 PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP  
 C<sub>c:m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon  
 M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon  
 K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP  
 C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP  
 PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon  
 PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of of VOC's as gasoline  
 PMR = lb, pollutant mass removal of VOC's as gasoline

**EQUATIONS**

$PPM_{wet} = PPM_{measured}$ $PPM_{dry} = (PPM_{wet}) / (1 - B_{ws})$ $PPM_c = (PPM_d)(K)$ $C_{c:m} = (PPM_c)(M_c / K_3)$	$C_c = (C_{c:m})(62.43 \times 10^{-9} \text{ lb-m}^3/\text{mg-ft}^3)$ $PMR_c = (C_c)(Q_{std})(60 \text{ min/hr})$ $PMR_g = (PMR_c)(M_g/M_{cg})$ $PMR = (PMR_g)(\#minutes/60)$
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**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**POST-TREATMENT EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop

AFVR EVENT DATE: 6/30/14-7/4/14

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub> (ppm)	PPM <sub>dry</sub> (ppm)	RF	PPM <sub>conc</sub> (ppm)	C <sub>c:m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	
30	21	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
60	25	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
90	22	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
120	20	6	6	6	1.02	7	3	0.00000	0.00	0.00	0.00
150	18	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
180	15	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
210	15	8	8	9	1.02	9	4	0.00000	0.00	0.00	0.00
240	18	6	6	6	1.02	7	3	0.00000	0.00	0.00	0.00
270	17	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
300	19	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
330	18	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
360	18	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
390	23	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
420	12	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
450	16	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
480	18	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
540	17	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
600	18	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
660	20	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
720	19	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
780	19	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
840	19	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
900	19	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
960	18	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1020	17	6	6	6	1.02	7	3	0.00000	0.00	0.00	0.00
1080	15	6	6	6	1.02	7	3	0.00000	0.00	0.00	0.00
1140	9	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
1200	9	650	650	752	1.02	767	383	0.00002	0.01	0.01	0.01
1260	8	700	700	822	1.02	839	418	0.00003	0.01	0.02	0.02
1320	9	650	650	726	1.02	741	370	0.00002	0.01	0.01	0.01
1380	9	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
1440	11	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
1560	11	2	2	2	1.02	2	1	0.00000	0.00	0.00	0.00
1680	11	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
1800	10	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
1920	17	6	6	6	1.02	7	3	0.00000	0.00	0.00	0.00
2040	17	6	6	6	1.02	7	3	0.00000	0.00	0.00	0.00
2160	21	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
2280	19	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
2400	18	6	6	6	1.02	7	3	0.00000	0.00	0.00	0.00
2520	20	6	6	6	1.02	6	3	0.00000	0.00	0.00	0.00
2640	19	4	4	4	1.02	4	2	0.00000	0.00	0.00	0.00
2760	12	800	800	1,069	1.02	1,091	544	0.00003	0.02	0.03	0.05
2880	9	700	700	926	1.02	944	471	0.00003	0.02	0.02	0.04
3000	8	700	700	946	1.02	965	481	0.00003	0.01	0.02	0.03
3120	7	810	810	1,095	1.02	1,117	557	0.00003	0.02	0.02	0.04
3240	8	650	650	787	1.02	803	401	0.00003	0.01	0.01	0.03

**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**POST-TREATMENT EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop

AFVR EVENT DATE: 6/30/14-7/4/14

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub> (ppm)	PPM <sub>dry</sub> (ppm)	RF	PPM <sub>conc</sub> (ppm)	C <sub>c,m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
3360	9	520	520	610	1.02	622	310	0.00002	0.01	0.01	0.02
3480	7	820	820	962	1.02	981	490	0.00003	0.01	0.02	0.03
3600	7	840	840	978	1.02	998	498	0.00003	0.01	0.01	0.03
3720	7	780	780	894	1.02	912	455	0.00003	0.01	0.01	0.03
3840	8	800	800	914	1.02	933	465	0.00003	0.01	0.02	0.03
3960	7	740	740	844	1.02	861	429	0.00003	0.01	0.01	0.03
4080	8	720	720	828	1.02	844	421	0.00003	0.01	0.02	0.03
4200	6	600	600	706	1.02	720	359	0.00002	0.01	0.01	0.02
4320	6	600	600	779	1.02	795	397	0.00002	0.01	0.01	0.02
4440	5	650	650	832	1.02	848	423	0.00003	0.01	0.01	0.02
4560	5	600	600	740	1.02	755	377	0.00002	0.01	0.01	0.02
4680	8	600	600	674	1.02	688	343	0.00002	0.01	0.01	0.02
4800	8	660	660	790	1.02	805	402	0.00003	0.01	0.01	0.03
4920	9	640	640	738	1.02	753	375	0.00002	0.01	0.01	0.03
5040	9	640	640	727	1.02	742	370	0.00002	0.01	0.01	0.03
5160	7	660	660	735	1.02	750	374	0.00002	0.01	0.01	0.02
5280	9	620	620	677	1.02	691	345	0.00002	0.01	0.01	0.03
5400	8	680	680	734	1.02	749	374	0.00002	0.01	0.01	0.03
5520	7	640	640	726	1.02	740	369	0.00002	0.01	0.01	0.02
5640	8	610	610	697	1.02	711	355	0.00002	0.01	0.01	0.03
5760	9	610	610	697	1.02	711	355	0.00002	0.01	0.01	0.03
<b>Average</b>	<b>13</b>	<b>291</b>	<b>291</b>	<b>346</b>	<b>1</b>	<b>353</b>	<b>176</b>	<b>0.00001</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>

Total Post-Treatment emissions in pounds: **0.78**

Total Post-Treatment emissions in gallons: **0.13**

**NOTES**

PPM<sub>measured</sub> = Actual measurements taken with TLV at the blower discharge piping in Parts Per Million (ppm)  
 100,000 ppm applied in calculation where TLV measurement was greater than 100,000 ppm (when applicable)  
 PPM<sub>wet</sub> = "wet" concentration  
 PPM<sub>dry</sub> = "dry" concentration  
 RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.  
 K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)  
 PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP  
 C<sub>c,m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon  
 M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon  
 K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP  
 C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP  
 PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon  
 PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of of VOC's as gasoline  
 PMR = lb, pollutant mass removal of VOC's as gasoline

**EQUATIONS**

<p>PPM<sub>wet</sub> = PPM<sub>measured</sub>                  PPM<sub>dry</sub> = (PPM<sub>wet</sub>)/(1-B<sub>ws</sub>)                  PPM<sub>c</sub> = (PPM<sub>d</sub>)(K)                  C<sub>c,m</sub> = (PPM<sub>c</sub>)(M<sub>c</sub> / K<sub>3</sub>)</p>	<p><math>C_c = (C_{c,m})(62.43 \times 10^{-9} \text{ lb-m}^3/\text{mg-ft}^3)</math>  <math>PMR_c = (C_c)(Q_{std})(60 \text{ min/hr})</math>  <math>PMR_g = (PMR_c)(M_g/M_{cg})</math>  <math>PMR = (PMR_g)(\#minutes/60)</math></p>
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Project 378 Truck Stop  
 Project 14-214210  
 Date: 6/30/14-7/14/14

APPENDIX L  
 AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
 AFVR EVENT FIELD DATA SHEETS

UST Permit No: 07960  
 ECS Field Rep. 1: A. Williamson  
 ECS Field Rep. 2: B. Peay

Elapsed Time (Hours)	Reading Interval (Mins)	Measurements During 96-hr AFVR Event																
		Date & Time	Stack Outlet			TLV (ppm)		Blower Vacuum (in.Hg)	AFVR Wells				Non-AFVR Wells					
			Air Flow (ppm)	Temperature (°F)	R.H. (%)	Pre-Treatment	Post-Treatment		07960-RW1		07960-MW1		07960-MW3		07960-MW21		07960-TW1	
		6/30/14 12:45	← Start time															
1 hr	30	6/30/14 13:15	481	108.9	78.2	5,000	4	27.5	24	19	20.8	22.5	22.17	0	22.94	0	21.63	1.0
	30	6/30/14 13:45	560	112.5	70.1	6,000	2	27.5	24	19	20.8	22.5	0	0	0	0	0	1.0
2 hr	30	6/30/14 14:15	510	118.1	65.1	6,000	4	27.5	23.5	20	21.8	22	0	0	0	0	0	0.4
	30	6/30/14 14:45	470	119.2	66.0	6,000	6	27.5	23.5	20	21.8	21.8	0	0	0	0	0	0.4
3 hr	30	6/30/14 15:15	420	119.5	69.6	6,000	2	27.5	23.25	21	22.8	22	0	0	0	0	0	0.4
	30	6/30/14 15:45	350	120.4	68.9	6,000	2	27.25	23.25	21	22.8	22	0	0	0	0	0	0.6
4 hr	30	6/30/14 16:15	356	123.1	67.1	8,000	8	27	23	22	23.8	21.5	0	0	0	0	0	0.6
	30	6/30/14 16:45	420	117.1	69.5	7,500	6	27.5	23	23	23.8	21	0	0	0	0	0	0.6
5 hr	30	6/30/14 17:15	391	117.5	68.5	8,000	4	27.5	22	24	24.8	21.5	0	0	0	0	0	0.2
	30	6/30/14 17:45	425	117.7	66.0	6,500	4	27.5	20	25	24.8	21.50	0	0	0	0	0	0.2
6 hr	30	6/30/14 18:15	420	114.8	71.1	6,000	2	27.5	19.5	26	25.8	21.00	0	0	0	0	0	0.2
	30	6/30/14 18:45	405	111.5	70.5	6,000	2	27.5	21	26	25.8	18.00	0	0	0	0	0	0.2
7 hr	30	6/30/14 19:15	512	108.3	71.0	5,000	2	27.5	21.5	27	26.8	18.00	0	0	0	0	0	0.2
	30	6/30/14 19:45	269	106.7	69.7	6,000	4	27.5	18.5	28	28	16	0	0	0	0	0	0
8 hr	30	6/30/14 20:15	356	107.1	80.9	0	0	28	29.5	28	28	7	0	0	0	0	0	0
	30	6/30/14 20:45	408	106.2	94.5	1,000	4	26	29	28.0	28	5	0	0	0	0	0	0
9 hr	60	6/30/14 21:45	373	97.9	80.5	540	0	26	26	28	28	12.5	0	0	0	0	0	0
10 hr	60	6/30/14 22:45	408	103.7	94.0	520	0	28	30	28.0	30	12	0	0	0	0	0	0
11 hr	60	6/30/14 23:45	443	100.9	99.9	800	0	28	22	28.0	30	27	0	0	0	0	0	0
12 hr	60	7/1/14 0:45	425	99.5	93.9	820	2	28	22	28.0	30	22	0	0	0	0	0	0
13 hr	60	7/1/14 1:45	408	99.0	98.7	780	0	28	22	28.0	30	21.00	0	0	0	0	0	0
14 hr	60	7/1/14 2:45	410	98.6	99.3	800	0	28	22	28.0	30	21.00	0	0	0	0	0	0
15 hr	60	7/1/14 3:45	408	97.5	99.9	720	2	28	22	28.0	30	19.50	0	0	0	0	0	0
16 hr	60	7/1/14 4:45	400	96.7	99.9	650	0	28	22	28.0	30	21	0	0	0	0	0	0
17 hr	60	7/1/14 5:45	375	98.1	99.9	680	6	28	22	28.0	30	20	0	0	0	0	0	0
18 hr	60	7/1/14 6:45	339	99.0	99.9	700	6	28	22	28.0	30	21.5	0	0	0	0	0	0
19 hr	60	7/1/14 7:45	200	103.7	99.9	720	4	28	22	28.0	30	21	0	0	0	0	0	0
20 hr	60	7/1/14 8:45	217	126.0	99.9	650	**	28	22	28.0	30	21	0	0	2	0	0.4	
21 hr	60	7/1/14 9:45	217	133.9	88.7	700	**	28	20	28.0	30	21	0	0	0.8	0	0.2	
22 hr	60	7/1/14 10:45	223	124.2	81.4	650	**	28	22	28.0	30	26.5	0	0	0.8	0	0.4	
23 hr	60	7/1/14 11:45	220	123.2	79.1	650	2	28	22	28.0	30	26.5	0	0	0.8	0	0.4	
24 hr	60	7/1/14 12:45	261	123.1	63.7	800	4	28	22	28.0	30	26.5	0	0	0.8	0	0.4	
26 hr	120	7/1/14 14:45	250	119.9	78.4	450	2	27.75	28	28.0	30	26.5	0	0	0.8	0	0.2	
28 hr	120	7/1/14 16:45	263	126.3	60.5	800	4	28	22	28.0	28	26.5	0	0	0.5	0	0.2	
30 hr	120	7/1/14 18:45	217	115.5	54.4	800	4	27.75	22	27.0	28	26.5	0	0	0.4	0	0.2	
32 hr	120	7/1/14 20:45	391	110.3	87.9	840	6	28	25.5	24	30	27	0	0	0.3	0	0.2	
34 hr	120	7/1/14 22:45	373	104.5	99.9	840	6	28	25.5	24	30	28	0	0	0.4	0	0.8	
36 hr	120	7/2/14 0:45	478	102.9	99.9	820	4	28	25.5	24	30	28	0	0	0.4	0	0.4	

Project 378 Truck Stop  
 Project 14-214210  
 Date: 6/30/14-7/4/14

**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**AFVR EVENT FIELD DATA SHEETS**

UST Permit No: 07960  
 ECS Field Rep. 1: A. Williamson  
 ECS Field Rep. 2: B. Peay

Elapsed Time (Hours)	Reading Interval (Min)	Measurements During 96-hr AFVR Event																
		Date & Time	Stack Outlet			TLV (ppm)		Blower Vacuum (in. Hg)	AFVR Wells				Non-AFVR Wells					
			Air Flow (ppm)	Temperature (°F)	R.H. (%)	Pre-Treatment	Post-Treatment		07960-RW1		07960-MW1		07960-MW3		07960-MW21		07960-TW1	
							Vacuum (in. Hg)	Stinger Depth (ft.)	Vacuum (in. Hg)	Stinger Depth (ft.)	DTW (ft)	Vacuum (in. wc)	DTW (ft)	Vacuum (in. wc)	DTW (ft)	Vacuum (in. wc)		
		6/30/14 12:45	← Start time															
38 hr	120	7/2/14 2:45	428	100.6	99.9	840	4	28	25.5	24	30	28		0		0.3		0
40 hr	120	7/2/14 4:45	401	101.7	91.4	800	6	28	24	24	30	28		0		0.3		0
42 hr	120	7/2/14 6:45	425	99.3	79.5	860	6	28	24	23	30	28		0		0.3		0
44 hr	120	7/2/14 8:45	420	99.9	81.9	800	4	28	24	23	30	23		0		3		0
46 hr	120	7/2/14 10:45	350	149.9	99.9	800	**	28	24	23	30	27		0		0		0
48 hr	120	7/2/14 12:45	265	148.6	99.9	700	**	28	24	23	30	27		0		0		0.2
50 hr	120	7/2/14 14:45	235	151.2	99.9	700	**	28	23	25	30	27		0		0		0.2
52 hr	120	7/2/14 16:45	225	146.8	99.9	810	**	28	22.5	24	30	27.5		0		0		0.2
54 hr	120	7/2/14 18:45	218	135.5	99.9	650	**	28	22	24	26	22.5		0		0		0.2
56 hr	120	7/2/14 20:45	235	129.0	99.9	520	**	27.5	22	24	30	19		0		0.3		0
58 hr	120	7/2/14 22:45	183	129.2	99.9	820	**	28	12	22	35	25		0		0.4		1.3
60 hr	120	7/3/14 0:45	167	127.6	99.9	840	**	28	16	22	35	27		0		0.3		0.8
62 hr	120	7/3/14 2:45	183	123.7	99.9	780	**	28	15.5	22	35	26		0		0.3		0
64 hr	120	7/3/14 4:45	205	123.1	99.9	800	**	28	15	22	35	26		0		0.3		0
66 hr	120	7/3/14 6:45	183	122.5	99.9	740	**	28	14	22	35	26.5		0		0.3		0
68 hr	120	7/3/14 8:45	212	133.5	78.6	720	**	28	13	25	35	26		0		0.4		0.4
70 hr	120	7/3/14 10:45	166	136.4	79.5	600	**	28	13	25	35	26		0		0.4		0.4
72 hr	120	7/3/14 12:45	165	146.3	99.9	600	**	28	14	22	35	24.5		0		0.4		0.2
74 hr	120	7/3/14 14:45	148	144.2	99.9	650	**	28	13.5	22	30	24.5		0		0.4		0.2
76 hr	120	7/3/14 16:45	149	138.6	99.9	600	**	28.5	13.5	22	30	24.5		0		0.4		0.2
78 hr	120	7/3/14 18:45	200	118.4	99.9	600	**	28	15	22	35	24.5		0		0.4		0.4
80 hr	120	7/3/14 20:45	200	133.2	99.9	660	**	28	15	22	35	25		0		0.4		0.2
82 hr	120	7/3/14 22:45	217	125.2	99.9	640	**	28	15	22	35	25		0		0.4		0.4
84 hr	120	7/4/14 0:45	226	121.5	99.9	640	**	28.25	15	22	35	25		0		0.3		0.2
86 hr	120	7/4/14 2:45	167	115.9	99.9	660	**	28	12	22	35	25		0		0.3		0
88 hr	120	7/4/14 4:45	200	109.1	99.9	620	**	28.25	11	22	35	25		0		0.3		0
90 hr	120	7/4/14 6:45	183	104.4	99.9	680	**	28.25	11	22	35	25		0		0.3		0
92 hr	120	7/4/14 8:45	185	131.2	75.9	640	**	28.25	11	22	35	25		0		0.3		0
94 hr	120	7/4/14 10:45	201	123.8	88.0	610	**	27.75	10	22.0	35	25		0		0.4		0
96 hr	120	7/4/14 12:45	217	144.3	99.9	610	**	28.5	10	22.0	35	25		0		0.4		0

**NOTES**  
 \*\* = Off-gas treatment system not in operation at this time interval, pre-treatment value applied in post-treatment emission calculation during this time interval.



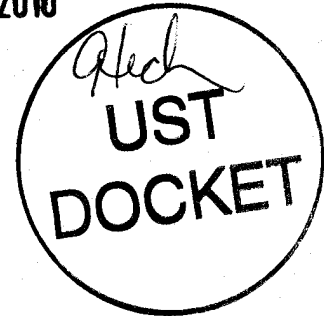


C. Earl Hunter, Commissioner

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

AUG 16 2010

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835



Re: Tier II Directive  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960, Cost Agreement # 39645, MWA #UMW-23828  
Release reported October 3, 1974  
Assessment Plan received August 4, 2010  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division 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 Division has reviewed the referenced Tier II Assessment Plan and cost agreement submitted by Environmental Compliance Services (ECS), Inc. The assessment should be conducted in accordance with the Tier II Assessment guidance document and must be conducted in compliance with all applicable regulations. All shallow wells are to be installed with screen intervals that bracket the water table. The Tier II assessment document and appendices may be obtained from our website at [http://www.scdhec.gov/environment/lwm/html/ust\\_guidance\\_docs.htm](http://www.scdhec.gov/environment/lwm/html/ust_guidance_docs.htm).

Assessment activities at the site should begin immediately upon receipt of this letter. Cost agreement #39645 has been approved 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. Cost agreement #39645 has been approved for the amount shown on the enclosed cost proposal form.

Please note the following adjustments to the submitted cost agreement:

- Personnel mobilizations were reduced from five to four. The comprehensive survey includes a personnel mobilization.
- The number of groundwater samples to be analyzed for lead was reduced from 42 to 22 to include only the newly installed monitoring wells.
- Groundwater analysis for nitrates, sulfates, ferrous iron, and methane were omitted. The UST Assessment Section is no longer sampling for these parameters.
- The number of groundwater samples to be analyzed for 8 oxygenates was reduced from 42 to 27 to include only the monitoring wells.
- The number of drums for soil disposal was reduced from 92 to 80. If more drums are necessary, an addendum to the cost agreement can be created in the future.

Mr. Wilkerson

Page 2

ECS, Inc. can submit an invoice for direct billing from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Please note that all applicable South Carolina certification requirements apply to the laboratory services, well installation, and report preparation. All site rehabilitation activities must be performed and submitted by a South Carolina Certified Underground Storage Tank Site Rehabilitation Contractor.

A Report of Findings and the invoice are due within **90 days** from the date of this letter. An interim well drilling invoice may be submitted for this scope of work. 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 note, if unnecessary dilutions are completed resulting in reporting limits of individual Chemicals of Concern (CoC) in excess of Risk-Based Screening Levels (RBSLs), the data cannot be used. In those cases, the Department may deny payment for any non-detect analysis where the reporting limit exceeds the RBSL. The UST Division encourages the use of 'J' values as necessary so the appropriate action can be determined for a release. According to Section IV.C.1 of the SUPERB Site Regulations and Fund Access Regulations, R.61-98, all plans, reports, invoices, and other documents relating to site rehabilitation activities which have been prepared or approved by a certified contractor shall be signed by the certified contractor and bear his certification number. As of April 1, 2009, the UST Division no longer reimburses costs for oxygenate analysis for any laboratory that is not certified through the SCDHEC Office of Environmental Laboratory Certification for the oxygenate compounds.

Water Well Record (DHEC form 1903, signed by a SC Certified well driller) for each new temporary or permanent monitoring well **in accordance with the South Carolina Well Standards, R.61-71**. 1903 forms are required for field screening borings (whether direct push or drilled) where a sample is extracted for analysis.

**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 Division 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.

Mr. Wilkerson  
Page 3

On all correspondence regarding this site and scope of work, please reference UST Permit #07960. If you have any questions concerning this correspondence, please contact me at (803) 896-6633, fax me at (803) 896-6245, or e-mail me at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Assessment Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc.: Approved Cost Agreement  
Monitoring Well Approval

cc: Environmental Compliance Services, P.O. Box 3528, Fort Mill, SC 29708 (w/enc)  
Technical File (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:** ECS, Inc.  
**(On behalf of):** Wilkerson Fuel Company, Inc.  
**Facility:** 378 Truck Stop, 731 Hwy 378, Edgefield, SC  
**UST Permit Number:** 07960  
**County:** Edgefield

This approval is for the installation of 14 shallow monitoring wells and eight deep telescoping wells. The monitoring wells are to be installed in the approved locations. Monitoring wells are to be installed following the South Carolina Well Standards, R.61-71, and the applicable guidance documents.

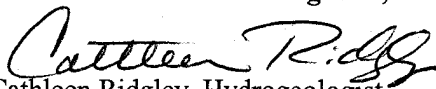
**Please note that R.61-71 requires the following:**

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the 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 Cathleen Ridgley the project manager (tel: (803) 896-6633 or e-mail: ridglect@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:** August 5, 2010

**Approval #:** UMW-23828

  
Cathleen Ridgley, Hydrogeologist  
Assessment Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

# Approved Cost Agreement 39645

Facility: 07960 378 TRUCK STOP

RIDGLECT

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
03 COMPREHENSIVE SURVEY		COMPREHENSIVE SURVEY	1.0000	1,000.00	1,000.00
04 MOB/DEMOB		A EQUIPMENT	1.0000	575.00	575.00
		B PERSONNEL	4.0000	290.00	1,160.00
09 WELL INSTALLATION		B WATER TABLE (DRILLED)	560.0000	38.00	21,280.00
		C TELESCOPING	640.0000	58.00	37,120.00
10 SAMPLE COLLECTION		A GROUND WATER	22.0000	55.00	1,210.00
		C WATER SUPPLY	15.0000	25.00	375.00
		D GROUNDWATER NO-PURGE	5.0000	35.00	175.00
11 ANALYSES					
	GW GROUNDWATER	A BTEX+NAPTH+MTBE	42.0000	100.00	4,200.00
		BB 1,2-DCA	42.0000	10.75	451.50
		E LEAD	22.0000	20.00	440.00
		F EDB	42.0000	55.00	2,310.00
		P 8 OXYGENATES	27.0000	85.00	2,295.00
	SOIL SOIL	Q BTEX+NAPTH	3.0000	100.00	300.00
		W GRAIN SIZE/HYDROMETER	2.0000	75.00	150.00
12 AQUIFER CHARACTERIZATION		B SLUG TEST	2.0000	150.00	300.00
17 DISPOSAL		A1 WASTEWATER - PURGING/SAMPLING	10.0000	90.00	900.00
		C SOIL (TREATMENT/DISPOSAL)	80.0000	50.00	4,000.00
19 RPT/PROJECT MNGT & COORDINATIO		PCT PERCENT	0.1500	78,341.50	11,751.23
				<b>Total Amount</b>	<b>90,092.73</b>



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

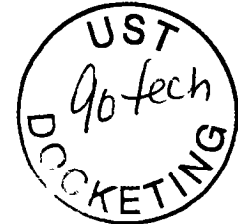
13504 South Point Boulevard, Unit F, Charlotte, NC 28273 tel 704.583.2711 fax 704.583.2744 www.ecsconsult.com

Cathleen Ridgely  
Corrective Action Section  
SCDHEC  
2600 Bull Street  
Columbia, South Carolina 29201



October 31, 2014  
ECS Project # 14-214210.02

Re: Disposal Manifest  
UST Permit #07960  
CA# 47617



Ms. Ridgely:

Enclosed please find the disposal manifest for purge water generated at 378 Truck Stop (UST Permit #007960). Should you have any questions or require additional information, please do not hesitate to call me at (704) 583-2711 or by email at [nfrance@ecsconsult.com](mailto:nfrance@ecsconsult.com).

Sincerely,  
**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

  
Noelle A. France  
Project Manager

NON-HAZARDOUS WASTE MANIFEST 1. Generator ID Number 2. Page 1 of 1 3. Emergency Response Phone 803-957-9175 4. Waste Tracking Number 9164-01

5. Generator's Name and Mailing Address: Wilkerson Fuel Co., PO Box 2835, Rock Hill, SC. Generator's Site Address (if different than mailing address): 378 Truck Stop, 731 US Hwy 379, Edgefield, SC. Generator's Phone: Noelle France 704-583-2711

6. Transporter 1 Company Name: A&D Environmental Services (SC) LLC U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name: A&D Environmental Services (SC) LLC U.S. EPA ID Number: SCD987598331

8. Designated Facility Name and Site Address: A&D Environmental Services, Inc, 2718 Uhwarrie Road, Archdale, NC 27263. Facility's Phone: 735-434-7750. U.S. EPA ID Number: NCD988232224

1. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt/Vol
	No.	Type		
1. NON-HAZARDOUS NON-REGULATED MATERIAL	4	DM	220	G
2. Purge Water				
3.				
4.				

13. Special Handling Instructions and Additional Information: 2014110. In Case of Emergency Call: 803-957-9175. A&D (SC) Job #215490 ESCD # 14-214210. A&D Profile #

14. GENERATOR/SHOFFER'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Officer's Printed/Typed Name: Noelle A France. Signature: [Signature]. Month: 9, Day: 12, Year: 14.

15. International Shipments:  Import to U.S.  Export from U.S. Port of entry/exit: Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials. Transporter 1 Printed/Typed Name: Chris Peter. Signature: [Signature]. Month: 9, Day: 16, Year: 14.

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

17. Discrepancy. 17a. Discrepancy Indication Space:  Quantity  Type  Residue  Partial Rejection  Full Rejection

17b. Alternate Facility (or Generator): Manifest Reference Number: U.S. EPA ID Number:

17c. Signature of Alternate Facility (or Generator): Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a. Printed/Typed Name: Travis Clapp. Signature: [Signature]. Month: 10, Day: 03, Year: 14.

DESIGNATED FACILITY TO GENERATOR

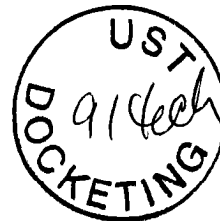


Catherine B. Templeton, Director

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

RONNY LOWDER  
EMERALD INC  
PO BOX 3050  
SUMTER SC 29151

NOV 24 2014



Re: **Notice to Proceed-GAC Change**  
378 Truck Stop, 731 Highway 378, Edgefield, SC 29824  
UST Permit #07960; CA#49330  
IFB-5400005822 5/3/13 EMW; PO # 4600368242  
Edgefield County

Dear Mr. Lowder:

Under the terms and conditions of the referenced contract, GAC filter replacements have been approved for the Gordon residence located at 724 Highway 378 and the Scurry residence located at 730 Highway 378. Mr. Sydney Gordon can be reached at (803)637-5266 and Ms. Hattie Scurry can be reached at (803)637-5793.

This facility has been assigned an individual Cost Agreement (CA) number as listed above. Please reference CA #49330 and PO # **4600368242** on the invoice submitted for payment. Emerald, Inc. should complete the work in accordance with the contract specifications. The work must be conducted as outlined in the UST Quality Assurance Program Plan (QAPP) and in accordance with all applicable regulations. A GAC Unit Installation and Maintenance record should be submitted within **thirty (30) days** from the date of the Notice to Proceed.

If you have any questions or need further assistance, please contact me at (803) 898-0610 or by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Approved Cost Agreement form

cc: Technical File (w/ACA form)  
Maia Milenkova, UST Management Division (w/ACA form)



# Approved Cost Agreement 49330

Facility: 07960 378 TRUCK STOP

RIDGLECT

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		B PERSONNEL	1.0000	90 00	90.00
24 GAC SYSTEM		C FILTER REPLACEMENT/REMOVAL	2.0000	350.00	700.00
			<b>Total Amount</b>		790 00

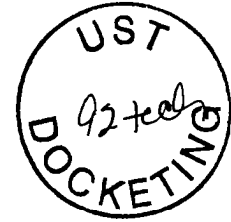


Catherine B. Templeton, Director

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

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

NOV 24 2014



Re: **AFVR Directive**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960; Cost Agreement # 49332  
Release reported October 3, 1974  
AFVR & Groundwater Sampling Report received September 15, 2014  
Edgefield County

Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) recognizes your commitment to continue work at this site using Environmental Compliance Services, Inc. as your contractor. The next appropriate scope of work is to continue aggressive fluid and vapor recovery (AFVR) to remove free phase product from the groundwater. Please have your contractor conduct two consecutive 48-hour AFVR events. One event should be conducted using monitoring well MW-1 and recovery well RW-1 as extraction points; the other event should be conducted using monitoring well MW-22 as an extraction point. Thirty days after the last AFVR event, all monitoring and recovery wells should be gauged. The AFVR event must be conducted in accordance with the UST Quality Assurance Program Plan (QAPP) Revision 2.0. Please note that AFVR procedures have been updated. **The stingers should be lowered at six inch intervals starting at the water table interface to a target depth of 29 feet in MW-1 and RW-1 and 38 feet in MW-22. Please strive to reach the target depth within the first 8 hours of the event and then periodically re-adjust the stingers to the interval with the highest vapor readings. The goal is to achieve the highest possible vapor recovery while simultaneously de-watering the smear-zone.**

A copy of the revised QAPP is available at [http://www.scdhec.gov/environment/docs/QAPP\\_Rev-2\\_April2013.pdf](http://www.scdhec.gov/environment/docs/QAPP_Rev-2_April2013.pdf).

**Please email me ([ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov)) the gauging data after the site reconnaissance and the start date of the event after it has been scheduled.**

Cost Agreement #49332 has been approved in the amount shown on the enclosed cost agreement form for the AFVR events. AFVR activities may proceed immediately upon receipt of this letter, and must be performed by a South Carolina-Certified Underground Storage Tank Site Rehabilitation Contractor. All applicable South Carolina certification requirements apply to preparation of an AFVR report.

An AFVR report and invoice must be submitted to the Division within 90 days from the date of this letter. If the invoice is 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.

Mr. Wilkerson

Page 2

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 Agency is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Agency for the cost to be paid. The Agency 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, the Agency 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 Agency grants pre-approval for transportation of free-phase product and petroleum-contaminated groundwater from the referenced facility to a permitted treatment facility for disposal. The transport and disposal must be conducted in accordance with the QAPP.

On all correspondence concerning this facility, please reference UST Permit #07960. If there are any questions concerning this project, feel free to contact me by telephone at (803) 898-0610, by fax at (803) 898-0673, or by e-mail at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,



Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
Underground Storage Tank Management Division  
Bureau of Land and Waste Management

enc: Approved cost agreement form

cc: Environmental Compliance Services, Inc., P.O. Box 3528, Fort Mill, SC 29708 (w/enc)  
Technical File (with enc)

# Approved Cost Agreement 49332

Facility 07960 378 TRUCK STOP

RIDGLECT

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		B1 PERSONNEL	1.0000	423 00	423 00
10 SAMPLE COLLECTION		E1 GAUGE WELL ONLY	41 0000	7 00	287 00
19 RPT/PROJECT MNGT & COORDINATIO		PRT REPORT PREPARATION	0 1200	21,480 25	2,577 63
23 EFR		A3 48 HOUR EVENT	2 0000	6,265 00	12,530 00
		C3 OFF GAS TREATMENT 48 HOUR	2 0000	327 00	654 00
		D SITE RECONNAISSANCE	1 0000	203.25	203 25
		F1 EFFLUENT DISPOSAL	15,000.0000	0.44	6,600 00
		G AFVR EQUIPMENT MOB	2 0000	391 50	783 00
<b>Total Amount</b>					<b>24,057 88</b>

# GAC Unit Installation and Maintenance

Date: 12/9/14

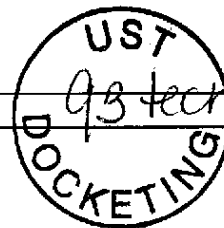
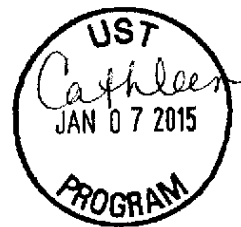
Facility Name: Former 378 Truck Stop

UST Permit Number: 07960

GAC Address: 730 Hwy 378 East, Edgefield, SC (Scurry Residence)

GAC Unit Serial Number: Tank #

Controller #



## NEW INSTALLATION

Date Installation Completed: \_\_\_\_\_

- Attachments Required
- schematic of system as installed
  - copy of analytical data for pre and post GAC samples
  - calculations of filter change
  - calculations of breakthrough

## MAINTENANCE AND SERVICE

### FILTER CHANGE

Filter Disposal Method: Landfill

Condition of GAC Unit                                           In Need of Repair\*                                           X                      Good

Condition of GAC Housing                                           In Need of Repair\*                                           X                      Good

\*Repairs Needed:

### SERVICE/REPAIR CALL

Service or Repair Provided:

### SAMPLE COLLECTION

Pre-GAC

Mid-GAC

Pre-GAC DUP

Post-GAC

Comments: Performed Carbon Filter change. Insulation added to GAC unit. Samples were not collected.

# GAC Unit Installation and Maintenance

Date: 12/9/14

Facility Name: Former 378 Truck Stop

UST Permit Number: 07960

GAC Address: 724 Hwy 378 East, Edgefield, SC (Gordon Residence)

GAC Unit Serial Number: Tank # \_\_\_\_\_  
Controller # \_\_\_\_\_

## NEW INSTALLATION

Date Installation Completed: \_\_\_\_\_

- Attachments Required
- schematic of system as installed
  - copy of analytical data for pre and post GAC samples
  - calculations of filter change
  - calculations of breakthrough

## MAINTENANCE AND SERVICE

### FILTER CHANGE

Filter Disposal Method: Landfill

Condition of GAC Unit                      \_\_\_\_\_ In Need of Repair\*                      X                      Good

Condition of GAC Housing                      \_\_\_\_\_ In Need of Repair\*                      X                      Good

\*Repairs Needed:

### SERVICE/REPAIR CALL

Service or Repair Provided:

### SAMPLE COLLECTION

Pre-GAC

Mid-GAC

Pre-GAC DUP

Post-GAC

Comments: Performed Carbon Filter change. Installed light to GAC housing. Samples were not collected.

# GAC Maintenance Report

Permit # 07960  
 Emerald Job # 110

Address	Serial #	Model #	Date Serviced	Condition of Unit	Samples Collected
730 Hwy 378 East, Edgefield, SC Scurry Residence			12/9/14	Needs Repairs <input type="checkbox"/> Good <input checked="" type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>
724 Hwy 378 East, Edgefield, SC Gordon Residence			12/9/14	Needs Repairs <input type="checkbox"/> Good <input checked="" type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>
				Needs Repairs <input type="checkbox"/> Good <input type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>
				Needs Repairs <input type="checkbox"/> Good <input type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>
				Needs Repairs <input type="checkbox"/> Good <input type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>
				Needs Repairs <input type="checkbox"/> Good <input type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>
				Needs Repairs <input type="checkbox"/> Good <input type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>
				Needs Repairs <input type="checkbox"/> Good <input type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>
				Needs Repairs <input type="checkbox"/> Good <input type="checkbox"/>	Pre-GAC <input type="checkbox"/> Dup-GAC <input type="checkbox"/> Mid-GAC <input type="checkbox"/> Post-GAC <input type="checkbox"/>

**Notes:**

Filter Disposal Method: Landfill

Service/Repairs:

Comments: Performed Carbon Filter change at Scurry & Gordon residences. Samples were not collected.

## 378 Truck Stop (Permit

Chad <cmclary@emeraldinc-us.com>

Mon 1/12/2015 11:31 AM

Inbox

To: Ridgley, Cathleen <ridglect@dhec.sc.gov>,

C. Milenkova, Maia <milenkmp@dhec.sc.gov>; Doll, Chris S. <dollcs@dhec.sc.gov>; Monts, Lee <montsla@dhec.sc.gov>,  
rllemerald@ftc-i.net <rllemerald@ftc-i.net>;

📎 4 attachments

IMG\_1025.JPG; IMG\_1026.JPG; IMG\_1027.JPG; IMG\_1028.JPG;

Cathleen,

I received a call Friday (9<sup>th</sup>) afternoon about a leak at the Scurry residence and went by on Saturday morning to investigate and/or repair the problem. Mrs. Scurry did have water at her house when I spoke with her on Friday afternoon and she mentioned that the problem was a leak under the well cover. When she said that the leak was under the well cover it made me a little suspicious as to whether this was a problem with the GAC unit or a problem with her well. When I arrived the piping to the GAC unit was fine and the leak was indeed under the well cover where the cast iron piping is converted to plastic piping. I have attached some pictures that show the leak and the well house. As you can see, the piping in the well house is not insulated and there is not a heat source to keep the piping from freezing. The insulation that you do see in the picture is insulation we installed to protect the piping run from the well to the GAC unit. This is the second time we have visited to the site to repair the piping in her well house. We repaired that exact same piece of piping last March after mobbing to the site in a snow storm and now we are expected to repair any plumbing problem she may have. I spoke with her about what we are responsible for repairing and tried to help her understand that we cannot be responsible for insulating or repairing piping that is in her well house. I told Mrs. Scurry that we were not responsible for the leaking pipe, that she would need to contact a plumber to repair the leak, and that some insulation would be need in the well house to protect the pipes. I checked back in with Mrs. Scurry Saturday afternoon to see if she was able to contact a plumber and was informed a plumber was supposed to arrive this morning to repair the leak. The leak was not a big one and I showed her how to turn the well pump on and off so she would have water throughout the weekend. I feel sorry for Mrs. Scurry but we have to draw the line somewhere. We cannot be responsible for insulating the well house and the GAC unit at these residences.

William (Chad) McClary, P.G.

Emerald, Inc.

Office 803-469-5454

Cell 803-960-6039







**QD Co**  
MODEL 2801084915  
Fram  
MADE IN USA  
WARNING  
ELECTRIC SHOCK HAZARD  
DISCONNECT POWER  
BEFORE SERVICING





Catherine B. Templeton, Director

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



RONNY LOWDER  
EMERALD INC  
PO BOX 3050  
SUMTER SC 29151

JAN 14 2015

Re: **Notice to Proceed-GAC Repair**  
378 Truck Stop, 731 Hwy. 378, Edgefield, SC  
UST Permit #07960; CA#49565  
IFB-5400005822 5/3/13 EMW; PO # 4600368242  
York County

Dear Mr. Lowder:

Under the terms and conditions of the referenced contract, GAC repairs have been approved for Ms. Hattie Scurry's residence located at 730 Highway 378 in Edgefield.

This facility has been assigned an individual Cost Agreement (CA) number as listed above. Please reference cost agreement # 49565 and **PO # 4600368242** on the invoice submitted for payment. A GAC Unit Repair record should be submitted within **thirty (30) days** from the date of the Notice to Proceed.

If you have any questions or need further assistance, please contact me at (803) 898-0610 or by email at [ridglect@dhec.sc.gov](mailto:ridglect@dhec.sc.gov).

Sincerely,

Cathleen Ridgley, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

enc: Approved Cost Agreement form

cc: Technical File (w/ ACA form)  
Maia Milenkova, UST Management Division (w/ACA form)

**Approved Cost Agreement 49565**

Facility 07960 378 TRUCK STOP

RIDGLECT

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		B PERSONNEL	2 0000	90 00	180.00
18 MISCELLANEOUS		SERVICE CALL	5 0000	35.00	175.00
			<b>Total Amount</b>		355.00

# GAC Unit Installation and Maintenance

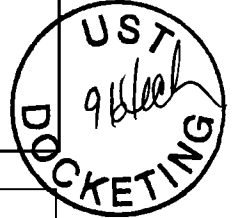
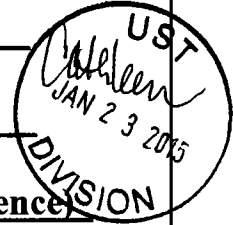
Date 1/10/15

Facility Name 378 Truck Stop

UST Permit number 07960

GAC Address 730 Highway 378, Edgefield, SC (Scurry Residence)

GAC Unit serial and model number and meter reading  
Tank #1(no serial number)



## NEW INSTALLATION

Date installation completed \_\_\_\_\_

Attachments required: \_\_\_ schematic of system as installed  
\_\_\_ copy of analytical data for pre and post GAC samples

## MAINTENANCE AND SERVICE

FILTER CHANGE

Filter Disposal method: \_\_\_\_\_

Condition of GAC Unit \_\_\_\_\_ in need of repair\* X good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\* X good

\*Repair needed: \_\_\_\_\_

SERVICE/REPAIR CALL

Service or repair provided: \_\_\_\_\_

SAMPLE COLLECTION (circle)      Pre-GAC      Post GAC

**Comments:** Emerald, Inc. received a call about a leaking pipe associated with the GAC unit on 1/9/15 at 5 PM. Emerald, Inc. spoke with the resident on the phone and determined that there was still water to the residence and let Mrs. Scurry know we would visit the site the next morning. During the visit on 1/10/15 it was noted that the leak was located inside the uninsulated pump house. Mrs. Scurry was informed that Emerald, Inc. was not responsible for leaks not associated directly to the GAC unit and we recommended that she insulate the pump house.

# GAC Unit Installation and Maintenance

Date 1/12/15

Facility Name 378 Truck Stop

UST Permit number 07960

GAC Address 730 Highway 378, Edgefield, SC (Scurry Residence)

GAC Unit serial and model number and meter reading  
Tank #1(no serial number)

## NEW INSTALLATION

Date installation completed \_\_\_\_\_

Attachments required: \_\_\_ schematic of system as installed  
\_\_\_ copy of analytical data for pre and post GAC samples

## MAINTENANCE AND SERVICE

FILTER CHANGE

Filter Disposal method: \_\_\_\_\_

Condition of GAC Unit \_\_\_\_\_ in need of repair\* X good

Condition of GAC Unit housing \_\_\_\_\_ in need of repair\* X good

\*Repair needed: \_\_\_\_\_

SERVICE/REPAIR CALL

Service or repair provided: \_\_\_\_\_

SAMPLE COLLECTION (circle)      Pre-GAC      Post GAC

**Comments:** Emerald, Inc. mobilized to the site to reset the control head on the Scurry GAC unit after the power to the pump and GAC was intermittently disconnected by the owner to ensure no damage was done to the pump due to the leaking pipe. Emerald, Inc. personnel also talked with Mrs. Scurry about Emerald's responsibilities regarding the GAC unit and observed the plumber repairing the leaking pipe. Total hours of service call at the site was Five hours.

## GAC Maintenance Report

### Permit # 07960

Address	Serial #	Model#	Date serviced	Condition of unit	Samples collected
730 Hwy 378, Edgefield, SC Scurry Residence			1/10/15	Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC
				Needs Repairs Good	Pre-GAC Post-GAC

**Notes:**

Repairs/service: \_\_\_\_\_

Filter disposal method: \_\_\_\_\_

Comments: Emerald, Inc. received a call about a leaking pipe associated with the GAC unit on 1/9/15 at 5 PM. Emerald, Inc. spoke with the resident on the phone and determined that there was still water to the residence and let Mrs. Scurry know we would visit the site the next morning. During the visit on 1/10/15 it was noted that the leak was located inside the uninsulated pump house. Mrs. Scurry was informed that Emerald, Inc. was not responsible for leaks not associated directly to the GAC unit and we recommended that she insulate the pump house. We returned on 1/12/15 to ensure the GAC unit was functioning properly and Mrs. Scurry had water.

# Document Receipt Information

Hard Copy

CD

Email

Date Received

3-30-2015

Permit Number

07960

Project Manager

Vacant / Reed

Name of Contractor

ees

USI Certification Number

Docket Number

97 tech

Scanned

AFVR Report





**AGRESSIVE FLUID VAPOR RECOVERY  
REPORT**

**378 TRUCK STOP  
731 HIGHWAY 378  
EDGEFIELD, SOUTH CAROLINA**

**UST# 07960**

A large, stylized silhouette of a tree is centered in the upper half of the page. Below the tree, a horizontal band contains the text 'WHERE BUSINESS AND THE ENVIRONMENT CONVERGE'. The bottom portion of the page features a stylized, textured representation of grass or reeds in shades of green and yellow.

**WHERE BUSINESS AND THE ENVIRONMENT CONVERGE**

Prepared for:  
Wilkerson Fuel Company, Inc  
Post Office Box 2835  
Rock Hill, South Carolina

ECS Project No.14-214210  
March 27, 2015

Prepared by:  
ECS, Inc.  
13504 South Point Blvd, Unit F  
Charlotte, NC 28273  
tel 704.583.2711 fax 704.583.2744  
[www.ecsconsult.com](http://www.ecsconsult.com)

**AGGRESSIVE FLUID VAPOR RECOVERY AND GROUNDWATER GAUGING REPORT**

**378 TRUCK STOP  
731 HWY 378  
EDGEFIELD, SOUTH CAROLINA  
EDGEFIELD COUNTY**

**UST PERMIT NO. 07960  
ECS PROJECT NO. 14-214210**


Prepared For:

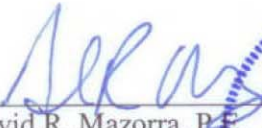
Wilkerson Fuel Company, Inc.  
Post Office Box 2835  
Rock Hill, South Carolina 29732

Prepared By:

Environmental Compliance Services, Inc.  
Post Office Box 3528  
Fort Mill, South Carolina 28273-3528

March 27, 2015

  
\_\_\_\_\_  
Noelle France  
Project Manager

  
\_\_\_\_\_  
David R. Mazorra, P.E.  
South Carolina Licensed Professional Engineer #31409



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## 1.0 INTRODUCTION

This report presents the results of the corrective action and groundwater gauging activities conducted at the 378 Truck Stop site between December 23, 2014 and February 19, 2015. The activities were conducted in accordance with the Underground Storage Tank (UST) Quality Assurance Program Plan (QAPP) Revision 2.0, and Cost Agreement Number 49332 as approved by the South Carolina Department of Health and Environmental Control (SCDHEC) in correspondence dated November 24, 2014.

### 1.1 SITE INFORMATION

**UST Facility Name:** 378 Truck Stop  
**UST Permit Number:** 07960  
**Facility Address:** 731 Highway 378  
Edgefield, South Carolina  
**Telephone Number:** Unknown

### 1.2 UST OWNER/OPERATOR

**Name:** Wilkerson Fuel Company, Inc.  
**Address:** Post Office Box 2835  
Rock Hill, South Carolina  
**Telephone Number:** (803) 324-4080

### 1.3 PROPERTY OWNER INFORMATION

**Name:** Gail and Barbara Whitmer  
**Address:** 1226 Highway 378 East  
Edgefield, South Carolina 29824  
**Telephone Number:** Unknown

### 1.4 DHEC CERTIFIED UST SITE REHABILITATION CONTRACTOR INFORMATION

**Name:** Environmental Compliance Services, Inc. (ECS)  
**Address:** Post Office Box 3528  
Fort Mill, South Carolina 29708  
**Telephone Number:** (800) 627-0493  
**Certification Number:** 358

### 1.5 SITE HISTORY

**UST Permit:** 07960  
**Site Name:** 378 Truck Stop  
**Date Release Reported to SCDHEC:** October 3, 1974, date confirmed July 8, 1996  
**Estimated Quantity of Product Released:** Not reported  
**Cause of Release:** UST system  
**SC RBCA Classification Code:** 2AA

**UST Permit #07960**

<b>UST #</b>	<b>Size (gallons)</b>	<b>Product</b>	<b>Date Installed</b>	<b>Currently in Use</b>	<b>Date Closed</b>
1	550	Diesel	Unknown	No (removed)	1/1/1987
2	1,000	Gasoline	Unknown	No (removed)	1/1/1987
3	2,000	Gasoline	Unknown	No (removed)	1/1/1987

The site was not in use at the time of the corrective action and groundwater sampling activities summarized in this report. An abandoned building was present onsite during our visits associated with the site activities. A concrete slab was located directly to the east of, and abutting, the onsite building. A release at the site was reported on October 3, 1974 and was confirmed on July 8, 1996. Reportedly, one 550-gallon diesel UST, one 1,000-gallon gasoline UST, one 2,000-gallon UST, their associated piping, and dispensers were removed from the site on January 1, 1987. The site did not contain USTs at the time of this report. A Site Locus map showing surrounding properties has been included as **Figure 1**. A Site Plan has been included as **Figure 2**.

**1.6 REGIONAL GEOLOGY/HYDROGEOLOGY**

The area is located in the Carolina Terrane of the Piedmont Physiographic Province. The Carolina Terrane consists of upper Precambrian to Cambrian greenschist facies metasedimentary and metavolcanic rocks intruded by numerous granitic and gabbroic plutons ranging in age from 265 to 650 million years. A mantle of residual soil and saprolite is reported to typically overlie the crystalline rocks of the Carolina Terrane. The thickness of the mantle ranges from approximately six to 60 feet, although it apparently is absent in places and thicker than 60 feet in others. The surface layers are reported to be composed chiefly of sandy clay. The clay content of most saprolites typically ranges from 10 to 25 percent, with some containing as little as three percent and others as much as 70 percent.

The mantle that covers the underlying fractured bedrock in most places provides an intergranular medium through which recharge into, and discharge of water from, the fractured rocks commonly occur. As a result, groundwater flow has been reported to occur within a composite two-media system. The top of the system has been the water table surface, which has been typically located within the saprolite. The fractured bedrock is expected to generally grade downward into unfractured rock below a depth of approximately 300 feet. The base of the groundwater system is therefore indistinct.

## **2.0 RECEPTOR SURVEY & SITE DATA**

### **2.1 RECEPTOR SURVEY**

A receptor survey was conducted within a 1,000 foot radius of the subject site during the May 2010 Tier I assessment activities. The 378 Truck Stop site was located in a predominantly residential area in Edgefield County. Properties directly surrounding the site were open fields. Nearby properties were mainly open fields and residences. A volunteer fire department station was located on the corner of Highway 378 and Faulkner Mountain Road.

At the time of the May 2010 Tier II, municipal water was not provided to the area. Multiple private water supply wells were identified during the Tier I receptor survey and were subsequently plotted on a site vicinity map. A comprehensive survey which included the private water supply wells, conducted during Tier II assessment activities, resulted in multiple changes to the site vicinity map.

### **2.2 SITE GEOLOGY/HYDROGEOLOGY**

During the Tier I the project area was underlain at shallow depths by light brown silt and silty clay. Rock and partially weathered rock were encountered below the silt and clay at varying depths throughout the study area. Partially weathered rock was first encountered at depths ranging from approximately 26 feet below land surface (bls) (07960-MW18 and 07960-MW27) to 50 feet bls (07690-TW9) across the subject area. Overall, partially weathered rock was first encountered at or below a depth of 30 feet bls onsite and in locations south of the site. Partially weathered rock was first encountered at more shallow depths in locations west, southwest, and southeast of the site. Rock was first encountered at depths ranging from approximately 30 feet bls (07960-MW8) to 68 feet bls (07690-TW3) across the subject area. The depths to rock observed during shallow monitoring well installation varied from approximately 30 feet bls to 39 feet bls. Overall, rock was encountered a bit deeper onsite and south of the site as compared to other areas (north, east, west, southwest, and southeast). Depths to rock were observed at shallower depths (between 32 and 35 feet bls) during telescoping well installation in areas southwest and southeast of the site, as compared to telescoping wells installed onsite and in areas south of the site. The largest discrepancy was observed at telescoping well 07690-TW3, located southwest of the site, where rock was not encountered until a depth of 68 feet bls.

The percentages of gravel, sand, and silt/clay in a soil sample collected during Tier I well installation activities from monitoring well 07960-MW3 at a depth of 40 feet below grade were 10.0%, 39.8%, and 50.1%, respectively. The percentages of gravel, sand, silt, and clay in a soil sample collected during Tier II well installation activities from 07960-MW12 at a depth of 30 feet below grade were 4.1%, 27.5%, 50.7%, and 17.7%, respectively. A soil sample was proposed for collection during installation of monitoring well 07690-TW5 at a depth within the well's screened interval. This sample was subsequently collected at a depth of 55 feet below grade. Following discussions with SCDHEC, the sample was not submitted for laboratory grain size analysis, as this sample consisted mainly of pulverized rock particles from the well drilling process.

### **3.0 ASSESSMENT INFORMATION**

#### **3.1 SOIL ASSESSMENT**

Soil assessment was not required for the scope of work outlined in the November 24, 2014 directive.

#### **3.2 GROUNDWATER FIELD SCREENING**

Groundwater field screening was not required for the scope of work outlined in the November 24, 2014 directive.

#### **3.3 MONITORING WELL INFORMATION**

Monitoring wells installation was not required for the scope of work outlined in the November 24, 2014 directive.

#### **3.4 GROUNDWATER ASSESSMENT**

##### **3.4.1 Free Product/Water Level Measurements**

On December 23, 2014, depths to free phase product and depths to groundwater were measured in wells 07960-MW1, 07960-MW22, and 07960-RW1 as part of site reconnaissance prior to two 48-hour Aggressive Fluid Vapor Recovery (AFVR) events. Free phase product was detected in well 07960-MW22 at a thickness of 0.12 feet during the.

On February 19, 2015, forty monitoring wells (07960-MW1 through 07960-MW31, and 07960-TW1 through TW9) were gauged for depths to groundwater, depth to free product and total well depths.

The groundwater elevations in the shallow monitoring wells (those wells with a screened interval between 10-45 feet bls), relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 72.17 feet (07960-MW9) to 84.93 feet (07960-MW17).

The groundwater elevations in the intermediate depth telescoping monitoring wells (defined as those wells with a screened interval between 53-68 feet bls), relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 66.41 feet (07960-TW7) to 78.92 feet (07960-TW8).

The groundwater elevations in the deep telescoping monitoring wells (defined as those wells with a screened interval between 75-80 feet bls), relative to a temporary benchmark with an assumed datum of 100 feet above mean sea level, ranged from 72.41 feet (07960-TW3) to 77.78 feet (07960-TW2).

##### **3.4.2 Well Sampling**

Groundwater sampling was not required for the scope of work outlined in the November 24, 2014 directive



### 3.4.3 Aquifer Characterization

Aquifer characteristic determinations were not required for the scope of work outlined in the November 24, 2014 directive.

## 4.0 CORRECTIVE ACTION

The SCDHEC directive included two 48-hour AFVR events to remove free phase product and reduce the dissolved petroleum hydrocarbon concentrations from monitoring wells 07960-RW1, 07960-MW1, and 07960-MW22. The first AFVR event was conducted from January 19 through January 21, 2015 and extracted vapors and fluids from wells 07960-RW1 and 07960-MW1. The second AFVR event was conducted from January 21 through January 23, 2015 and extracted vapors and fluids from well 07960-MW22. A site reconnaissance was performed for this site on December 23, 2014. The site reconnaissance indicated the presence of free phase petroleum product in 07969-MW22 at a thickness of 0.12 feet.

### 4.1 CORRECTIVE ACTION ACTIVITIES

#### 4.1.1 AFVR Event – January 19 through January 21, 2015

The trailer mounted AFVR equipment consisted of one Dekker VMX0303K oil-sealed vacuum system capable of extracting dry vapors from the subsurface at a rate of 275 cubic feet per minute (CFM) at 25 inches Mercury (in.Hg) vacuum. The vacuum blower is connected to a manifold, air/water separator, and magnehelic gauges for system monitoring. A water discharge line is connected from the oil water separator, flow meter, and transfer pump that pumps the water to a holding tank temporarily stored onsite. Wells 07960-RW1 and 07960-MW1 were used as target extraction wells during this event.

A trailer mounter ThermTech VAC-50 thermal oxidation system, capable of treating 25% of the Lower Explosive Limit at 500 CFM, was used to reduce the off-gas emission concentrations from the AFVR blower to the atmosphere.

The drop tube (also known as stinger pipe) was initially lowered to the depth of fluid encountered the well. The stinger pipe was periodically lowered throughout the first 8 hours of the event to a target depth of 29 feet below land surface (bls) and then adjusted to levels with higher vapor concentrations recorded from the exhaust stack for the duration of the event. Monitoring wells 07960-MW3, 07960-MW21, and 07960-TW1 were used as observation wells to collect vacuum radius of influence measurements throughout the AFVR event.

Measurements of vacuum, air velocities, temperature, and off-gas concentration readings (with exception) were collected at 30-minute intervals during the first 8 hours, then at 1-hour intervals between 9 and 24 hours of the event, and collected at 2-hour intervals throughout the remainder of the event.

The vacuum readings averaged 27.52 in.Hg over the course of the event. The air velocity rates averaged 198.16 feet per minute (ft/min) from the discharge stack on the blower over the course of the event. The organic vapor concentrations recovered from the targeted observation wells was measured at the discharge stack using the Bacharach TLV Sniffer, and averaged 365 parts per million (ppm) during the event. The exhaust stack gas temperatures averaged 105.94 degrees Fahrenheit (°F).

Free product was not detected in the wells 07960-RW1, 07960-MW1, 07960-MW3, 07960-MW21 and 07960-TW1 during post-AFVR measurements on January 21, 2015. A summary of free phase product and AFVR data collected is presented in **Table 6**. A summary of groundwater elevation data is presented in **Table 7**.

The total estimated amount of pre-treated petroleum products removed as a vapor, 0.39 pounds (0.07 gallons). The total estimated amount of post-treatment petroleum products emitted to the atmosphere was 0.00 pounds (0.00 gallons).

A measurable amount of free phase product was not detected in the holding tank during post-AFVR measurements. Field data sheets and emissions calculations for the AFVR event are included in **Appendix L**.

#### 4.1.2 AFVR Event – January 21 through January 23, 2015

The trailer mounted AFVR equipment is the same equipment as described in Section 4.1.1. Well 07960-MW22 was used as target extraction wells during this event.

A trailer mounter ThermTech VAC-50 thermal oxidation system, capable of treating 25% of the Lower Explosive Limit at 500 CFM, was used to reduce the off-gas emission concentrations from the AFVR blower to the atmosphere.

The drop tube (also known as stinger pipe) was initially lowered to the depth of fluid encountered the well. The stinger pipe was periodically lowered throughout the first 8 hours of the event and then adjusted to levels with higher vapor concentrations recorded from the exhaust stack for the duration of the event. Monitoring wells 07960-MW11, 07960-MW14 and 07960-MW15 were used as observation wells to collect vacuum radius of influence measurements throughout the AFVR event.

Measurements of vacuum, air velocities, temperature, and off-gas concentration readings (with exception) were collected at 30-minute intervals during the first 8 hours, then at 1-hour intervals between 9 and 24 hours of the event, and collected at 2-hour intervals throughout the remainder of the event.

The vacuum readings averaged 27.43 in.Hg over the course of the event. The air velocity rates averaged 237.95 feet per minute (ft/min) from the discharge stack on the blower over the course of the event. The organic vapor concentrations recovered from the targeted observation wells was measured at the discharge stack using the Bacharach TLV Sniffer, and averaged 303 parts per million (ppm) during the event. The exhaust stack gas temperatures averaged 60.43 degrees Fahrenheit (°F).

Free product was not detected in the monitoring wells 07960-MW22, 07960-MW11, 07960-MW14, 07960-MW15 and 07960-MW30 during post-AFVR measurements on January 23, 2015. A summary of free phase product and AFVR data collected is presented in **Table 6**. A summary of groundwater elevation data is presented in **Table 7**.

The total estimated amount of pre-treated petroleum products removed as a vapor, 0.38 pounds (0.06 gallons). The total estimated amount of post-treatment petroleum products emitted to the atmosphere was 0.11 pounds (0.02 gallons).

A measurable amount of free phase product was not detected in the holding tank during post-AFVR measurements. Field data sheets and emissions calculations for the AFVR event are included in **Appendix L**.

#### **4.2 INVESTIGATIVE DERIVED WASTE**

Approximately 1,060 gallons of fluid were extracted from 07960-RW1, 07960-MW1, and 07960-MW22 during the two AFVR events. Liquids produced during the AFVR events were disposed of by Zebra Environmental Services. Copies of the disposal manifest are included in **Appendix G**.

## **5.0 SUMMARY CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 SUMMARY**

- Free phase product was detected in well 07960-MW22 (thickness of 0.12 feet) during site reconnaissance on December 23, 2014.
- On February 19, 2015, forty monitoring wells (07960-MW1 through 07960-MW31, and 07960-TW1 through TW9) were gauged for depths to groundwater, depth to free product and total well depths.
- There was no free product observed in the wells gauged on February 19, 2015.

### **5.2 CONCLUSIONS**

- Approximately 1,060 gallons of fluids were removed from monitoring wells 07960-RW1, 09760-MW1, and 07960-MW22 during the two 48-hour AFVR events conducted January 19 through January 23, 2015.
- For the AFVR dated January 19 through January 21, 2015, stack emission calculations indicated 0.39 pounds (0.07 gallons) of petroleum products were removed from the subsurface.
- For the AFVR dated January 21 through January 23, 2015, stack emission calculations indicated 0.38 pounds (0.06 gallons) of petroleum products were removed from the subsurface and 0.11 pounds (0.02 gallons) were emitted to the atmosphere.

### **5.3 RECOMMENDATIONS**

- ECS recommends conducting a groundwater sampling event to evaluate the effectiveness of the AFVR events, and to continue monitoring the dissolved petroleum hydrocarbon concentrations in groundwater.

## **6.0 LIMITATIONS**

This report has been prepared for the exclusive use of Wilkerson Fuel Company for specific application to the referenced site in Edgefield County, South Carolina. The assessment was conducted based on the scope of work and level of effort desired by the SCDHEC and with resources adequate only for that scope of work. Our findings have been developed in accordance with generally accepted standards of geology and hydrogeology practices in the State of South Carolina, available information, and our professional judgment. No other warranty is expressed or implied.

The data that are presented in this report are indicative of conditions that existed at the precise locations sampled and at the time the samples were collected. Additionally, the data obtained from samples would be interpreted as being meaningful with respect to parameters indicated in the laboratory report. No additional information can logically be inferred from these data.

Certain data contained in this report were not obtained under the supervision of ECS. Although the accuracy of these data cannot be verified, for the purposes of this report, ECS assumes that they are correct.

### **6.1 DATA VERIFICATION**

The Project Verifier/Quality Assurance Manager has reviewed this report and provided any additional comments if applicable in **Appendix K**.

## **TABLES**

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**TABLE 2  
GROUNDWATER ELEVATION DATA  
378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW1	5/25/2010	101.85	15.33	15.37	0.04	86.51	unknown	unknown
	10/18/2010	101.98	26.50	26.54	0.04	75.47		
	4/19/2011		--	21.70	--	80.28		
	8/29/2011		--	31.17	--	70.81		
	2/12/2013		28.12	28.21	0.09	73.84		
	9/30/2013		23.10	23.14	0.04	78.87		
	7/28/2014		--	23.95	--	78.03		
2/19/2015	--	17.34	--	84.64				
07960-MW2	5/25/2010	101.02	--	16.82	--	84.20	41.72	unknown
	10/18/2010	100.99	--	27.10	--	73.89		
	4/19/2011		--	23.34	--	77.68		
	8/29/2011		--	30.91	--	70.08		
	2/12/2013		--	31.33	--	69.66		
	9/30/2013		--	24.02	--	76.97		
	7/28/2014		--	24.39	--	76.60		
2/19/2015	--	22.22	--	78.77				
07960-MW3	5/25/2010	101.46	--	17.28	--	84.18	40	10-40
	10/18/2010	101.54	--	27.58	--	73.96		
	4/19/2011		--	23.78	--	77.76		
	8/29/2011		--	31.38	--	70.16		
	2/12/2013		--	31.79	--	69.75		
	9/30/2013		--	24.51	--	77.03		
	7/28/2014		--	24.74	--	76.80		
2/19/2015	--	22.30	--	79.24				
07960-MW4	5/25/2010	100.50	--	16.35	--	84.15	40	10-40
	10/18/2010	100.48	--	26.20	--	74.28		
	4/19/2011		--	22.12	--	78.36		
	8/29/2011		--	29.92	--	70.56		
	2/12/2013		--	30.00	--	70.48		
	9/30/2013		--	23.09	--	77.39		
	7/28/2014		--	23.10	--	77.38		
2/19/2015	--	20.45	--	80.03				
07960-MW5	5/25/2010	104.21	--	27.30	--	76.91	40	20-40
	10/18/2010	104.18	--	30.24	--	73.94		
	4/19/2011		--	27.63	--	76.55		
	8/29/2011		--	34.18	--	70.00		
	2/12/2013		--	36.02	--	68.16		
	9/30/2013		--	27.51	--	76.67		
	7/28/2014		--	27.01	--	77.17		
2/19/2015	--	25.68	--	78.50				
07960-MW6	10/18/2010	102.25	--	28.01	--	74.24	35.05	20.05-35.05
	4/19/2011		--	23.06	--	79.19		
	8/29/2011		--	32.01	--	70.24		
	2/12/2013		--	30.98	--	71.27		
	9/30/2013		--	24.52	--	77.73		
	7/28/2014		--	25.29	--	76.96		
2/19/2015	--	22.13	--	80.12				
07960-MW7	10/18/2010	99.72	--	25.10	--	74.62	34.92	19.92-34.92
	4/19/2011		--	21.04	--	78.68		
	8/29/2011		--	25.83	--	73.89		
	2/12/2013		--	28.60	--	71.12		
	9/30/2013		--	20.10	--	79.62		
	7/28/2014		--	19.89	--	79.83		
2/19/2015	--	21.62	--	78.10				



**TABLE 2  
GROUNDWATER ELEVATION DATA  
378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW8	10/18/2010	99.92	--	25.45	--	74.47	35.08	20.08-35.08
	4/19/2011		--	22.51	--	77.41		
	8/29/2011		--	28.62	--	71.30		
	2/12/2013		--	29.52	--	70.40		
	9/30/2013		--	24.74	--	75.18		
	7/28/2014		--	23.80	--	76.12		
	2/19/2015		--	24.14	--	75.78		
07960-MW9	10/18/2010	94.83	--	30.31	--	64.52	35.17	20.17-35.17
	4/19/2011		--	24.13	--	70.70		
	8/29/2011		--	28.08	--	66.75		
	2/12/2013		--	30.51	--	64.32		
	9/30/2013		--	23.00	--	71.83		
	7/28/2014		--	22.60	--	72.23		
	2/19/2015		--	22.66	--	72.17		
07960-MW10	10/18/2010	99.12	--	29.73	--	69.39	40.16	25.16-40.16
	4/19/2011		--	26.18	--	72.94		
	8/29/2011		--	31.51	--	67.61		
	2/12/2013		--	27.25	--	71.87		
	9/30/2013		--	25.38	--	73.74		
	7/28/2014		--	25.27	--	73.85		
	2/19/2015		--	22.03	--	77.09		
07960-MW11	10/18/2010	102.61	--	28.75	--	73.86	35.23	20.23-35.23
	4/19/2011		--	25.59	--	77.02		
	8/29/2011		--	32.42	--	70.19		
	2/12/2013		--	33.99	--	68.62		
	9/30/2013		--	25.10	--	77.51		
	7/28/2014		--	25.23	--	77.38		
	2/19/2015		--	23.37	--	79.24		
07960-MW12	10/18/2010	103.46	--	29.63	--	73.83	34.99	19.99-34.99
	4/19/2011		--	26.11	--	77.35		
	8/29/2011		--	33.56	--	69.90		
	2/12/2013		--	Dry	--	Dry		
	9/30/2013		--	26.25	--	77.21		
	7/28/2014		--	24.89	--	78.57		
	2/19/2015		--	25.79	--	77.67		
07960-MW13	10/18/2010	101.48	--	27.63	--	73.85	40.19	25.19-40.19
	4/19/2011		--	23.50	--	77.98		
	8/29/2011		--	31.34	--	70.14		
	2/12/2013		--	31.69	--	69.79		
	9/30/2013		--	24.74	--	76.74		
	7/28/2014		--	22.95	--	78.53		
	2/19/2015		--	22.20	--	79.28		
07960-MW14	10/18/2010	103.48	--	29.99	--	73.49	39.74	24.74-39.74
	4/19/2011		--	28.52	--	74.96		
	8/29/2011		--	34.59	--	68.89		
	2/12/2013		--	35.07	--	68.41		
	9/30/2013		--	27.01	--	76.47		
	7/28/2014		--	28.00	--	75.48		
	2/19/2015		--	25.75	--	77.73		
07960-MW15	10/18/2010	103.16	--	30.32	--	72.84	40.13	25.13-40.13
	4/19/2011		--	25.18	--	77.98		
	8/29/2011		--	33.50	--	69.66		
	2/12/2013		--	33.42	--	69.74		
	9/30/2013		--	26.85	--	76.31		
	7/28/2014		--	27.60	--	75.56		
	2/19/2015		--	23.84	--	79.32		

**TABLE 2  
GROUNDWATER ELEVATION DATA  
378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW16	10/18/2010	101.32	--	30.79	--	70.53	40.11	25.11-40.11
	4/19/2011		--	24.59	--	76.73		
	8/29/2011		--	32.68	--	68.64		
	2/12/2013		--	33.56	--	67.76		
	9/30/2013		--	25.31	--	76.01		
	7/28/2014		--	25.31	--	76.01		
	2/19/2015		--	24.81	--	76.51		
07960-MW17	10/18/2010	98.40	--	23.74	--	74.66	35.02	20.02-35.02
	4/19/2011		--	18.20	--	80.20		
	8/29/2011		--	28.55	--	69.85		
	2/12/2013		--	19.25	--	79.15		
	9/30/2013		--	20.20	--	78.20		
	7/28/2014		--	21.00	--	77.40		
	2/19/2015		--	13.47	--	84.93		
07960-MW18	10/18/2010	95.05	--	22.02	--	73.03	35.67	20.67-35.67
	4/19/2011		--	15.71	--	79.34		
	8/29/2011		--	23.00	--	72.05		
	2/12/2013		--	23.23	--	71.82		
	9/30/2013		--	18.25	--	76.80		
	7/28/2014		--	18.35	--	76.70		
	2/19/2015		--	15.90	--	79.15		
07960-MW19	10/18/2010	101.07	--	27.62	--	73.45	38.57	23.57-38.57
	4/19/2011		--	21.63	--	79.44		
	8/29/2011		--	30.56	--	70.51		
	2/12/2013		--	32.05	--	69.02		
	9/30/2013		--	24.35	--	76.72		
	7/28/2014		--	25.64	--	75.43		
	2/19/2015		--	19.11	--	81.96		
07960-MW20	12/6/2010	110.52	--	41.77	--	68.75	45.05	30.05-45.05
	4/19/2011		--	37.72	--	72.80		
	8/29/2011		--	41.27	--	69.25		
	2/12/2013		--	Dry	--	Dry		
	9/30/2013		--	35.84	--	74.68		
	7/28/2014		--	31.20	--	79.32		
	2/19/2015		--	35.52	--	75.00		
07960-MW21	12/6/2010	101.70	--	32.66	--	69.04	40.16	25.16-40.16
	4/19/2011		--	24.19	--	77.51		
	8/29/2011		--	38.77	--	62.93		
	2/12/2013		--	32.00	--	69.70		
	9/30/2013		--	22.41	--	79.29		
	7/28/2014		--	24.15	--	77.55		
	2/19/2015		--	21.78	--	79.92		
07960-MW22	12/6/2010	105.13	--	34.95	--	70.18	40.09	25.09-40.09
	4/19/2011		--	28.56	--	76.57		
	8/29/2011		--	35.88	--	69.25		
	2/12/2013		37.61	37.98	0.37	67.15		
	9/30/2013		--	29.18	--	75.95		
	7/28/2014		--	29.30	--	75.83		
	2/19/2015		--	28.11	--	77.02		
07960-MW23	12/6/2010	100.01	--	29.26	--	70.75	37.24	22.24-37.24
	4/19/2011		--	19.69	--	80.32		
	8/29/2011		--	29.01	--	71.00		
	2/12/2013		--	26.28	--	73.73		
	9/30/2013		--	22.83	--	77.18		
	7/28/2014		--	24.82	--	75.19		
	2/19/2015		--	16.62	--	83.39		
07960-MW24	12/6/2010	99.08	--	32.25	--	66.83	40.13	25.13-40.13
	4/19/2011		--	25.58	--	73.50		
	8/29/2011		--	31.62	--	67.46		
	2/12/2013		--	33.17	--	65.91		
	9/30/2013		--	26.53	--	72.55		
	7/28/2014		--	26.45	--	72.63		
	2/19/2015		--	24.49	--	74.59		

**TABLE 2  
GROUNDWATER ELEVATION DATA  
378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation (ft)	Well Depth (ft)	Screened Interval (ft)
07960-MW25	12/6/2010	101.54	--	32.00	--	69.54	39.98	24.98-39.98
	4/19/2011		--	23.44	--	78.10		
	8/29/2011		--	32.18	--	69.36		
	2/12/2013		--	33.28	--	68.26		
	9/30/2013		--	24.58	--	76.96		
	7/28/2014		--	25.45	--	76.09		
	2/19/2015		--	22.01	--	79.53		
07960-MW26	12/6/2010	97.25	--	29.08	--	68.17	38.74	23.74-38.74
	4/19/2011		--	21.07	--	76.18		
	8/29/2011		--	29.08	--	68.17		
	2/12/2013		--	30.29	--	66.96		
	9/30/2013		--	21.84	--	75.41		
	7/28/2014		--	18.25	--	79.00		
	2/19/2015		--	21.85	--	75.40		
07960-MW27	12/6/2010	97.20	--	28.48	--	68.72	35.10	20.10-35.10
	4/19/2011		--	24.42	--	72.78		
	8/29/2011		--	29.24	--	67.96		
	2/12/2013		--	30.27	--	66.93		
	9/30/2013		--	22.87	--	74.33		
	7/28/2014		--	22.75	--	74.45		
	2/19/2015		--	22.11	--	75.09		
07960-MW28	12/6/2010	101.29	--	33.39	--	67.90	40.03	25.03-40.03
	4/19/2011		--	20.91	--	80.38		
	8/29/2011		--	29.92	--	71.37		
	2/12/2013		--	28.86	--	72.43		
	9/30/2013		--	24.65	--	76.64		
	7/28/2014		--	22.05	--	79.24		
	2/19/2015		--	22.63	--	78.66		
07960-MW29	2/12/2013	101.08	--	32.04	--	69.04	40.15	25.15-40.15
	9/30/2013		--	23.99	--	77.09		
	7/28/2014		--	23.25	--	77.83		
	2/19/2015		--	21.82	--	79.26		
07960-MW30	2/12/2013	104.62	--	36.20	--	68.42	45.05	30.05-45.05
	9/30/2013		--	28.51	--	76.11		
	7/28/2014		--	26.14	--	78.48		
	2/19/2015		--	26.88	--	77.74		
07960-MW31	2/12/2013	103.20	--	35.31	--	67.89	43.96	28.96-43.96
	9/30/2013		--	27.30	--	75.90		
	7/28/2014		--	24.80	--	78.40		
	2/19/2015		--	26.62	--	76.58		
07960-TW1	10/18/2010	101.83	--	28.44	--	73.39	63.27	58.27-63.27
	4/19/2011		--	25.53	--	76.30		
	8/29/2011		--	32.26	--	69.57		
	2/12/2013		--	33.22	--	68.61		
	9/30/2013		--	25.66	--	76.17		
	7/28/2014		--	25.55	--	76.28		
07960-TW2	2/19/2015	101.97	--	23.31	--	78.52	80.23	75.23-80.23
	10/18/2010		--	29.57	--	72.40		
	4/19/2011		--	23.83	--	78.14		
	8/29/2011		--	31.62	--	70.35		
	2/12/2013		--	33.22	--	68.75		
	9/30/2013		--	24.27	--	77.70		
7/28/2014	--	24.59	--	77.38				
2/19/2015	--	24.19	--	77.78				

**TABLE 2  
GROUNDWATER ELEVATION DATA  
378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft)	Depth to Free Product (ft)	Depth to Ground-water (ft)	Free Product Thickness (ft)	Ground-water Elevation (ft)	Well Depth (ft)	Screened Interval (ft)
07960-TW-3	10/18/2010	95.33	--	25.39	--	69.94	80.62	75.62-80.62
	4/19/2011		--	23.83	--	71.50		
	8/29/2011		--	27.78	--	67.55		
	2/12/2013		--	29.97	--	65.36		
	9/30/2013		--	22.78	--	72.55		
	7/28/2014		--	22.50	--	72.83		
	2/19/2015		--	22.92	--	72.41		
07960-TW4	10/18/2010	99.23	--	43.13	--	56.10	68.56	63.56-68.56
	4/19/2011		--	27.11	--	72.12		
	8/29/2011		--	31.09	--	68.14		
	2/12/2013		--	32.81	--	66.42		
	9/30/2013		--	23.45	--	75.78		
	7/28/2014		--	22.19	--	77.04		
	2/19/2015		--	26.55	--	72.68		
07960-TW5	10/18/2010	103.62	--	29.69	--	73.93	58.38	53.38-58.38
	4/19/2011		--	25.96	--	77.66		
	8/29/2011		--	33.09	--	70.53		
	2/12/2013		--	34.60	--	69.02		
	9/30/2013		--	26.42	--	77.20		
	7/28/2014		--	26.91	--	76.71		
	2/19/2015		--	26.02	--	77.60		
07960-TW6	10/18/2010	101.29	--	31.22	--	70.07	58.55	53.55-58.55
	4/19/2011		--	25.25	--	76.04		
	8/29/2011		--	33.00	--	68.29		
	2/12/2013		--	33.80	--	67.49		
	9/30/2013		--	26.72	--	74.57		
	7/28/2014		--	27.55	--	73.74		
	2/19/2015		--	24.58	--	76.71		
07960-TW7	10/18/2010	98.13	--	50.90	--	47.23	58.94	53.94-58.94
	4/19/2011		--	16.83	--	81.30		
	8/29/2011		--	36.98	--	61.15		
	2/12/2013		--	37.54	--	60.59		
	9/30/2013		--	19.20	--	78.93		
	7/28/2014		--	15.79	--	82.34		
	2/19/2015		--	31.72	--	66.41		
07960-TW8	10/18/2010	101.03	--	28.18	--	72.85	58.53	53.53-58.53
	4/19/2011		--	22.19	--	78.84		
	8/29/2011		--	41.54	--	59.49		
	2/12/2013		--	42.13	--	58.90		
	9/30/2013		--	32.10	--	68.93		
	7/28/2014		--	25.57	--	75.46		
	2/19/2015		--	22.11	--	78.92		
07960-TW9	12/6/2010	96.92	--	28.96	--	67.96	80.12	75.12-80.12
	4/19/2011		--	21.14	--	75.78		
	8/29/2011		--	28.94	--	67.98		
	2/12/2013		--	30.22	--	66.70		
	9/30/2013		--	22.59	--	74.33		
	7/28/2014		--	23.95	--	72.97		
	2/19/2015		--	20.46	--	76.46		
07960-RW1	2/19/2015	NA	--	9.18	--	NA	NA	NA

Notes:

Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.

Groundwater elevations adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.

May 2010 survey data collected by Environmental Compliance Services, Inc. during Tier I assessment activities.

Subsequent October and December 2010 survey data provided by Pittman Professional Land Surveying.

**Table 6**  
**SUMMARY OF AGGRESSIVE FLUID/VAPOR RECOVERY INFORMATION**  
**378 TRUCK STOP**

Well ID	Date	Time (hours)	Average Effluent Velocity (fpm)	Average Effluent Temperature (°F)	Average Effluent Concentration (ppm)	Total Free Product Volatized (gallons)	Total Free Product as Fluid (gallons)	Total Free Product Recovered (gallons)	Total Fluid Volume removed (gallons)
07960 RW1	1/19-1/21 2015	48	198.16	105.94	365	0.19	0	0.19	265
07960-MW1	1/19-1/21 2015	48	198.16	105.94	365	0.19	0	0.19	265
07960-MW22	1/21- 1/23 2015	48	237.95	60.43	303	0.03	0	0.03	530
<b>Totals</b>		--	--	--	--	0.220	0	0.410	1,060

Notes:

Cross-sectional area of exhaust stack is 0.19 sq. ft.

Total Volatized in gallons = Air emissions in pounds/(6.25 lbs./gal.)

Total Free Product as Fluid is obtained from disposal manifest and/or correspondence with subcontractors from each AFVR event.

Total Free Product Recovered = Total Free Product Volatized + Total Free Product as Fluid.

**Table 7**  
**SUMMARY OF GROUNDWATER ELEVATION DATA**  
**AGGRESSIVE FLUID/VAPOR RECOVERY EVENTS**  
**378 TRUCK STOP**

Well ID	Date Measured	Top of Casing Elevation (ft.)	Depth to Groundwater (ft.)	Depth to Free Product (ft.)	Free Product Thickness (ft.)	Groundwater Elevation (ft.)	Well Depth (ft.)	Screened Interval (ft.)
07960-TW1	1/19/15 (pre AFVR)	101.83	28.03	--	--	73.80	63.27	58.27-63.27
	1/21/15 (immediately post-AFVR)		27.31	--	--	74.52		
	1/21/15 (20 minutes post-AFVR)		26.78	--	--	75.05		
07960-MW21	1/19/15 (pre AFVR)	101.70	24.19	--	--	78.42	40.16	25.16-40.16
	1/21/15 (immediately post-AFVR)		24.07	--	--	78.54		
	1/21/15 (20 minutes post-AFVR)		24.09	--	--	78.52		
07960-MW3	1/19/15 (pre AFVR)	101.54	25.27	--	--	77.34	40	10-40
	1/21/15 (immediately post-AFVR)		25.76	--	--	76.85		
	1/21/15 (20 minutes post-AFVR)		25.68	--	--	76.93		
07960-MW1	1/19/15 (pre AFVR)	101.98	20.35	--	--	82.26	44.81	unknown
	1/21/15 (immediately post-AFVR)		27.69	--	--	74.92		
	1/21/15 (20 minutes post-AFVR)		27.18	--	--	75.43		
07960-RW1	1/19/15 (pre AFVR)	101.63	16.78	--	--	85.83	29	14-29
	1/21/15 (immediately post-AFVR)		26.63	--	--	75.98		
	1/21/15 (20 minutes post-AFVR)		26.37	--	--	76.24		
07960-MW11	1/21/15 (pre-AFVR)	102.61	26.30	--	--	76.31	35.23	20.23-35.23
	1/23/15 (immediately post-AFVR)		26.45	--	--	76.16		
	1/23/15 (20 minutes post-AFVR)		26.41	--	--	76.20		
07960-MW22	1/21/15 (pre-AFVR)	105.13	39.87	--	--	62.74	40.09	25.09-40.09
	1/23/15 (immediately post-AFVR)		36.57	--	--	68.56		
	1/23/15 (20 minutes post-AFVR)		36.52	--	--	68.61		
07960-MW14	1/21/15 (pre-AFVR)	103.48	28.36	--	--	75.12	39.74	24.74-39.74
	1/23/15 (immediately post-AFVR)		29.03	--	--	74.45		
	1/23/15 (20 minutes post-AFVR)		29.53	--	--	73.95		
07960-MW15	1/21/15 (pre-AFVR)	103.16	27.38	--	--	75.78	40.13	25.13-40.13
	1/23/15 (immediately post-AFVR)		28.84	--	--	74.32		
	1/23/15 (20 minutes post-AFVR)		28.81	--	--	74.35		
07960-MW30	1/21/15 (pre-AFVR)	104.62	29.72	--	--	73.44	45.05	30.05-45.05
	1/23/15 (immediately post-AFVR)		27.65	--	--	75.51		
	1/23/15 (20 minutes post-AFVR)		27.51	--	--	75.65		

Notes:

Elevations relative to a temporary benchmark with an assumed datum of 100.00 feet above mean sea level; data reported in feet.

Groundwater elevation adjusted for the presence of free product, where present, with an assumed density of 0.75 g/cm<sup>3</sup>.

## **FIGURES**

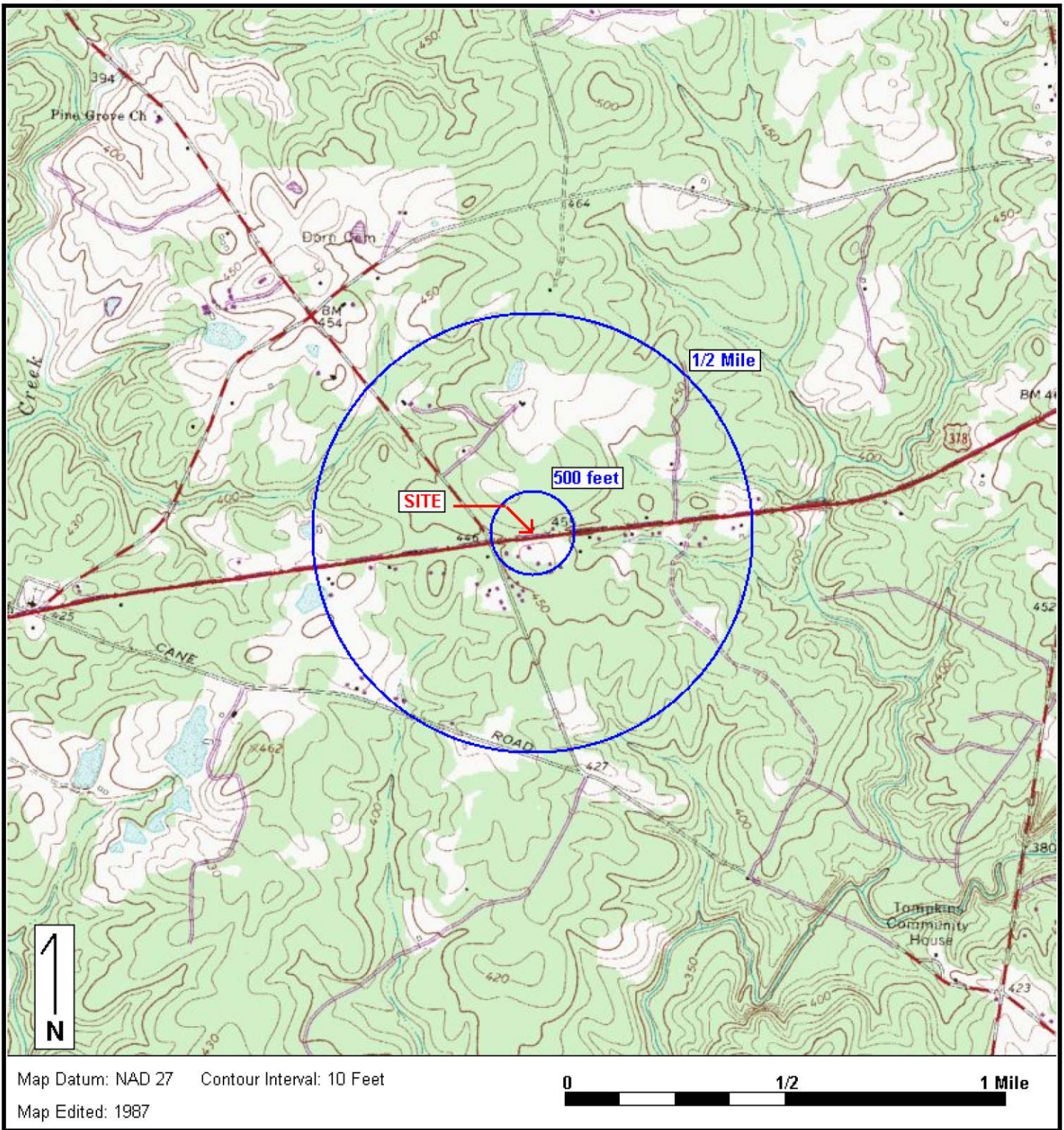
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Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas





**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- ⊙ Spillout (Water Table) Monitoring Well
- ⊙ Telescoping Monitoring Well
- ⊙ Abandoned Telescoping Monitoring Well
- ⊙ Water Supply Well
- ⊙ MW-1 Wall I.D.
- ⊙ Recovery Well

**General Notes:**

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

**ecs**

WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

13904 SOUTH POINT BLVD. UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL: (704)585-2711 FAX: (704)585-2744

**378 Truck Stop**

731 Highway 378  
 Edgefield, SC

<b>CLIENT</b>		<b>Wilkerson Fuel Company, Inc.</b>	
<b>DATE</b>		10/17/13	
<b>SCALE</b>		1"=150'	
<b>NO.</b>	<b>DATE</b>	<b>BY</b>	<b>FOR</b>
1	10/17/13	14-214210	2

**APPENDIX B**

---

Groundwater Gauging Log

Location Edgefield, SC Date 2/19/15

Project / Client 378 Track Stop  
14-214210

Start	715. Loaded F150.			
LeA	ECS 730, 207 2900/mi			
On site 1000 for gauging.				
UST Permit # 07960.				
Weather: Sunny, 20's - 30's				
ID	DTW	DTP	TWD	
mm1	17.34	NP	44.07	
mm2	22.22	-	43.39	
mm3	22.30	-	39.67	
mm4	20.45	-	39.60	
mm5	25.68	-	39.71	
mm6	22.13	-	35.02	
mm7	21.62	-	35.00	
mm8	24.14	-	35.04	
mm9	22.66	-	35.14	
mm10	22.03	-	40.14	
mm11	23.37	-	35.20	
mm12	25.79	-	34.90	
mm13	22.22	-	40.15	
mm14	25.75	-	39.72	
mm15	23.84	-	40.10	
mm16	24.81	-	40.08	
mm17	13.47	-	34.96	
mm18	15.40	-	35.65	

Location Edgefield, SC Date 2/18/15

Project / Client 378 Track Stop  
14-214210

ID	DTW	DTP	TWD	
mm19	19.11	-	38.54	
mm20	35.52	-	45.01	
mm21	21.78	-	40.11	
mm22	28.11	NP	40.21	
mm23	16.62	-	37.18	
mm24	24.49	-	39.98	
mm25	10.22	-	34.94	
mm26	21.85	-	38.89	
mm27	22.11	-	35.05	
mm28	22.22	-	39.99	
mm29	28.12	-	40.08	
mm30	26.92	-	44.96	
mm31	29.92	-	43.88	
mm32	9.18	NP	29.18	
mm33	23.31	-	63.23	
mm34	24.19	-	80.19	
mm35	22.92	-	80.58	
mm36	26.55	-	68.52	
mm37	20.02	-	58.33	
mm38	24.58	-	58.50	
mm39	31.72	-	58.85	
mm40	22.11	-	58.49	
mm41	20.46	-	60.05	

Left site 1315  
Arrive ECS 1600, 2075424mm

**APPENDIX G**

---

Disposal Manifest

# MATERIAL MANIFEST



EMERGENCY PHONE NO.  
(336) 841-5276

POST OFFICE BOX 357  
HIGH POINT, NC 27261

TEL (336) 841-5276  
FAX (336) 841-5509

Manifest Document No.	
Page	of
Zebra Job No. 50086	

## GENERATOR INFORMATION

Name 378 Truck Stop		US EPA ID No.
Street Address 751 Hwy 378 Eden, NC	Mailing Address ECS	Phone No.
		Contact Noelle

## DESCRIPTION OF MATERIALS

HM	USDOT Proper Shipping Name (Complete All Items for Hazardous Materials)	Hazard Class or Div	UN / NA ID No.	Packing Group	Containers		Total Quantity	Unit Wt./Vol.
					Qty.	Type		
a.	Non Haz Liquids 1203	NA	NA	NA	1	TI	1060	G
b.								
c.								

## ADDITIONAL INFORMATION

	ERG No.	Zebra Profile Code	Facility Use
a.	NA		
b.			
c.			

## GENERATOR'S CERTIFICATION

This is to certify that the above-described materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40 CFR Part 261 or any applicable state law, and unless specifically identified above, the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2 ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

Printed / Typed Name Aron Williamson ECS Agent For Williamson Fuel Co.	Signature Aron Williamson	Mo. / Day / Yr. 1/23/15
---	------------------------------	----------------------------

## TRANSPORTER INFORMATION

Transporter Zebra Environmental & Industrial Services Inc	I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.	
Address 901 East Springfield Road High Point, NC 27263	Signature <i>[Signature]</i>	Shipment Date 1/23/15
Transporter or EPA ID No. NCO991302669	Unit No. RT872	I hereby acknowledge receipt of the above-described materials were received from the generator site and were transported to the facility listed below.
Phone (336) 841-5276	Signature <i>[Signature]</i>	Delivery Date 1/23/15

## FACILITY INFORMATION

Facility Zebra Environmental & Industrial Services, Inc.	I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy noted below.	
Address 901 East Springfield Road High Point, NC 27263	Signature <i>[Signature]</i>	Receipt Date 1/23/15
Facility or EPA ID No. NCO991302669	Discrepancies / Routing Codes / Handling Methods	
Phone (336) 841-5276	a.	
Contact David Tedder	b.	
	c.	

**APPENDIX K**

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Data Verification Checklist

## Contractor Checklist

For each report submitted to the UST Management Division, the contractor will be required to verify that all data elements for the required scope of work have been provided. For items not required for the scope of work, the N/A box should be checked. For items required and not completed or provided, the No box should be checked and a thorough description of the reason must be provided.

Item #	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	✓		
2	Is UST Owner/Operator name, address, & phone number provided?	✓		
3	Is name, address, & phone number of current property owner provided?	✓		
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	✓		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			✓
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?			✓
7	Has the facility history been summarized?	✓		
8	Has the regional geology and hydrogeology been described?	✓		
9	Are the receptor survey results provided as required?			✓
10	Has current use of the site and adjacent land been described?	✓		
11	Has the site-specific geology and hydrogeology been described?	✓		
12	Has the primary soil type been described?	✓		
13	Have field screening results been described?			✓
14	Has a description of the soil sample collection and preservation been detailed?			✓
15	Has the field screening methodology and procedure been detailed?			✓
16	Has the monitoring well installation and development dates been provided?			✓
17	Has the method of well development been detailed?			✓
18	Has justification been provided for the locations of the monitoring wells?			✓
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	✓		
20	Has the groundwater sampling methodology been detailed?			✓
21	Have the groundwater sampling dates and groundwater measurements been provided?			✓
22	Has the purging methodology been detailed?			✓
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete?			
24	If free-product is present, has the thickness been provided?			✓
25	Does the report include a brief discussion of the assessment done and the results?			✓
26	Does the report include a brief discussion of the aquifer evaluation and results?			✓
27	Does the report include a brief discussion of the fate & transport models used?			✓

Item #	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			✓
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			✓
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			✓
31	Have recommendations for further action been provided and explained?	✓		
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			✓
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			✓
34	Has the current and historical laboratory data been provided in tabular format?	✓		
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			✓
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			✓
37	Has the topographic map been provided with all required elements? (Figure 1)	✓		
38	Has the site base map been provided with all required elements? (Figure 2)	✓		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			✓
40	Has the site potentiometric map been provided? (Figure 5)			✓
41	Have the geologic cross-sections been provided? (Figure 6)			✓
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			✓
43	Has the site survey been provided and include all necessary elements? (Appendix A)			✓
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)			✓
45	Is the laboratory performing the analyses properly certified?			✓
46	Has the tax map been included with all necessary elements? (Appendix C)			✓
47	Have the soil boring/field screening logs been provided? (Appendix D)			✓
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			✓
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			✓
50	Have the disposal manifests been provided? (Appendix G)	✓		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			✓
52	Has all fate and transport modeling been provided? (Appendix I)			✓
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			✓
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	✓		





## **APPENDIX L**

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**Aggressive Fluid Vapor Recovery Event Data  
Including: Before and After Data; Field Data Sheets; Air Flow  
Calculations; Pre-Treatment Emissions Calculations; Post-  
Treatment Emissions Calculations**

**APPENDIX L  
AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
BEFORE AND AFTER DATA**

Project Name:	<u>378 Truck Stop</u>	UST Permit No:	<u>07960</u>
Project No:	<u>14-214210</u>	ECS Field Rep. 1:	<u>A. Williamson</u>
Start Date:	<u>1/19/2015</u>	ECS Field Rep. 2:	<u>B. Peay</u>
End Date:	<u>1/21/2015</u>		

AFVR Measurements Prior to and After Event

**Measurements Prior to AFVR Event**

Blower Model	<u>Dekker Vmax 3030</u>	
Water Tank Storage Capacity:	<u>8,800</u>	gallons
Inside Diameter of Blower Outlet Stack	<u>3.068</u>	inches
Is Tank Empty & Clean (Y/N)	<u>Y</u>	

**Measurements Before AFVR Event**      **1/19/2015**

Tanker Product volume	<u>0</u>	gallons
Tanker Water volume	<u>0</u>	gallons

**Measurements After AFVR Event**      **1/21/2015**

Tanker Product volume	<u>0</u>	gallons
Tanker Water volume	<u>530</u>	gallons

Well ID	Prior to AFVR -		Immediately Post AFVR		20-min Post AFVR	
	Depth to Product	Depth to Water	Depth to Product	Depth to Water	Depth to Product	Depth to Water
<b>07960-RW1</b>	NP	16.78	NP	26.63	NP	26.37
<b>07960-MW1</b>	NP	20.35	NP	27.69	NP	27.18
<b>07960-MW3</b>	NP	25.27	NP	25.76	NP	25.68
<b>07960-MW21</b>	NP	24.19	NP	24.07	NP	24.09
<b>07960-TW1</b>	NP	28.03	NP	27.31	NP	26.78

NP denotes no measurable free product.

NM denotes not measured.

Project 378 Truck Stop  
 Project 14-214210  
 Date: 1/19-1/21 2015

**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**AFVR EVENT FIELD DATA SHEETS**

UST Permit No: 07960  
 ECS Field Rep. 1: A. Williamson  
 ECS Field Rep. 2: B. Peay

Elapsed Time (Hours)	Reading Interval (Mins)	Measurements During 96-hr AFVR Event																					
		Date & Time	Stack Outlet			Blower		AFVR Wells				Non-AFVR Wells											
			Air Flow (fpm)	Temperature (°F)	R.H. (%)	TLV (ppm)	Vacuum (in.Hg)	07960-RW1		07960-MW1		07960-MW3		07960-MW21		07960-TW1							
		1/19/15 11:30	←	Start time																			
1 hr	30	1/19/15 12:00	148	127.9	98.9	300		28.0	24	16.75	20	20.35		0		0		0		0.0			
	30	1/19/15 12:30	131	122.0	98.2	240		27.5	24	16.75	20	20.35		0		0		0		0.0			
2 hr	30	1/19/15 13:00	200	121.6	96.4	360		27.5	24	17.75	20	21.35		0		0		0		0.05			
	30	1/19/15 13:30	217	121.8	96.4	420		27.5	24	17.75	19	21.35		0		0		0		0.05			
3 hr	30	1/19/15 14:00	131	123.3	97.3	520		27.5	24	18.75	19	22.35		0		0		0		0.05			
	30	1/19/15 14:30	235	122.4	98.1	540		27.5	24	19.75	19	23.35		0		0		0		0.05			
4 hr	30	1/19/15 15:00	183	122.5	98.2	500		27.5	24	20.75	19	24.35		0		0		0		0.05			
	30	1/19/15 15:30	217	121.8	97.7	560		27.5	23	21.75	19	25.35		0		0		0		0.05			
5 hr	30	1/19/15 16:00	148	118.9	97.9	540		27.5	23	21.75	19	25.35		0		0		0		0.05			
	30	1/19/15 16:30	200	115.9	98.3	380		27.5	23	22.75	19	26.35		0		0		0		0.05			
6 hr	30	1/19/15 17:00	148	112.3	98.0	400		27.5	23	23.75	18.5	27.35		0		0		0		0.05			
	30	1/19/15 17:30	183	109.3	98.2	340		27.5	22.5	24.75	19	28.35		0		0		0		0.05			
7 hr	30	1/19/15 18:00	235	108.9	97.8	320		27.5	22.5	25.75	18.5	29.00		0		0		0		0.05			
	30	1/19/15 18:30	225	107.8	97.6	240		27.5	22.5	26.75	18.5	29		0		0		0		0.05			
8 hr	30	1/19/15 19:00	185	104.0	98.7	280		27.5	22.5	27.75	18.5	29		0		0		0		0.05			
	30	1/19/15 19:30	213	105.8	99.0	300		27.5	22.5	23.8	19	29		0		0		0		0.05			
9 hr	60	1/19/15 20:30	218	103.2	98.6	260		27.5	22.5	23.8	19	27.35		0		0		0		0.05			
10 hr	60	1/19/15 21:30	193	100.5	98.3	280		27.5	22.5	29.0	22.5	29.0		0		0		0		0.05			
11 hr	60	1/19/15 22:30	183	98.6	98.1	240		27.5	22.5	29.0	22.5	29.0		0		0		0		0.05			
12 hr	60	1/19/15 23:30	165	98.2	97.3	240		27.5	22.5	29.0	19.5	29		0		0		0		0.05			
13 hr	60	1/20/15 0:30	183	94.0	97.4	290		27.5	18.75	29.0	19.75	29.0		0		0		0		0.05			
14 hr	60	1/20/15 1:30	183	94.0	97.4	290		27.5	18.75	29.0	19.75	29.0		0		0		0		0.05			
15 hr	60	1/20/15 2:30	183	94.0	97.4	290		27.5	18.75	29.0	19.75	29		0		0		0		0.05			
16 hr	60	1/20/15 3:30	183	94.0	97.4	290		27.5	18.75	29.0	19.75	29.0		0		0		0		0.05			
17 hr	60	1/20/15 4:30	183	94.0	97.4	290		27.5	18.75	29.0	19.75	29.0		0		0		0		0.05			
18 hr	60	1/20/15 5:30	183	94.0	97.4	290		27.5	18.75	29.0	19.75	29		0		0		0		0.05			
19 hr	60	1/20/15 6:30	183	94.0	97.4	290		27.5	18.75	29.0	19.75	29.0		0		0		0		0.05			
20 hr	60	1/20/15 7:30	183	94.0	97.4	290		27.5	18.75	29.0	19.75	29.0		0		0		0		0.05			
21 hr	60	1/20/15 8:30	200	89.8	97.4	340		27.5	15	19.75	20	19.75		0		0		0		0.05			
22 hr	60	1/20/15 9:30	200	100.9	85.0	260		28	5	23.35	8.5	19.75		0		0		0		0.05			
23 hr	60	1/20/15 10:30	289	110.7	96.7	320		27.5	9	23.35	15	19.75		0		0		0		0.05			

Project 378 Truck Stop  
 Project 14-214210  
 Date: 1/19-1/21 2015

**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**AFVR EVENT FIELD DATA SHEETS**

UST Permit No: 07960  
 ECS Field Rep. 1: A. Williamson  
 ECS Field Rep. 2: B. Peay

Elapsed Time (Hours)	Reading Interval (Mins)	Measurements During 96-hr AFVR Event															
		Date & Time	Stack Outlet			TLV (ppm)		Blower Vacuum (in.Hg)	AFVR Wells				Non-AFVR Wells				
			Air Flow (fpm)	Temperature ("F)	R.H. (%)	Pre- Treatment	Post- Treatment		07960-RW1		07960-MW1		07960-MW3		07960-MW21		07960-TW1
							Vacuum (in.Hg)	Stinger Depth (ft.)	Vacuum (in.Hg)	Stinger Depth (ft.)	DTW (ft)	Vacuum (in.wc)	DTW (ft)	Vacuum (in.wc)	DTW (ft)	Vacuum (in.wc)	
		1/19/15 11:30	← Start time														
24 hr	60	1/20/15 11:30	301	114.8	95.6	440	27.5	20	23.35	26	23.75	0	0	0	0	0	0.05
26 hr	120	1/20/15 13:30	165	117.9	96.3	460	27.5	20	23.75	23	23.75	0	0	0	0	0	0.05
28 hr	120	1/20/15 15:30	200	118.7	95.9	480	27.5	23	25.75	21	23.75	0	0	0	0	0	0.05
30 hr	120	1/20/15 17:30	222	118.3	97.2	460	27.5	23	25.75	21	23.75	0	0	0	0	0	0.05
32 hr	120	1/20/15 19:30	210	101.3	97.4	440	27.5	23	25.75	20.5	23.35	0	0	0	0	0	0.05
34 hr	120	1/20/15 21:30	200	99.1	94.1	460	27.5	23	25.75	20.5	23.35	0	0	0	0	0	0.05
36 hr	120	1/20/15 23:30	226	98.7	96.5	480	27.5	23	25.75	20.5	23.35	0	0	0	0	0	0.05
38 hr	120	1/21/15 1:30	222	99.1	95.4	460	27.5	23	25.75	19.75	23.35	0	0	0	0	0	0.05
40 hr	120	1/21/15 3:30	222	99.1	95.4	460	27.5	23	25.75	19.75	23.35	0	0	0	0	0	0.05
42 hr	120	1/21/15 5:30	222	99.1	95.4	460	27.5	23	25.75	19.75	23.35	0	0	0	0	0	0.05
44 hr	120	1/21/15 7:30	222	99.1	95.4	460	27.5	23	25.75	19.75	23.35	0	0	0	0	0	0.05
46 hr	120	1/21/15 9:30	217	99.5	94.3	440	27.5	23	27.75	19	25.35	0	0	0	0	0	0.05
48 hr	120	1/21/15 11:30	200	76.7	86.3	44	27.5	23	27.75	20	26.01667	0	0	0	0	0	0.05

**NOTES**  
 \*\* = Off-gas treatment system not in operation at this time interval; pre-treatment value applied in post-treatment emission calculation during this time interval.

**APPENDIX L  
AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
AIR FLOW CALCULATIONS**

SITE NAME: 378 Truck Stop  
 UST PERMIT NUMBER: 07960  
 AVERAGE DEPTH TO GROUNDWATER: 21.34  
 DESCRIBE SOIL IN THE SATURATED ZONE: silty SAND  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): Unknown  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: 07690-RW1 & 07690-MW1  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM PUMP (cfm @ in.Hg): 275cfm @ 25 in Hg

**AIR FLOW CALCULATIONS**

Date	Time	Vacuum (in.Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>ws</sub> (Wt/Wt)	B <sub>ws</sub> (vol/vol)	Q <sub>std</sub> (DSCFM)
Start	11:30								
01/19/15	12:00	28.00	148	3	127.9	98.9	0.10258050713	0.1412	6
01/19/15	12:30	27.50	131	3	122.0	98.2	0.08456985644	0.1193	5
01/19/15	13:00	27.50	200	3	121.6	96.4	0.08178484472	0.1159	8
01/19/15	13:30	27.50	217	3	121.8	96.4	0.08229748379	0.1165	9
01/19/15	14:00	27.50	131	3	123.3	97.3	0.08716333302	0.1225	5
01/19/15	14:30	27.50	235	3	122.4	98.1	0.08553671614	0.1205	10
01/19/15	15:00	27.50	183	3	122.5	98.2	0.08590451185	0.1210	7
01/19/15	15:30	27.50	217	3	121.8	97.7	0.08355639245	0.1181	9
01/19/15	16:00	27.50	148	3	118.9	97.9	0.07647862285	0.1092	6
01/19/15	16:30	27.50	200	3	115.9	98.3	0.06992614976	0.1007	8
01/19/15	17:00	27.50	148	3	112.3	98.0	0.06222724293	0.0907	6
01/19/15	17:30	27.50	183	3	109.3	98.2	0.05672981136	0.0833	8
01/19/15	18:00	27.50	235	3	108.9	97.8	0.05576754908	0.0820	10
01/19/15	18:30	27.50	225	3	107.8	97.6	0.05373854464	0.0793	10
01/19/15	19:00	27.50	185	3	104.0	98.7	0.04820257815	0.0717	8
01/19/15	19:30	27.50	213	3	105.8	99.0	0.05121628706	0.0758	9
01/19/15	20:30	27.50	218	3	103.2	98.6	0.04693536414	0.0699	10
01/19/15	21:30	27.50	193	3	100.5	98.3	0.04290577445	0.0643	9
01/19/15	22:30	27.50	183	3	98.6	98.1	0.04027368712	0.0606	8
01/19/15	23:30	27.50	165	3	98.2	97.3	0.03941270378	0.0594	8
01/20/15	0:30	27.50	183	3	94.0	97.4	0.03443549744	0.0523	8
01/20/15	1:30	27.50	183	3	94.0	97.4	0.03443549744	0.0523	8
01/20/15	2:30	27.50	183	3	94.0	97.4	0.03443549744	0.0523	8
01/20/15	3:30	27.50	183	3	94.0	97.4	0.03443549744	0.0523	8
01/20/15	4:30	27.50	183	3	94.0	97.4	0.03443549744	0.0523	8
01/20/15	5:30	27.50	183	3	94.0	97.4	0.03443549744	0.0523	8
01/20/15	6:30	27.50	183	3	94.0	97.4	0.03443549744	0.0523	8
01/20/15	7:30	27.50	183	3	94.0	97.4	0.03443549744	0.0523	8
01/20/15	8:30	27.50	200	3	89.8	97.4	0.03001256094	0.0459	9
01/20/15	9:30	28.00	200	3	100.9	85.0	0.03722817487	0.0563	9
01/20/15	10:30	27.50	269	3	110.7	96.7	0.05830606363	0.0854	12
01/20/15	11:30	27.50	301	3	114.8	95.6	0.06549906789	0.0950	13
01/20/15	13:30	27.50	165	3	117.9	96.3	0.07276528339	0.1044	7
01/20/15	15:30	27.50	200	3	118.7	95.9	0.07426273893	0.1063	8
01/20/15	17:30	27.50	222	3	118.3	97.2	0.07445285275	0.1066	9
01/20/15	19:30	27.50	210	3	101.3	97.4	0.04359025770	0.0653	9
01/20/15	21:30	27.50	200	3	99.1	94.1	0.03915390090	0.0590	9
01/20/15	23:30	27.50	226	3	98.7	96.5	0.03970267342	0.0598	10
01/21/15	1:30	27.50	222	3	99.1	95.4	0.03972936574	0.0598	10
01/21/15	3:30	27.50	222	3	99.1	95.4	0.03972936574	0.0598	10
01/21/15	5:30	27.50	222	3	99.1	95.4	0.03972936574	0.0598	10
01/21/15	7:30	27.50	222	3	99.1	95.4	0.03972936574	0.0598	10
01/21/15	9:30	27.50	217	3	99.5	94.3	0.03974962022	0.0599	10
01/21/15	11:30	27.50	200	3	76.7	86.3	0.01707997512	0.0266	10
<b>Average</b>		<b>27.52</b>	<b>198.16</b>	<b>3.07</b>	<b>105.94</b>	<b>96.65</b>	<b>0.0537</b>	<b>0.08</b>	<b>8.76</b>

**NOTES**

Qstd = Flow at Dry Standard Cubic Feet Per Minute (DSCFM)  
 Vacuum = The level of vacuum being applied recorded from the liquid ring pump inlet in inches of Mercury (in.Hg)  
 Velocity = The rate at which air flows is measured at the blower discharge piping in feet per minute (fpm)  
 Pipe ID = The inside diameter of the blower discharge piping (from the vacuum pump) in inches (in)  
 Temperature = air stream temp exiting the blower discharge piping (dry bulb temp) in degrees Fahrenheit (°F)  
 Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping  
 B<sub>ws</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart (temp Vs relative humidity) based on an elevation of 458 feet above sea level.  
 B<sub>ws</sub> = water vapor % by volume

**EQUATIONS**

$$B_{ws} = (B_{ws}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{ws}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1 - \text{Water Vapor}) * \text{velocity} * (\text{PI} * (\text{diameter}/24)^2) * (528 * \text{R}/(\text{Temp} + 460))$$

**APPENDIX L  
AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
PRE-TREATMENT EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop AFVR EVENT DATE: 1/19-1/21 2015

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub> (ppm)	PPM <sub>dry</sub> (ppm)	RF	PPM <sub>conc</sub> (ppm)	C <sub>cm</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
30	6	300	300	349	1.02	356	178	0.00001	0.00	0.00	0.00
60	5	240	240	273	1.02	278	139	0.00001	0.00	0.00	0.00
90	8	360	360	407	1.02	415	207	0.00001	0.01	0.01	0.00
120	9	420	420	475	1.02	485	242	0.00002	0.01	0.01	0.00
150	5	520	520	593	1.02	604	302	0.00002	0.01	0.01	0.00
180	10	540	540	614	1.02	626	312	0.00002	0.01	0.01	0.01
210	7	500	500	569	1.02	580	289	0.00002	0.01	0.01	0.00
240	9	560	560	635	1.02	648	323	0.00002	0.01	0.01	0.01
270	6	540	540	606	1.02	618	309	0.00002	0.01	0.01	0.00
300	8	380	380	423	1.02	431	215	0.00001	0.01	0.01	0.00
330	6	400	400	440	1.02	449	224	0.00001	0.01	0.01	0.00
360	8	340	340	371	1.02	378	189	0.00001	0.01	0.01	0.00
390	10	320	320	349	1.02	356	177	0.00001	0.01	0.01	0.00
420	10	240	240	261	1.02	266	133	0.00001	0.00	0.01	0.00
450	8	280	280	302	1.02	308	154	0.00001	0.00	0.01	0.00
480	9	300	300	325	1.02	331	165	0.00001	0.01	0.01	0.00
540	10	260	260	280	1.02	285	142	0.00001	0.01	0.01	0.01
600	9	280	280	299	1.02	305	152	0.00001	0.00	0.01	0.01
660	8	240	240	255	1.02	261	130	0.00001	0.00	0.00	0.00
720	8	240	240	255	1.02	260	130	0.00001	0.00	0.00	0.00
780	8	290	290	306	1.02	312	156	0.00001	0.00	0.01	0.01
840	8	290	290	306	1.02	312	156	0.00001	0.00	0.01	0.01
900	8	290	290	306	1.02	312	156	0.00001	0.00	0.01	0.01
960	8	290	290	306	1.02	312	156	0.00001	0.00	0.01	0.01
1020	8	290	290	306	1.02	312	156	0.00001	0.00	0.01	0.01
1080	8	290	290	306	1.02	312	156	0.00001	0.00	0.01	0.01
1140	8	290	290	306	1.02	312	156	0.00001	0.00	0.01	0.01
1200	8	290	290	306	1.02	312	156	0.00001	0.00	0.01	0.01
1260	9	340	340	356	1.02	363	181	0.00001	0.01	0.01	0.01
1320	9	260	260	276	1.02	281	140	0.00001	0.00	0.01	0.01
1380	12	320	320	350	1.02	357	178	0.00001	0.01	0.01	0.01
1440	13	440	440	486	1.02	496	247	0.00002	0.01	0.01	0.01
1560	7	460	460	514	1.02	524	261	0.00002	0.01	0.01	0.02
1680	8	480	480	537	1.02	548	273	0.00002	0.01	0.01	0.02
1800	9	460	460	515	1.02	525	262	0.00002	0.01	0.01	0.02
1920	9	440	440	471	1.02	480	240	0.00001	0.01	0.01	0.02
2040	9	460	460	489	1.02	499	249	0.00002	0.01	0.01	0.02
2160	10	480	480	511	1.02	521	260	0.00002	0.01	0.01	0.02
2280	10	460	460	489	1.02	499	249	0.00002	0.01	0.01	0.02
2400	10	460	460	489	1.02	499	249	0.00002	0.01	0.01	0.02
2520	10	460	460	489	1.02	499	249	0.00002	0.01	0.01	0.02
2640	10	460	460	489	1.02	499	249	0.00002	0.01	0.01	0.02
2760	10	440	440	468	1.02	477	238	0.00001	0.01	0.01	0.02
2880	10	44	44	45	1.02	46	23	0.00000	0.00	0.00	0.00
<b>Average</b>	<b>9</b>	<b>365</b>	<b>365</b>	<b>398</b>	<b>1</b>	<b>406</b>	<b>202</b>	<b>0.00001</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>

Total Pretreatment emissions in pounds: **0.39**  
Total Pretreatment emissions in gallons: **0.07**

**NOTES**

PPM<sub>measured</sub> = Actual measurements taken with TLV at the blower discharge piping in Parts Per Million (ppm)  
 100,000 ppm applied in calculation where TLV measurement was greater than 100,000 ppm (when applicable)  
 PPM<sub>wet</sub> = "wet" concentration  
 PPM<sub>dry</sub> = "dry" concentration  
 RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.  
 K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)  
 PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP  
 C<sub>cm</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon  
 M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon  
 K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP  
 C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP  
 PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon  
 PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of VOC's as gasoline  
 PMR = lb, pollutant mass removal of VOC's as gasoline

**EQUATIONS**

$$PPM_{wet} = PPM_{measured}$$

$$PPM_{dry} = (PPM_{wet}) / (1 - B_{wet})$$

$$PPM_c = (PPM_d) / (K)$$

$$C_{cm} = (PPM_c) / (M_c / K_3)$$

$$C_c = (C_{cm}) / (62.43 \times 10^{-6} \text{ lb-m}^3/\text{mg-ft}^3)$$

$$PMR_c = (C_c) / (Q_{air}) / (60 \text{ min/hr})$$

$$PMR_g = (PMR_c) / (M_g / M_{c,g})$$

$$PMR = (PMR_g) / (\#minutes/60)$$

**APPENDIX L  
AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
POST-TREATMENT EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop AFVR EVENT DATE: 1/19-1/21 2015

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub> (ppm)	PPM <sub>dry</sub> (ppm)	RF	PPM <sub>conc</sub> (ppm)	C <sub>c,m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
30	6	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
60	5	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
90	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
120	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
150	5	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
180	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
210	7	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
240	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
270	6	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
300	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
330	6	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
360	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
390	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
420	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
450	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
480	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
540	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
600	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
660	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
720	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
780	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
840	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
900	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
960	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1020	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1080	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1140	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1200	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1260	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1320	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1380	12	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1440	13	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1560	7	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1680	8	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1800	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
1920	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
2040	9	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
2160	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
2280	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
2400	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
2520	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
2640	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
2760	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
2880	10	0	0	0	1.02	0	0	0.00000	0.00	0.00	0.00
<b>Average</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0.00000</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Total Post-Treatment emissions in pounds: 0.00  
Total Post-Treatment emissions in gallons: 0.00

**NOTES**

PPM<sub>measured</sub> = Actual measurements taken with TLV at the blower discharge piping in Parts Per Million (ppm)  
 100,000 ppm applied in calculation where TLV measurement was greater than 100,000 ppm (when applicable)  
 PPM<sub>wet</sub> = "wet" concentration  
 PPM<sub>dry</sub> = "dry" concentration  
 RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.  
 K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)  
 PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP  
 C<sub>c,m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon  
 M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon  
 K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP  
 C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP  
 PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon  
 PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of VOC's as gasoline  
 PMR = lb, pollutant mass removal of VOC's as gasoline

**EQUATIONS**

PPM <sub>wet</sub> = PPM <sub>measured</sub>	$C_c = (C_{c,m})(62.43 \times 10^{-6} \text{ lb-m}^3/\text{mg-ft}^3)$
PPM <sub>dry</sub> = (PPM <sub>wet</sub> )/(1-B <sub>ws</sub> )	PMR <sub>c</sub> = (C <sub>c</sub> )(Q <sub>std</sub> )(60 min/hr)
PPM <sub>c</sub> = (PPM <sub>v</sub> )(K)	PMR <sub>g</sub> = (PMR <sub>c</sub> )(M <sub>g</sub> /M <sub>c</sub> )
C <sub>c,m</sub> = (PPM <sub>c</sub> )(M <sub>c</sub> / K <sub>3</sub> )	PMR = (PMR <sub>g</sub> )(#minutes/60)



**APPENDIX L  
AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
BEFORE AND AFTER DATA**

Project Name:	<u>378 Truck Stop</u>	UST Permit No:	<u>07960</u>
Project No:	<u>14-214210</u>	ECS Field Rep. 1:	<u>A. Williamson</u>
Start Date:	<u>1/21/2015</u>	ECS Field Rep. 2:	<u>B. Peay</u>
End Date:	<u>1/23/2015</u>		

AFVR Measurements Prior to and After Event

**Measurements Prior to AFVR Event**

Blower Model	<u>Dekker Vmax 3030</u>	
Water Tank Storage Capacity:	<u>9,600</u>	gallons
Inside Diameter of Blower Outlet Stack	<u>3.068</u>	inches
Is Tank Empty & Clean (Y/N)	<u>Y</u>	

**Measurements Before AFVR Event**

Tanker Product volume	<u>0</u>	gallons
Tanker Water volume	<u>0</u>	gallons

**Measurements After AFVR Event**

Tanker Product volume	<u>0</u>	gallons
Tanker Water volume	<u>530</u>	gallons

Well ID	Prior to AFVR -		Immediately Post AFVR		20-min Post AFVR	
	Depth to Product	Depth to Water	Depth to Product	Depth to Water	Depth to Product	Depth to Water
<b>07960-MW22</b>	NP	30.87	NP	36.57	NP	36.52
<b>07960-MW11</b>	NP	26.30	NP	26.45	NP	26.41
<b>07960-MW14</b>	NP	28.36	NP	29.03	NP	29.53
<b>07960-MW15</b>	NP	27.38	NP	28.84	NP	28.81
<b>07960-MW30</b>	NP	29.72	NP	27.65	NP	27.51

NP denotes no measurable free product.

NM denotes not measured.

Project 378 Truck Stop  
 Project 14-214210  
 Date: 1/21/15 - 1/23/15

**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**AFVR EVENT FIELD DATA SHEETS**

UST Permit No: 07960  
 ECS Field Rep. 1: A. Williamson  
 ECS Field Rep. 2: B. Peay

Elapsed Time (Hours)	Reading Interval (Mins)	Measurements During 96-hr AFVR Event													
		Date & Time	Air Flow (fpm)	Temperature (°F)	R.H. (%)	TLV (ppm)		Blower Vacuum (in.Hg)	AFVR Well		Non-AFVR Wells				
						Pre-Treatment	Post-Treatment		07960-MW22 Vacuum (in.Hg)	07960-MW22 Stinger Depth (ft.)	07960-MW11 DTW (ft)	07960-MW11 Vacuum (in.wc)	07960-MW14 DTW (ft)	07960-MW14 Vacuum (in.wc)	07960-MW15 DTW (ft)
		1/21/15 12:15	← Start time						30.90	26.30	0	28.36	0	27.38	0
1 hr	30	1/21/15 12:45	339	76.7	86.3	920	20	27.5	20	30.90		0		0	0
	30	1/21/15 13:15	269	77.4	76.5	340	18	27.5	21.5	30.90		0		0	0
2 hr	30	1/21/15 13:45	339	76.8	70.7	360	14	27.5	21	31.9		0		0	0
	30	1/21/15 14:15	339	75.6	71.1	240	22	27.5	21	31.9		0		0	0
3 hr	30	1/21/15 14:45	304	73.6	72.2	260	20	27.5	21	32.9		0		0	0
	30	1/21/15 15:15	321	75.2	70.1	320	26	27.5	20	32.9		0		0	0
4 hr	30	1/21/15 15:45	252	74.1	72.0	360	22	27.5	20	33.9		0		0	0
	30	1/21/15 16:15	232	72.3	58.2	240	24	27.5	20.5	33.9		0		0	0
5 hr	30	1/21/15 16:45	200	71.6	56.1	330	32	27.5	20.5	34.4		0		0	0
	30	1/21/15 17:15	185	72.0	61.3	300	30	27.5	20.5	35.4		0		0	0
6 hr	30	1/21/15 17:45	200	71.8	60.5	340	28	27.5	20.5	35.9		0		0	0
	30	1/21/15 18:15	193	65.5	72.3	280	20	27.5	20.5	36.4		0		0	0
7 hr	30	1/21/15 18:45	210	60.4	70.1	220	15	27.5	20.5	36.9		0		0	0
	30	1/21/15 19:15	192	59.8	71.3	240	10	27	20.5	37.4		0		0	0
8 hr	30	1/21/15 19:45	224	58.1	71.8	420	26	27	20.5	38		0		0	0
	30	1/21/15 20:15	235	56.5	72.7	400	20	27	20.5	38		0		0	0
9 hr	60	1/21/15 21:15	218	55.1	73.8	380	24	27	20.5	38		0		0	0
10 hr	60	1/21/15 22:15	205	56.2	74.2	380	30	27	20.5	38		0		0	0
11 hr	60	1/21/15 23:15	195	54.5	75.4	300	34	27	20.5	38		0		0	0
12 hr	60	1/22/15 0:15	198	50.5	85.0	250	32	27.5	20.25	38		0		0	0
13 hr	60	1/22/15 1:15	198	50.5	85.0	250	32	27.5	20.25	38		0		0	0
14 hr	60	1/22/15 2:15	198	50.5	85.0	250	32	27.5	20.25	38		0		0	0
15 hr	60	1/22/15 3:15	198	50.5	85.0	250	32	27.5	20.25	38		0		0	0
16 hr	60	1/22/15 4:15	198	50.5	85.0	250	32	27.5	20.25	38		0		0	0
17 hr	60	1/22/15 5:15	198	50.5	85.0	250	32	27.5	20.25	38		0		0	0
18 hr	60	1/22/15 6:15	198	50.5	85.0	250	32	27.5	20.25	38		0		0	0
19 hr	60	1/22/15 7:15	198	50.5	85.0	250	32	27.5	20.25	38		0		0	0
20 hr	60	1/22/15 8:15	200	46.4	94.6	200	30	27.5	20	38.0		0		0	0
21 hr	60	1/22/15 9:15	317	52.2	82.3	420	26	27.5	14	38.0		0		0	0
22 hr	60	1/22/15 10:15	321	57.9	81.2	540	14	27.5	18	38.0		0		0	0
23 hr	60	1/22/15 11:15	235	61.7	87.7	240	20	27.5	20	38.0		0		0	0
24 hr	60	1/22/15 12:15	217	66.2	79.3	220	18	27.5	20	38.0		0		0	0
26 hr	120	1/22/15 14:15	287	71.2	79.5	240	20	27.5	20	38.0		0		0	0
28 hr	120	1/22/15 16:15	241	69.8	80.3	220	22	27.5	20	38.0		0		0	0
30 hr	120	1/22/15 18:15	218	67.8	72.5	340	20	27.5	20	34.4		0		0	0
32 hr	120	1/22/15 20:15	205	59.6	81.6	220	28	27.5	20	34.4		0		0	0

Project: 378 Truck Stop  
 Project: 14-214210  
 Date: 1/21/15 - 1/23/15

**APPENDIX L  
 AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
 AFVR EVENT FIELD DATA SHEETS**

UST Permit No: 07960  
 ECS Field Rep. 1: A. Williamson  
 ECS Field Rep. 2: B. Peay

Elapsed Time (Hours)	Reading Interval (Mins.)	Measurements During 96-hr AFVR Event																			
		Date & Time	Air Flow (fpm)	Temperature (°F)	R.H. (%)	TLV (ppm)		Blower Vacuum (in.Hg)	AFVR Well			Non-AFVR Wells									
						Pre-Treatment	Post-Treatment		07960-MW22 Vacuum (in.Hg)	07960-MW22 Stinger Depth (ft.)	07960-MW11 DTW (ft)	07960-MW11 Vacuum (in.wc)	07960-MW14 DTW (ft)	07960-MW14 Vacuum (in.wc)	07960-MW15 DTW (ft)	07960-MW15 Vacuum (in.wc)					
		1/21/15 12:15	←	Start time											30.90	26.30	0	28.36	0	27.38	0
34 hr	120	1/22/15 22:15	195	57.3	82.3	200	15	27.5	20	35.4		0		0		0		0			
36 hr	120	1/23/15 0:15	210	56.2	80.5	260	24	27.5	20	36.4		0		0		0		0			
38 hr	120	1/23/15 2:15	266	53.5	84.4	200	19	27.5	19.5	36.4		0		0		0		0			
40 hr	120	1/23/15 4:15	266	53.5	84.4	200	19	27.5	19.5	36.4		0		0		0		0			
42 hr	120	1/23/15 6:15	266	53.5	84.4	200	19	27.5	19.5	36.4		0		0		0		0			
44 hr	120	1/23/15 8:15	321	50.7	88.3	140	14	27.5	19	36.4		0		0		0		0			
46 hr	120	1/23/15 10:15	287	47.7	86.8	500	32	27.5	19	38		0		0		0		0			
48 hr	120	1/23/15 12:15	183	46.8	98.2	360	20	27.5	19	38		0		0		0		0			

**NOTES**  
 \*\* = Off-gas treatment system not in operation at this time interval; pre-treatment value applied in post-treatment emission calculation during this time interval.

**APPENDIX L  
AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
AIR FLOW CALCULATIONS**

SITE NAME: 378 Truck Stop  
 UST PERMIT NUMBER: 07960  
 AVERAGE DEPTH TO GROUNDWATER: 21.34  
 DESCRIBE SOIL IN THE SATURATED ZONE: silty SAND  
 INDICATE AVERAGE HYDRAULIC CONDUCTIVITY (if known): Unknown  
 IDENTIFY THE WELL AND THE I.D. OF EACH WELL USED FOR AFVR: 07690-MW22  
 PROVIDE BLOWER SPECIFICATIONS OF THE VACUUM PUMP (cfm @ in.Hg): 275cfm @ 25 in Hg

**AIR FLOW CALCULATIONS**

Date	Time	Vacuum (in.Hg)	Velocity (ft/min)	Pipe ID (in)	Temp (°F)	Relative Humidity	B <sub>ws</sub> (Wt/Wt)	B <sub>ws</sub> (vol/vol)	Q <sub>std</sub> (DSCFM)
Start	12:15								
01/21/15	12:45	27.50	339	3	76.7	86.3	0.01707997512	0.0266	17
01/21/15	13:15	27.50	269	3	77.4	76.5	0.01545607530	0.0242	13
01/21/15	13:45	27.50	339	3	76.8	70.7	0.01397068191	0.0219	17
01/21/15	14:15	27.50	339	3	75.6	71.1	0.01349027862	0.0212	17
01/21/15	14:45	27.50	304	3	73.6	72.2	0.01279836260	0.0201	15
01/21/15	15:15	27.50	321	3	75.2	70.1	0.01311660399	0.0206	16
01/21/15	15:45	27.50	252	3	74.1	72.0	0.01298267505	0.0204	13
01/21/15	16:15	27.50	232	3	72.3	58.2	0.00982835806	0.0155	12
01/21/15	16:45	27.50	200	3	71.6	56.1	0.00924340462	0.0146	10
01/21/15	17:15	27.50	185	3	72.0	61.3	0.01025430780	0.0162	9
01/21/15	17:45	27.50	200	3	71.8	60.5	0.01004894580	0.0158	10
01/21/15	18:15	27.50	193	3	65.5	72.3	0.00966813605	0.0153	10
01/21/15	18:45	27.50	210	3	60.4	70.1	0.00781164148	0.0124	11
01/21/15	19:15	27.00	192	3	59.8	71.3	0.00777698405	0.0123	10
01/21/15	19:45	27.00	224	3	58.1	71.8	0.00763648314	0.0121	12
01/21/15	20:15	27.00	235	3	56.5	72.7	0.00703518221	0.0111	12
01/21/15	21:15	27.00	218	3	55.1	73.8	0.00678522243	0.0108	11
01/21/15	22:15	27.00	205	3	56.2	74.2	0.00710356180	0.0113	11
01/21/15	23:15	27.00	195	3	54.5	75.4	0.00678236285	0.0108	10
01/22/15	0:15	27.50	198	3	50.5	85.0	0.00659703362	0.0105	10
01/22/15	1:15	27.50	198	3	50.5	85.0	0.00659703362	0.0105	10
01/22/15	2:15	27.50	198	3	50.5	85.0	0.00659703362	0.0105	10
01/22/15	3:15	27.50	198	3	50.5	85.0	0.00659703362	0.0105	10
01/22/15	4:15	27.50	198	3	50.5	85.0	0.00659703362	0.0105	10
01/22/15	5:15	27.50	198	3	50.5	85.0	0.00659703362	0.0105	10
01/22/15	6:15	27.50	198	3	50.5	85.0	0.00659703362	0.0105	10
01/22/15	7:15	27.50	198	3	50.5	85.0	0.00659703362	0.0105	10
01/22/15	8:15	27.50	200	3	46.4	94.6	0.00629326181	0.0100	11
01/22/15	9:15	27.50	317	3	52.2	82.3	0.00680440590	0.0108	17
01/22/15	10:15	27.50	321	3	57.9	81.2	0.00828098684	0.0131	17
01/22/15	11:15	27.50	235	3	61.7	87.7	0.01027400050	0.0162	12
01/22/15	12:15	27.50	217	3	66.2	79.3	0.01088612495	0.0171	11
01/22/15	14:15	27.50	287	3	71.2	79.5	0.01299932396	0.0204	14
01/22/15	16:15	27.50	241	3	69.8	80.3	0.01250929691	0.0196	12
01/22/15	18:15	27.50	218	3	67.8	72.5	0.01051229288	0.0166	11
01/22/15	20:15	27.50	205	3	59.6	81.6	0.00885226549	0.0140	11
01/22/15	22:15	27.50	195	3	57.3	82.3	0.00821293982	0.0130	10
01/23/15	0:15	27.50	210	3	56.2	80.5	0.00771417458	0.0122	11
01/23/15	2:15	27.50	266	3	53.5	84.4	0.00732562479	0.0116	14
01/23/15	4:15	27.50	266	3	53.5	84.4	0.00732562479	0.0116	14
01/23/15	6:15	27.50	266	3	53.5	84.4	0.00732562479	0.0116	14
01/23/15	8:15	27.50	321	3	50.7	88.3	0.00690763655	0.0109	17
01/23/15	10:15	27.50	287	3	47.7	86.8	0.00606228406	0.0096	15
01/23/15	12:15	27.50	183	3	46.8	98.2	0.00663586093	0.0105	10
<b>Average</b>		<b>27.43</b>	<b>237.95</b>	<b>3.07</b>	<b>60.43</b>	<b>78.29</b>	<b>0.0090</b>	<b>0.01</b>	<b>12.20</b>

**NOTES**

Qstd = Flow at Dry Standard Cubic Feet Per Minute (DSCFM)  
 Vacuum = The level of vacuum being applied recorded from the liquid ring pump inlet in inches of Mercury (in.Hg)  
 Velocity = The rate at which air flows is measured at the blower discharge piping in feet per minute (fpm)  
 Pipe ID = The inside diameter of the blower discharge piping (from the vacuum pump) in inches (in)  
 Temperature = air stream temp exiting the blower discharge piping (dry bulb temp) in degrees Fahrenheit (°F)  
 Relative humidity = The % relative humidity of the air stream exiting the blower discharge piping  
 B<sub>ws</sub> = water vapor % by weight, i.e., pounds of water per pound of dry air, derived from the Psychrometric chart (temp Vs relative humidity) based on an elevation of 458 feet above sea level.  
 B<sub>ws</sub> = water vapor % by volume

**EQUATIONS**

$$B_{ws} = (B_{ws}/18 \text{ lb-mole H}_2\text{O}) / [(1/28.84 \text{ lb-mole dry air}) + (B_{ws}/18 \text{ lb-mole H}_2\text{O})]$$

$$Q_{std} = (1 - \text{Water Vapor}) * \text{velocity} * (PI * (\text{diameter}/24)^2) * (528 * R / (\text{Temp} + 460))$$

**APPENDIX L**  
**AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA**  
**PRE-TREATMENT EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop AFVR EVENT DATE: 1/21/15 - 1/23/15

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub> (ppm)	PPM <sub>dry</sub> (ppm)	RF	PPM <sub>conc</sub> (ppm)	C <sub>c,m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
30	17	920	920	945	1.02	964	481	0.00003	0.03	0.03	0.02
60	13	340	340	348	1.02	355	177	0.00001	0.01	0.01	0.01
90	17	360	360	368	1.02	375	187	0.00001	0.01	0.01	0.01
120	17	240	240	245	1.02	250	125	0.00001	0.01	0.01	0.00
150	15	260	260	265	1.02	271	135	0.00001	0.01	0.01	0.00
180	16	320	320	327	1.02	333	166	0.00001	0.01	0.01	0.01
210	13	360	360	367	1.02	375	187	0.00001	0.01	0.01	0.01
240	12	240	240	244	1.02	249	124	0.00001	0.01	0.01	0.00
270	10	330	330	335	1.02	342	170	0.00001	0.01	0.01	0.00
300	9	300	300	305	1.02	311	155	0.00001	0.01	0.01	0.00
330	10	340	340	345	1.02	352	176	0.00001	0.01	0.01	0.00
360	10	280	280	284	1.02	290	145	0.00001	0.01	0.01	0.00
390	11	220	220	223	1.02	227	113	0.00001	0.00	0.01	0.00
420	10	240	240	243	1.02	248	124	0.00001	0.00	0.01	0.00
450	12	420	420	425	1.02	434	216	0.00001	0.01	0.01	0.01
480	12	400	400	405	1.02	413	206	0.00001	0.01	0.01	0.01
540	11	380	380	384	1.02	392	195	0.00001	0.01	0.01	0.01
600	11	380	380	384	1.02	392	196	0.00001	0.01	0.01	0.01
660	10	300	300	303	1.02	309	154	0.00001	0.01	0.01	0.01
720	10	250	250	253	1.02	258	129	0.00001	0.00	0.01	0.01
780	10	250	250	253	1.02	258	129	0.00001	0.01	0.01	0.01
840	10	250	250	253	1.02	258	129	0.00001	0.01	0.01	0.01
900	10	250	250	253	1.02	258	129	0.00001	0.01	0.01	0.01
960	10	250	250	253	1.02	258	129	0.00001	0.01	0.01	0.01
1020	10	250	250	253	1.02	258	129	0.00001	0.01	0.01	0.01
1080	10	250	250	253	1.02	258	129	0.00001	0.01	0.01	0.01
1140	10	250	250	253	1.02	258	129	0.00001	0.01	0.01	0.01
1200	11	200	200	202	1.02	206	103	0.00001	0.00	0.00	0.00
1260	17	420	420	425	1.02	433	216	0.00001	0.01	0.02	0.02
1320	17	540	540	547	1.02	558	278	0.00002	0.02	0.02	0.02
1380	12	240	240	244	1.02	249	124	0.00001	0.01	0.01	0.01
1440	11	220	220	224	1.02	228	114	0.00001	0.00	0.01	0.01
1560	14	240	240	245	1.02	250	125	0.00001	0.01	0.01	0.02
1680	12	220	220	224	1.02	229	114	0.00001	0.01	0.01	0.01
1800	11	340	340	346	1.02	353	176	0.00001	0.01	0.01	0.02
1920	11	220	220	223	1.02	228	114	0.00001	0.00	0.01	0.01
2040	10	200	200	203	1.02	207	103	0.00001	0.00	0.00	0.01
2160	11	260	260	263	1.02	268	134	0.00001	0.01	0.01	0.01
2280	14	200	200	202	1.02	206	103	0.00001	0.01	0.01	0.01
2400	14	200	200	202	1.02	206	103	0.00001	0.01	0.01	0.01
2520	14	200	200	202	1.02	206	103	0.00001	0.01	0.01	0.01
2640	17	140	140	142	1.02	144	72	0.00000	0.00	0.01	0.01
2760	15	500	500	505	1.02	515	257	0.00002	0.01	0.02	0.03
2880	10	360	360	364	1.02	371	185	0.00001	0.01	0.01	0.02
<b>Average</b>	<b>12</b>	<b>303</b>	<b>303</b>	<b>308</b>	<b>1</b>	<b>314</b>	<b>157</b>	<b>0.00001</b>	<b>0.01</b>	<b>0.01</b>	<b>0.01</b>

Total Pretreatment emissions in pounds: **0.38**  
Total Pretreatment emissions in gallons: **0.06**

**NOTES**

PPM<sub>measured</sub> = Actual measurements taken with TLV at the blower discharge piping in Parts Per Million (ppm)  
100,000 ppm applied in calculation where TLV measurement was greater than 100,000 ppm (when applicable)  
PPM<sub>wet</sub> = "wet" concentration  
PPM<sub>dry</sub> = "dry" concentration  
RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.  
K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)  
PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP  
C<sub>c,m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon  
M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon  
K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP  
C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP  
PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon  
PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of VOC's as gasoline  
PMR = lb, pollutant mass removal of VOC's as gasoline

**EQUATIONS**

$$PPM_{wet} = PPM_{measured}$$

$$PPM_{dry} = (PPM_{wet}) / (1 - B_{wet})$$

$$PPM_c = (PPM_d) / (K)$$

$$C_{c,m} = (PPM_c) (M_c / K_3)$$

$$C_c = (C_{c,m}) (62.43 \times 10^{-6} \text{ lb-m}^3/\text{mg-ft}^3)$$

$$PMR_c = (C_c) (Q_{air}) (60 \text{ min/hr})$$

$$PMR_g = (PMR_c) (M_g / M_{c,g})$$

$$PMR = (PMR_g) (\#minutes/60)$$

**APPENDIX L  
AGGRESSIVE FLUID VAPOR RECOVERY EVENT DATA  
POST-TREATMENT EMISSION CALCULATIONS**

SITE NAME: 378 Truck Stop AFVR EVENT DATE: 1/21/15 - 1/23/15

Elapsed Time (min)	Flow (DSCFM)	PPM <sub>measured</sub> (ppm)	PPM <sub>wet</sub> (ppm)	PPM <sub>dry</sub> (ppm)	RF	PPM <sub>conc</sub> (ppm)	C <sub>c,m</sub> (mg/dsm <sup>3</sup> )	C <sub>c</sub> (lb/dscf)	PMR <sub>c</sub> (lb/hr)	PMR <sub>g</sub> (lb/hr)	PMR (lb)
0	--	--	--	--	--	--	--	--	--	--	--
30	17	20	20	21	1.02	21	10	0.00000	0.00	0.00	0.00
60	13	18	18	18	1.02	19	9	0.00000	0.00	0.00	0.00
90	17	14	14	14	1.02	15	7	0.00000	0.00	0.00	0.00
120	17	22	22	22	1.02	23	11	0.00000	0.00	0.00	0.00
150	15	20	20	20	1.02	21	10	0.00000	0.00	0.00	0.00
180	16	26	26	27	1.02	27	14	0.00000	0.00	0.00	0.00
210	13	22	22	22	1.02	23	11	0.00000	0.00	0.00	0.00
240	12	24	24	24	1.02	25	12	0.00000	0.00	0.00	0.00
270	10	32	32	32	1.02	33	17	0.00000	0.00	0.00	0.00
300	9	30	30	30	1.02	31	16	0.00000	0.00	0.00	0.00
330	10	28	28	28	1.02	29	14	0.00000	0.00	0.00	0.00
360	10	20	20	20	1.02	21	10	0.00000	0.00	0.00	0.00
390	11	15	15	15	1.02	15	8	0.00000	0.00	0.00	0.00
420	10	10	10	10	1.02	10	5	0.00000	0.00	0.00	0.00
450	12	26	26	26	1.02	27	13	0.00000	0.00	0.00	0.00
480	12	20	20	20	1.02	21	10	0.00000	0.00	0.00	0.00
540	11	24	24	24	1.02	25	12	0.00000	0.00	0.00	0.00
600	11	30	30	30	1.02	31	15	0.00000	0.00	0.00	0.00
660	10	34	34	34	1.02	35	17	0.00000	0.00	0.00	0.00
720	10	32	32	32	1.02	33	16	0.00000	0.00	0.00	0.00
780	10	32	32	32	1.02	33	16	0.00000	0.00	0.00	0.00
840	10	32	32	32	1.02	33	16	0.00000	0.00	0.00	0.00
900	10	32	32	32	1.02	33	16	0.00000	0.00	0.00	0.00
960	10	32	32	32	1.02	33	16	0.00000	0.00	0.00	0.00
1020	10	32	32	32	1.02	33	16	0.00000	0.00	0.00	0.00
1080	10	32	32	32	1.02	33	16	0.00000	0.00	0.00	0.00
1140	10	32	32	32	1.02	33	16	0.00000	0.00	0.00	0.00
1200	11	200	200	202	1.02	206	103	0.00001	0.00	0.00	0.00
1260	17	420	420	425	1.02	433	216	0.00001	0.01	0.02	0.02
1320	17	540	540	547	1.02	558	278	0.00002	0.02	0.02	0.02
1380	12	20	20	20	1.02	21	10	0.00000	0.00	0.00	0.00
1440	11	18	18	18	1.02	19	9	0.00000	0.00	0.00	0.00
1560	14	20	20	20	1.02	21	10	0.00000	0.00	0.00	0.00
1680	12	22	22	22	1.02	23	11	0.00000	0.00	0.00	0.00
1800	11	20	20	20	1.02	21	10	0.00000	0.00	0.00	0.00
1920	11	28	28	28	1.02	29	14	0.00000	0.00	0.00	0.00
2040	10	15	15	15	1.02	16	8	0.00000	0.00	0.00	0.00
2160	11	24	24	24	1.02	25	12	0.00000	0.00	0.00	0.00
2280	14	19	19	19	1.02	20	10	0.00000	0.00	0.00	0.00
2400	14	19	19	19	1.02	20	10	0.00000	0.00	0.00	0.00
2520	14	19	19	19	1.02	20	10	0.00000	0.00	0.00	0.00
2640	17	14	14	14	1.02	14	7	0.00000	0.00	0.00	0.00
2760	15	500	500	505	1.02	515	257	0.00002	0.01	0.02	0.03
2880	10	360	360	364	1.02	371	185	0.00001	0.01	0.01	0.02
<b>Average</b>	<b>12</b>	<b>67</b>	<b>67</b>	<b>68</b>	<b>1</b>	<b>69</b>	<b>35</b>	<b>0.00000</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Total Post-Treatment emissions in pounds: **0.11**  
Total Post-Treatment emissions in gallons: **0.02**

**NOTES**

PPM<sub>measured</sub> = Actual measurements taken with TLV at the blower discharge piping in Parts Per Million (ppm)  
 100,000 ppm applied in calculation where TLV measurement was greater than 100,000 ppm (when applicable)  
 PPM<sub>wet</sub> = "wet" concentration  
 PPM<sub>dry</sub> = "dry" concentration  
 RF (Response Factor) = Multiplying factor for converting ppm meter readings of hexane-calibrated instruments to ppm concentrations of other gases: 1.02 for benzene; 1.03 for toluene; 1.64 for o-xylene. Multiplying factor obtained from Instruction Manual for TLV Sniffer® by Bacharach, Inc., Instruction 23-9613, rev.2, January 1990.  
 K = Number of carbons in calibration gas: (Methane K = 1, or Propane K = 3, or Hexane K = 6)  
 PPM<sub>c</sub> = PPM<sub>v</sub>, Volumetric concentration of VOC emissions as carbon, dry basis at STP  
 C<sub>c,m</sub> = mg/dsm<sup>3</sup>, mass concentration of VOC emissions as carbon  
 M<sub>c</sub> = 12.01 mg/mg-mole, molecular weight of carbon  
 K<sub>3</sub> = 24.07 dsm<sup>3</sup>/10<sup>6</sup> mg-mole, mass to volume conversion factor at STP  
 C<sub>c</sub> = lb/dscf, mass concentration of VOC emissions as carbon, dry basis at STP  
 PMR<sub>c</sub> = lb/hr, pollutant mass removal rate of VOC's as carbon  
 PMR<sub>g</sub> = lb/hr, pollutant mass removal rate of VOC's as gasoline  
 PMR = lb, pollutant mass removal of VOC's as gasoline

**EQUATIONS**

PPM <sub>wet</sub> = PPM <sub>measured</sub>	$C_c = (C_{c,m})(62.43 \times 10^{-6} \text{ lb-m}^3/\text{mg-ft}^3)$
PPM <sub>dry</sub> = (PPM <sub>wet</sub> )/(1-B <sub>wet</sub> )	PMR <sub>c</sub> = (C <sub>c</sub> )(Q <sub>std</sub> )(60 min/hr)
PPM <sub>c</sub> = (PPM <sub>v</sub> )(K)	PMR <sub>g</sub> = (PMR <sub>c</sub> )(M <sub>v</sub> /M <sub>c</sub> )
C <sub>c,m</sub> = (PPM <sub>c</sub> )(M <sub>c</sub> / K <sub>3</sub> )	PMR = (PMR <sub>g</sub> )(#minutes/60)



Catherine E. Heigel, Director

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

MR FRANK WILKERSON  
WILKERSON FUEL COMPANY INC  
P O BOX 2835  
ROCK HILL SC 29732-4835

**AUG 24 2015**

Re: **Site-Specific Work Plan (SSWP) Directive for Groundwater Sampling**  
378 Truck Stop, 731 Hwy 378, Edgefield, SC  
UST Permit # 07960  
Release Reported October 3, 1974  
AFVR Report received March 30, 2015  
Monitoring Report received September 15, 2014  
Edgefield County



Dear Mr. Wilkerson:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) recognizes your commitment to continue work at this site using Environmental Compliance Services, Inc. as your contractor. The next appropriate scope of work at the site is a comprehensive groundwater sampling event.

The groundwater sampling event should be conducted in accordance with the most recent revision of the UST Quality Assurance Program Plan (QAPP), Environmental Compliance Services, Inc.'s Annual Contractor Quality Assurance Plan (ACQAP), and in compliance with all applicable regulations. Groundwater samples should be collected from all monitoring wells, water supply wells, or surface water locations associated with the referenced release and analyzed for BTEX + Naphth + MtBE, 1,2-DCA, 8 oxygenates, and EDB. All monitoring wells will need to be purged since it has been greater than 12 months since the last groundwater sampling event. A copy of the current revision of the Agency QAPP for the UST Management Division is available at <http://www.scdhec.gov/Environment/LW/UST/ReleaseAssessmentClean-up/QualityAssurance/>.

Your contractor must complete the QAPP Contractor addendum or the Site Specific Work Plan (SSWP) if your contractor has an approved ACQAP. The QAPP or SSWP and Cost Proposal must be submitted within 30 days from the date of this letter. The State Underground Petroleum Environmental Response Bank (SUPERB) Account allowable cost for each component is included on the Assessment Component Cost Agreement Form. **Please note that technical and financial preapproval from the Agency must be issued before work begins.**

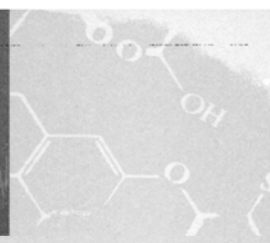
On all correspondence concerning this site, please reference **UST Permit # 07960**. If there are any questions concerning this project, please contact me at (803) 898-0610 or by email at [hetricml@dhec.sc.gov](mailto:hetricml@dhec.sc.gov).

Sincerely, *Matthew Lee Hetrick*  
Matthew L. Hetrick, Hydrogeologist  
Corrective Action Section  
UST Management Division  
Bureau of Land and Waste Management

cc: Environmental Compliance Services, Inc., P O Box 3528, Fort Mill, SC 29708  
Technical File



WHERE BUSINESS AND THE ENVIRONMENT CONVERGE



13504 South Point Boulevard, Unit F, Charlotte, NC 28273 tel 704.583.2711 fax 704.583.2744 www.ecsconsult.com

Mr. Matthew L. Hetrick  
Corrective Action Section  
Underground Storage Tank Management Division  
SCDHEC  
2600 Bull Street  
Columbia, South Carolina 29201



August 31, 2015  
ECS Project #14-214210

Re: Site Specific Work Plan  
378 Truck Stop  
731 Highway 378  
Edgefield, South Carolina  
UST Permit #07960



Mr. Hetrick:

Enclosed please find the Site Specific Work Plan requested for the referenced site, in your letter dated August 24, 2015. Should you have any questions or require additional information, please do not hesitate to call me at (704) 583-2711 or by email at nfrance@ecsconsult.com.

Sincerely,  
**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Noelle A. France  
Project Manager

SCANNED





Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division

To: Matthew Hetrick (SCDHEC Project Manager)
From: Noelle A. France (Contractor Project Manager)
Contractor: ECS, Inc. UST Contractor Certification Number: 358

Facility Name: 378 Truck Stop UST Permit #: 07960
Facility Address: 731 Highway 378, Edgefield, South Carolina
Responsible Party: Wilkerson Fuel Company Phone: 803-324-4080
RP Address: PO Box 2835 Rock Hill, South Carolina
Property Owner (if different): Gail and Barbara Whitmer
Property Owner Address: 1226 Highway 378 East, Edgefield, South Carolina
Current Use of Property: Vacant

Scope of Work (Please check all that apply)
[ ] IGWA [ ] Tier II [x] Groundwater Sampling [ ] GAC
[ ] Tier I [ ] Monitoring Well Installation [ ] Other

Analyses (Please check all that apply)
Groundwater/Surface Water:
[x] BTEXNMDCA (8260B) [ ] Lead [ ] BOD [ ] Methane
[x] Oxygenates (8260B) [ ] 8 RCRA Metals [ ] Nitrate [ ] Ethanol
[x] EDB (8011) [ ] TPH [ ] Sulfate [ ] Dissolved Iron
[ ] PAH (8270D) [ ] pH [ ] Other
Soil:
[ ] BTEXNM [ ] Lead [ ] 8 RCRA Metals [ ] TPH-DRO (3550B/8015B) [ ] Grain Size
[ ] PAH [ ] Oil & Grease (9071) [ ] TPH-GRO (5030B/8015B) [ ] TOC
Air:
[ ] BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)
NA Soil 17 Water Supply Wells NA Air 3 Field Blank
40 Monitoring Wells NA Surface Water 3 Duplicate 4 Trip Blank

Field Screening Methodology
Estimate number and total completed depth for each point, and include their proposed locations on the attached map.
# of shallow points proposed: NA Estimated Footage: NA feet per point
# of deep points proposed: NA Estimated Footage: NA feet per point
Field Screening Methodology: NA

Permanent Monitoring Wells
Estimate number and total completed depth for each well, and include their proposed locations on the attached map.
# of shallow wells: NA Estimated Footage: NA feet per point
# of deep wells: NA Estimated Footage: NA feet per point
# of recovery wells: NA Estimated Footage: NA feet per point
Monitoring Well development method (consistent with SOP):
Comments, if warranted:

UST Permit #: 07960 Facility Name: 378 Truck Stop

**Implementation Schedule** (Number of calendar days from approval)

Field Work Start-Up: 30 days Field Work Completion: 60 days  
Report Submittal: 90 # of Copies Provided to Property Owners: \_\_\_\_\_

**Aquifer Characterization**

Pump Test:  Slug Test:  (Check one and provide explanation below for choice)

NA

**Investigation Derived Waste Disposal**

Soil: NA Tons Purge Water: 300 Gallons  
Drilling Fluids: NA Gallons Free-Phase Product: NA Gallons

**Additional Details For This Scope of Work**

For example, list wells to be sampled, wells to be abandoned/repared, well pads/bolts/caps to replace, details of AFVR event, etc.

ECS will purge and sample groundwater monitoring wells 07960-MW1 through 07960-MW31, 07960-TW1 through 07960-TW9, 07960-RW1, WSW-1 Pre-GAC, WSW-1 Post GAC, WSW-2 through WSW7, WSW-8 Pre-GAC, WSW-8 Post-GAC and WSW-9 through WSW-15

ECS will collect appropriate duplicates, field blanks, and trip blanks. The samples will be analyzed for BTEXMN, 1,2,DCA, ethanol, and the 8 oxygenates by Method 8260, All samples with the exception of the trip blanks will be analyzed for the presence of EDB by EPA Method 8011.

**Compliance With Annual Contractor Quality Assurance Plan (ACQAP)**

Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.

Name of Laboratory: \_\_\_\_\_  
SCDHEC Certification Number: \_\_\_\_\_  
Name of Laboratory Director: \_\_\_\_\_

NA Well Driller as indicated in ACQAP? (Yes/No) If no, indicate driller information below.

Name of Well Driller: \_\_\_\_\_  
SCLLR Certification Number: \_\_\_\_\_

NA Other variations from ACQAP. Please describe below.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Attachments**

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	Proposed monitoring well locations
Location of property lines	Legend with facility name and address, UST permit number, and bar scale
Location of buildings	Streets or highways (indicate names and numbers)
Previous soil sampling locations	Location of all present and former ASTs and USTs
Previous monitoring well locations	Location of all potential receptors
Proposed soil boring locations	
3. Assessment Component Cost Agreement, SCDHEC Form D-3664



South Carolina Department of Health and Environmental Control

**ASSESSMENT COMPONENT COST AGREEMENT  
SOUTH CAROLINA**

Department of Health and Environmental Control  
Underground Storage Tank Management Division  
State Underground Petroleum Environmental Response Bank Account  
May 15, 2014

**378 Truck Stop**

UST Permit #: 07960

Cost Agreement #: \_\_\_\_\_

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>1. Plan Preparation</b>				
A1. Site-specific Work Plan	1	each	\$150.00	\$150.00
B1. Tax Map		each	\$70.00	\$0.00
C1. Tier II or Comp. Plan /QAPP Appendix B		each	\$250.00	\$0.00
<b>2. A1. Receptor Survey *</b>		each	\$551.00	\$0.00
<b>3. Survey (500 ft x 500 ft)</b>				
A1. Comprehensive Survey		each	\$1,040.00	\$0.00
B. Subsurface Geophysical Survey				
1B. < 10 meters below grade		each	\$1,300.00	\$0.00
2B. > 10 meters below grade		each	\$2,310.00	\$0.00
C1. Geophysical UST or Drum Survey		each	\$910.00	\$0.00
<b>4. Mob/Demob</b>				
A1. Equipment		each	\$1,020.00	\$0.00
B1. Personnel	2	each	\$423.00	\$846.00
C1. Adverse Terrain Vehicle		each	\$500.00	\$0.00
<b>5. A1. Soil Borings (hand auger)*</b>		foot	\$5.00	\$0.00
<b>6. Soil Borings (requiring equipment, push technology, etc)* or Field Screening (including water sample, soil sample, soil gas sample, etc.)*</b>				
AA. Standard		per foot	\$15.00	\$0.00
C1. Fractured Rock		per foot	\$20.20	\$0.00
<b>7. A1. Soil Leachability Model</b>		each	\$60.00	\$0.00
<b>8. Abandonment (per foot)*</b>				
A1. 2" diameter or less		per foot	\$3.10	\$0.00
B1. Greater than 2" to 6" diameter		per foot	\$4.50	\$0.00
C1. Dug/Bored well (up to 6 feet diameter)		per foot	\$15.00	\$0.00
<b>9. Well Installation (per foot)*</b>				
A1. Water Table (hand augered)		per foot	\$10.60	\$0.00
B1. Water Table (drill rig)		per foot	\$38.00	\$0.00
CC. Telescoping		per foot	\$50.00	\$0.00
DD. Rock Drilling		per foot	\$58.00	\$0.00
E1. 2" Rock Coring		per foot	\$30.90	\$0.00
G1. Rock Multi-sampling ports/screens		per foot	\$33.40	\$0.00
HH. Recovery Well (4" diameter)		per foot	\$45.00	\$0.00
II. Pushed Pre-packed screen (1.25" dia)		per foot	\$15.00	\$0.00
J1. Rotasonic (2" diameter)		per foot	\$44.00	\$0.00
K. Re-develop Existing Well		per foot	\$11.00	\$0.00
<b>10. Groundwater Sample Collection / Gauge Depth to Water or Product *</b>				
A1. Groundwater Purge	40	per well/recept	\$60.00	\$2,400.00
B1. Air or Vapors		per recepto	\$12.00	\$0.00
C1. Water Supply	17	per well/recept	\$22.00	\$374.00
D1. Groundwater No Purge or Duplicate	3	per well/recept	\$28.00	\$84.00
E1. Gauge Well only		per well	\$7.00	\$0.00
F1. Sample Below Product		per well	\$12.00	\$0.00
G1. Passive Diffusion Bag		each	\$26.00	\$0.00
H1. Field Blank	3	each	\$24.60	\$73.80

<b>11. Laboratory Analyses-Groundwater</b>					
A2. BTEXNM+Oxyg's+1,2 DCA+Eth(82	64	per sample	\$122.00		\$7,808.00
AA1. Lead, Filtered		per sample	\$13.80		\$0.00
B2. Rush EPA Method 8260B (All of item A.)		per sample	\$153.60		\$0.00
C2. Trimethal, Butyl, and Isopropyl Benzenes		per sample	\$36.40		\$0.00
D1. PAH's		per sample	\$60.60		\$0.00
E1. Lead		per sample	\$16.00		\$0.00
F1. EDB by EPA 8011	60	per sample	\$45.20		\$2,712.00
FF1. EDB by EPA Method 8011 Rush		per sample	\$68.20		\$0.00
G1. 8 RCRA Metals		per sample	\$63.40		\$0.00
H1. TPH (9070)		per sample	\$41.00		\$0.00
II. pH		per sample	\$5.20		\$0.00
J1. BOD		per sample	\$20.00		\$0.00
PP. Ethanol		per sample	\$14.80		\$0.00
<b>11. Analyses-Soil</b>					
Q1. BTEX + Naphth.		per sample	\$64.00		\$0.00
R1. PAH's		per sample	\$64.04		\$0.00
S1. 8 RCRA Metals		per sample	\$56.40		\$0.00
U1. TPH-DRO (3550C/8015C)		per sample	\$40.00		\$0.00
V1. TPH- GRO (5030B/8015C)		per sample	\$35.96		\$0.00
W1. Grain size/hydrometer		per sample	\$104.00		\$0.00
X1. Total Organic Carbon		per sample	\$30.60		\$0.00
<b>11. Analyses-Air</b>					
Y1. BTEX + Naphthalene		per sample	\$216.00		\$0.00
<b>11. Analyses-Free Phase Product</b>					
Z1. Hydrocarbon Fuel Identification		per sample	\$357.00		\$0.00
<b>12. Aquifer Characterization</b>					
A1. Pumping Test*		per hour	\$23.00		\$0.00
B1. Slug Test*		per test	\$191.00		\$0.00
C1. Fractured Rock		per test	\$100.00		\$0.00
<b>13. A1. Free Product Recovery Rate Test*</b>		each	\$38.00		\$0.00
<b>14. Fate/Transport Modeling</b>					
A1. Mathematical Model		each	\$100.00		\$0.00
B1. Computer Model		each	\$100.00		\$0.00
<b>15. Risk Evaluation</b>					
A. Tier I Risk Evaluation		each	\$300.00		\$0.00
B1. Tier II Risk Evaluation		each	\$100.00		\$0.00
<b>16. A1. Subsequent Survey*</b>		each	\$260.00		\$0.00
<b>17. Disposal (gallons or tons)*</b>					
AA. Wastewater	300	gallon	\$0.56		\$168.00
BB. Free Product		gallon	\$0.50		\$0.00
C1. Soil Treatment/Disposal		ton	\$60.00		\$0.00
D1. Drilling fluids		gallon	\$0.42		\$0.00
<b>18. Miscellaneous (attach receipts)</b>					
		each	\$0.00		\$0.00
		each	\$0.00		\$0.00
		each	\$0.00		\$0.00
<b>20. Tier I Assessment (Use DHEC 3665 form)</b>		standard			\$0.00
<b>21. IGWA (Use DHEC 3666 form)</b>		standard			\$0.00
<b>22. Corrective Action (Use DHEC 3667 form)</b>		PFP Bid			\$0.00

<b>23. Aggressive Fluid &amp; Vapor Recovery (AFVR)</b>					
A1. 8-hour Event*		each	\$1,375.00		\$0.00
AA. 24-hour Event*		each	\$3,825.00		\$0.00
A3. 48-hour Event*		each	\$6,265.00		\$0.00
A4. 96-hour Event*		each	\$12,567.50		\$0.00
C1. Off-gas Treatment 8 hour		per event	\$122.50		\$0.00
C2. Off-gas Treatment 24 hour		per event	\$241.50		\$0.00
C3. Off-gas Treatment 48 hour		per event	\$327.00		\$0.00
C4. Off-gas Treatment 96 hour		per event	\$780.00		\$0.00
D. Site Reconnaissance		each	\$203.25		\$0.00
E1. Additional Hook-ups		each	\$25.75		\$0.00
F1. Effluent Disposal		gallon	\$0.44		\$0.00
G. AFVR Mobilization/Demobilization		each	\$391.50		\$0.00
<b>24. Granulated Activated Carbon (GAC) filter system installation &amp; service:</b>					
A1. New GAC System Installation*		each	\$1,900.00		\$0.00
BB. Refurbished GAC Sys. Install*		each	\$900.00		\$0.00
C1. Filter replacement/removal*		each	\$350.00		\$0.00
DD. GAC System removal, cleaning, & refurbishment*		each	\$275.00		\$0.00
E1. GAC System housing*		each	\$250.00		\$0.00
F. In-line particulate filter		each	\$150.00		\$0.00
G1. Additional piping & fittings		foot	\$1.50		\$0.00
<b>25. Well Repair</b>					
A1. Additional Copies of the Report Delivered		each	\$50.00		\$0.00
B1. Repair 2x2 MW pad*		each	\$50.00		\$0.00
C1. Repair 4x4 MW pad*		each	\$88.00		\$0.00
D1. Repair well vault*		each	\$118.00		\$0.00
F1. Replace well cover bolts		each	\$2.60		\$0.00
G. Replace locking well cap & lock		each	\$15.00		\$0.00
H1. Replace/Repair stick-up*		each	\$134.00		\$0.00
II. Convert Flush-mount to Stick-up*		each	\$150.00		\$0.00
J1. Convert Stick-up to Flush-mount*		each	\$130.00		\$0.00
K1. Replace missing/illegible well ID plate		each	\$12.00		\$0.00
<b>Report Prep &amp; Project Management</b>	12%	percent	\$14,615.80		\$1,753.90
<b>TOTAL</b>					\$16,369.70

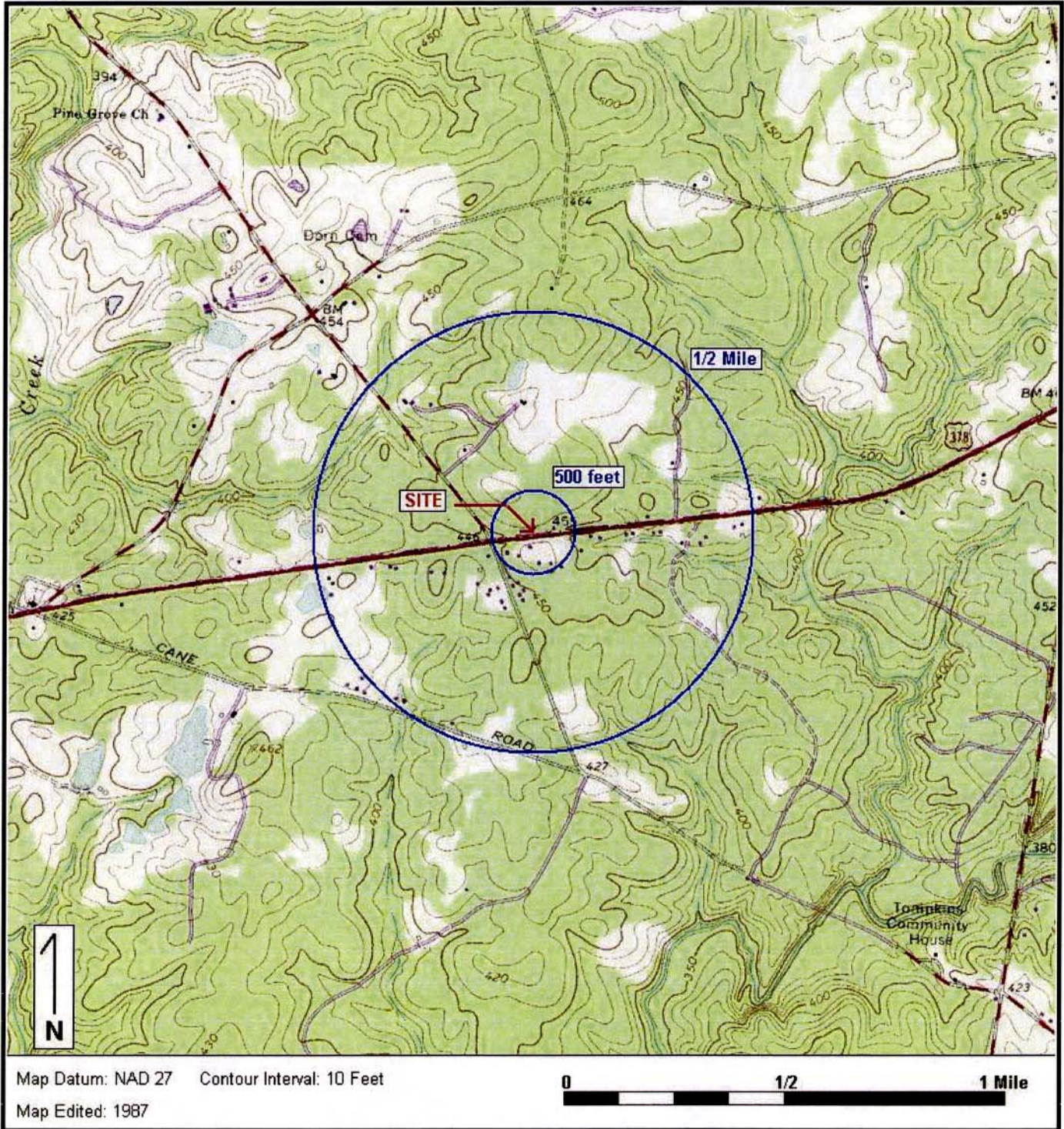
\*The appropriate mobilization cost can be added to complete these tasks, as necessary



Environmental Compliance Services, Inc.  
13504 South Point Boulevard  
Charlotte, NC 28273  
Phone 704.583.2711  
www.ecsconsult.com

378 Truck Stop  
731 Highway 378  
Edgefield, SC 29824

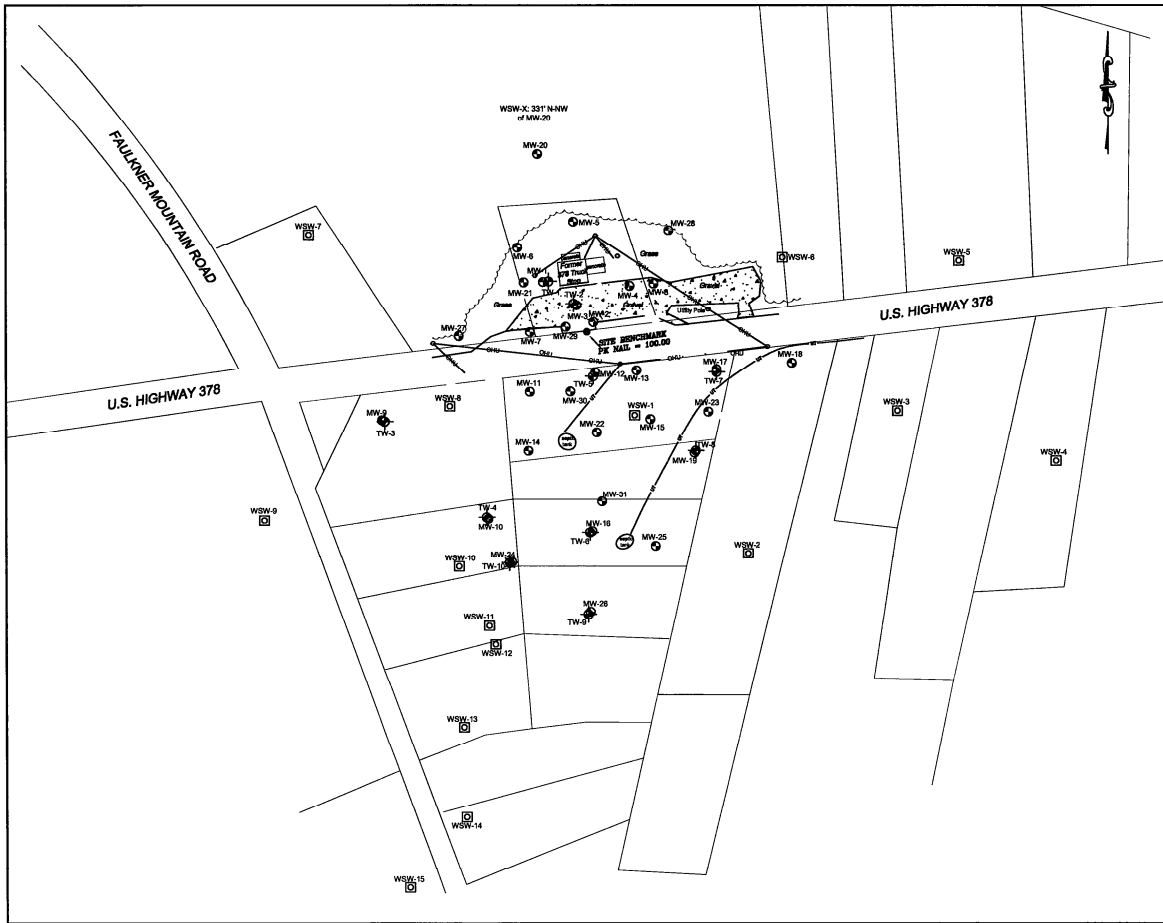
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Owdoms, SC

Lat/Lon: 33° 56' 13" NORTH, 81° 57' 3" WEST - UTM Coordinates: 17 412120 EAST / 3755577 NORTH

Generated By: Rich Walas



**Legend**

- Approximate Property Line
- Overhead Electric Line
- Underground Telephone Line
- Utility Pole
- Shallow (Water Table) Monitoring Well
- ⊕ Telescoping Monitoring Well
- ⊗ Abandoned Telescoping Monitoring Well
- ⊠ Water Supply Well
- MW-1 Well I.D.

**General Notes:**  
 All locations, dimensions, and property lines depicted on this plan are approximations. This plan should not be used for construction or land conveyance purposes.

**ecs**  
 WHERE BUSINESS AND THE ENVIRONMENT CONVERGE  
 13504 SOUTH POINT BLVD, UNIT F  
 CHARLOTTE, NORTH CAROLINA 28273  
 TEL. (704)583-2711 FAX (704)583-2744

**PROJECT:**  
 378 Truck Stop  
 731 Highway 378  
 Edgefield, SC

**TITLE:**  
 Site Plan

**CLIENT:**  
 Wilkerson Fuel Company, Inc.

**GRAPHIC SCALE:**  
 1" = 150'

COMPUTER DRAFTER	CHECKED BY	DESIGNED BY	APPROVED BY
CD	CD	CD	CD
SCALE	DATE	JOB NO.	FIGURE NO.
1"=150'	5/2/11	14-214210	2