D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

SEP 17 2007

RONNY LOWDER
EMERALD INC
PO BOX 3050
SUMTER SC 29151

Re: **Notice to Proceed-Groundwater Sampling**
Bid # SB-27496-03/08/05; PO# 574989

Dear Mr. Lowder:

Based on the award of the referenced bid package, enclosed are the information packets to conduct six (6) groundwater-sampling events. The packets contain all necessary information for work to begin. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order #574989 on the appropriate invoice submitted for payment against the facility.

UST Permit #	Facility	County	# wells	UST Project Manager	Sampling Due Date	Parameters-Groundwater	PACE CA#	EMERALD CA#
00420	Cooley's Grocery	Anderson	5	R. Miner	10/12/07	BTEXMN, DCA, & EDB	30562	30563
05694	Copeland's Station	Laurens	11	J. Abernathy	10/12/07	BTEXMN, DCA, & EDB	30545	30544
05698	Copeland's Gulf	Laurens	11	J. Abernathy	10/12/07	BTEXMN, DCA, & EDB	30555	30554
05702	Home Store 1	Laurens	19	J. Abernathy	10/12/07	BTEXMN, DCA, EDB, & Oxygenates	30543	30542
02033	Blacksburg Space	Cherokee	21	S. Block	10/12/07	BTEXMN, DCA, & EDB	30279	30280
03470	Danny's Grocery	Florence	18	L. Petrus	10/12/07	BTEXMN & DCA	29948	29947

Emerald, Inc. will perform services at the sites on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. Contact information has been provided in the information packet. The Bureau grants pre-approval for transportation of drums of groundwater from the referenced sites to a permitted treatment facility. The contaminated groundwater must be properly stored in labeled 55-gallon drums or equivalent containers. The contaminated groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included with the final report. **Please note, the final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed.**

Itech

Please contact me with the sampling schedule before commencing work at these facilities. If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
Northeastern SC Corrective Action Section
Assessment & Corrective Action Division
Underground Storage Tank Program
Bureau of Land & Waste Management

enc: Information Packets
Approved Cost Agreements

cc: Andy Stevens, PACE Analytical, 9800 Kincey Ave. Ste. 100, Huntersville, NC, 28078 (w/ Approved CAs)
Technical Files (w/o. enc.)

Approved Cost Agreement 30545

Facility: 05694 COPELANDS SERVICE STATION INC

ABERNAJD

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
11 ANALYSES						
	GW GROUNDWATER	A	BTEX+NAPTH+MTBE	11.0000	23.00	253.00
		F	EDB	11.0000	27.00	297.00
				Total Amount		550.00

Approved Cost Agreement 30544

Facility: 05694 COPELANDS SERVICE STATION INC

ABERNAJD

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		B	PERSONNEL	0.5000	114.40	57.20
10 SAMPLE COLLECTION						
		A	GROUND WATER	0.5000	10.00	5.00
		D	GROUNDWATER NO-PURGE	10.5000	10.00	105.00
17 DISPOSAL						
		A2	WASTEWATER - PUMPING TEST	15.0000	0.50	7.50
				Total Amount		174.70

Midlands
Environmental
Consultants, Inc.

June 15, 2010

UST
JUN 15 2010
PROGRAM

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

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #38833
MECI Project Number 10-2846A
Certified Site Rehabilitation Contractor UCC-009

UST
DOCKET
10284

Dear Ms. Briney,

Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

A site visit was conducted at Copeland's Service Station on May 10, 2010 to locate/gauge monitoring wells and to evaluate current site conditions. MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on June 5, 2010. The event was conducted on monitoring wells AFVR-3 and MW-12 to remove free phase petroleum. Free phase petroleum product was detected in monitoring well AFVR-3 at a thickness of 0.12 feet and in MW-12 at a thickness of 0.78 feet prior to the event. The event was continuously conducted for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was not detected in the wells immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 3.36 pounds or approximately 0.58 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 0.42 pounds per hour. Concentrations of off gas produced during the event were recorded from 135 parts per million by volume (PPM) to 1,028 PPM. Measurements were obtained from vapors prior to entering off gas treatment.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexi
Telephone: (803) 808-2043 • fax: (803) 808-2

Vacuum readings were recorded at a range of 13.0 to 20.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1A.

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2A. Monitoring well locations are depicted on attached Figure 1.

A total of 175 gallons of liquid was removed from AFVR-3 and MW-12 during this event. Free Phase Petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to TK Tank Services of Sumter, S.C for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

Brendon Kelly
Project Scientist

Attachments:

TABLE 1A
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2846A
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
AFVR-3 MW-12	06/05/10	9:30	0.50	13.0	1,028	1,590	143.10	1.77	0.88
	06/05/10	10:00	0.50	13.0	367	1,640	147.60	0.65	0.33
	06/05/10	10:30	0.50	13.0	365	1,560	140.40	0.61	0.31
	06/05/10	11:00	0.50	13.0	280	1,630	146.70	0.49	0.25
	06/05/10	11:30	0.50	15.0	180	1,330	119.70	0.26	0.13
	06/05/10	12:00	0.50	15.0	174	1,310	117.90	0.25	0.12
	06/05/10	12:30	0.50	15.0	183	1,300	117.00	0.26	0.13
	06/05/10	13:00	0.50	15.0	171	1,430	128.70	0.26	0.13
	06/05/10	13:30	0.50	15.0	135	1,480	133.20	0.22	0.11
	06/05/10	14:00	0.50	17.0	224	1,080	97.20	0.26	0.13
	06/05/10	14:30	0.50	17.0	176	1,060	95.40	0.20	0.10
	06/05/10	15:00	0.50	17.0	178	1,060	95.40	0.20	0.10
	06/05/10	15:30	0.50	17.0	191	1,010	90.90	0.21	0.10
	06/05/10	16:00	0.50	20.0	307	750	67.50	0.25	0.12
	06/05/10	16:30	0.50	20.0	320	840	75.60	0.29	0.15
	06/05/10	17:00	0.50	20.0	273	720	64.80	0.21	0.11
	06/05/10	17:30	0.50	20.0	385	810	72.90	0.34	0.17
									TOTAL **3.36**

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
AFVR-3	2"	TD: 34.10	29.69	29.81	0.12	***	29.75	***	0.04
MW-12	2"	25-35	30.46	31.24	0.78	***	30.94	***	-0.30

Vacuum Truck Information		Well ID	Stinger Depth
Subcontractor:	MECI	AFVR-3	30.00
Truck Operator:	G. Globensky	MW-12	31.00
Stack I.D. (feet)	0.33 feet		
Corrected depth to water before AFVR event in AFVR-1:			29.71
Corrected depth to water before AFVR event in MW-12:			30.58

Recovery / Disposal Information		
Hydro carbons Removed (vapor):	3.36	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	0.58	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	175	Gallons

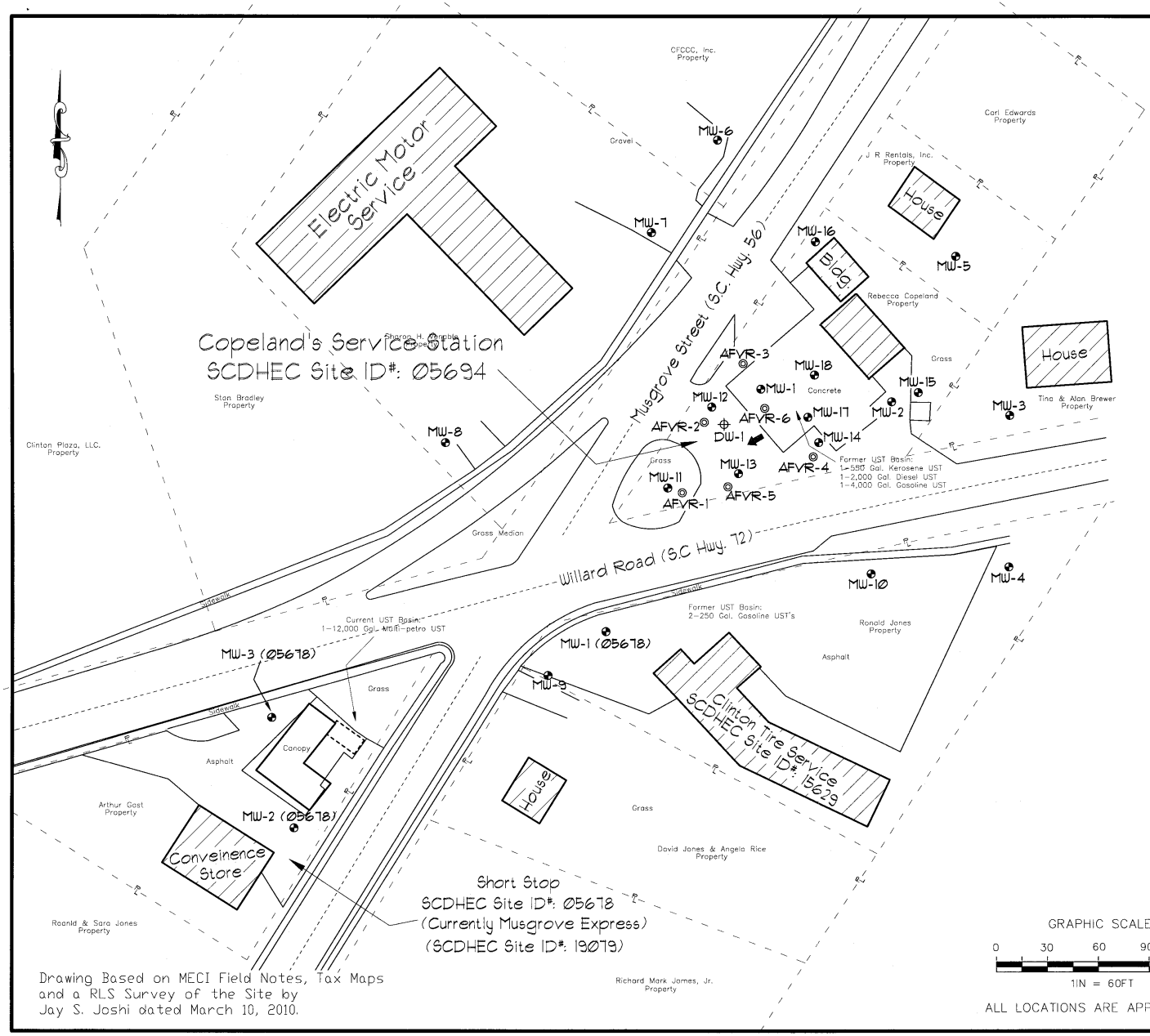
TABLE 2A
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2846A
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-6	**MW-7**	**MW-15**
Nearest Extraction Well:		AFVR-3	AFVR-3	AFVR-3
Approximate Distance:		132 ft	93 ft	105 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
9:30	0.0	0	0	0
10:00	0.5	0	0	0
10:30	1.0	0	0	0
11:00	1.5	0	0	0
11:30	2.0	0	0	0
12:00	2.5	0	0	0
12:30	3.0	0	0	0
13:00	3.5	0	0	0
13:30	4.0	0	0	0
14:00	4.5	0	0	0
14:30	5.0	0	0	0
15:00	5.5	0	0	0
15:30	6.0	0	0	0
16:00	6.5	0	0	0
16:30	7.0	0	0	0
17:00	7.5	0	0	0
17:30	8.0	0	0	0
Maximum Change:		**0**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-6	**MW-7**	**MW-15**
Nearest Extraction Well:		AFVR-3	AFVR-3	AFVR-3
Approximate Distance:		132 ft	93 ft	105 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		26.97	29.60	27.75
13:30	4 hours	26.97	29.60	27.75
17:30	8 hours	26.97	29.60	27.75
Maximum Change:		0.00	0.00	0.00



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	3

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone: TK10233

4. Waste Tracking Number

5. Generator's Name and Mailing Address: MIDLANDS ENVIRONMENTAL, 1144 TWO NOTCH ROAD, LEXINGTON, SC

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: T K TANK SERVICES INC.

U.S. EPA ID Number: 803-418-2314

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address: T K TANK SERVICES, INC. 125 BOULEVARD ROAD SUMTER, SC 29153

U.S. EPA ID Number: 803-418-2314

Facility's Phone:

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
NON HAZARDOUS PETROLEUM CONTAMINATED WATER/PRODUCT	1	TT	3615 GAL	

Site	Site ID#	Gallons
Lull Exxon	12194	100
Oak Creek	18662	350
Carter Bus	02044	150
Marion	12223	250
Rogers Auto	00428	180
Rogers Auto	00428	180
Anderson	00769	150
Hardy	09733	125
Cottlands	005694	175
Midway	03144	100
Quick	06946	50
Gold Rush	19260	275
28 Mart	07176	130
28 Mart	07176	130

3615

13. Special Handling Instructions and Additional Information: MIDLANDS ENVIRONMENTAL LEXINGTON, SC

Site	Site ID#	Gallons
Oakland Ave.	19142	100
Ancrum	01617	275
Former Adams	19416	125
BJ's	04224	125
Clamps	11412	1025

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's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

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: Travis Lucas | Signature | Month: 6 | Day: 14 | Year: 10

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: 35745

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

Midlands
Environmental
Consultants, Inc.

June 30, 2010

UST
JUL 02 2010
PROGRAM

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

Hech
UST
DOCKET

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #38833
MECI Project Number 10-2846B
Certified Site Rehabilitation Contractor UCC-009

Dear Ms. Briney,

Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on June 23, 2010. The event was conducted on monitoring wells AFVR-6 and MW-1 to remove free phase petroleum. Free phase petroleum product was detected in monitoring well AFVR-6 at a thickness of 5.00 feet and in MW-1 at a thickness of 3.16 feet prior to the event. The event was continuously conducted for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was not detected in the wells immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 12.05 pounds or approximately 2.08 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 1.51 pounds per hour. Concentrations of off gas produced during the event were recorded from 635 parts per million by volume (PPM) to 1,852 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at a range of 17.0 to 20.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1B.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2B. Monitoring well locations are depicted on attached Figure 1.

A total of 100 gallons of liquid was removed from AFVR-6 and MW-1 during this event. Free Phase Petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to TK Tank Services of Sumter, S.C for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

Brendon P. Kelly
Project Scientist

Attachments:

TABLE 1B
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2846B
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
MW-1 AFVR-6	06/23/10	9:00	0.50	17.0	1,756	890	80.10	1.69	0.84
	06/23/10	9:30	0.50	17.0	1,745	940	84.60	1.77	0.89
	06/23/10	10:00	0.50	17.0	1,708	940	84.60	1.73	0.87
	06/23/10	10:30	0.50	17.0	1,776	920	82.80	1.76	0.88
	06/23/10	11:00	0.50	17.0	1,691	900	81.00	1.64	0.82
	06/23/10	11:30	0.50	17.0	1,635	900	81.00	1.59	0.79
	06/23/10	12:00	0.50	17.0	1,560	940	84.60	1.58	0.79
	06/23/10	12:30	0.50	17.0	1,564	940	84.60	1.59	0.79
	06/23/10	13:00	0.50	17.0	1,546	950	85.50	1.59	0.79
	06/23/10	13:30	0.50	19.0	1,695	860	77.40	1.57	0.79
	06/23/10	14:00	0.50	19.0	1,852	820	73.80	1.64	0.82
	06/23/10	14:30	0.50	19.0	1759	840	75.60	1.60	0.80
	06/23/10	15:00	0.50	19.0	1541	850	76.50	1.41	0.71
	06/23/10	15:30	0.50	20.0	1358	730	65.70	1.07	0.54
	06/23/10	16:00	0.50	20.0	986	670	60.30	0.71	0.36
	06/23/10	16:30	0.50	20.0	872	690	62.10	0.65	0.32
	06/23/10	17:00	0.50	20.0	635	730	65.70	0.50	0.25
									TOTAL **12.05**

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
MW-1	2"	TD: 33.95	29.55	32.71	3.16	***	30.85	***	0.83
AFVR-6	2"	TD: 34.36	28.86	33.86	5.00	***	28.63	***	-5.23

Vacuum Truck Information

Subcontractor: MECI
Truck Operator: G. Globensky
Stack I.D. (feet) 0.33 feet

Well ID	Stinger Depth
MW-1	30.00
AFVR-6	30.00

Corrected depth to water before AFVR event in MW-1: 30.02
Corrected depth to water before AFVR event in AFVR-6: 29.61

Recovery / Disposal Information

Hydro carbons Removed (vapor):	12.05	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	2.08	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	100	Gallons

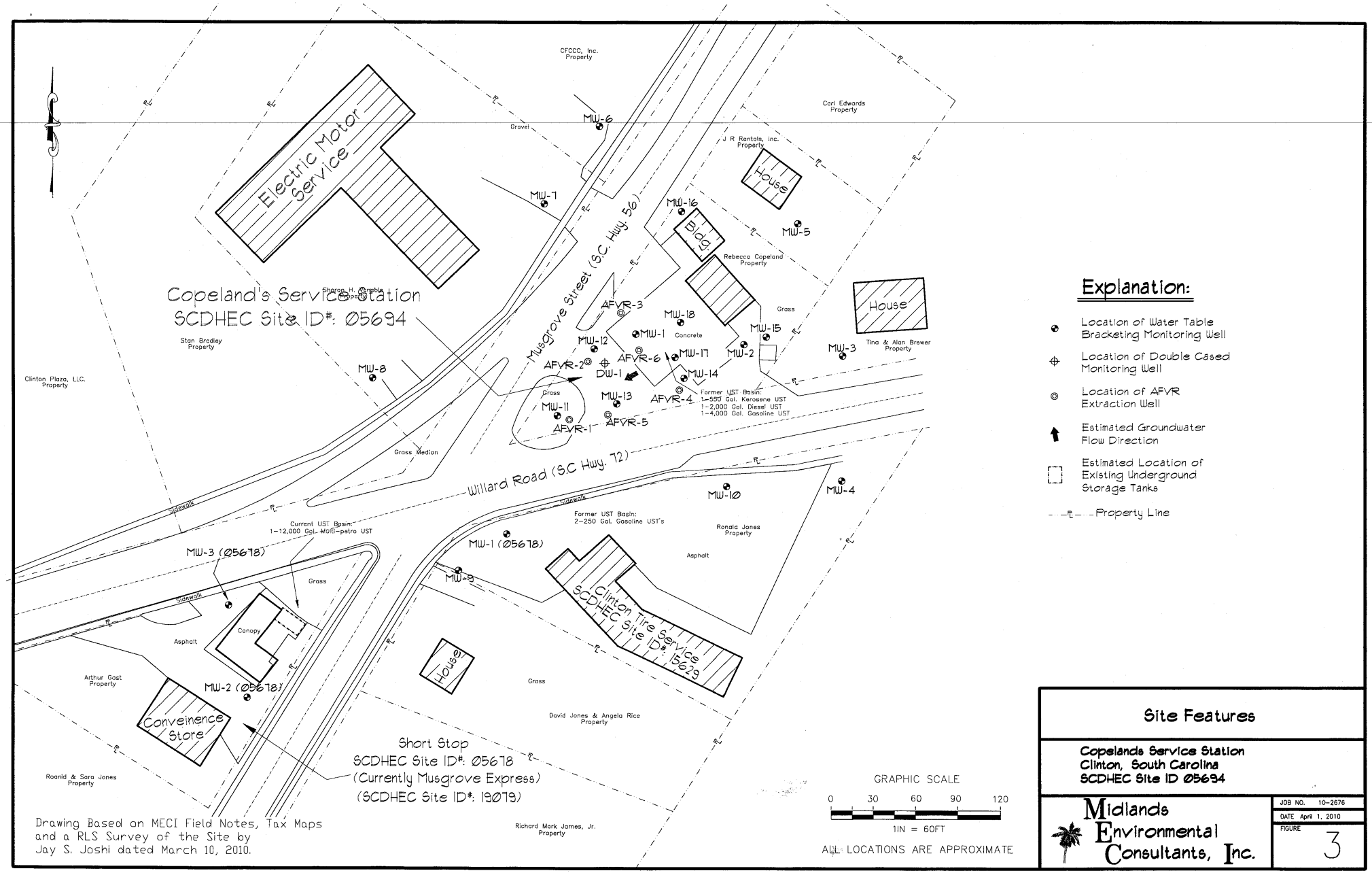
TABLE 2B
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2846B
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-6	**MW-7**	**MW-16**
Nearest Extraction Well:		MW-1	MW-1	AFVR-6
Approximate Distance:		149 ft	113 ft	103 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
9:00	0.0	0	0	0
9:30	0.5	0	0	0
10:00	1.0	0	0	0
10:30	1.5	0	0	0
11:00	2.0	0	0	0
11:30	2.5	0	0	0
12:00	3.0	0	0	0
12:30	3.5	0	0	0
13:00	4.0	0	0	0
13:30	4.5	0	0	0
14:00	5.0	0	0	0
14:30	5.5	0	0	0
15:00	6.0	0	0	0
15:30	6.5	0	0	0
16:00	7.0	0	0	0
16:30	7.5	0	0	0
17:00	8.0	0	0	0
Maximum Change:		**0**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-6	**MW-7**	**MW-16**
Nearest Extraction Well:		MW-1	MW-1	AFVR-6
Approximate Distance:		149 ft	113 ft	103 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		27.02	29.61	28.25
13:00	4 hours	27.02	29.61	28.25
17:00	8 hours	27.02	29.61	28.25
Maximum Change:		0.00	0.00	0.00


Electric Motor Service
Copeland's Service Station
SCDHEC Site ID#: 05694
Stan Bradley Property
Sharon H. Campbell Property
Clinton Plaza, LLC. Property
CFCCC, Inc. Property
Gravel
MW-6
MW-7
MW-8
Musgrove Street (S.C. Hwy. 56)
Carl Edwards Property
J R Rentals, Inc. Property
House
MW-5
MW-16
Bldg.
Rebecca Copeland Property
Grass
House
Tina & Alan Brewer Property
MW-3
MW-15
MW-2
MW-18
MW-1
Concrete
MW-12
AFVR-3
AFVR-2
DW-1
AFVR-6
MW-17
MW-14
AFVR-4
MW-13
MW-11
AFVR-1
AFVR-5
Former UST Basin:
1-550 Gal. Kerosene UST
1-2,000 Gal. Diesel UST
1-4,000 Gal. Gasoline UST
Grass Median
Willard Road (S.C Hwy. 72)
Sidewalk
MW-10
MW-4
Former UST Basin:
2-250 Gal. Gasoline UST's
Ronald Jones Property
Asphalt
MW-1 (05678)
MW-9
Current UST Basin:
1-12,000 Gal. Multi-petro UST
MW-3 (05678)
Grass
Canopy
Asphalt
Arthur Gast Property
MW-2 (05678)
Conveinence Store
Clinton Tire Service
SCDHEC Site ID#: 15629
House
Grass
David Jones & Angela Rice Property
Short Stop
SCDHEC Site ID#: 05678
(Currently Musgrove Express)
(SCDHEC Site ID#: 19079)
Ronald & Sara Jones Property
Richard Mark James, Jr. Property
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.
GRAPHIC SCALE
0 30 60 90 120
1IN = 60FT
ALL LOCATIONS ARE APPROXIMATE
Explanation:
Location of Water Table Bracketing Monitoring Well
Location of Double Cased Monitoring Well
Location of AFVR Extraction Well
Estimated Groundwater Flow Direction
Estimated Location of Existing Underground Storage Tanks
Property Line
Site Features
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694
Midlands Environmental Consultants, Inc.
JOB NO. 10-2676
DATE April 1, 2010
FIGURE 3

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: Pollards Inc.

Generator's Site Address (if different than mailing address): 1164 Bradford Lexington

Generator's Phone:

6. Transporter 1 Company Name: T K TANK SERVICES INC.

U.S. EPA ID Number: 803-418-2314

7. Transporter 2 Company Name: N/A

U.S. EPA ID Number:

8. Designated Facility Name and Site Address: T K TANK SERVICES INC 165 BOULEVARD ROAD SUMTER, SC 29153

U.S. EPA ID Number:

Facility's Phone: 803-418-2314

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
NON HAZARDOUS CONTAMINATED WATER/PRODUCT				
Site / Gallons / UST				
Green Ave BP 175 13084	1	TT	2665	
Austin 150 04038			gal	
Singinger 140 03021				
McCox Oil 180 18662				
Bay Creek 100 00858				
Whittle Bros 200 00858				
Richland C. Lark. 300 11808				
Shelton Food 150 38760				
Shelton Food 125 38760				
Shelton Food 275 38760				
Copeland 100 05694				
Richland C. Pub. Works 325 11705				
Sanders Deep Well 100 02940				
Cooper 50 16923				
Pelzer Gas 150 00480				

13. Special Handling Instructions and Additional Information

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's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

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: Travis Lucas | Signature | Month: 6 | Day: 29 | Year: 10

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

Midlands
Environmental
Consultants, Inc.

July 30, 2010

UST
AUG 0 3 2010
PROGRAM

UST
DOCKET
12

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

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #38833
MECI Project Number 10-2846C
Certified Site Rehabilitation Contractor UCC-009

Dear Ms. Briney,

Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on July 18, 2010. The event was conducted on monitoring wells AFVR-5 and MW-13 to remove free phase petroleum. Free phase petroleum product was detected in monitoring well AFVR-5 at a thickness of 3.13 feet and in MW-13 at a thickness of 3.90 feet prior to the event. The event was continuously conducted for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was detected in monitoring well AFVR-5 at a thickness of 0.06 feet and in MW-13 at a thickness of 0.26 feet immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 12.73 pounds or approximately 2.20 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 1.59 pounds per hour. Concentrations of off gas produced during the event were recorded from 357 parts per million by volume (PPM) to 4,139 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at a range of 10.0 to 20.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1C.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2C. Monitoring well locations are depicted on attached Figure 1.

A total of 25 gallons of liquid was removed from AFVR-5 and MW-13 during this event. Free Phase Petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to TK Tank Services of Sumter, S.C for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

Brendon P. Kelly
Project Scientist

Attachments:

TABLE 1C
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2846C
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
MW-13	07/18/10	13:00	0.50	15.0	357	850	76.50	0.33	0.16
AFVR-5	07/18/10	13:30	0.50	15.0	407	880	79.20	0.39	0.19
	07/18/10	14:00	0.50	15.0	418	910	81.90	0.41	0.21
	07/18/10	14:30	0.50	20.0	984	1,370	123.30	1.46	0.73
	07/18/10	15:00	0.50	20.0	1,436	1,820	163.80	2.82	1.41
	07/18/10	15:30	0.50	20.0	1,339	1,800	162.00	2.60	1.30
	07/18/10	16:00	0.50	19.0	1,185	1,770	159.30	2.27	1.13
	07/18/10	16:30	0.50	19.0	1,241	1,860	167.40	2.49	1.25
	07/18/10	17:00	0.50	19.0	1,160	1,950	175.50	2.44	1.22
	07/18/10	17:30	0.50	20.0	1,049	940	84.60	1.06	0.53
	07/18/10	18:00	0.50	11.0	1,548	890	80.10	1.49	0.74
	07/18/10	18:30	0.50	10.0	973	810	72.90	0.85	0.43
	07/18/10	19:00	0.50	10.0	748	820	73.80	0.66	0.33
	07/18/10	19:30	0.50	17.0	1,597	530	47.70	0.91	0.46
	07/18/10	20:00	0.50	17.0	3,461	390	35.10	1.46	0.73
	07/18/10	20:30	0.50	16.0	3,796	430	38.70	1.76	0.88
	07/18/10	21:00	0.50	16.0	4,139	460	41.40	2.06	1.03
									TOTAL
									12.73

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
MW-13	2"	25-35	30.47	34.37	3.90	30.74	31.00	0.26	0.17
AFVR-5	2"	TD: 34.35	30.65	33.78	3.13	30.93	30.99	0.06	-0.08

Vacuum Truck Information

Subcontractor: MECI
Truck Operator: G. Globensky
Stack I.D. (feet) 0.33 feet

Well ID	Stinger Depth
MW-13	31.00
AFVR-5	31.00

Corrected depth to water before AFVR event in MW-1: 31.06
Corrected depth to water before AFVR event in AFVR-6: 31.12

Recovery / Disposal Information

Hydro carbons Removed (vapor):	12.73	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	2.20	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	25	Gallons

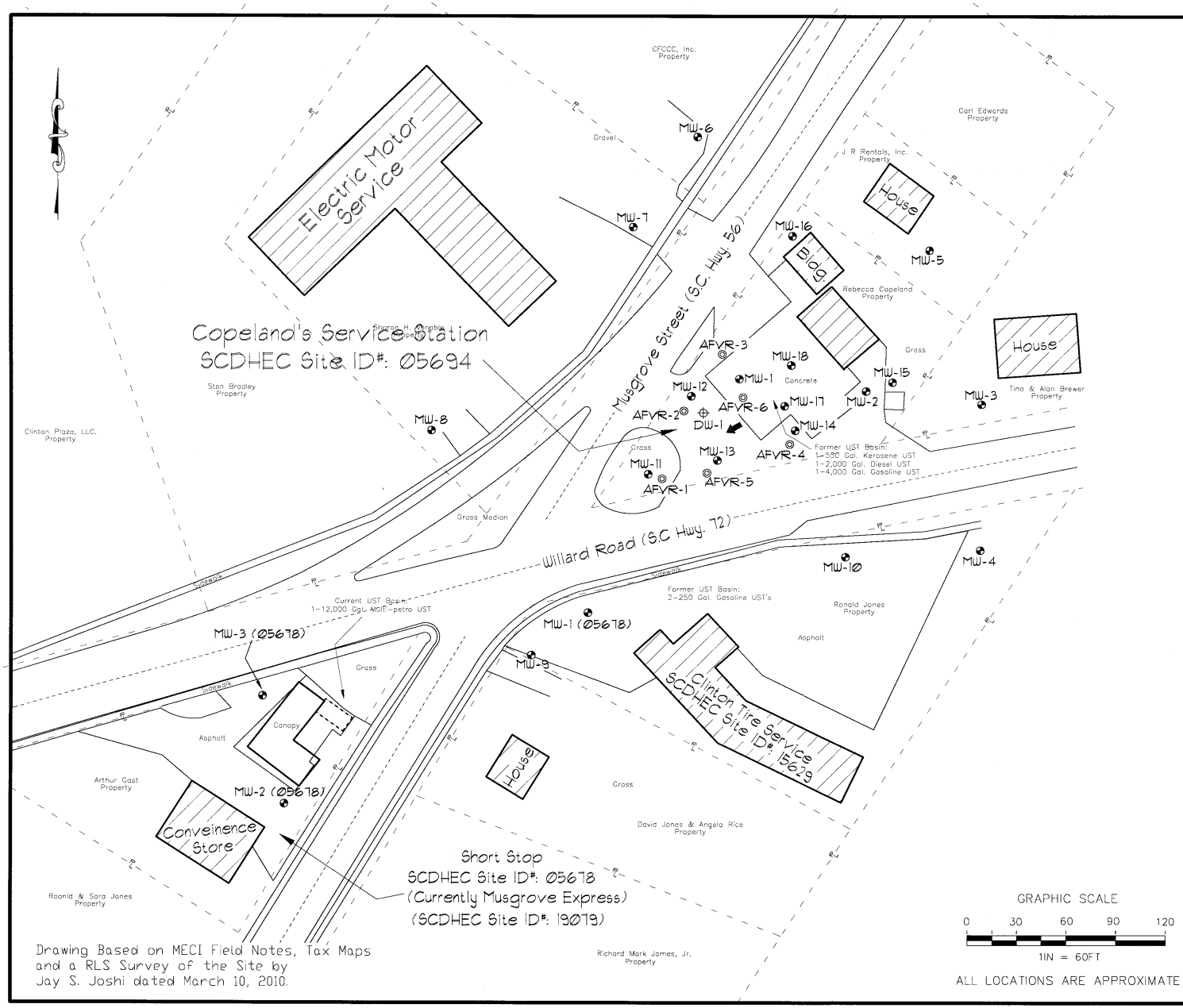
TABLE 2C
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2846C
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-6	**MW-7**	**MW-16**
Nearest Extraction Well:		MW-13	MW-13	MW-13
Approximate Distance:		197 ft	152 ft	144 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
13:00	0.0	0	0	0
13:30	0.5	0	0	0
14:00	1.0	0	0	0
14:30	1.5	0	0	0
15:00	2.0	0	0	0
15:30	2.5	0	0	0
16:00	3.0	0	0	0
16:30	3.5	0	0	0
17:00	4.0	0	0	0
17:30	4.5	0	0	0
18:00	5.0	0	0	0
18:30	5.5	0	0	0
19:00	6.0	0	0	0
19:30	6.5	0	0	0
20:00	7.0	0	0	0
20:30	7.5	0	0	0
21:00	8.0	0	0	0
Maximum Change:		**0**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-6	**MW-7**	**MW-16**
Nearest Extraction Well:		MW-13	MW-13	MW-13
Approximate Distance:		197 ft	152 ft	144 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		27.21	29.76	28.73
17:00	4 hours	27.21	29.76	28.73
21:00	8 hours	27.21	29.76	28.73
Maximum Change:		0.00	0.00	0.00



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	3

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: MIDLANDS ENVIRONMENTAL, 1104 TWO NOTCH ROAD, LEXINGTON, SC 29072

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: TK TANK SERVICE, SUMTER, SC — U.S. EPA ID Number: 98757357

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

8. Designated Facility Name and Site Address: TK TANK SERVICES, 425 BOULEVARD ROAD, SUMTER, SC 29153 — U.S. EPA ID Number

Facility's Phone: 1106 803-416-5834 — 98757357

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1 NON HAZARDOUS PETROLEUM CONTAMINATED WATER	1	TT	3000 GAL	
2				

Site	UST #	Gallons
Beaton	18906	190
"	"	135
"	"	150
Howard Maness	"	160
Former Fast Fare	00411	175
"	"	150
Zee Mart	18131	225
"	07176	100
Beaufort + Patrol	"	220
"	01056	50
Randys Auto	"	50
"	11671	150
"	"	180
Copelands	"	250
Rogers	05694	25
	04428	150

13. Special Handling Instructions and Additional Information

Site	UST #	Gallons
Rogers	04428	175
Fmr. Fast Fare	00411	0
Beaufort Patrol	01056	150
Mack's Camp	01253	250
Midway Service	13046	65

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's/Offeror's Printed/Typed Name — Signature — Month 7 Day 30 Year 1

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: Travis Lucas — Signature — Month 7 Day 30 Year 10

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

Midlands
Environmental
Consultants, Inc.

August 11, 2010

UST
AUG 13 2010
PROGRAM

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

13tech
UST
DOCKET

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #38833
MECI Project Number 10-2846D
Certified Site Rehabilitation Contractor UCC-009

Dear Ms. Briney,

Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on July 30, 2010. The event was conducted on monitoring wells AFVR-4 and MW-14 to remove free phase petroleum. Free phase petroleum product was detected in monitoring well AFVR-4 at a thickness of 0.10 feet and in MW-14 at a thickness of 0.85 feet prior to the event. The event was continuously conducted for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was not detected in the well immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 4.83 pounds or approximately 0.83 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 0.60 pounds per hour. Concentrations of off gas produced during the event were recorded from 275 parts per million by volume (PPM) to 1,664 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at a range of 14.0 to 18.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1D.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2D. Monitoring well locations are depicted on attached Figure 1.

A total of 20 gallons of liquid was removed from AFVR-4 and MW-14 during this event. Free Phase Petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to TK Tank Services of Sumter, S.C for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Gavin G. Globensky
Staff Biologist

Brendon P. Kelly
Project Scientist

Attachments:

TABLE 1D
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2846D
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
MW-14	07/30/10	8:45	0.50	16.0	1,664	1,090	98.10	1.96	0.98
AFVR-4	07/30/10	9:15	0.50	16.0	841	1,090	98.10	0.99	0.50
	07/30/10	9:45	0.50	16.0	650	1,080	97.20	0.76	0.38
	07/30/10	10:15	0.50	15.0	421	1,230	110.70	0.56	0.28
	07/30/10	10:45	0.50	15.0	372	1,220	109.80	0.49	0.25
	07/30/10	11:15	0.50	14.0	324	1,230	110.70	0.43	0.22
	07/30/10	11:45	0.50	14.0	275	1,250	112.50	0.37	0.19
	07/30/10	12:15	0.50	16.0	279	1,060	95.40	0.32	0.16
	07/30/10	12:45	0.50	16.0	282	1,030	92.70	0.31	0.16
	07/30/10	13:15	0.50	16.0	286	1,020	91.80	0.32	0.16
	07/30/10	13:45	0.50	16.0	324	1,100	99.00	0.38	0.19
	07/30/10	14:15	0.50	16.0	362	1,130	101.70	0.44	0.22
	07/30/10	14:45	0.50	18.0	404	890	80.10	0.39	0.19
	07/30/10	15:15	0.50	18.0	447	900	81.00	0.43	0.22
	07/30/10	15:45	0.50	18.0	489	880	79.20	0.46	0.23
	07/30/10	16:15	0.50	18.0	532	880	79.20	0.51	0.25
	07/30/10	16:45	0.50	18.0	575	870	78.30	0.54	0.27
									TOTAL
									4.83

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
MW-14	2"	25-35	30.40	31.25	0.85	***	32.42	***	***
AFVR-4	2"	TD: 34.45	30.60	30.70	0.10	***	31.45	***	***

Vacuum Truck Information		Well ID	Stinger Depth
Subcontractor:	MECI	MW-14	32.00
Truck Operator:	J.Womack	AFVR-4	31.00
Stack I.D. (feet)	0.33 feet		
Corrected depth to water before AFVR event in MW-1:			30.53
Corrected depth to water before AFVR event in AFVR-6:			30.62

Recovery / Disposal Information		
Hydro carbons Removed (vapor):	4.83	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	0.83	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	20	Gallons

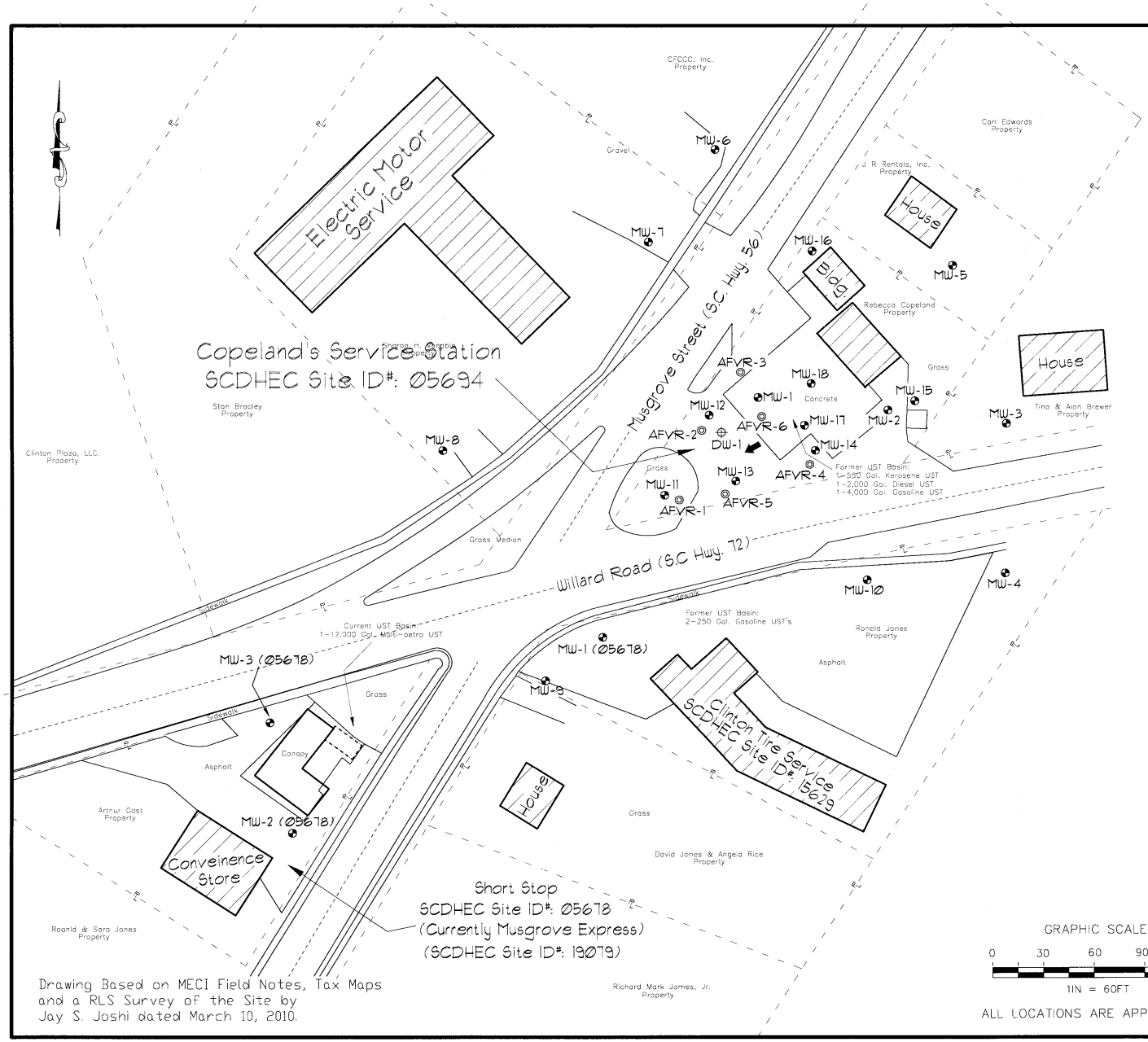
TABLE 2D
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2846D
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-13	**MW-15**	**MW-17**
Nearest Extraction Well:		AFVR-4	MW-14	MW-14
Approximate Distance:		45 ft	65 ft	17 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
8:45	0.0	0	0	0
9:15	0.5	0	0	0
9:45	1.0	0	0	0
10:15	1.5	0	0	0
10:45	2.0	0	0	0
11:15	2.5	0	0	0
11:45	3.0	0	0	0
12:15	3.5	0	0	0
12:45	4.0	0	0	0
13:15	4.5	0	0	0
13:45	5.0	0	0	0
14:15	5.5	0	0	0
14:45	6.0	0	0	0
15:15	6.5	0	0	0
15:45	7.0	0	0	0
16:15	7.5	0	0	0
16:45	8.0	0	0	0
Maximum Change:		**0**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-13	**MW-15**	**MW-17**
Nearest Extraction Well:		AFVR-4	MW-14	MW-14
Approximate Distance:		45 ft	65 ft	17 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		30.80	25.50	30.45
12:45	4 hours	30.86	25.50	30.40
16:45	8 hours	30.90	25.50	30.38
Maximum Change:		-0.10	0.00	0.07



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	3

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
2. Page 1 of
3. Emergency Response Phone: TK10279
4. Waste Tracking Number

5. Generator's Name and Mailing Address
MIDLANDS ENVIRONMENTAL
1144 TWO NOTCH ROAD
LEXINGTON, SC 29073

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: T K TANK SERVICES INC..
U.S. EPA ID Number: 803-418-2314

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

8. Designated Facility Name and Site Address
T K TANK SERVICES, INC
425 BOULEVARD ROAD
SUMTER, SC 29153
U.S. EPA ID Number: 803-418-2314

Facility's Phone:

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1 NON HAZARDOUS PETROLEUM CONTAMINATED WATER/PRODUCT AP	1	TT	2500 GAL	
Site / UST / Gallons				
Sportsman Corner 12151 160				
Sportsman Corner 12151 150				
Hartzog Farms 14935 150				
" " 14935 150				
Pelzer 00480 325				
Former Fastfare 18131 210				
Copperlands 05694 20				
Hartzog Farms 14935 90				
" " 14935 80				
Howard Manes 00411 250				
Joker, Joes 10658 200				
" " 10658 125				
Howard Manes 00411 200				
Hartzog 14935 125				
Joker Joes 10658 175				
Shade Tree 04676 150				
" " 04676 175				

13. Special Handling Instructions and Additional Information

Site	UST	Gallons
Fleet Ops Building	11180	50
Movie Gallery	19077	150

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's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

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: Joseph W. Stanton | Signature | Month 8 | Day 11 | Year 10

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

17. Discrepancy

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

2,915 Gal per actual weight

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: Nicole J. Milligan | Signature | Month 8 | Day 11 | Year 10

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 8/06)

DESIGNATED FACILITY TO GENERATOR

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

14 Tech

UST DOCKET

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

AUG 17 2010

Re: Aggressive Fluid Vapor Recovery (AFVR)Report Review letter
Copelands Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694
Release Reported June 24, 1993
AFVR reports received June 15, 2010, July 2, 2010, August 3, 2010, and August 13, 2010
Laurens County

Dear Mr. Copeland:

The Underground Storage Tank Management Division has reviewed the referenced reports and noted the findings (see enclosures). The next scope of work deemed necessary is to install four monitoring wells to define the petroleum plume and a groundwater sampling to collect current data.

The SCDHEC will procure the services of an environmental contractor for the release reported on June 24, 1993. Your continued cooperation is appreciated.

On all correspondence regarding this site, please reference the UST Permit # 05694. If you have questions concerning this correspondence or would like to submit additional information, please contact me by phone at (803) 896-6323, by fax at (803) 896-6245, or by email at brineysm@dhec.sc.gov.

Sincerely,

Stephanie Briney

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: AFVR reports

cc: Technical File (w/out enc)

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

SEP 30 2010

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS INC
P O BOX 854
LEXINGTON SC 29071

istech UST DOCKET

Re: Bid # IFB-34007-6/3/08-EMW; PO# 4500011317
Notice to Proceed

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct assessments at several facilities. The packets contain the necessary approval for work to begin. The facilities have been assigned Cost Agreement (CA) numbers as listed below. Please reference the CA numbers and Purchase Order # 4500011317 on the appropriate invoices submitted for payment against the facilities. As specified in the referenced bid, **the completed invoice forms and associated reports (include contract certification number) are expected on or before the designated due date (see below).**

UST Permit#	Facility	County	Release #	Work Scope	Due Date*	CA #	Approved Amt
09322	Smiths Grocery	York	1	Monitoring Well Installation	60 Days	39705	$10,750.00
02233	Danny Melton Amoco	Chesterfield	1	Monitoring Well Installation	60 Days	39453	$325.00
05694	Copelands Service Station	Lauens	1	Monitoring Well Installation	60 Days	39770	$7,860.00
00332	Interstate Truck Stop	Allendale	2	Monitoring Well Installation	60 Days	39471	$2,000.00
11702	Colonel Creek Landing	Fairfield	1	Monitoring Well Installation	60 Days	39701	$2,841.00

*From receipt of letter

Midland's Environmental Consultants, Inc. will perform services at the sites on behalf of the site's UST owners; however, payments will be made from the SUPERB Account. The site's UST owners have no obligation for payment for this scope of work. **Please note, if there are any changes in the established cost agreement amounts (e.g., additional water supply wells sampled, additional well footage, etc.) contact the site's project manager for technical and/or financial approval. Failure to do so prior to submittal of invoice may result in delay of payment.**

The Bureau grants pre-approval for transportation of drums of virgin petroleum contaminated soil and drums of groundwater from the referenced site to a permitted treatment facility. The contaminated soil and/or groundwater must be properly stored in labeled 55-gallon drums or equivalent containers.

The contaminated soil and/or groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included as an appendix to the final report. Please note, transportation of waste oil contaminated soil must receive pre-approval from the Division of Waste Assessment & Emergency Response.

Please provide this office with a schedule of drilling dates and coordinate all work with me before commencing work at the facility. If you have any questions or need further assistance, please contact me at (803) 896-6633.

Sincerely,

Cathleen Ridgley

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

enc.: Monitoring Well Approvals (MWA)
Approved Cost Agreements (ACA)
Information Packets

cc: Cathleen Ridgley, UST Program (w/out enc)
Technical Files (w/ copy of MWA, ACA, & Site Map)

Approved Cost Agreement 39770

Facility: 05694 COPELANDS SERVICE STATION INC

BRINEYSM

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		A	EQUIPMENT	1.0000	100.00	100.00
		B	PERSONNEL	3.0000	100.00	300.00
09 WELL INSTALLATION						
		B	WATER TABLE (DRILLED)	120.0000	20.00	2,400.00
		C	TELESCOPING	80.0000	25.00	2,000.00
10 SAMPLE COLLECTION						
		A	GROUND WATER	5.0000	25.00	125.00
		D	GROUNDWATER NO-PURGE	15.0000	25.00	375.00
		E	GAUGE WELL ONLY	8.0000	25.00	200.00
11 ANALYSES						
	GW GROUNDWATER	A	BTEX+NAPTH+MTBE	20.0000	30.00	600.00
		E	LEAD	20.0000	10.00	200.00
		F	EDB	20.0000	28.00	560.00
16 SUBSEQUENT SURVEY						
			SUBSEQUENT SURVEY	1.0000	50.00	50.00
17 DISPOSAL						
		A1	WASTEWATER - PURGING/SAMPLING	2.0000	50.00	100.00
		C	SOIL (TREATMENT/DISPOSAL)	15.0000	50.00	750.00
23 EFR						
		D	SITE RECONNAISSANCE	1.0000	100.00	100.00
				Total Amount		7,860.00

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

Monitoring Well Approval

Approval is hereby granted to: Midlands Environmental Consultants Inc.
Facility: Coplands Service Station, 700 Musgrove St., Clinton, SC
UST Permit Number: 05694
County: Laurens

This approval is for the installation of four groundwater monitoring wells. The monitoring wells are to be installed in the approved location. The 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:

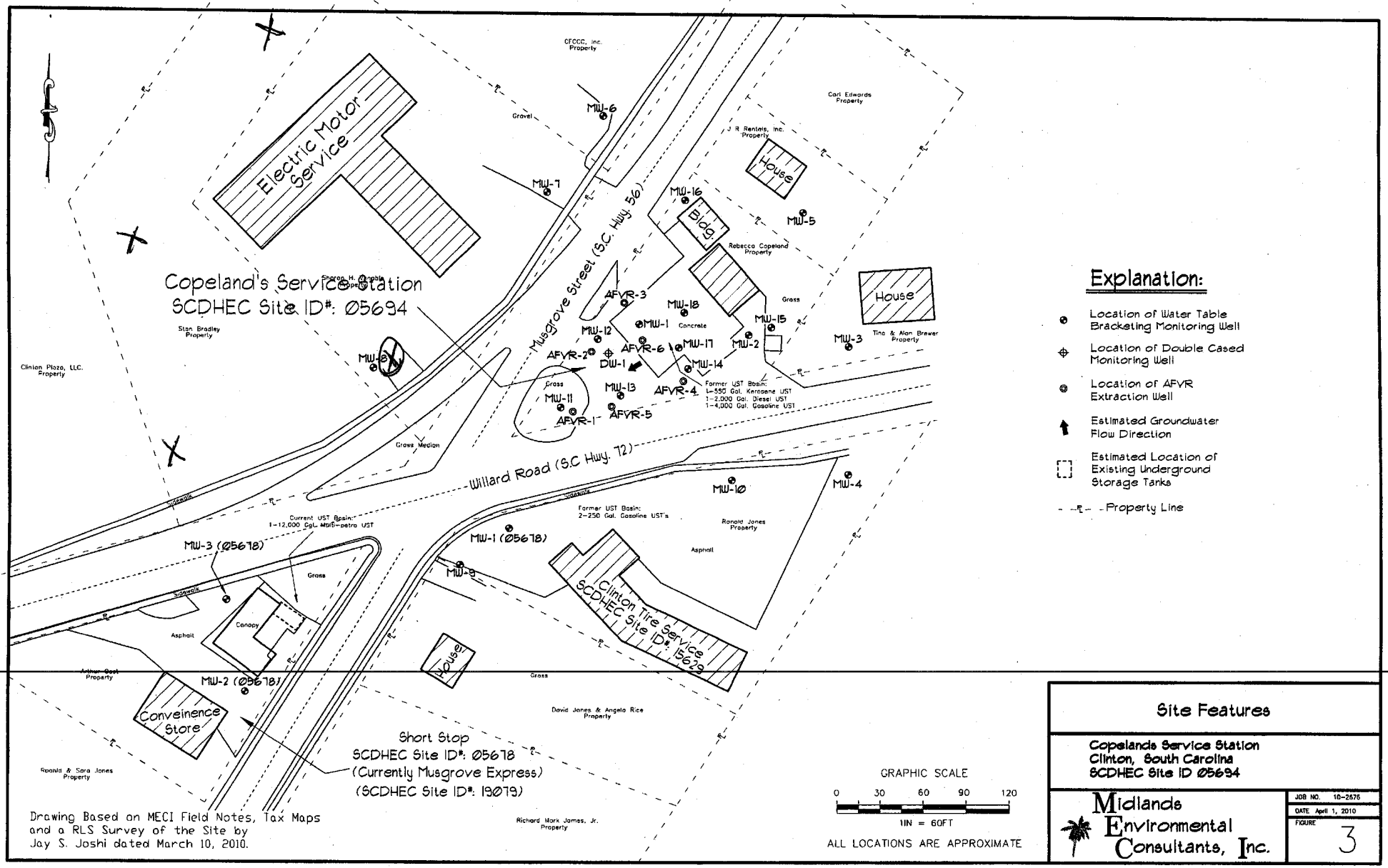
1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted 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 Stephanie Briney (tel: 803-896-6323 or e-mail: brineysm@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 Issue: August 16, 2010 **Approval No.: UMW-23853**

Stephanie Briney

Stephanie Briney, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management



05694

X = proposed shallow monitoring wells (X) = proposed deep monitoring

16 Tech
UST
DOCKET

UNDERGROUND STORAGE TANK (UST) OWNER/OPERATOR LEAD INFORMATION SHEET

1. CONTRACTOR OF CHOICE

As the UST Owner/Operator of UST Permit # 05694, I would like to use the contractor or person(s)* listed below and request that they represent me for: (check one)

( ) Initial Groundwater Assessment
( ) Other (please specify)_____
(X) all future assessments and clean-up scopes. **

UST
Steph
OCT 14 2010
PROGRAM

Name of Contractor/Person(s): Midlands Environmental Consultants, Inc.

Address: 235-B Dooley Road, Lexington, SC 29073

Telephone Number: (803) 808-2043

Note: Site rehabilitation activities must be performed by a SCDHEC Certified Site Rehabilitation Contractor in accordance with R.61-98.

*indicate if the person listed is your own employee

** if you would like the contractor to perform all future assessment and clean up activities at this and/or other facilities that have confirmed releases, please provide a list of all sites on your letterhead and provide the information requested in items 2 and 3 below within the context of the letter.

2. FINANCIAL OR FAMILIAL RELATIONSHIP

Does a financial or familial relationship, as defined below, exist between you and the contractor/person that you listed above? _____ Yes _X_ No (please initial)

Financial Relationship: A connection or association through a material interest of sources of income which exceed five percent of annual gross income from a business entity.

Familial Relationship: A connection or association by family or relatives, in which a family member or relative has a material interest. Family or relatives include: father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, grandchild, great grandchild, step grandparent, step great grandparent, step grandchild, step great grandchild, or fiancee.

3. PAYMENT

You can pay the contractor and, upon the submittal of the canceled check (or a notarized statement from the contractor), be compensated from the SUPERB Account, or have payment issued directly from us to the contractor.

I request that payment be made to me after I have paid the contractor. _____ Yes _____ No (please initial)
I request that payment be made directly to the contractor. HWL _X_ Yes _____ No (please initial)

Note: All costs must receive prior financial approval from the Department regardless of payment option.

Underground Storage Tank Owner/Operator Signature Harold Wm Carl
Date 10/14/10

Midlands
Environmental
Consultants, Inc.

November 12, 2010

UST DOCKET

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

USST
NOV 15 2010
PROGRAM

Subject: Report of Monitoring Well Installation, Groundwater Sampling, And Chemical Analyses
Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID# 05694, CA # 39770
MECI Project Number 10-3037
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Briney,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Monitoring Well Installation, Groundwater Sampling, and Chemical Analyses for the referenced site. This report describes assessment activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

PROJECT INFORMATION

The subject site (Copelands Service Station) is located at 700 Musgrove Street in Clinton, Laurens County, South Carolina (see Figure 1). The site consists of an approximately 5.07 acre parcel of land (see Figure 2), and currently occupied by an active gas station. The site formerly maintained one 550 gallon kerosene UST, one 2,000 gallon diesel UST, and one 4,000 gallon gasoline UST. The South Carolina Department of Health and Environmental Control (SCDHEC) reported release of petroleum product from three single walled underground storage tanks (UST) at the subject site in June of 1993, which was confirmed in July of 1994. MECI performed an additional assessment at the subject site in February of 2010. This assessment included the installation of two groundwater monitoring wells and a comprehensive groundwater sampling event.

The above project information is based on SCDHEC files.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

FIELD EXPLORATION

Field exploration conducted at the site included:

- construction of four groundwater monitoring wells;
- groundwater sampling; chemical analysis of groundwater samples: and,
- subsequent survey of the subject site.

The monitoring well locations were selected based on SCDHEC project manager instructions, existing site conditions, and drilling accessibility.

MONITORING WELL INSTALLATION

From October 14 through 28, 2010, three single cased, watertable bracketing monitoring wells and one double cased "deep" monitoring well were installed at the subject site. These well was installed by Geologic Exploration, of Statesville, North Carolina (S.C. Driller Certification: Danny Summers #B 01430 and Brian Thomas #B 01465). These wells were installed to better define the contaminant plume down gradient from the subject site. Monitoring wells MW-19, MW-20 and MW-21 were installed as single cased, watertable bracketing monitoring wells. These wells were installed using an ATV-mounted drilling rig employing 7.5-inch outer diameter hollow-stem augers to construct the borehole.

Monitoring well DW-2 was installed as a doubled cased monitoring well. During construction, a 6-inch outer casing was advanced to auger refusal and grouted in-place. The grout was allowed to cure and the remainder of the depth of the borehole was achieved using mud-rotary techniques. Mud-rotary refusal was encountered at 61.0 feet BGS. Monitoring well DW-1 was cased to a depth of 47.0 feet BGS and is screened from 56.0 to 61.0 feet BGS. The following table presents new well installation details:

Well Number	Screened Interval (ft)	Total Depth (ft)
MW-19	23.0-33.0	33.0
MW-20	23.0-33.0	33.0
MW-21	23.0-33.0	33.0
DW-2	56.0-61.0	61.0

The soils encountered during drilling activities consisted of fine to medium grained sands and silts of the Piedmont Physiographic Province.

Representative portions of soil samples were screened with an Photo Ionization Detector (PID) and classified by MECI personnel. Test boring records showing soil descriptions and screening result are attached.

Based on PID readings and lack on access to spread soils onsite, soil cuttings were transported to Waste Management/Richland Landfill, Elgin, SC by MECI. A total of 1.96 tons was disposed of in this manner. A disposal manifest for these soils is attached at the end of this report.

Following completion of the monitoring wells, the wells were developed by bailing until they were determined to be functioning properly and turbidity was reduced. Test Boring Records showing soil descriptions and monitoring well installation details are attached. The drummed purge water was treated by MECI personnel using a granular activated carbon drum. A total of one (1) drum of purge/development water was disposed of in this manner. A disposal manifest for the drummed purge water is attached at the end of this report.

SITE SURVEY

Following the well installation, a subsequent survey was conducted by MECI personnel, utilizing a fiberglass rod, level, and tape to determine the horizontal and vertical position of the newly installed monitoring wells. Elevations were based on site datum provided by SCDHEC.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSES

On November 2, 2010, MECI personnel collected groundwater samples from twenty (20) monitoring wells at the subject site. Monitoring wells MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-5, and AFVR-6 were gauged and contained measurable free phase petroleum product and were not sampled. Monitoring wells MW-2 and AFVR-1 were gauged and determined to have insufficient water for sampling. Based on a request by SCDHEC personnel, not all of the wells were purged prior to sampling. Purging was completed by bailing at least three well volumes of water from the well or until pH, conductivity, dissolved oxygen stabilized to within 10%, whichever occurred first. Where applicable, field measurements of pH, conductivity, dissolved oxygen, dissolved carbon dioxide, and water temperature were obtained before well sampling process. Table 1 presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC guidelines.

Groundwater samples obtained were sent to Pace Analytical Services, Inc. of Huntersville, NC (SCDHEC Laboratory Certification #99006) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Gauge Only	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
				Analyte Sampled									
MW-1			X										
MW-2			X										
MW-3		X		X	X			X					
MW-4		X		X	X			X					
MW-5		X		X	X			X					
MW-6		X		X	X			X					
MW-7		X		X	X			X					

Monitoring Well	Purge	No Purge	Gauge Only	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
				Analyte Sampled									
MW-8		X		X	X			X					
MW-9		X		X	X			X					
MW-10		X		X	X			X					
MW-11		X		X	X			X					
MW-12			X										
MW-13			X										
MW-14			X										
MW-15		X		X	X			X					
MW-16		X		X	X			X					
MW-17		X		X	X			X					
MW-18		X		X	X			X					
MW-19	X			X	X			X					
MW-20	X			X	X			X					
MW-21	X			X	X			X					
DW-1	X			X	X			X					
DW-2	X			X	X			X					
AFVR-1			X										
AFVR-2		X		X	X			X					
AFVR-3			X										
AFVR-4		X		X	X			X					
AFVR-5			X										
AFVR-6			X										

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

The results of the laboratory analyses are summarized in Table 2, and presented in the attached Analytical data.

GROUNDWATER ANALYTICAL RESULTS

As discussed above, groundwater samples obtained from the monitoring wells were analyzed for dissolved phase petroleum constituents. The analytical results indicate petroleum impact to the local groundwater with the highest dissolved concentrations detected in the area of monitoring well MW-13. Monitoring well MW-13 contained 2.75 feet of free phase petroleum product at time of sampling. Additionally, monitoring wells MW-1, MW-12, MW-14, AFVR-3, AFVR-5, and AFVR-6 contained measurable free phase petroleum product at time of sampling. The analytical results indicate dissolved total BTEX concentrations ranging from levels below detection limits (BDL) to 74,950 micrograms per liter in AFVR-4. The analytical results indicate dissolved MTBE concentrations ranging from levels below detection limits (BDL) to 910 micrograms per liter in monitoring well MW-18. The results of the analyses for each monitoring well and specific parameters are listed on Table 2. The detection limit for each parameter is provided in the attached laboratory reports.

ASSESSMENT SUMMARY

Groundwater elevation data for the November 2, 2010, gauging events was plotted, and points of equal elevation were interpolated between the monitoring wells. A groundwater contour map of the surficial aquifer was thus prepared and is presented on Figure 3.

At time of sampling, free phase petroleum product was detected in MW-1 at a thickness of 1.45 feet, in MW-12 at a thickness of 0.08 feet, in MW-13 at a thickness of 2.75 feet, in MW-14 at a thickness of 0.09 feet, in AFVR-3 at a thickness of 0.28 feet, in AFVR-5 at a thickness of 1.68 feet , and in AFVR-6 at a thickness of 0.56 feet. The concentrations of dissolved total BTEX (indicator of the dissolved phase plume) in the groundwater on and surrounding the site range from levels below detection limits (BDL) to 74,950 micrograms per liter in AFVR-4. The concentrations of MTBE in the groundwater on and surrounding the site range from levels below detection limits (BDL) to 910 micrograms per liter in MW-18. Figure 4 depicts graphically the concentrations of Total BTEX (indicator for plume migration) dissolved in the groundwater at the site. Figure 5 depicts graphically the concentrations of MTBE dissolved in the groundwater at the site.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Contents of this report are intended for the sole use by the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Brendon P. Kelly
Project Scientist

Bryan T. Shane, P.G.
Principal Geologist

Attachments

TABLES

TABLE 1

FIELD PARAMETERS
NOVEMBER 02, 2010 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-3037
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Dissolved CO_2 (mg/l)	Dissolved Oxygen (mg/l)	Temperature (^{o} Celsius)	pH (Initial)	pH (Final)	Conductivity (Initial)	Conductivity (Final)	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-1	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=33.95	30.79	33.63	2.84	659.98	628.76
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=33.95	31.35	32.80	1.45	659.98	628.41
MW-2	2/3/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	TD=12.05	DRY	DRY	DRY	659.57	DRY
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	TD=12.05	DRY	DRY	DRY	659.57	DRY
MW-3	2/3/2010	105	3.07	18.7	5.51	NT	42.7	NT	25-35	***	26.50	***	658.21	631.71
	11/2/2010	175	0.81	18.7	5.61	NT	72.7	NT	-	***	31.06	***	658.21	627.15
MW-4	2/3/2010	65	4.21	18.4	5.99	NT	55.1	NT	25-35	***	30.53	***	658.41	627.88
	11/2/2010	75	1.32	16.7	6.22	NT	70.4	NT	-	***	31.83	***	658.41	626.58
MW-5	2/3/2010	25	6.90	14.5	6.08	6.77	46.5	43.9	25-35	***	15.14	***	653.79	638.65
	11/2/2010	125	1.76	17.6	6.11	NT	68.7	NT	-	***	25.60	***	653.79	628.19
MW-6	2/3/2010	60	3.01	18.5	6.20	NT	44.9	NT	25-35	***	28.03	***	656.32	628.29
	11/2/2010	75	1.13	19.5	5.91	NT	63.0	NT	-	***	28.39	***	656.32	627.93
MW-7	2/3/2010	130	1.56	18.9	6.07	NT	45.9	NT	25-35	***	30.76	***	658.96	628.20
	11/2/2010	100	0.97	19.8	5.42	NT	37.0	NT	-	***	30.95	***	658.96	628.01
MW-8	2/3/2010	INS	INS	INS	INS	INS	INS	INS	25-35	***	32.81	***	659.94	627.13
	11/2/2010	200+	0.91	19.5	10.84	NT	266.3	NT	-	***	31.87	***	659.94	628.07
MW-9	2/3/2010	200+	0.58	20.2	6.25	NT	217.1	NT	25-35	***	33.03	***	660.49	627.46
	11/2/2010	105	1.55	19.3	5.98	NT	68.5	NT	-	***	32.50	***	660.49	627.99
MW-10	2/3/2010	150	2.30	17.9	5.95	NT	67.0	NT	25-35	***	31.34	***	659.53	628.19
	11/2/2010	150	1.69	18.3	5.57	NT	69.8	NT	-	***	32.31	***	659.53	627.22
MW-11	2/3/2010	INS	INS	INS	INS	INS	INS	INS	25-35	***	33.05	***	661.23	628.18
	11/2/2010	160	1.05	20.5	5.64	NT	76.0	NT	-	***	33.25	***	661.23	627.98
MW-12	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	31.55	32.80	1.25	660.14	628.40
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	32.00	32.08	0.08	660.14	628.13
MW-13	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	31.78	33.81	2.03	661.12	629.04
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	31.93	34.68	2.75	661.12	628.78
MW-14	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	30.60	31.46	0.86	660.25	629.52
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	32.18	32.27	0.09	660.25	628.06

Notes:

1. mg/l = milligrams per liter.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Stabalized groundwater levels measured 11/02/10.
4. NT = Not Tested.
5. INS = Insufficient Water for Field Measurements
6. Dissolved oxygen, dissolved carbon dioxide, initial pH, initial conductivity, and temperature measurements obtained on 11/02/10 & 11/08/10.
7. PROD= Free Phase Petroleum Product.
8. Groundwater elevation for MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-5, and AFV-6 corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85

TABLE 1

FIELD PARAMETERS
NOVEMBER 02, 2010 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-3037
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Dissolved CO_2 (mg/l)	Dissolved Oxygen (mg/l)	Temperature (^{o} Celsius)	pH (Initial)	pH (Final)	Conductivity (Initial)	Conductivity (Final)	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-15	2/3/2010	45	2.44	19.2	5.92	NT	70.4	NT	25-35	***	25.35	***	659.54	634.19
	11/2/2010	190	1.66	19.1	5.40	NT	48.0	NT	-	***	31.27	***	659.54	628.27
MW-16	2/3/2010	155	2.43	18.6	6.24	NT	184.1	NT	25-35	***	29.41	***	658.22	628.81
	11/2/2010	165	0.76	19.0	5.80	NT	166.3	NT	-	***	30.04	***	658.22	628.18
MW-17	2/19/2010	110	3.78	20.7	6.60	6.54	164.4	194.5	30-40	***	30.14	***	660.19	630.05
	11/2/2010	90	0.70	21.5	6.00	NT	155.4	NT	-	***	31.76	***	660.19	628.43
MW-18	2/19/2010	140	2.28	20.8	6.46	6.42	139.9	177.1	30-40	***	28.74	***	659.50	630.76
	11/2/2010	115	0.60	20.8	5.40	NT	141.7	NT	-	***	30.56	***	659.50	628.94
MW-19	11/2/2010	50	1.35	19.9	9.79	8.79	138.2	107.0	23-33	***	26.43	***	654.46	628.03
MW-20	11/2/2010	95	5.74	20.0	8.58	8.50	106.1	97.6	23-33	***	27.80	***	654.26	626.46
MW-21	11/2/2010	150	3.49	18.0	8.31	7.97	65.0	72.0	23-33	***	27.19	***	653.53	626.34
DW-1	2/3/2010	40	1.21	19.1	6.78	6.75	91.8	101.4	75-85	***	32.02	***	660.41	628.39
	11/2/2010	50	2.00	19.8	6.59	6.48	93.4	90.5	-	***	32.41	***	660.41	628.00
DW-2	11/2/2010	25	5.17	22.7	10.99	11.93	3,279	533.0	56-61	***	31.59	***	659.59	628.00
AFVR-1	2/3/2010	INS	INS	INS	INS	INS	INS	INS	TD=33.96	***	33.09	***	661.55	628.46
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	-	***	DRY	***	661.55	DRY
AFVR-2	2/3/2010	INS	INS	INS	INS	INS	INS	INS	TD=34.45	***	32.13	***	660.51	628.38
	11/2/2010	200+	1.06	21.3	5.45	NT	83.0	NT	-	***	32.35	***	660.51	628.16
AFVR-3	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.10	30.85	30.97	0.12	659.34	628.47
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	31.06	31.34	0.28	659.34	628.24
AFVR-4	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.45	30.88	30.92	0.04	660.14	629.25
	11/2/2010	200+	1.08	20.5	6.05	NT	227.0	NT	-	***	32.15	***	660.14	627.99
AFVR-5	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.35	31.55	34.65	3.10	661.21	629.20
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	32.13	33.81	1.68	661.21	628.83
AFVR-6	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.36	31.93	34.00	2.07	659.95	627.71
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	31.20	31.76	0.56	659.95	628.67

Notes:
1. mg/l = milligrams per liter.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Stabalized groundwater levels measured 11/02/10.
4. NT = Not Tested.
5. INS = Insufficient Water for Field Measurements
6. Dissolved oxygen, dissolved carbon dioxide, initial pH, initial conductivity, and temperature measurements obtained on 11/02/10 & 11/08/10.
7. PROD= Free Phase Petroleum Product.
8. Groundwater elevation for MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-5, and AFV-6 corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85

TABLE 2

GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 02, 2010 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-3037
SCDHEC ID NUMBER 05694

Well Number	Sample Date	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	Total BTEX (µg/l)	MTBE (µg/l)	Naphthalene (µg/l)	EDB (µg/l)	Total Lead (µg/l)
MW-1	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	2/3/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	2/3/2010	<5.0	**105**	**61.2**	**388**	**554.2**	<5.0	**44.8**	**0.22**	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020	<5.0
MW-4	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020	<5.0
MW-5	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020	**4.8J**
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	<5.0
MW-6	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	**7.1**
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020	**5.4**
MW-7	2/3/2010	**12.5**	**27.8**	**94.4**	**323**	**457.7**	<10.0	**38.3**	**0.078**	<5.0
	11/2/2010	<5.0	<5.0	<5.0	**14.1**	**14.1**	<5.0	<5.0	**0.045**	<5.0
MW-8	2/3/2010	**989**	<25.0	**40.7**	**24.6J**	**1,054.3J**	<25.0	**619**	<0.019	<5.0
	11/2/2010	**113**	**203**	**140**	**284**	**740**	**20.7**	**287**	<0.020	<5.0
MW-9	2/3/2010	**4,620**	**32,600**	**3,190**	**17,600**	**58,010**	<5.0	**623**	**59.3**	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020	<5.0
MW-10	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020	<5.0
MW-11	2/3/2010	<250	**101J**	**1,310**	**15,200**	**16,611J**	<250	**1,280**	<0.020	**17.3**
	11/2/2010	<250	**251**	**1,640**	**16,300**	**18,191**	<250	**1,350**	<0.020	**8.9**
MW-12	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-13	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. mg/l = milligrams per liter
4. MTBE = Methyl-Tertiary-Butyl Ether
5. EDB = Ethylene Dibromide
6. 1,2 DCA = 1,2-Dichloroethane
7. NT = Not Tested
8. See Appendix for Laboratory Detection Limits
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free Phase Petroleum Product

TABLE 2

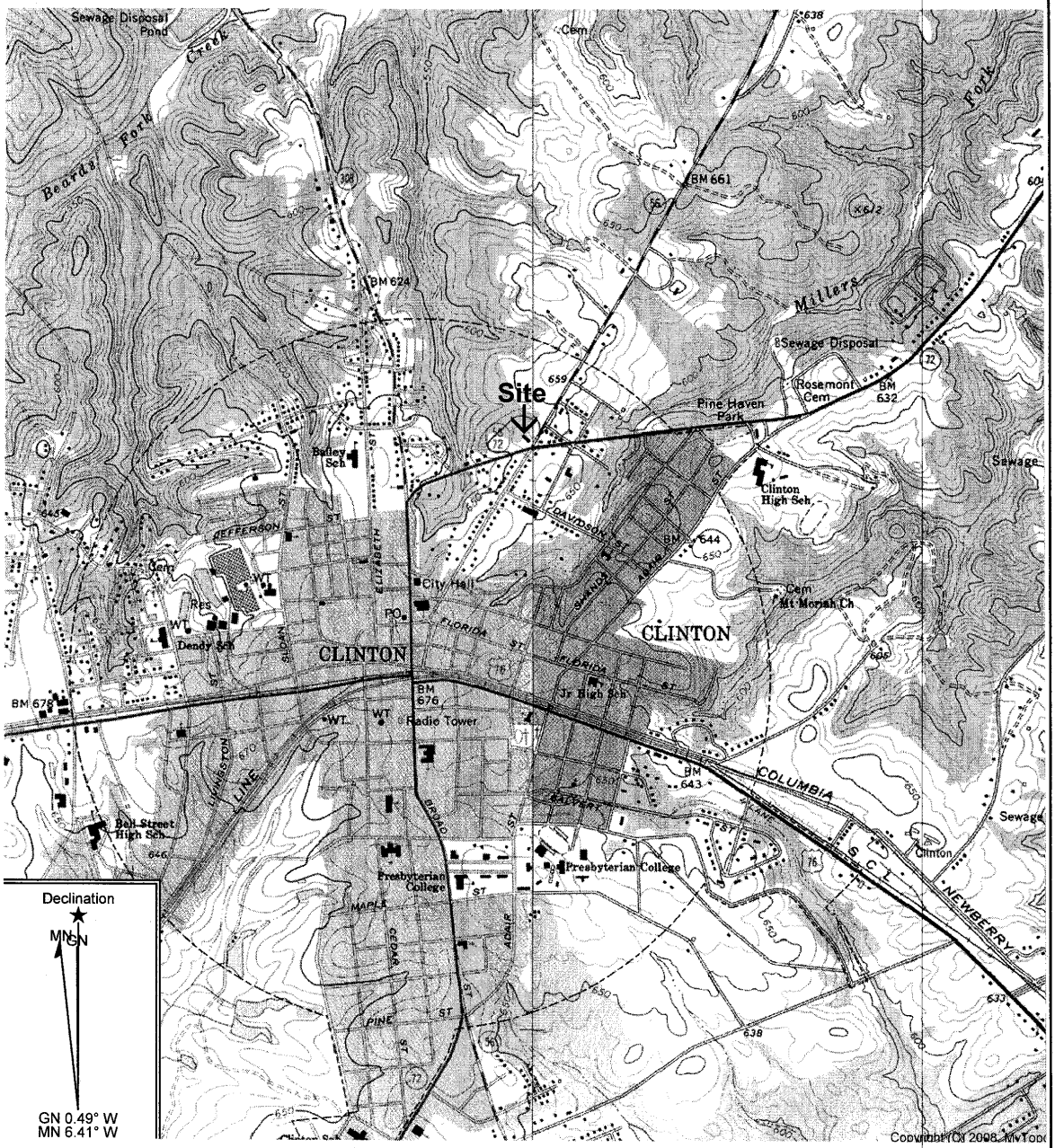
GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 02, 2010 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-3037
SCDHEC ID NUMBER 05694

Well Number	Sample Date	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	Total BTEX (µg/l)	MTBE (µg/l)	Naphthalene (µg/l)	EDB (µg/l)	Total Lead (µg/l)
MW-15	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	<5.0
	11/2/2010	<5.0	**1.8J**	<5.0	<10.0	**1.8J**	<5.0	<5.0	<0.019	**55.2**
MW-16	2/3/2010	<10.0	**10.6**	**263**	**1,040**	**1,313.6**	<10.0	**247**	<0.020	<5.0
	11/2/2010	<5.0	**3.9J**	**26.8**	**503**	**533.7J**	<5.0	**155**	<0.020	<5.0
MW-17	2/19/2010	**9,790**	**15,500**	**2,490**	**12,700**	**40,480**	**87.3**	**380J**	**14.5**	<5.0
	11/2/2010	**10,900**	**19,500**	**3,000**	**19,000**	**52,400**	**15.0**	**432**	**39.4**	**7.1**
MW-18	2/19/2010	**8,250**	**32,900**	**3,440**	**19,000**	**63,590**	**597J**	<1,000	**50.7**	**13.7**
	11/2/2010	**8,070**	**34,500**	**3,440**	**19,600**	**65,610**	**910**	**1,330**	**64.2**	**12.4**
MW-19	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020	<5.0
MW-20	11/2/2010	<5.0	**4.0J**	<5.0	**4.9J**	**8.9J**	<5.0	**4.4J**	<0.027	<5.0
MW-21	11/2/2010	**25.5**	**3.4J**	<5.0	**88.7**	**117.6J**	<5.0	**9.1**	**0.24**	<5.0
DW-1	2/3/2010	**653**	<25.0	<25.0	**24.0J**	**677.0J**	<25.0	**32.6**	<0.020	<5.0
	11/2/2010	**6.0**	**1.9J**	<5.0	**3.0J**	**10.9J**	<5.0	<5.0	<0.020	<5.0
DW-2	11/2/2010	**100**	<5.0	<5.0	**11.5**	**111.5**	<5.0	**2.9J**	<0.021	<5.0
AFVR-1	2/3/2010	<100	**106**	**1,220**	**8,730**	**10,056**	<100	**636**	**0.075**	**4.8J**
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
AFVR-2	2/3/2010	**2,930**	**18,400**	**872J**	**16,000**	**38,202J**	<1,000	**606J**	**10.6**	**15.4**
	11/2/2010	**3,950**	**28,600**	**2,480**	**24,800**	**59,830**	<250	**653**	**15.4**	<5.0
AFVR-3	2/3/2010	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
	11/2/2010	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
AFVR-4	2/3/2010	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
	11/2/2010	**20,500**	**31,300**	**3,250**	**19,900**	**74,950**	<125	**541**	**305**	**29.9**
AFVR-5	2/3/2010	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
	11/2/2010	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
AFVR-6	2/3/2010	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
	11/2/2010	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. mg/l = milligrams per liter
4. MTBE = Methyl-Tertiary-Butyl Ether
5. EDB = Ethylene Dibromide
6. 1,2 DCA = 1,2-Dichloroethane
7. NT = Not Tested
8. See Appendix for Laboratory Detection Limits
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free Phase Petroleum Product

FIGURES



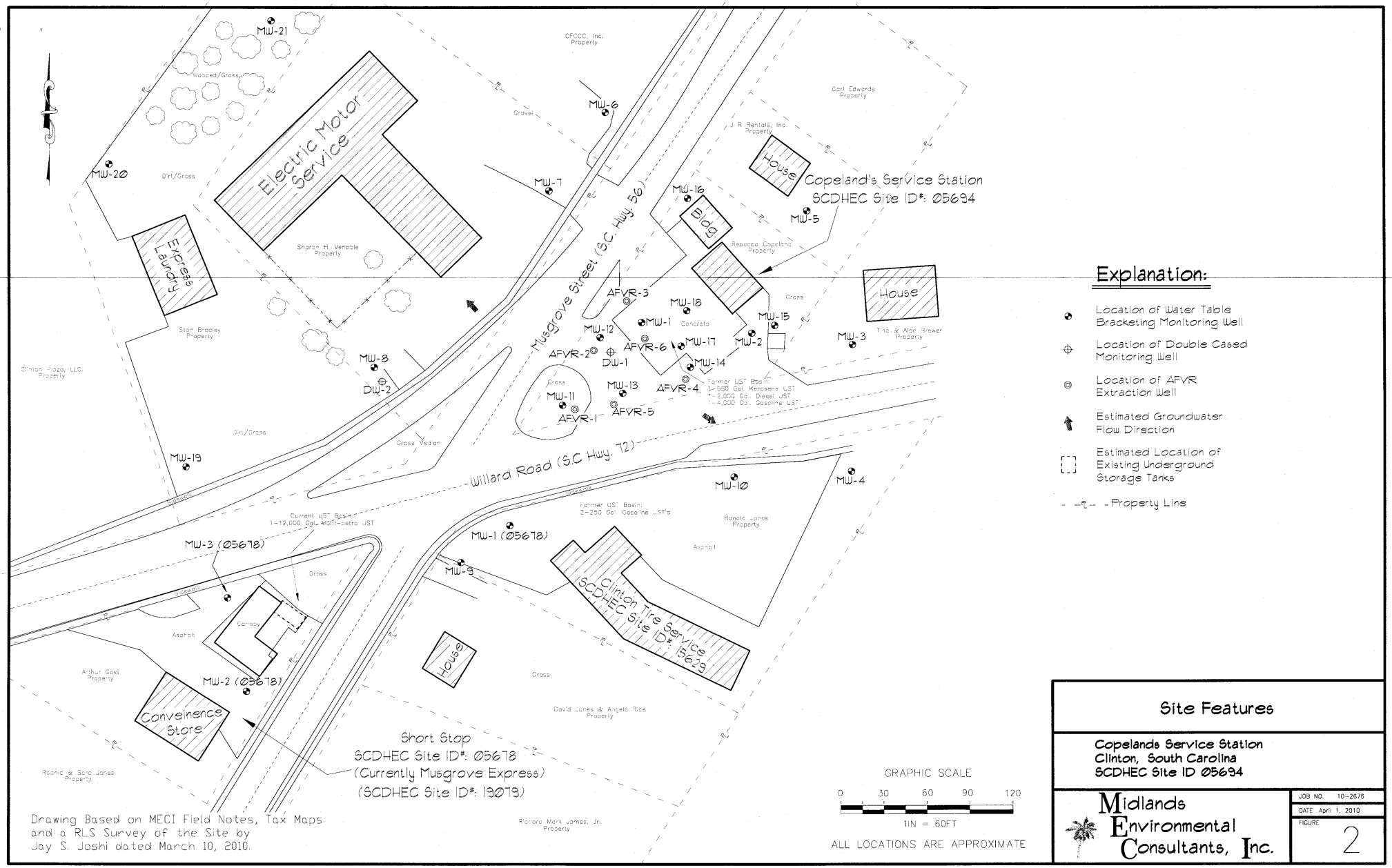
GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Clinton, South Carolina
Joanna, South Carolina
USGS 7.5 Min. Quad
Countour Interval – 10 Feet

Midlands Environmental Consultants, Inc.	Site Location
Copelands Service Station 700 Musgrove Street, Clinton, SC SCDHEC Site ID# 05694	
Figure 1	MECI 10-3037



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

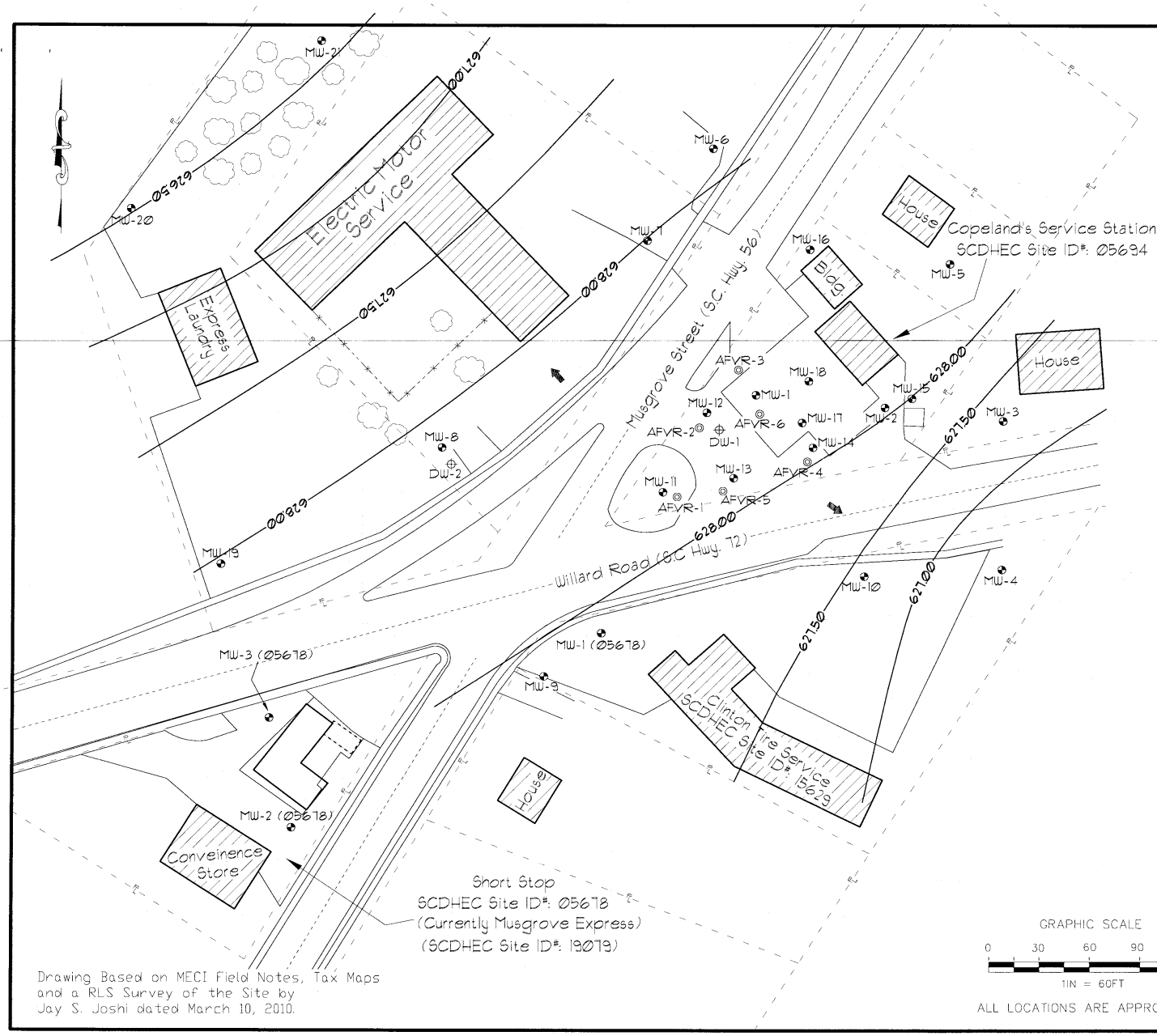
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	2



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Ground-Water Elevation Isopleth (feet)

Groundwater Elevation Data

Well #	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well Head Elevation	Groundwater Elevation
MW-1	31.35	32.80	1.45	659.88	628.41
MW-2	---	DRY	---	659.57	DRY
MW-3	---	31.06	---	658.21	627.15
MW-4	---	31.83	---	658.41	626.58
MW-5	---	25.60	---	653.79	628.19
MW-6	---	28.39	---	656.32	627.93
MW-7	---	30.95	---	658.96	628.01
MW-8	---	31.87	---	659.94	628.07
MW-9	---	32.50	---	660.49	627.99
MW-10	---	32.31	---	659.53	627.22
MW-11	---	33.25	---	661.23	627.98
MW-12	32.00	32.08	0.08	660.14	628.13
MW-13	31.93	34.68	2.75	661.12	628.78
MW-14	32.18	32.27	0.09	660.25	628.06
MW-15	---	31.27	---	659.54	628.27
MW-16	---	30.04	---	658.22	628.18
MW-17	---	31.76	---	660.19	628.43
MW-18	---	30.56	---	659.50	628.94
MW-19	---	26.43	---	654.46	628.03
MW-20	---	27.80	---	654.26	626.46
MW-21	---	27.19	---	653.53	626.34
DW-1	---	32.41	---	660.41	628.00
DW-2	---	31.59	---	659.59	628.00
AFVR-1	---	DRY	---	661.55	DRY
AFVR-2	---	32.35	---	660.51	628.16
AFVR-3	31.06	31.34	0.28	659.34	628.24
AFVR-4	---	32.15	---	660.14	627.99
AFVR-5	32.13	33.81	1.68	661.21	628.83
AFVR-6	31.20	31.76	0.56	659.95	628.67

Notes: Depth to groundwater measured on November 2, 2010.

Contour Interval = 0.50 Feet

Site Datum Based on Assumed Spot Elevation.

Monitoring wells MW-11, DW-1, and DW-2 not used in contouring.

Groundwater elevation for MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-5, and AFVR-6 corrected for the presence of Free Phase Petroleum Product using a specific gravity for fuel of 0.85.

Ground Water Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

Groundwater Contour Map

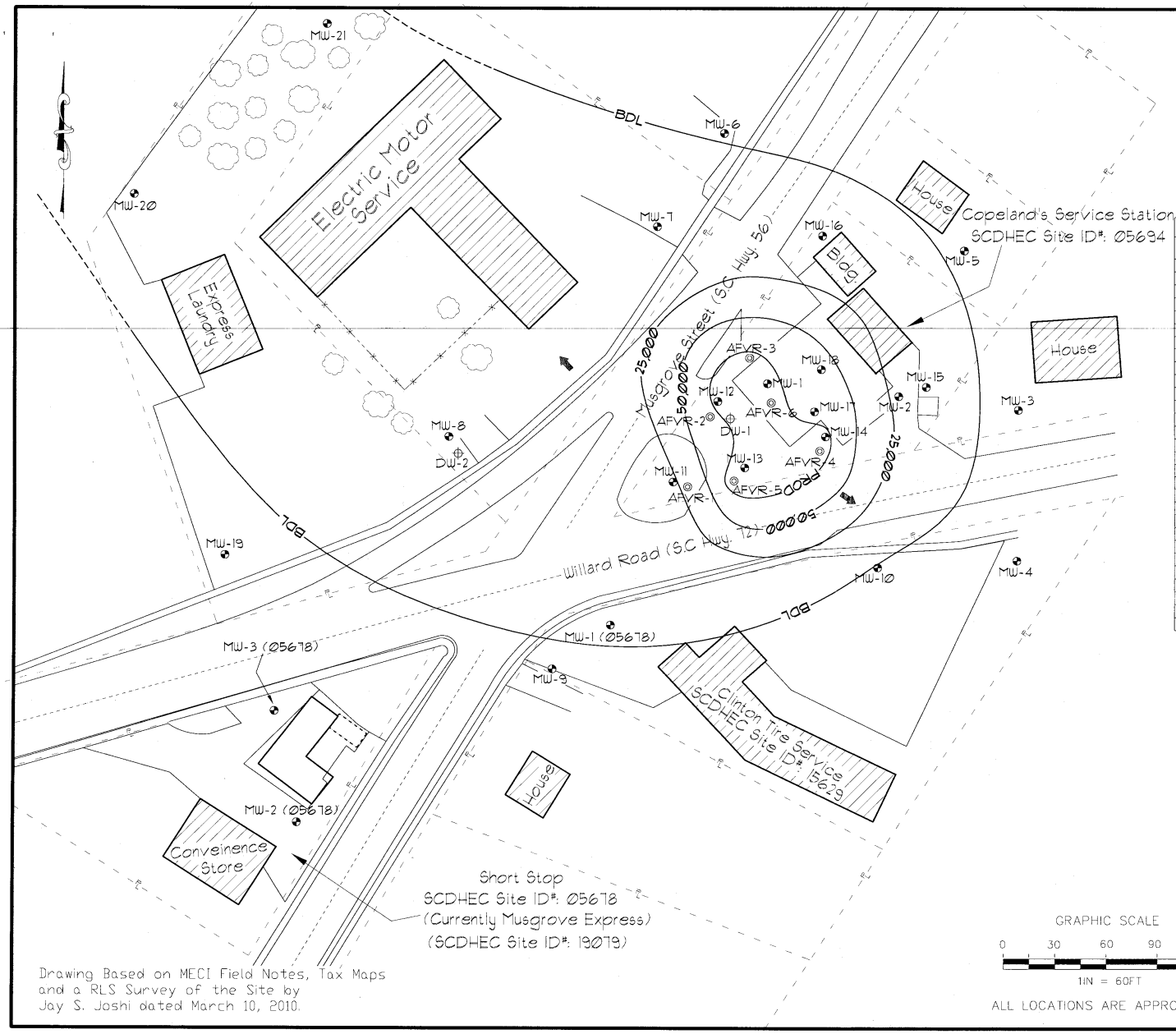
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 10-2676

DATE April 1, 2010

FIGURE 3



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Total BTEX Concentration Isopleth (ug/l)

COC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	MTBE (ug/l)	Naphthalene (ug/l)	EDB (ug/l)
MW-1	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-4	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-5	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-6	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-7	<5.0	<5.0	<5.0	14.1	14.1	<5.0	<5.0	0.045
MW-8	113	203	140	284	740	20.7	287	<0.020
MW-9	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-10	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-11	<250	251	1,640	16,300	18,191	<250	1,350	<0.020
MW-12	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-15	<5.0	1.8J	<5.0	<10.0	1.8J	<5.0	<5.0	<0.019
MW-16	<5.0	3.9J	26.8	503	533.7J	<5.0	155	<0.020
MW-17	10,900	19,500	3,000	19,000	52,400	15.0	432	39.4
MW-18	8,070	34,500	3,440	19,600	65,610	910	1,330	64.2
MW-19	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-20	<5.0	4.0J	<5.0	4.9J	8.9J	<5.0	4.4J	<0.027
MW-21	25.5	3.4J	<5.0	88.7	117.6J	<5.0	9.1	0.24
DW-1	6.0	1.9J	<5.0	3.0J	10.9J	<5.0	<5.0	<0.020
DW-2	100	<5.0	<5.0	11.5	111.5	<5.0	2.9J	<0.021
AFVR-1	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
AFVR-2	3,950	28,600	2,480	24,800	59,830	<250	653	15.4
AFVR-3	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	20,500	31,300	3,250	19,900	74,950	<125	541	305
AFVR-5	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-6	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD

Notes: Groundwater samples collected on November 2, 2010.

Concentration Isopleth Interval = 25,000 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

DRY = Monitoring Well Dry at Time of Sampling

"J" values used in total BTEX calculation.

Concentration Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

Total BTEX Isopleth Map

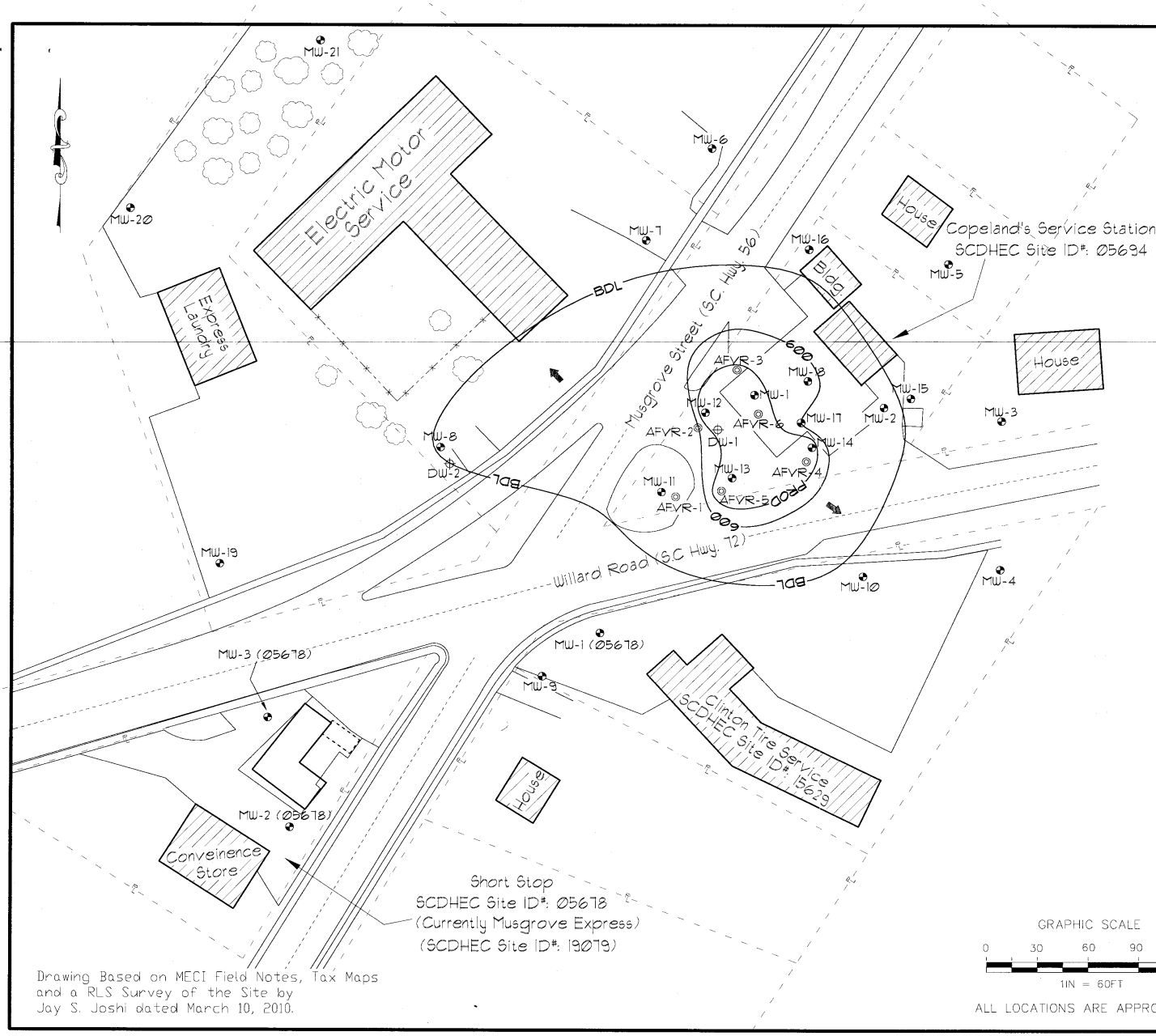
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 10-2676

DATE April 1, 2010

FIGURE 4



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- MTBE Concentration Isopleth (ug/l)

COC Concentration Data

Sample *	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	MTBE (ug/l)	Naphthalene (ug/l)	EDB (ug/l)
MW-1	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-4	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-5	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-6	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-7	<5.0	<5.0	<5.0	14.1	14.1	<5.0	<5.0	0.045
MW-8	113	203	140	284	740	20.7	287	<0.020
MW-9	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-10	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-11	<250	251	1,640	16,300	18,191	<250	1,350	<0.020
MW-12	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-15	<5.0	1.8J	<5.0	<10.0	1.8J	<5.0	<5.0	<0.019
MW-16	<5.0	3.9J	26.8	503	533.7J	<5.0	155	<0.020
MW-17	10,900	19,500	3,000	19,000	52,400	15.0	432	39.4
MW-18	8,070	34,500	3,440	19,600	65,610	910	1,330	64.2
MW-19	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-20	<5.0	4.0J	<5.0	4.9J	8.9J	<5.0	4.4J	<0.027
MW-21	25.5	3.4J	<5.0	88.7	117.6J	<5.0	9.1	0.24
DW-1	6.0	1.9J	<5.0	3.0J	10.9J	<5.0	<5.0	<0.020
DW-2	100	<5.0	<5.0	11.5	111.5	<5.0	2.9J	<0.021
AFVR-1	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
AFVR-2	3,950	28,600	2,480	24,800	59,830	<250	653	15.4
AFVR-3	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	20,500	31,300	3,250	19,900	74,950	<125	541	305
AFVR-5	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-6	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD

Notes: Groundwater samples collected on November 2, 2010.

Concentration Isopleth Interval = 600 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

DRY = Monitoring Well Dry at Time of Sampling

"J" values used in total BTEX calculation.

Concentration Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

MTBE Isopleth Map

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 10-2676

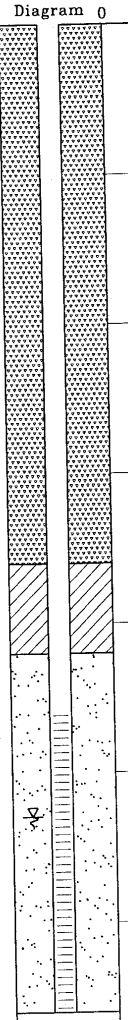
DATE April 1, 2010

FIGURE 5

TEST BORING AND MONITORING WELL INSTALLATION RECORDS

Depth (Feet)	Description	PID PPM
	Grass with Topsoil	
	PIEDMONT RESIDUUM: Red, Micaceous SILT	
5		1.9
10		21.3
15		1.9
	Brown, Micaceous Silty Fine to Medium SAND	
20		2.1
25		2.2
30		1.8
		0.6
35	Boring Terminated at 33.0 Feet. Monitoring Well Installed to 33.0 Feet Below Ground Surface (BGS). Groundwater Measured at 26.43 Feet Below Top of Casing on 11/02/10.	

Well Diagram



Penetration Blows Per Foot

0 5 10 20 40 60 80 100

NO BLOWCOUNTS RECORDED

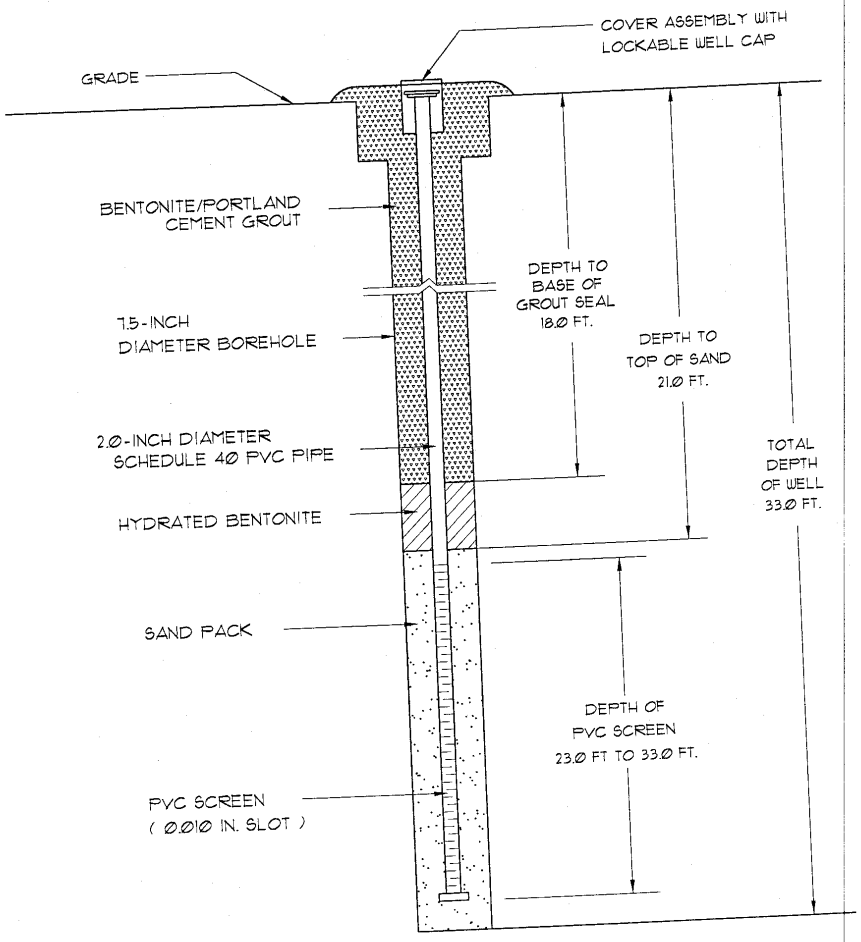
TEST BORING RECORD
Copeland's Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037

Boring Number:	MW-19
Date Drilled:	10/13/10
Drilled By:	Geologic Exploration Inc.
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Copeland's Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037

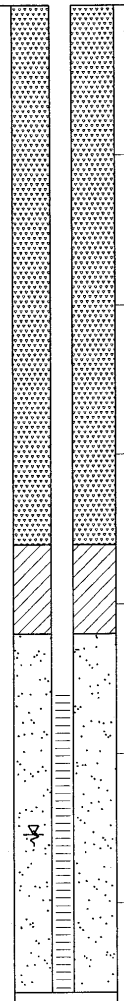


Well Number:	MW-19
Date Drilled:	10/13/10
Drilled By:	Geologic Exploration Inc.
Driller: D. Summers	S.C. I.D. #: B 01430
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

Depth (Feet)	Description	PID PPM
	Grass with Topsoil	
	PIEDMONT RESIDUUM: Red, Micaceous Silty Fine to Medium SAND	
5		0.8
10		0.8
15		0.7
	Brown, Micaceous Silty Fine to Medium SAND	
20		0.5
25		0.4
30		0.4
		1.1
35	Boring Terminated at 33.0 Feet. Monitoring Well Installed to 33.0 Feet Below Ground Surface (BGS). Groundwater Measured at 27.80 Feet Below Top of Casing on 11/02/10.	

Well Diagram



Penetration Blows Per Foot

0 5 10 20 40 60 80 100

NO BLOWCOUNTS RECORDED

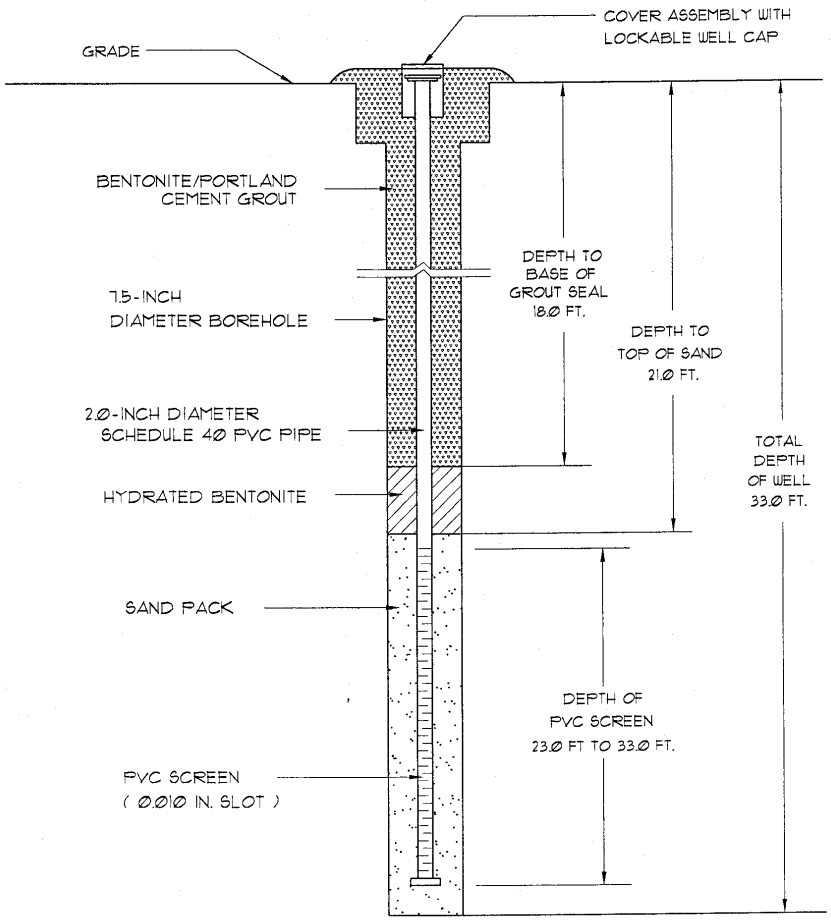
TEST BORING RECORD
Copeland's Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037

Boring Number:	MW-20
Date Drilled:	10/13/10
Drilled By:	Geologic Exploration Inc.
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Copeland's Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037

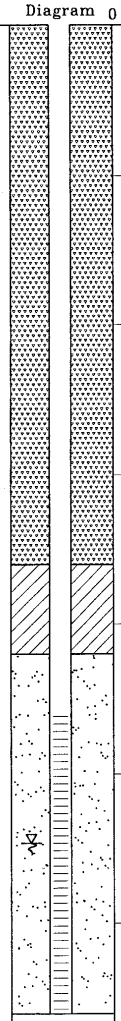


Well Number:	MW-20
Date Drilled:	10/13/10
Drilled By:	Geologic Exploration Inc.
Driller: D. Summers	S.C. I.D. #: B 01430
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-1043 fax: 808-1048

Depth (Feet)	Description	PID PPM
	Grass with Topsoil	
	PIEDMONT RESIDUUM: Red, Micaceous Silty Fine SAND	
5		1.0
10		0.6
	Brown, Micaceous Silty Fine to Medium SAND	
15		0.6
20		0.3
25		0.3
30		0.5
		0.3
35	Boring Terminated at 33.0 Feet. Monitoring Well Installed to 33.0 Feet Below Ground Surface (BGS). Groundwater Measured at 27.19 Feet Below Top of Casing on 11/02/10.	

Well Diagram



Penetration Blows Per Foot

0 5 10 20 40 60 80 100

NO BLOWCOUNTS RECORDED

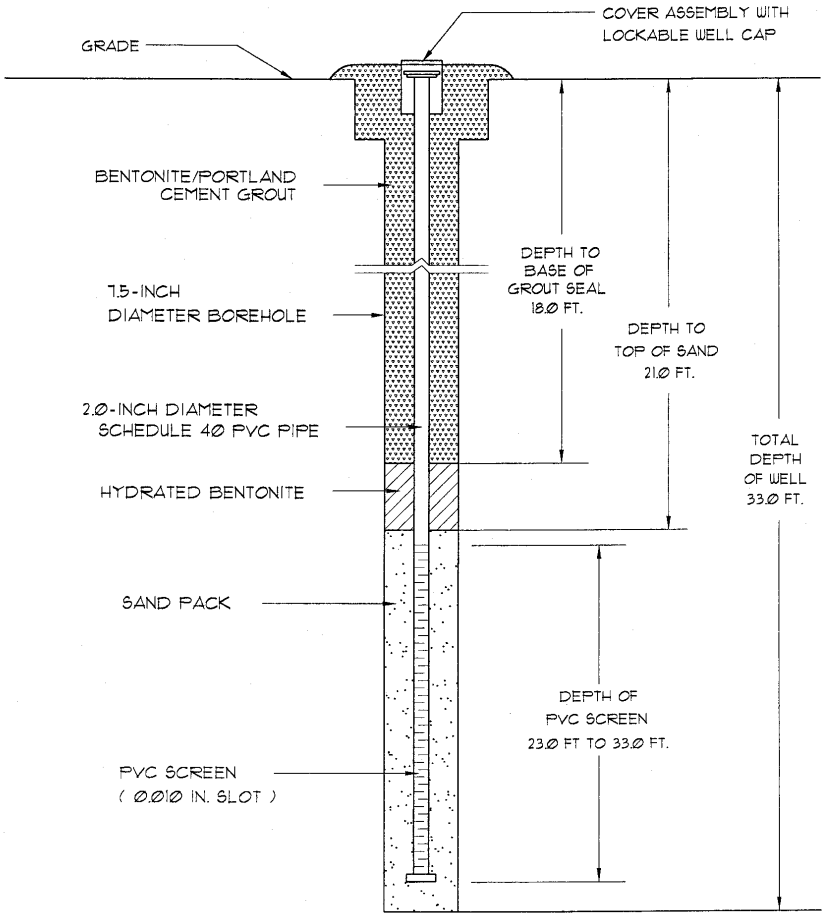
TEST BORING RECORD
Copeland's Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037

Boring Number:	MW-21
Date Drilled:	10/13/10
Drilled By:	Geologic Exploration Inc.
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Copeland's Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037



Well Number:	MW-21
Date Drilled:	10/13/10
Drilled By:	Geologic Exploration Inc.
Driller: D. Summers S.C. I.D. #: B 01430	
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

Depth (Feet)	Description	PID PPM
	Grass with Topsoil	
	PIEDMONT RESIDUUM: Red, Silty Fine to Medium SAND	
5		1.3
10	Brown, Micaceous Silty Fine to Medium SAND	ND
15		ND
20		ND
25		ND
30		ND
35		ND
	Partially Weathered Rock: Sampled as Brown, Micaceous Silty Fine to Medium SAND	0.9

Well Diagram

Penetration Blows Per Foot: 0, 10, 20, 40, 60, 80, 100

NO BLOWCOUNTS RECORDED

TEST BORING RECORD
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037

Boring Number:	DW-2
Date Drilled:	10/28/10
Drilled By:	Geologic Exploration Inc.
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235 B Doolely Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

Depth (Feet)	Description	PID PPM	Well Diagram	Penetration Blows Per Foot (0, 10, 20, 40, 60, 80, 100)
	Partially Weathered Rock: Sampled as Brown, Micaceous Silty Fine to Medium SAND			NO BLOWCOUNTS RECORDED
45		2.1		
	NOTE: Auger refusal encountered at 47.0 feet. 10-inch boring terminated at 47.0 feet. 6-inch outer casing set and 4-inch boring initiated.	2.6		
50				
55				
60				
	Mud-Rotary Refusal Encountered at 61.0 Feet Below Ground Surface (BGS). Monitoring Well Installed to 61.0 Feet BGS. Groundwater Measured at 31.59 Feet Below Top of Casing on 11/02/10.			
65				
70				
75				

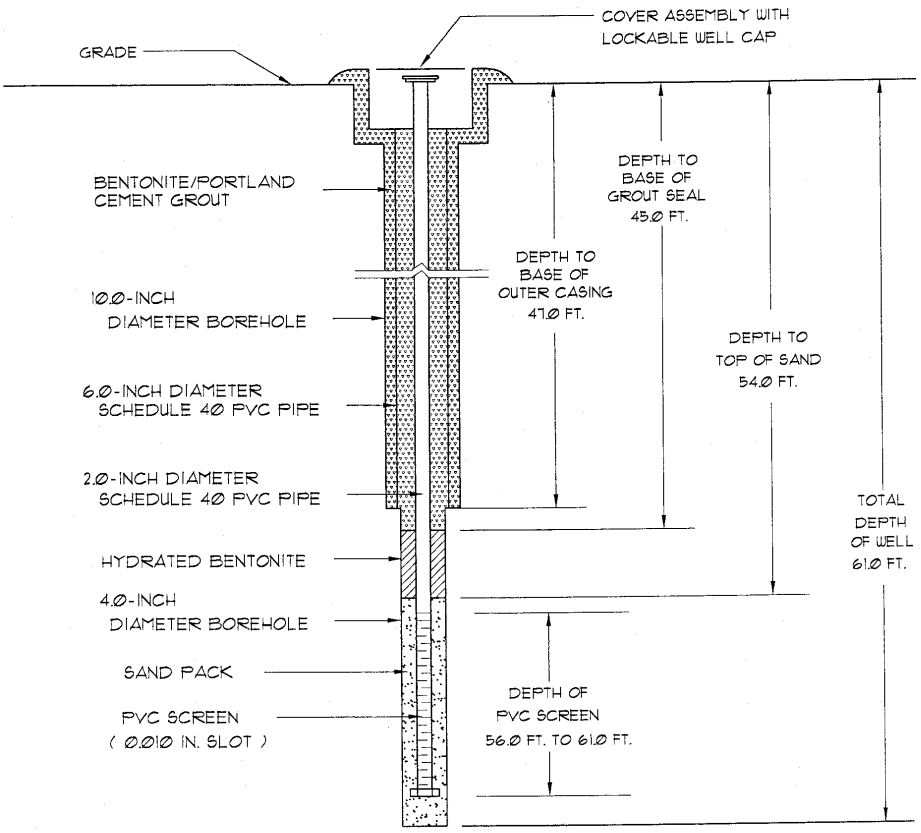
TEST BORING RECORD
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037

Boring Number:	DW-2
Date Drilled:	10/28/10
Drilled By:	Geologic Exploration Inc.
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235 B Doolely Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-3037



Well Number:	DW-2
Date Drilled:	10/28/10
Drilled By:	Geologic Exploration, Inc.
Driller: B. Thomas	S.C. I.D. #: B 01465
Logged By:	R. Ariail

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

D H E C

PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: BRADLEY, STAN (last) (first)
Address: 3611 EAST CROFT CIRCLE
City: SPARTANBURG State: SC Zip: 29302
Telephone: Work: Home:

2. LOCATION OF WELL: SC **COUNTY:** LAURENS
Name: COPELANDS SERVICE STATION
Street Address: 700 MUSGROVE STREET
City: CLINTON Zip: 29325
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
RED SILTY CLAY	15.0	15.0
TAN SILTY SAND	15.0	30.0
TAN SILT	5.0	35.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-19 BENTONITE SEAL FROM 18.0 TO 21.0 FT.

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

7. PERMIT NUMBER: 05694

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) Date Started: 10/13/10
33.0 ft. Date Completed: 10/13/10

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 23.0 ft. depth
_____ in. to _____ 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: 10.0 FEET
Set Between: 23.0 ft. and 33.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL 29.0 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 21.0 ft. to 33.0 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 18.0 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: DANNY SUMMERS **CERT. NO.:** 01430
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A B C D (circle one) ☐ ☑ ☐ ☐
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: _____ Date: 10/19/10
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: BRADLEY, STAN (last) (first)
Address: 3611 EAST CROFT CIRCLE
City: SPARTANBURG State: SC Zip: 29302
Telephone: Work: Home:

2. LOCATION OF WELL: SC **COUNTY:** LAURENS
Name: COPELANDS SERVICE STATION
Street Address: 700 MUSGROVE STREET
City: CLINTON Zip: 29325
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
RED SILTY CLAY	15.0	15.0
TAN SILTY SAND	15.0	30.0
TAN SILT	7.0	37.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-20 BENTONITE SEAL FROM 18.0 TO 21.0 FT.

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

7. PERMIT NUMBER: 05694

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) Date Started: 10/13/10
33.0 ft. Date Completed: 10/13/10

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 23.0 ft. depth
_____ in. to _____ 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: 10.0 FEET
Set Between: 23.0 ft. and 33.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL 29.0 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 21.0 ft. to 33.0 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 18.0 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: DANNY SUMMERS **CERT. NO.:** 01430
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A B C D (circle one) ☐ ☑ ☐ ☐
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: _____ Date: 10/19/10
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C

PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: BRADLEY, STAN (last) (first)
Address: 3611 EAST CROFT CIRCLE
City: SPARTANBURG State: SC Zip: 29302
Telephone: Work: Home:

2. LOCATION OF WELL: SC **COUNTY:** LAURENS
Name: COPELANDS SERVICE STATION
Street Address: 700 MUSGROVE STREET
City: CLINTON Zip: 29325
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
RED SILTY CLAY	15.0	15.0
TAN SILTY SAND	15.0	30.0
TAN SILT	3.0	33.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-21 BENTONITE SEAL FROM 18.0 TO 21.0 FT.

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

7. PERMIT NUMBER: 05694

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) Date Started: 10/13/10
33.0 ft. Date Completed: 10/13/10

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 23.0 ft. depth
_____ in. to _____ 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: 10.0 FEET
Set Between: 23.0 ft. and 33.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL 29.0 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 21.0 ft. to 33.0 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 18.0 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: DANNY SUMMERS **CERT. NO.:** 01430
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A B C D (circle one) ☐ ☑ ☐ ☐
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: _____ Date: 10/19/10
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C

PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: VENABLE, SHARON (last) (first)
Address: PO BOX 504
City: CLINTON State: SC Zip: 29325
Telephone: Work: Home:

2. LOCATION OF WELL: SC **COUNTY:** LAURENS
Name: COPELANDS SERVICE STATION
Street Address: 700 MUSGROVE STREET
City: CLINTON Zip: 29325
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
RED SILTY CLAY	8.0	8.0
BROWN SILTY CLAY	11.0	19.0
TAN SILTY CLAY	19.0	38.0
PARTIALLY WEATHERED ROCK	23.0	61.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
DW-2 BENTONITE SEAL FROM 45.0 TO 54.0 FT. 6 INCH PVC CASING GROUTED FROM 0.0 TO 47.0 FT

6. TYPE: ☑ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

7. PERMIT NUMBER: 05694

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) Date Started: 10/27/10
61.0 ft. Date Completed: 10/28/10

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 56.0 ft. depth
6.0 in. to 47.0 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: 5.0 FEET
Set Between: 56.0 ft. and 61.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL 23.0 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 54.0 ft. to 61.0 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 45.0 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
STATESVILLE, NC 28625
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
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: Brian Thomas Date: 10/29/10
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

ANALYTICAL RESULTS

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

November 10, 2010

Mr. Bryan Shane
Midlands Environmental
PO Box 854
Lexington, SC 29071

RE: Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Dear Mr. Shane:
Enclosed are the analytical results for sample(s) received by the laboratory on November 03, 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.

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,

Renee Spencer

Renee Spencer

renee.spencer@pacelabs.com
Project Manager

Enclosures

cc: Mr. Jeff Coleman, Midlands Environmental

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

CERTIFICATIONS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
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
Virginia Certification #: 00213
Connecticut Certification #: PH-0104
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DHH Drinking Water # LA 100031
West Virginia Certification #: 357

Asheville Certification IDs
2225 Riverside Dr., Asheville, NC 28804
Connecticut Certification #: PH-0106
Florida/NELAP Certification #: E87648
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 #: 99030002
South Carolina Certification #: 99030001
Virginia Certification #: 00072
West Virginia Certification #: 356

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE SUMMARY

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9281314001	MW-3	Water	11/02/10 12:08	11/03/10 15:25
9281314002	MW-4	Water	11/02/10 10:25	11/03/10 15:25
9281314003	MW-5	Water	11/02/10 12:00	11/03/10 15:25
9281314004	MW-6	Water	11/02/10 14:30	11/03/10 15:25
9281314005	MW-7	Water	11/02/10 14:35	11/03/10 15:25
9281314006	MW-8	Water	11/02/10 14:45	11/03/10 15:25
9281314007	MW-9	Water	11/02/10 10:35	11/03/10 15:25
9281314008	MW-10	Water	11/02/10 11:45	11/03/10 15:25
9281314009	MW-11	Water	11/02/10 13:00	11/03/10 15:25
9281314010	MW-15	Water	11/02/10 12:25	11/03/10 15:25
9281314011	MW-16	Water	11/02/10 11:55	11/03/10 15:25
9281314012	MW-17	Water	11/02/10 12:35	11/03/10 15:25
9281314013	MW-18	Water	11/02/10 12:17	11/03/10 15:25
9281314014	MW-19	Water	11/02/10 15:10	11/03/10 15:25
9281314015	MW-20	Water	11/02/10 15:21	11/03/10 15:25
9281314016	MW-21	Water	11/02/10 15:30	11/03/10 15:25
9281314017	DW-1	Water	11/02/10 13:05	11/03/10 15:25
9281314018	DW-2	Water	11/02/10 14:50	11/03/10 15:25
9281314019	AFVR-2	Water	11/02/10 12:55	11/03/10 15:25
9281314020	AFVR-4	Water	11/02/10 12:39	11/03/10 15:25

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE ANALYTE COUNT

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Lab ID	Sample ID	Method	Analysts	Analytes Reported
9281314001	**MW-3**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	MCK	12
9281314002	**MW-4**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	MCK	12
9281314003	**MW-5**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	MCK	12
9281314004	**MW-6**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	MCK	12
9281314005	**MW-7**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	MCK	12
9281314006	**MW-8**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC, MCK	12
9281314007	**MW-9**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	MCK	12
9281314008	**MW-10**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	MCK	12
9281314009	**MW-11**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314010	**MW-15**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314011	**MW-16**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314012	**MW-17**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC, MCK	12
9281314013	**MW-18**	EPA 8011	CAH	2

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE ANALYTE COUNT

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314014	**MW-19**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314015	**MW-20**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314016	**MW-21**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314017	**DW-1**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314018	**DW-2**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC	12
9281314019	**AFVR-2**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC, MCK	12
9281314020	**AFVR-4**	EPA 8011	CAH	2
		EPA 6010	SHB	1
		EPA 8260	BLC, MCK	12

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: MW-3 **Lab ID: 9281314001** Collected: 11/02/10 12:08 Received: 11/03/10 15:25 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	11/04/10 15:05	11/05/10 06:19	106-93-4	
1-Chloro-2-bromopropane (S)	108	%	60-140		1	11/04/10 15:05	11/05/10 06:19	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 16:26	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/05/10 21:02	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/05/10 21:02	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/05/10 21:02	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/05/10 21:02	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/05/10 21:02	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/05/10 21:02	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/05/10 21:02	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/05/10 21:02	95-47-6	
4-Bromofluorobenzene (S)	107	%	70-130		1		11/05/10 21:02	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/05/10 21:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		11/05/10 21:02	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/05/10 21:02	2037-26-5	

Sample: MW-4 **Lab ID: 9281314002** Collected: 11/02/10 10:25 Received: 11/03/10 15:25 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	11/04/10 15:05	11/05/10 06:37	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	11/04/10 15:05	11/05/10 06:37	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 16:30	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/05/10 21:21	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/05/10 21:21	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/05/10 21:21	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/05/10 21:21	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/05/10 21:21	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/05/10 21:21	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/05/10 21:21	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/05/10 21:21	95-47-6	
4-Bromofluorobenzene (S)	106	%	70-130		1		11/05/10 21:21	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/05/10 21:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		11/05/10 21:21	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/05/10 21:21	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: MW-5 **Lab ID: 9281314003** Collected: 11/02/10 12:00 Received: 11/03/10 15:25 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	11/04/10 15:05	11/05/10 06:55	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	11/04/10 15:05	11/05/10 06:55	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 16:33	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/05/10 21:39	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/05/10 21:39	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/05/10 21:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/05/10 21:39	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/05/10 21:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/05/10 21:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/05/10 21:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/05/10 21:39	95-47-6	
4-Bromofluorobenzene (S)	106	%	70-130		1		11/05/10 21:39	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/05/10 21:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/05/10 21:39	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/05/10 21:39	2037-26-5	

Sample: MW-6 **Lab ID: 9281314004** Collected: 11/02/10 14:30 Received: 11/03/10 15:25 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	11/04/10 15:05	11/05/10 07:14	106-93-4	
1-Chloro-2-bromopropane (S)	106	%	60-140		1	11/04/10 15:05	11/05/10 07:14	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**5.4**	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 16:36	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/05/10 21:57	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/05/10 21:57	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/05/10 21:57	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/05/10 21:57	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/05/10 21:57	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/05/10 21:57	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/05/10 21:57	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/05/10 21:57	95-47-6	
4-Bromofluorobenzene (S)	107	%	70-130		1		11/05/10 21:57	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/05/10 21:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		11/05/10 21:57	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		11/05/10 21:57	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: MW-7 **Lab ID: 9281314005** Collected: 11/02/10 14:35 Received: 11/03/10 15:25 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)	**0.045**	ug/L	0.020	0.020	1	11/04/10 15:06	11/05/10 07:32	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	11/04/10 15:06	11/05/10 07:32	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 16:40	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/05/10 22:16	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/05/10 22:16	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/05/10 22:16	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/05/10 22:16	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/05/10 22:16	108-88-3	
Xylene (Total)	**14.1**	ug/L	10.0	2.7	1		11/05/10 22:16	1330-20-7	
m&p-Xylene	**3.7J**	ug/L	10.0	2.7	1		11/05/10 22:16	179601-23-1	
o-Xylene	**10.4**	ug/L	5.0	1.7	1		11/05/10 22:16	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		1		11/05/10 22:16	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/05/10 22:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		11/05/10 22:16	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		11/05/10 22:16	2037-26-5	

Sample: MW-8 **Lab ID: 9281314006** Collected: 11/02/10 14:45 Received: 11/03/10 15:25 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	11/04/10 15:06	11/05/10 08:08	106-93-4	
1-Chloro-2-bromopropane (S)	105	%	60-140		1	11/04/10 15:06	11/05/10 08:08	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 16:54	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**113**	ug/L	5.0	1.2	1		11/05/10 22:08	71-43-2	
Ethylbenzene	**140**	ug/L	5.0	1.1	1		11/05/10 22:08	100-41-4	
Methyl-tert-butyl ether	**20.7**	ug/L	5.0	2.0	1		11/05/10 22:08	1634-04-4	
Naphthalene	**287**	ug/L	100	58.0	20		11/06/10 20:26	91-20-3	
Toluene	**203**	ug/L	100	36.0	20		11/06/10 20:26	108-88-3	
Xylene (Total)	**284**	ug/L	10.0	2.7	1		11/05/10 22:08	1330-20-7	
m&p-Xylene	**192**	ug/L	10.0	2.7	1		11/05/10 22:08	179601-23-1	
o-Xylene	**92.2**	ug/L	5.0	1.7	1		11/05/10 22:08	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		11/05/10 22:08	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/05/10 22:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/05/10 22:08	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		11/05/10 22:08	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: MW-9 **Lab ID: 9281314007** Collected: 11/02/10 10:35 Received: 11/03/10 15:25 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	11/04/10 15:06	11/05/10 08:27	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	11/04/10 15:06	11/05/10 08:27	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 16:58	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/06/10 17:40	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/06/10 17:40	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 17:40	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/06/10 17:40	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/06/10 17:40	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/06/10 17:40	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/06/10 17:40	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/06/10 17:40	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		11/06/10 17:40	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/06/10 17:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		11/06/10 17:40	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		11/06/10 17:40	2037-26-5	

Sample: MW-10 **Lab ID: 9281314008** Collected: 11/02/10 11:45 Received: 11/03/10 15:25 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	11/04/10 15:06	11/05/10 08:45	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	11/04/10 15:06	11/05/10 08:45	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 17:01	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/06/10 17:59	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/06/10 17:59	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 17:59	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/06/10 17:59	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/06/10 17:59	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/06/10 17:59	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/06/10 17:59	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/06/10 17:59	95-47-6	
4-Bromofluorobenzene (S)	101	%	70-130		1		11/06/10 17:59	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/06/10 17:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		11/06/10 17:59	17060-07-0	
Toluene-d8 (S)	94	%	70-130		1		11/06/10 17:59	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: MW-11 **Lab ID: 9281314009** Collected: 11/02/10 13:00 Received: 11/03/10 15:25 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	11/04/10 15:06	11/05/10 09:04	106-93-4	
1-Chloro-2-bromopropane (S)	104	%	60-140		1	11/04/10 15:06	11/05/10 09:04	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**8.9**	ug/L	5.0	4.0	1	11/05/10 11:30	11/08/10 17:04	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	250	60.0	50		11/05/10 23:03	71-43-2	
Ethylbenzene	**1640**	ug/L	250	55.0	50		11/05/10 23:03	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	250	100	50		11/05/10 23:03	1634-04-4	
Naphthalene	**1350**	ug/L	250	145	50		11/05/10 23:03	91-20-3	
Toluene	**251**	ug/L	250	90.0	50		11/05/10 23:03	108-88-3	
Xylene (Total)	**16300**	ug/L	500	135	50		11/05/10 23:03	1330-20-7	
m&p-Xylene	**12400**	ug/L	500	135	50		11/05/10 23:03	179601-23-1	
o-Xylene	**3960**	ug/L	250	85.0	50		11/05/10 23:03	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		50		11/05/10 23:03	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		50		11/05/10 23:03	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		50		11/05/10 23:03	17060-07-0	
Toluene-d8 (S)	97	%	70-130		50		11/05/10 23:03	2037-26-5	

Sample: MW-15 **Lab ID: 9281314010** Collected: 11/02/10 12:25 Received: 11/03/10 15:25 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	11/04/10 15:07	11/05/10 09:22	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	11/04/10 15:07	11/05/10 09:22	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**55.2**	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:16	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/06/10 03:39	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/06/10 03:39	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 03:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/06/10 03:39	91-20-3	
Toluene	**1.8J**	ug/L	5.0	1.8	1		11/06/10 03:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/06/10 03:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/06/10 03:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/06/10 03:39	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		11/06/10 03:39	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		11/06/10 03:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		11/06/10 03:39	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		11/06/10 03:39	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: MW-16 **Lab ID: 9281314011** Collected: 11/02/10 11:55 Received: 11/03/10 15:25 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	11/04/10 15:07	11/05/10 09:41	106-93-4	
1-Chloro-2-bromopropane (S)	107	%	60-140		1	11/04/10 15:07	11/05/10 09:41	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:21	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/06/10 03:57	71-43-2	
Ethylbenzene	**26.8**	ug/L	5.0	1.1	1		11/06/10 03:57	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 03:57	1634-04-4	
Naphthalene	**155**	ug/L	50.0	29.0	10		11/06/10 12:34	91-20-3	
Toluene	**3.9J**	ug/L	5.0	1.8	1		11/06/10 03:57	108-88-3	
Xylene (Total)	**503**	ug/L	100	27.0	10		11/06/10 12:34	1330-20-7	
m&p-Xylene	**326**	ug/L	100	27.0	10		11/06/10 12:34	179601-23-1	
o-Xylene	**177**	ug/L	50.0	17.0	10		11/06/10 12:34	95-47-6	
4-Bromofluorobenzene (S)	107	%	70-130		1		11/06/10 03:57	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/06/10 03:57	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		11/06/10 03:57	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		11/06/10 03:57	2037-26-5	

Sample: MW-17 **Lab ID: 9281314012** Collected: 11/02/10 12:35 Received: 11/03/10 15:25 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)	**39.4**	ug/L	0.97	0.97	50	11/04/10 15:07	11/05/10 13:24	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		50	11/04/10 15:07	11/05/10 13:24	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**7.1**	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:25	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**10900**	ug/L	2500	600	500		11/06/10 20:44	71-43-2	
Ethylbenzene	**3000**	ug/L	250	55.0	50		11/06/10 12:53	100-41-4	
Methyl-tert-butyl ether	**15.0**	ug/L	5.0	2.0	1		11/06/10 04:15	1634-04-4	
Naphthalene	**432**	ug/L	250	145	50		11/06/10 12:53	91-20-3	
Toluene	**19500**	ug/L	2500	900	500		11/06/10 20:44	108-88-3	
Xylene (Total)	**19000**	ug/L	500	135	50		11/06/10 12:53	1330-20-7	
m&p-Xylene	**13300**	ug/L	500	135	50		11/06/10 12:53	179601-23-1	
o-Xylene	**5720**	ug/L	250	85.0	50		11/06/10 12:53	95-47-6	
4-Bromofluorobenzene (S)	110	%	70-130		1		11/06/10 04:15	460-00-4	
Dibromofluoromethane (S)	91	%	70-130		1		11/06/10 04:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		11/06/10 04:15	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		11/06/10 04:15	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: MW-18 **Lab ID: 9281314013** Collected: 11/02/10 12:17 Received: 11/03/10 15:25 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)	**64.2**	ug/L	2.0	2.0	100	11/04/10 15:07	11/05/10 13:43	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		100	11/04/10 15:07	11/05/10 13:43	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**12.4**	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:40	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**8070**	ug/L	1000	240	200		11/06/10 13:11	71-43-2	
Ethylbenzene	**3440**	ug/L	1000	220	200		11/06/10 13:11	100-41-4	
Methyl-tert-butyl ether	**910**	ug/L	50.0	20.0	10		11/06/10 04:34	1634-04-4	
Naphthalene	**1330**	ug/L	50.0	29.0	10		11/06/10 04:34	91-20-3	
Toluene	**34500**	ug/L	1000	360	200		11/06/10 13:11	108-88-3	
Xylene (Total)	**19600**	ug/L	2000	540	200		11/06/10 13:11	1330-20-7	
m&p-Xylene	**13400**	ug/L	2000	540	200		11/06/10 13:11	179601-23-1	
o-Xylene	**6220**	ug/L	1000	340	200		11/06/10 13:11	95-47-6	
4-Bromofluorobenzene (S)	108	%	70-130		10		11/06/10 04:34	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		10		11/06/10 04:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		10		11/06/10 04:34	17060-07-0	
Toluene-d8 (S)	106	%	70-130		10		11/06/10 04:34	2037-26-5	

Sample: MW-19 **Lab ID: 9281314014** Collected: 11/02/10 15:10 Received: 11/03/10 15:25 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	11/04/10 16:16	11/04/10 19:13	106-93-4	
1-Chloro-2-bromopropane (S)	104	%	60-140		1	11/04/10 16:16	11/04/10 19:13	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:44	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/06/10 11:17	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/06/10 11:17	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 11:17	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/06/10 11:17	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/06/10 11:17	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/06/10 11:17	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/06/10 11:17	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/06/10 11:17	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		11/06/10 11:17	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/06/10 11:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		11/06/10 11:17	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		11/06/10 11:17	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: MW-20 **Lab ID: 9281314015** Collected: 11/02/10 15:21 Received: 11/03/10 15:25 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	0.027	0.027	1	11/04/10 16:16	11/04/10 19:31	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	11/04/10 16:16	11/04/10 19:31	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:48	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		11/06/10 05:11	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/06/10 05:11	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 05:11	1634-04-4	
Naphthalene	**4.4J**	ug/L	5.0	2.9	1		11/06/10 05:11	91-20-3	
Toluene	**4.0J**	ug/L	5.0	1.8	1		11/06/10 05:11	108-88-3	
Xylene (Total)	**4.9J**	ug/L	10.0	2.7	1		11/06/10 05:11	1330-20-7	
m&p-Xylene	**3.6J**	ug/L	10.0	2.7	1		11/06/10 05:11	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/06/10 05:11	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		11/06/10 05:11	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/06/10 05:11	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		11/06/10 05:11	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		11/06/10 05:11	2037-26-5	

Sample: MW-21 **Lab ID: 9281314016** Collected: 11/02/10 15:30 Received: 11/03/10 15:25 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)	**0.24**	ug/L	0.019	0.019	1	11/04/10 16:16	11/04/10 19:50	106-93-4	
1-Chloro-2-bromopropane (S)	97	%	60-140		1	11/04/10 16:16	11/04/10 19:50	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:51	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**25.5**	ug/L	5.0	1.2	1		11/06/10 05:29	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/06/10 05:29	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 05:29	1634-04-4	
Naphthalene	**9.1**	ug/L	5.0	2.9	1		11/06/10 05:29	91-20-3	
Toluene	**3.4J**	ug/L	5.0	1.8	1		11/06/10 05:29	108-88-3	
Xylene (Total)	**88.7**	ug/L	10.0	2.7	1		11/06/10 05:29	1330-20-7	
m&p-Xylene	**45.6**	ug/L	10.0	2.7	1		11/06/10 05:29	179601-23-1	
o-Xylene	**43.1**	ug/L	5.0	1.7	1		11/06/10 05:29	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		11/06/10 05:29	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		1		11/06/10 05:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		11/06/10 05:29	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		11/06/10 05:29	2037-26-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: DW-1 **Lab ID: 9281314017** Collected: 11/02/10 13:05 Received: 11/03/10 15:25 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	11/04/10 16:16	11/04/10 20:09	106-93-4	
1-Chloro-2-bromopropane (S)	111	%	60-140		1	11/04/10 16:16	11/04/10 20:09	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:54	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**6.0**	ug/L	5.0	1.2	1		11/06/10 05:47	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/06/10 05:47	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 05:47	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		11/06/10 05:47	91-20-3	
Toluene	**1.9J**	ug/L	5.0	1.8	1		11/06/10 05:47	108-88-3	
Xylene (Total)	**3.0J**	ug/L	10.0	2.7	1		11/06/10 05:47	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		11/06/10 05:47	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		11/06/10 05:47	95-47-6	
4-Bromofluorobenzene (S)	102	%	70-130		1		11/06/10 05:47	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/06/10 05:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		11/06/10 05:47	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		11/06/10 05:47	2037-26-5	

Sample: DW-2 **Lab ID: 9281314018** Collected: 11/02/10 14:50 Received: 11/03/10 15:25 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	0.021	0.021	1	11/04/10 16:16	11/04/10 20:27	106-93-4	
1-Chloro-2-bromopropane (S)	103	%	60-140		1	11/04/10 16:16	11/04/10 20:27	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 15:58	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**100**	ug/L	5.0	1.2	1		11/06/10 06:06	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		11/06/10 06:06	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		11/06/10 06:06	1634-04-4	
Naphthalene	**2.9J**	ug/L	5.0	2.9	1		11/06/10 06:06	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		11/06/10 06:06	108-88-3	
Xylene (Total)	**11.5**	ug/L	10.0	2.7	1		11/06/10 06:06	1330-20-7	
m&p-Xylene	**5.0J**	ug/L	10.0	2.7	1		11/06/10 06:06	179601-23-1	
o-Xylene	**6.5**	ug/L	5.0	1.7	1		11/06/10 06:06	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		11/06/10 06:06	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/06/10 06:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		11/06/10 06:06	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		11/06/10 06:06	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

Sample: AFVR-2 **Lab ID: 9281314019** Collected: 11/02/10 12:55 Received: 11/03/10 15:25 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)	**15.4**	ug/L	0.49	0.49	25	11/04/10 16:16	11/05/10 10:55	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		25	11/04/10 16:16	11/05/10 10:55	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 16:04	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**3950**	ug/L	250	60.0	50		11/06/10 06:24	71-43-2	
Ethylbenzene	**2480**	ug/L	250	55.0	50		11/06/10 06:24	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	250	100	50		11/06/10 06:24	1634-04-4	
Naphthalene	**653**	ug/L	250	145	50		11/06/10 06:24	91-20-3	
Toluene	**28600**	ug/L	5000	1800	1000		11/06/10 21:03	108-88-3	
Xylene (Total)	**24800**	ug/L	500	135	50		11/06/10 06:24	1330-20-7	
m&p-Xylene	**16000**	ug/L	500	135	50		11/06/10 06:24	179601-23-1	
o-Xylene	**8850**	ug/L	250	85.0	50		11/06/10 06:24	95-47-6	
4-Bromofluorobenzene (S)	106	%	70-130		50		11/06/10 06:24	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		50		11/06/10 06:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		50		11/06/10 06:24	17060-07-0	
Toluene-d8 (S)	101	%	70-130		50		11/06/10 06:24	2037-26-5	

Sample: AFVR-4 **Lab ID: 9281314020** Collected: 11/02/10 12:39 Received: 11/03/10 15:25 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)	**305**	ug/L	10.4	10.4	500	11/04/10 16:16	11/05/10 11:14	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		500	11/04/10 16:16	11/05/10 11:14	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**29.9**	ug/L	5.0	4.0	1	11/08/10 11:10	11/09/10 16:07	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**20500**	ug/L	5000	1200	1000		11/06/10 21:21	71-43-2	
Ethylbenzene	**3250**	ug/L	125	27.5	25		11/06/10 06:42	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	125	50.0	25		11/06/10 06:42	1634-04-4	
Naphthalene	**541**	ug/L	125	72.5	25		11/06/10 06:42	91-20-3	
Toluene	**31300**	ug/L	5000	1800	1000		11/06/10 21:21	108-88-3	
Xylene (Total)	**19900**	ug/L	10000	2700	1000		11/06/10 21:21	1330-20-7	
m&p-Xylene	**13500**	ug/L	10000	2700	1000		11/06/10 21:21	179601-23-1	
o-Xylene	**6470**	ug/L	5000	1700	1000		11/06/10 21:21	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		25		11/06/10 06:42	460-00-4	
Dibromofluoromethane (S)	100	%	70-130		25		11/06/10 06:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		25		11/06/10 06:42	17060-07-0	
Toluene-d8 (S)	103	%	70-130		25		11/06/10 06:42	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

QC Batch: OEXT/11732 — Analysis Method: EPA 8011
QC Batch Method: EPA 8011 — Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9281314001, 9281314002, 9281314003, 9281314004, 9281314005, 9281314006, 9281314007, 9281314008, 9281314009, 9281314010, 9281314011, 9281314012, 9281314013

METHOD BLANK: 522798 — Matrix: Water
Associated Lab Samples: 9281314001, 9281314002, 9281314003, 9281314004, 9281314005, 9281314006, 9281314007, 9281314008, 9281314009, 9281314010, 9281314011, 9281314012, 9281314013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	11/05/10 02:38	
1-Chloro-2-bromopropane (S)	%	106	60-140	11/05/10 02:38	

LABORATORY CONTROL SAMPLE & LCSD: 522799 522800

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	0.34	0.33	120	116	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				106	101	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 522801 522802

Parameter	Units	9281202009 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	0.31	0.32	112	114	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						99	101	60-140			

SAMPLE DUPLICATE: 522803

Parameter	Units	9281314005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	0.045	0.034	29	20	R3
1-Chloro-2-bromopropane (S)	%	102	97	6		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

QC Batch: OEXT/11735 — Analysis Method: EPA 8011
QC Batch Method: EPA 8011 — Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9281314014, 9281314015, 9281314016, 9281314017, 9281314018, 9281314019, 9281314020

METHOD BLANK: 522806 — Matrix: Water
Associated Lab Samples: 9281314014, 9281314015, 9281314016, 9281314017, 9281314018, 9281314019, 9281314020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	11/04/10 18:17	
1-Chloro-2-bromopropane (S)	%	105	60-140	11/04/10 18:17	

LABORATORY CONTROL SAMPLE & LCSD: 522807 522808

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	0.35	0.35	122	120	60-140	1	20	
1-Chloro-2-bromopropane (S)	%				111	102	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 522809 522810

Parameter	Units	20830251 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	0.36	122	128	60-140	5	20	
1-Chloro-2-bromopropane (S)	%						107	112	60-140			

SAMPLE DUPLICATE: 522811

Parameter	Units	20830252 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	100	97	3		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

QC Batch: MPRP/7372 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET
Associated Lab Samples: 9281314001, 9281314002, 9281314003, 9281314004, 9281314005, 9281314006, 9281314007, 9281314008, 9281314009

METHOD BLANK: 523428 — Matrix: Water
Associated Lab Samples: 9281314001, 9281314002, 9281314003, 9281314004, 9281314005, 9281314006, 9281314007, 9281314008, 9281314009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	11/08/10 15:24	

LABORATORY CONTROL SAMPLE: 523429

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	486	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523430 523431

Parameter	Units	9281202009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	ug/L	ND	500	500	480	490	96	98	75-125	2	20	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

QC Batch: MPRP/7382 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 9281314010, 9281314011, 9281314012, 9281314013, 9281314014, 9281314015, 9281314016, 9281314017, 9281314018, 9281314019, 9281314020

METHOD BLANK: 524391 Matrix: Water
Associated Lab Samples: 9281314010, 9281314011, 9281314012, 9281314013, 9281314014, 9281314015, 9281314016, 9281314017, 9281314018, 9281314019, 9281314020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	11/09/10 14:56	

LABORATORY CONTROL SAMPLE: 524392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	511	102	80-120	

MATRIX SPIKE SAMPLE: 524393

Parameter	Units	9281003001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	511	102	75-125	

SAMPLE DUPLICATE: 524394

Parameter	Units	9281003002 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

QC Batch: MSV/12926 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 9281314001, 9281314002, 9281314003, 9281314004, 9281314005

METHOD BLANK: 523664 Matrix: Water
Associated Lab Samples: 9281314001, 9281314002, 9281314003, 9281314004, 9281314005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	11/05/10 13:39	
Ethylbenzene	ug/L	ND	5.0	11/05/10 13:39	
m&p-Xylene	ug/L	ND	10.0	11/05/10 13:39	
Methyl-tert-butyl ether	ug/L	ND	5.0	11/05/10 13:39	
Naphthalene	ug/L	ND	5.0	11/05/10 13:39	
o-Xylene	ug/L	ND	5.0	11/05/10 13:39	
Toluene	ug/L	ND	5.0	11/05/10 13:39	
Xylene (Total)	ug/L	ND	10.0	11/05/10 13:39	
1,2-Dichloroethane-d4 (S)	%	95	70-130	11/05/10 13:39	
4-Bromofluorobenzene (S)	%	102	70-130	11/05/10 13:39	
Dibromofluoromethane (S)	%	100	70-130	11/05/10 13:39	
Toluene-d8 (S)	%	99	70-130	11/05/10 13:39	

LABORATORY CONTROL SAMPLE: 523665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	41.5	83	70-130	
Ethylbenzene	ug/L	50	42.3	85	70-130	
m&p-Xylene	ug/L	100	85.4	85	70-130	
Methyl-tert-butyl ether	ug/L	50	48.5	97	70-130	
Naphthalene	ug/L	50	43.3	87	70-130	
o-Xylene	ug/L	50	44.0	88	70-130	
Toluene	ug/L	50	43.0	86	70-130	
Xylene (Total)	ug/L	150	129	86	70-130	
1,2-Dichloroethane-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523666 523667

Parameter	Units	9280895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	41.6	43.2	82	85	70-130	4	30	
Ethylbenzene	ug/L	ND	50	50	40.8	41.3	81	82	70-130	1	30	
m&p-Xylene	ug/L	ND	100	100	81.8	82.6	81	81	70-130	1	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	50.5	48.3	101	97	70-130	4	30	
Naphthalene	ug/L	ND	50	50	39.5	40.9	79	82	70-130	4	30	
o-Xylene	ug/L	ND	50	50	41.9	40.7	83	80	70-130	3	30	
Toluene	ug/L	ND	50	50	42.7	44.7	83	87	70-130	5	30	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523666 523667

Parameter	Units	9280895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane-d4 (S)	%						99	98	70-130			
4-Bromofluorobenzene (S)	%						105	105	70-130			
Dibromofluoromethane (S)	%						101	100	70-130			
Toluene-d8 (S)	%						100	100	70-130			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

QC Batch: MSV/12932 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV SC
Associated Lab Samples: 9281314006, 9281314009

METHOD BLANK: 523817 — Matrix: Water
Associated Lab Samples: 9281314006, 9281314009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	11/05/10 15:59	
Ethylbenzene	ug/L	ND	5.0	11/05/10 15:59	
m&p-Xylene	ug/L	ND	10.0	11/05/10 15:59	
Methyl-tert-butyl ether	ug/L	ND	5.0	11/05/10 15:59	
Naphthalene	ug/L	ND	5.0	11/05/10 15:59	
o-Xylene	ug/L	ND	5.0	11/05/10 15:59	
Toluene	ug/L	ND	5.0	11/05/10 15:59	
Xylene (Total)	ug/L	ND	10.0	11/05/10 15:59	
1,2-Dichloroethane-d4 (S)	%	96	70-130	11/05/10 15:59	
4-Bromofluorobenzene (S)	%	99	70-130	11/05/10 15:59	
Dibromofluoromethane (S)	%	96	70-130	11/05/10 15:59	
Toluene-d8 (S)	%	98	70-130	11/05/10 15:59	

LABORATORY CONTROL SAMPLE: 523818

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	48.2	96	70-130	
Ethylbenzene	ug/L	50	48.1	96	70-130	
m&p-Xylene	ug/L	100	97.5	97	70-130	
Methyl-tert-butyl ether	ug/L	50	50.2	100	70-130	
Naphthalene	ug/L	50	57.3	115	70-130	
o-Xylene	ug/L	50	49.0	98	70-130	
Toluene	ug/L	50	48.4	97	70-130	
Xylene (Total)	ug/L	150	146	98	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			99	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523819 523820

Parameter	Units	9281059033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	21600	50	50	5600	5380	-32006	-32444	70-130	4	30	E,P6
Ethylbenzene	ug/L	3470	50	50	1570	1530	-3793	-3874	70-130	3	30	E,P6
m&p-Xylene	ug/L	12900	100	100	2720	2660	-10212	-10277	70-130	2	30	E,P6
Methyl-tert-butyl ether	ug/L	52.9	50	50	99.1	103	93	100	70-130	4	30	
Naphthalene	ug/L	626	50	50	688	814	123	376	70-130	17	30	E,P6
o-Xylene	ug/L	5690	50	50	2020	1960	-7339	-7463	70-130	3	30	E,P6
Toluene	ug/L	34800	50	50	5380	5130	-58919	-59421	70-130	5	30	E,P6

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523819 523820

Parameter	Units	9281059033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane-d4 (S)	%						118	122	70-130			
4-Bromofluorobenzene (S)	%						104	104	70-130			
Dibromofluoromethane (S)	%						81	86	70-130			
Toluene-d8 (S)	%						76	74	70-130			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

QC Batch: MSV/12934 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV SC
Associated Lab Samples: 9281314010, 9281314011, 9281314012, 9281314013, 9281314014, 9281314015, 9281314016, 9281314017, 9281314018, 9281314019, 9281314020

METHOD BLANK: 523951 — Matrix: Water
Associated Lab Samples: 9281314010, 9281314011, 9281314012, 9281314013, 9281314014, 9281314015, 9281314016, 9281314017, 9281314018, 9281314019, 9281314020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	11/06/10 03:20	
Ethylbenzene	ug/L	ND	5.0	11/06/10 03:20	
m&p-Xylene	ug/L	ND	10.0	11/06/10 03:20	
Methyl-tert-butyl ether	ug/L	ND	5.0	11/06/10 03:20	
Naphthalene	ug/L	ND	5.0	11/06/10 03:20	
o-Xylene	ug/L	ND	5.0	11/06/10 03:20	
Toluene	ug/L	2.0J	5.0	11/06/10 03:20	
Xylene (Total)	ug/L	ND	10.0	11/06/10 03:20	
1,2-Dichloroethane-d4 (S)	%	102	70-130	11/06/10 03:20	
4-Bromofluorobenzene (S)	%	104	70-130	11/06/10 03:20	
Dibromofluoromethane (S)	%	98	70-130	11/06/10 03:20	
Toluene-d8 (S)	%	98	70-130	11/06/10 03:20	

LABORATORY CONTROL SAMPLE: 523952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	47.3	95	70-130	
Ethylbenzene	ug/L	50	46.2	92	70-130	
m&p-Xylene	ug/L	100	95.8	96	70-130	
Methyl-tert-butyl ether	ug/L	50	49.8	100	70-130	
Naphthalene	ug/L	50	59.4	119	70-130	
o-Xylene	ug/L	50	48.2	96	70-130	
Toluene	ug/L	50	51.1	102	70-130	
Xylene (Total)	ug/L	150	144	96	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Dibromofluoromethane (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523953 523954

Parameter	Units	9281314010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	53.1	50.3	105	100	70-130	5	30	
Ethylbenzene	ug/L	ND	50	50	50.8	46.3	101	92	70-130	9	30	
m&p-Xylene	ug/L	ND	100	100	99.2	89.4	98	88	70-130	10	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	56.0	52.3	112	105	70-130	7	30	
Naphthalene	ug/L	ND	50	50	60.3	57.8	121	116	70-130	4	30	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523953 523954

Parameter	Units	9281314010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
o-Xylene	ug/L	ND	50	50	49.7	45.3	99	90	70-130	9	30	
Toluene	ug/L	1.8J	50	50	52.6	48.7	102	94	70-130	8	30	
1,2-Dichloroethane-d4 (S)	%						104	103	70-130			
4-Bromofluorobenzene (S)	%						101	99	70-130			
Dibromofluoromethane (S)	%						103	102	70-130			
Toluene-d8 (S)	%						99	99	70-130			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

QC Batch: MSV/12938 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV SC
Associated Lab Samples: 9281314007, 9281314008

METHOD BLANK: 524238 — Matrix: Water
Associated Lab Samples: 9281314007, 9281314008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	11/06/10 17:22	
Ethylbenzene	ug/L	ND	5.0	11/06/10 17:22	
m&p-Xylene	ug/L	ND	10.0	11/06/10 17:22	
Methyl-tert-butyl ether	ug/L	ND	5.0	11/06/10 17:22	
Naphthalene	ug/L	ND	5.0	11/06/10 17:22	
o-Xylene	ug/L	ND	5.0	11/06/10 17:22	
Toluene	ug/L	ND	5.0	11/06/10 17:22	
Xylene (Total)	ug/L	ND	10.0	11/06/10 17:22	
1,2-Dichloroethane-d4 (S)	%	98	70-130	11/06/10 17:22	
4-Bromofluorobenzene (S)	%	100	70-130	11/06/10 17:22	
Dibromofluoromethane (S)	%	96	70-130	11/06/10 17:22	
Toluene-d8 (S)	%	99	70-130	11/06/10 17:22	

LABORATORY CONTROL SAMPLE: 524239

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	46.4	93	70-130	
Ethylbenzene	ug/L	50	46.2	92	70-130	
m&p-Xylene	ug/L	100	94.4	94	70-130	
Methyl-tert-butyl ether	ug/L	50	47.4	95	70-130	
Naphthalene	ug/L	50	54.4	109	70-130	
o-Xylene	ug/L	50	47.6	95	70-130	
Toluene	ug/L	50	47.1	94	70-130	
Xylene (Total)	ug/L	150	142	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: 524240 524241

Parameter	Units	9281484008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	53.2	47.6	106	95	70-130	11	30	
Ethylbenzene	ug/L	ND	50	50	50.6	46.0	101	92	70-130	9	30	
m&p-Xylene	ug/L	ND	100	100	102	93.3	102	93	70-130	9	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	54.4	50.9	109	102	70-130	7	30	
Naphthalene	ug/L	ND	50	50	65.4	57.0	131	114	70-130	14	30	M0
o-Xylene	ug/L	ND	50	50	51.3	47.2	103	94	70-130	8	30	
Toluene	ug/L	ND	50	50	52.1	47.0	104	94	70-130	10	30	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524240 524241

Parameter	Units	9281484008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane-d4 (S)	%						100	101	70-130			
4-Bromofluorobenzene (S)	%						101	102	70-130			
Dibromofluoromethane (S)	%						101	103	70-130			
Toluene-d8 (S)	%						101	100	70-130			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALIFIERS

Project: COPLANDS SRVC STATION 10-3037
Pace Project No.: 9281314

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.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R3	RPD value was outside control limits due to uncertainty of values at or near the PRL.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

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

1409661

Section A Required Client Information:

Company: MECI
Address: 235 B Dooley Rd
Lexington, SC 29073
Email To: JLC@meci.net
Phone: 803-808-2043 Fax: 803-808-2048
Requested Due Date/TAT:

Section B Required Project Information:

Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Coplands Service Station
Project Number: 10-3037

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #: 8361

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): BTEX, Naph, MTBE; EDB; Total Lead

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BTEX, Naph, MTBE	EDB	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	mw-3	WT	G			11/2	1208		7			1	6						x	x	x		928314 001
2	mw-4						1025		7			1	6						x	x	x		Added 2 Bottles 002
3	mw-5						1200		7			1	6						x	x	x		003
4	mw-6						1430		7			1	6						x	x	x		004
5	mw-7						1435		7			1	6						x	x	x		005
6	mw-8						1445		7			1	6						x	x	x		006
7	mw-9						1035		7			1	6						x	x	x		Added 2 Bottles 007
8	mw-10						1145		7			1	6						x	x	x		008
9	mw-11						1300		7			1	6						x	x	x		009
10	mw-15						1225		7			1	6						x	x	x		010
11	mw-16						1155		7			1	6						x	x	x		011
12	mw-17	WT	G			11/2	1235		7			1	6						x	x	x		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Report "J" Values	[signature]	11-3-10	9:15	[signature] - Pace	11-3-10	9:15				
	[signature]	11-3-10	15:25	[signature] pace c.ft	11-3-10	15:25	2.5	Y	n	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chris Lashley
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/2/10

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

1409663

Section A Required Client Information:

Company: MECI
Address: 235 B Dooley Rd
Lexington, SC 29073
Email To: JLC@MECI.net
Phone: 803-808-2043 Fax: 803-808-2048
Requested Due Date/TAT:

Section B Required Project Information:

Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Coplands Service Station
Project Number: 10-3037

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BTEX, Naph, MTBE	EDB	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 9281314
1	MW-18	WT	G			11/2	1217		7			1	6						x	x	x		013
2	MW-19						1510		7			1	6						x	x	x		014
3	MW-20						1521		7			1	6						x	x	x		015
4	MW-21						1530		7			1	6						x	x	x		016
5	DW-1						1305		7			1	6						x	x	x		017
6	DW-2						1450		7			1	6						x	x	x		018
7	AFVR-2						1255		7			1	6						x	x	x		019
8	AFVR-4	WT	G			11/2	1239		7			1	6						x	x	x		020
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Report "J" Values	[signature]	11-3-10	9:15	B Moody-Pace	11-3-10	9:15				
	B Moody	11-3-10	15:25	Justin Molly Pace	11-3-10	15:25	2.5	Y	n	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Lashley

SIGNATURE of SAMPLER: Chris Lashley

DATE Signed (MM/DD/YY): 11/2/10

*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

FIELD DATA INFORMATION SHEETS

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/2/2010

Field Personnel: Brian Owen and Chris Lashley

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copelands Service Station

Site ID#: 05694 **Monitoring Well #** DW-1

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	32.41			feet
Total Well Depth (TWD)	85			feet
Length of the water column (LWC=TWD-DGW)			52.59	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	8.57	gallons
3 casing volume (3 X CV)=		3	25.72	gallons

Total Volume of Water Purged Before Sampling 15 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:05	13:08	13:11					
pH (s.u.)	6.59	6.54	6.48					
Specific Conductivity (µmhos/cm)	93.4	92.8	90.5					
Water Temperature (°C)	19.8	19.8	20.0					
Dissolved Oxygen	2.00	2.11	1.60					
PID readings, if required								

Remarks: Sample Time: 13:11 Dry at 15 Gallons

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/2/2010

Field Personnel: Brian Owen and Chris Lashley

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copelands Service Station

Site ID#: 05694 **Monitoring Well #** DW-2

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.59			feet
Total Well Depth (TWD)	61			feet
Length of the water column (LWC=TWD-DGW)			29.41	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	4.79	gallons
3 casing volume (3 X CV)=		3	14.38	gallons

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:40	14:50						
pH (s.u.)	10.99	11.93						
Specific Conductivity (µmhos/cm)	3,279	533.0						
Water Temperature (°C)	22.7	20.2						
Dissolved Oxygen	5.17	6.80						
PID readings, if required								

Remarks: Sample Time: 14:50 Dry at 5 Gallons

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/2/2010
Field Personnel: Brian Owen and Chris Lashley
General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copelands Service Station
Site ID#: 05694 **Monitoring Well #** MW-19
Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	26.43			feet
Total Well Depth (TWD)	33			feet
Length of the water column (LWC=TWD-DGW)			6.57	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	1.07	gallons
3 casing volume (3 X CV)=		3	3.21	gallons

Total Volume of Water Purged Before Sampling 3 gals.
*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:00	15:05	15:07	15:10				
pH (s.u.)	9.79	9.32	9.09	8.79				
Specific Conductivity (µmhos/cm)	138.2	249.7	104.2	107.0				
Water Temperature (°C)	19.9	20.1	20.1	20.0				
Dissolved Oxygen	1.35	1.36	1.97	1.64				
PID readings, if required								

Remarks: Sample Time: 15:10

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/2/2010

Field Personnel: Brian Owen and Chris Lashley

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copelands Service Station

Site ID#: 05694 **Monitoring Well #** MW-20

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	27.80			feet
Total Well Depth (TWD)	33			feet
Length of the water column (LWC=TWD-DGW)			5.2	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.85	gallons
3 casing volume (3 X CV)=		3	2.54	gallons

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:14	15:18	15:20	15:21				
pH (s.u.)	8.58	8.57	8.53	8.50				
Specific Conductivity (μmhos/cm)	106.1	100.4	95.0	97.6				
Water Temperature (°C)	20.0	20.2	20.2	20.0				
Dissolved Oxygen	5.74	5.71	5.61	5.99				
PID readings, if required								

Remarks: Sample Time: 15:21

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/2/2010

Field Personnel: Brian Owen and Chris Lashley

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copelands Service Station

Site ID#: 05694 **Monitoring Well #** MW-21

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	27.80			feet
Total Well Depth (TWD)	33			feet
Length of the water column (LWC=TWD-DGW)			5.2	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.85	gallons
3 casing volume (3 X CV)=		3	2.54	gallons

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:25	15:27	15:28	15:30				
pH (s.u.)	8.31	8.17	8.27	7.97				
Specific Conductivity (µmhos/cm)	65.0	68.2	69.0	72.0				
Water Temperature (°C)	18.0	17.7	17.8	17.9				
Dissolved Oxygen	3.49	3.90	3.24	2.77				
PID readings, if required								

Remarks: Sample Time: 15:30

WASTE DISPOSAL MANIFESTS

Midlands
Environmental
Consultants, Inc.

November 11, 2010

Re: Treatment of Purge Water
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID Number 05964
MECI Project Number 10-3037

To Whom it May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

One 55-gallon drum was treated on November 02, 2010 at the referenced site.

A total of one (1) 55-gallon drum was treated at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

WASTE MANAGEMENT

Richland County LF
1047 Highway Church Road
Elgin, SC, 29045
Ph: (803) 788-3054

Original
Ticket# 1062387

Customer Name MIDLANDSENVIRON MIDLANDS ENVI
Ticket Date 10/27/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0
Destination
PO
Profile VA2718 (SOIL FROM UST ASSESSMENT)
Generator 126-MIDLANDSENVIRONMENTAL MIDLANDS ENVIRONMENTAL

Carrier MIDLANDSENVIRON MIDLANDS ENVIRONMENT
Vehicle# 1
Container
Driver
Check#
Billing # 0000469
Gen EPA ID

Volume

	Time	Scale	ScaleMaster		
In	10/27/2010 13:15:37	Scale1	Dwayne	Gross	13820 lb
Out	10/27/2010 13:40:28	Scale2	Dwayne	Tare	9900 lb
				Net	3920 lb
				Tons	1.96

Comments

Product		LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	SOIL-Cont. Soil -	100	1.96	Tons				30-LAURENS
2	FUEL-Fuel Surcharg	100		%				30-LAURENS
3	EVF-P-Standard Env	100		%				30-LAURENS

Total Fees
Total Ticket

SIGNATURE

403WM

SPECIAL WASTE MANIFEST

WASTE ID NUMBER VA2718	*Richland Landfill* 1047 Highway Church Road Elgin, SC 29045
EXPIRATION DATE December 7, 2010	Special Waste Phone: 803-744-3346 Fax: 866-904-7194
Prepared by:	Karen Truett/Carol Weldon

GENERATOR OF WASTE: Midlands Env. Consultants, Inc. - Various

CUSTOMER Midlands Env. Consultants ACCOUNT NUMBER: 820-469

LOCATION OF WASTE: Site Address:

CITY: COUNTY:

PHONE NUM 803-808-2043 CONTACT: Bryan Shane

FAX NUMBER:

GENERATOR'S SIGNATURE [signature] DATE: 10/27/10

TRANSPORTER OF WASTE: Meci

DATE: 10/27/10 TRUCK NUMBER: 1

DRIVER'S SIGNATURE [signature]

**** TO BE COMPLETED BY RICHLAND LANDFILL******

DISPOSAL SITE: RICHLAND LANDFILL ELGIN, SC

Waste Class: Soil

DESCRIPTION OF WASTE: Soil from UST Assessment

TICKET NUMBER: 1062387

RECEIVED BY: JLM

Copelands Service Station

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

NOV 22 2010

Re: Assessment Report Review letter
Copelands Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694
Release Reported June 24, 1993
Assessment report receivedNovember 15, 2010
Laurens County

Dear Mr. Copeland:

The Underground Storage Tank Management Division has reviewed the referenced report and noted the findings (see enclosures). The next scope of work deemed necessary is to conduct five Aggressive Fluid Vapor Recovery (AFVR) events to remove free product from the monitoring wells located on the site.

On all correspondence regarding this site, please reference the UST Permit # 05694. If you have questions concerning this correspondence or would like to submit additional information, please contact me by phone at (803) 896-6323, by fax at (803) 896-6245, or by email at brineysm@dhec.sc.gov.

Sincerely,

Stephanie Briney

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

UST DOCKET 18T

enc: Assessment report

cc: Technical File (w/out enc)

D H E C
PROMOTE PROTECT PROSPER
C. Earl Hunter, Commissioner
Promoting and protecting the health of the public and the environment.

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

MAR 08 2011

19tech
UST
DOCKET

Re: **AFVR Directive**
Copelands Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694; CA # 40573
Release reported June 24, 1993
Assessment Report Received November 15, 2010
Laurens County

Dear Mr. Copeland:

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 the next necessary scope of work to be 5 Aggressive Fluid Vapor Recovery (AFVR) events conducted 15 days apart to remove free phase product from MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-4, AFVR-5, and AFVR-6. Please have your contractor conduct the first AFVR event on MW-13 and AFVR-5, the second AFVR event should be conducted on MW-14 and AFVR-4, the third AFVR event should be conducted on MW-1 and AFVR-6, the fourth AFVR event should be conducted on MW-12 and AFVR-3, and the fifth AFVR event should be conducted on MW-13 and AFVR-5. Thirty days after the last AFVR event please have your contractor gauge the following monitoring wells MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-4, AFVR-5, and AFVR-6.

Cost Agreement # 40573 has been approved in the amount shown on the enclosed cost agreement form for the aforementioned scope of work. The AFVR activities may proceed immediately upon receipt of this letter. The report submitted at the completion of these activities should include the following:

- A narrative portion documenting the AFVR events noting site conditions, the name of the AFVR contractor, field personnel, date, time the AFVR events started and ended, ambient air temperature, and general weather conditions during the AFVR events.
- 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.
- Recovered free phase petroleum and groundwater must be accepted by a permitted treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included as an appendix to the final report.

Midland Environmental Consultants, 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 report and invoice are due within 90 days from the date of this letter. 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 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.

On all correspondence concerning this site, please reference **UST Permit # 05694 and CA # 40573.** If there are any questions concerning this project, please contact me at (803) 896-6323 or by email at brineysm@dhec.sc.gov.

Sincerely,

Stephanie Briney

Stephanie Briney, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Approved Cost Agreement

cc: Midlands Environmental Consultants, Inc., PO Box 854, Lexington, SC 29071 (w/ enc)
Technical File (w/o enc)

Approved Cost Agreement 40573

Facility: 05694 COPELANDS SERVICE STATION INC

BRINEYSM

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		A	EQUIPMENT	5.0000	575.00	2,875.00
		B	PERSONNEL	6.0000	290.00	1,740.00
10 SAMPLE COLLECTION						
		E	GAUGE WELL ONLY	8.0000	20.00	160.00
17 DISPOSAL						
		A2	WASTEWATER - PUMPING TEST	4,000.0000	0.60	2,400.00
19 RPT/PROJECT MNGT & COORDINATIO						
		PCT	PERCENT	0.1500	23,575.00	3,536.25
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
				Total Amount		27,111.25

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

RECEIVED
NOV 16 2007
UNDERGROUND STORAGE
TANK PROGRAM

November 14, 2007

Ms. Debra Thoma
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Dear Ms. Thoma:
Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2007. 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 Herring

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..

UST PROGRAM
DOCKETING # 2

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

CERTIFICATIONS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Charlotte Certification IDs

Florida/NELAP Certification Number: E87627
Kansas Certification Number: E-10364
Louisiana/LELAP Certification Number: 04034
North Carolina Drinking Water Certification Number: 37706
North Carolina Wastewater Certification Number: 12
North Carolina Field Services Certification Number: 5342
South Carolina Certification Number: 990060001
South Carolina Bioassay Certification Number: 990060003
Tennessee Certification Number: 04010
Virginia Certification Number: 00213

Asheville Certification IDs

Florida/NELAP Certification Number: E87648
Louisiana/LELAP Certification Number: 03095
New Jersey Certification Number: NC011
North Carolina Drinking Water Certification Number: 37712
North Carolina Wastewater Certification Number: 40
North Carolina Bioassay Certification Number: 9
Pennsylvania Certification Number: 68-03578
South Carolina Certification Number: 99030001
South Carolina Bioassay Certification Number: 99030002
Tennessee Certification Number: 2980
Virginia Certification Number: 00072

Eden Certification IDs

North Carolina Drinking Water Certification Number: 37738
Virginia Drinking Water Certification Number: 00424
North Carolina Wastewater Certification Number: 633

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: MW-3 **Lab ID: 927415001** Collected: 11/07/07 12:10 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	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	1	11/11/07 00:00	11/13/07 01:25	106-93-4	
1-Chloro-2-bromopropane (S)	79	%	60-140	1	11/11/07 00:00	11/13/07 01:25	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	1		11/11/07 13:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		11/11/07 13:03	994-05-8	
Benzene	ND	ug/L	5.0	1		11/11/07 13:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		11/11/07 13:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		11/11/07 13:03	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		11/11/07 13:03	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		11/11/07 13:03	106-93-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		11/11/07 13:03	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		11/11/07 13:03	108-20-3	
Ethanol	ND	ug/L	200	1		11/11/07 13:03	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		11/11/07 13:03	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		11/11/07 13:03	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		11/11/07 13:03	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		11/11/07 13:03	91-20-3	
Toluene	ND	ug/L	5.0	1		11/11/07 13:03	108-88-3	
Xylene (Total)	ND	ug/L	10.0	1		11/11/07 13:03	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	1		11/11/07 13:03	1330-20-7	
o-Xylene	ND	ug/L	5.0	1		11/11/07 13:03	95-47-6	
Dibromofluoromethane (S)	102	%	85-115	1		11/11/07 13:03	1868-53-7	
Toluene-d8 (S)	99	%	70-120	1		11/11/07 13:03	2037-26-5	
4-Bromofluorobenzene (S)	95	%	87-109	1		11/11/07 13:03	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	79-120	1		11/11/07 13:03	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: MW-4 **Lab ID: 927415002** Collected: 11/07/07 10:45 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	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	1	11/11/07 00:00	11/13/07 01:34	106-93-4	
1-Chloro-2-bromopropane (S)	82	%	60-140	1	11/11/07 00:00	11/13/07 01:34	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	1		11/11/07 13:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		11/11/07 13:21	994-05-8	
Benzene	ND	ug/L	5.0	1		11/11/07 13:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		11/11/07 13:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		11/11/07 13:21	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		11/11/07 13:21	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		11/11/07 13:21	106-93-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		11/11/07 13:21	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		11/11/07 13:21	108-20-3	
Ethanol	ND	ug/L	200	1		11/11/07 13:21	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		11/11/07 13:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		11/11/07 13:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		11/11/07 13:21	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		11/11/07 13:21	91-20-3	
Toluene	ND	ug/L	5.0	1		11/11/07 13:21	108-88-3	
Xylene (Total)	ND	ug/L	10.0	1		11/11/07 13:21	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	1		11/11/07 13:21	1330-20-7	
o-Xylene	ND	ug/L	5.0	1		11/11/07 13:21	95-47-6	
Dibromofluoromethane (S)	104	%	85-115	1		11/11/07 13:21	1868-53-7	
Toluene-d8 (S)	101	%	70-120	1		11/11/07 13:21	2037-26-5	
4-Bromofluorobenzene (S)	95	%	87-109	1		11/11/07 13:21	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	79-120	1		11/11/07 13:21	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: MW-5 **Lab ID: 927415003** Collected: 11/07/07 12:25 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	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	1	11/11/07 00:00	11/13/07 01:44	106-93-4	
1-Chloro-2-bromopropane (S)	78	%	60-140	1	11/11/07 00:00	11/13/07 01:44	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	1		11/11/07 13:38	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		11/11/07 13:38	994-05-8	
Benzene	ND	ug/L	5.0	1		11/11/07 13:38	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		11/11/07 13:38	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		11/11/07 13:38	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		11/11/07 13:38	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		11/11/07 13:38	106-93-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		11/11/07 13:38	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		11/11/07 13:38	108-20-3	
Ethanol	ND	ug/L	200	1		11/11/07 13:38	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		11/11/07 13:38	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		11/11/07 13:38	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		11/11/07 13:38	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		11/11/07 13:38	91-20-3	
Toluene	ND	ug/L	5.0	1		11/11/07 13:38	108-88-3	
Xylene (Total)	ND	ug/L	10.0	1		11/11/07 13:38	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	1		11/11/07 13:38	1330-20-7	
o-Xylene	ND	ug/L	5.0	1		11/11/07 13:38	95-47-6	
Dibromofluoromethane (S)	101	%	85-115	1		11/11/07 13:38	1868-53-7	
Toluene-d8 (S)	99	%	70-120	1		11/11/07 13:38	2037-26-5	
4-Bromofluorobenzene (S)	97	%	87-109	1		11/11/07 13:38	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	79-120	1		11/11/07 13:38	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: MW-6 **Lab ID: 927415004** Collected: 11/07/07 11:45 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	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	1	11/11/07 00:00	11/13/07 01:53	106-93-4	
1-Chloro-2-bromopropane (S)	62	%	60-140	1	11/11/07 00:00	11/13/07 01:53	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	1		11/11/07 13:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		11/11/07 13:56	994-05-8	
Benzene	ND	ug/L	5.0	1		11/11/07 13:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		11/11/07 13:56	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		11/11/07 13:56	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		11/11/07 13:56	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		11/11/07 13:56	106-93-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		11/11/07 13:56	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		11/11/07 13:56	108-20-3	
Ethanol	ND	ug/L	200	1		11/11/07 13:56	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		11/11/07 13:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		11/11/07 13:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		11/11/07 13:56	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		11/11/07 13:56	91-20-3	
Toluene	ND	ug/L	5.0	1		11/11/07 13:56	108-88-3	
Xylene (Total)	ND	ug/L	10.0	1		11/11/07 13:56	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	1		11/11/07 13:56	1330-20-7	
o-Xylene	ND	ug/L	5.0	1		11/11/07 13:56	95-47-6	
Dibromofluoromethane (S)	104	%	85-115	1		11/11/07 13:56	1868-53-7	
Toluene-d8 (S)	99	%	70-120	1		11/11/07 13:56	2037-26-5	
4-Bromofluorobenzene (S)	96	%	87-109	1		11/11/07 13:56	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	79-120	1		11/11/07 13:56	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: MW-7 **Lab ID: 927415005** Collected: 11/07/07 11:35 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	**0.086**	ug/L	0.020	1	11/11/07 00:00	11/12/07 17:40	106-93-4	
1-Chloro-2-bromopropane (S)	78	%	60-140	1	11/11/07 00:00	11/12/07 17:40	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	1		11/11/07 14:13	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		11/11/07 14:13	994-05-8	
Benzene	ND	ug/L	5.0	1		11/11/07 14:13	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		11/11/07 14:13	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		11/11/07 14:13	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		11/11/07 14:13	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		11/11/07 14:13	106-93-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		11/11/07 14:13	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		11/11/07 14:13	108-20-3	
Ethanol	ND	ug/L	200	1		11/11/07 14:13	64-17-5	
Ethylbenzene	**16.6**	ug/L	5.0	1		11/11/07 14:13	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		11/11/07 14:13	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		11/11/07 14:13	1634-04-4	
Naphthalene	**11.6**	ug/L	5.0	1		11/11/07 14:13	91-20-3	
Toluene	ND	ug/L	5.0	1		11/11/07 14:13	108-88-3	
Xylene (Total)	**109**	ug/L	10.0	1		11/11/07 14:13	1330-20-7	
m&p-Xylene	**52.4**	ug/L	10.0	1		11/11/07 14:13	1330-20-7	
o-Xylene	**55.7**	ug/L	5.0	1		11/11/07 14:13	95-47-6	
Dibromofluoromethane (S)	104	%	85-115	1		11/11/07 14:13	1868-53-7	
Toluene-d8 (S)	100	%	70-120	1		11/11/07 14:13	2037-26-5	
4-Bromofluorobenzene (S)	98	%	87-109	1		11/11/07 14:13	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	79-120	1		11/11/07 14:13	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: MW-8 **Lab ID: 927415006** Collected: 11/07/07 11:20 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	**0.087**	ug/L	0.020	1	11/11/07 00:00	11/12/07 17:49	106-93-4	
1-Chloro-2-bromopropane (S)	82	%	60-140	1	11/11/07 00:00	11/12/07 17:49	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	1		11/11/07 14:31	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		11/11/07 14:31	994-05-8	
Benzene	**1350**	ug/L	100	20		11/13/07 04:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		11/11/07 14:31	624-95-3	
tert-Butyl Alcohol	**150**	ug/L	100	1		11/11/07 14:31	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		11/11/07 14:31	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		11/11/07 14:31	106-93-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		11/11/07 14:31	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		11/11/07 14:31	108-20-3	
Ethanol	ND	ug/L	200	1		11/11/07 14:31	64-17-5	
Ethylbenzene	**26.0**	ug/L	5.0	1		11/11/07 14:31	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		11/11/07 14:31	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		11/11/07 14:31	1634-04-4	
Naphthalene	**158**	ug/L	5.0	1		11/11/07 14:31	91-20-3	
Toluene	ND	ug/L	5.0	1		11/11/07 14:31	108-88-3	
Xylene (Total)	**11.6**	ug/L	10.0	1		11/11/07 14:31	1330-20-7	
m&p-Xylene	**10.4**	ug/L	10.0	1		11/11/07 14:31	1330-20-7	
o-Xylene	ND	ug/L	5.0	1		11/11/07 14:31	95-47-6	
Dibromofluoromethane (S)	103	%	85-115	1		11/11/07 14:31	1868-53-7	
Toluene-d8 (S)	101	%	70-120	1		11/11/07 14:31	2037-26-5	
4-Bromofluorobenzene (S)	99	%	87-109	1		11/11/07 14:31	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	79-120	1		11/11/07 14:31	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: DW-1 **Lab ID: 927415007** Collected: 11/07/07 13:05 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	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	1	11/11/07 00:00	11/12/07 17:58	106-93-4	
1-Chloro-2-bromopropane (S)	82	%	60-140	1	11/11/07 00:00	11/12/07 17:58	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	100	1		11/12/07 20:42	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	1		11/12/07 20:42	994-05-8	
Benzene	ND	ug/L	5.0	1		11/12/07 20:42	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	1		11/12/07 20:42	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	1		11/12/07 20:42	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1		11/12/07 20:42	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		11/12/07 20:42	106-93-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		11/12/07 20:42	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1		11/12/07 20:42	108-20-3	
Ethanol	ND	ug/L	200	1		11/12/07 20:42	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1		11/12/07 20:42	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	1		11/12/07 20:42	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		11/12/07 20:42	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		11/12/07 20:42	91-20-3	
Toluene	ND	ug/L	5.0	1		11/12/07 20:42	108-88-3	
Xylene (Total)	ND	ug/L	10.0	1		11/12/07 20:42	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	1		11/12/07 20:42	1330-20-7	
o-Xylene	ND	ug/L	5.0	1		11/12/07 20:42	95-47-6	
Dibromofluoromethane (S)	104	%	85-115	1		11/12/07 20:42	1868-53-7	
Toluene-d8 (S)	100	%	70-120	1		11/12/07 20:42	2037-26-5	
4-Bromofluorobenzene (S)	96	%	87-109	1		11/12/07 20:42	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	79-120	1		11/12/07 20:42	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: AFVR-1 **Lab ID: 927415008** Collected: 11/07/07 13:30 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	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	1	11/11/07 00:00	11/12/07 18:07	106-93-4	
1-Chloro-2-bromopropane (S)	85	%	60-140	1	11/11/07 00:00	11/12/07 18:07	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	2000	20		11/13/07 04:07	75-85-4	
tert-Amylmethyl ether	ND	ug/L	200	20		11/13/07 04:07	994-05-8	
Benzene	ND	ug/L	100	20		11/13/07 04:07	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2000	20		11/13/07 04:07	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2000	20		11/13/07 04:07	75-65-0	
tert-Butyl Formate	ND	ug/L	1000	20		11/13/07 04:07	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	100	20		11/13/07 04:07	106-93-4	
1,2-Dichloroethane	ND	ug/L	100	20		11/13/07 04:07	107-06-2	
Diisopropyl ether	ND	ug/L	100	20		11/13/07 04:07	108-20-3	
Ethanol	ND	ug/L	4000	20		11/13/07 04:07	64-17-5	
Ethylbenzene	**969**	ug/L	100	20		11/13/07 04:07	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	200	20		11/13/07 04:07	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	100	20		11/13/07 04:07	1634-04-4	
Naphthalene	**736**	ug/L	100	20		11/13/07 04:07	91-20-3	
Toluene	**111**	ug/L	100	20		11/13/07 04:07	108-88-3	
Xylene (Total)	**8260**	ug/L	200	20		11/13/07 04:07	1330-20-7	
m&p-Xylene	**5790**	ug/L	200	20		11/13/07 04:07	1330-20-7	
o-Xylene	**2460**	ug/L	100	20		11/13/07 04:07	95-47-6	
Dibromofluoromethane (S)	98	%	85-115	20		11/13/07 04:07	1868-53-7	
Toluene-d8 (S)	100	%	70-120	20		11/13/07 04:07	2037-26-5	
4-Bromofluorobenzene (S)	100	%	87-109	20		11/13/07 04:07	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	79-120	20		11/13/07 04:07	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

Sample: AFVR-2 **Lab ID: 927415009** Collected: 11/07/07 13:45 Received: 11/08/07 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011							
1,2-Dibromoethane (EDB)	**58.9**	ug/L	2.0	100	11/11/07 00:00	11/13/07 12:26	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140	100	11/11/07 00:00	11/13/07 12:26	301-79-56	S4
8260 MSV Oxygenates	Analytical Method: EPA 8260							
tert-Amyl Alcohol	ND	ug/L	10000	100		11/11/07 18:00	75-85-4	
tert-Amylmethyl ether	ND	ug/L	1000	100		11/11/07 18:00	994-05-8	
Benzene	**8700**	ug/L	500	100		11/11/07 18:00	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	10000	100		11/11/07 18:00	624-95-3	
tert-Butyl Alcohol	ND	ug/L	10000	100		11/11/07 18:00	75-65-0	
tert-Butyl Formate	ND	ug/L	5000	100		11/11/07 18:00	762-75-4	
1,2-Dibromoethane (EDB)	ND	ug/L	500	100		11/11/07 18:00	106-93-4	
1,2-Dichloroethane	ND	ug/L	500	100		11/11/07 18:00	107-06-2	
Diisopropyl ether	**595**	ug/L	500	100		11/11/07 18:00	108-20-3	
Ethanol	ND	ug/L	20000	100		11/11/07 18:00	64-17-5	
Ethylbenzene	**4070**	ug/L	500	100		11/11/07 18:00	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1000	100		11/11/07 18:00	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	500	100		11/11/07 18:00	1634-04-4	
Naphthalene	**1100**	ug/L	500	100		11/11/07 18:00	91-20-3	
Toluene	**42000**	ug/L	2500	500		11/13/07 02:29	108-88-3	
Xylene (Total)	**22500**	ug/L	1000	100		11/11/07 18:00	1330-20-7	
m&p-Xylene	**15300**	ug/L	1000	100		11/11/07 18:00	1330-20-7	
o-Xylene	**7240**	ug/L	500	100		11/11/07 18:00	95-47-6	
Dibromofluoromethane (S)	105	%	85-115	100		11/11/07 18:00	1868-53-7	
Toluene-d8 (S)	100	%	70-120	100		11/11/07 18:00	2037-26-5	
4-Bromofluorobenzene (S)	96	%	87-109	100		11/11/07 18:00	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	79-120	100		11/11/07 18:00	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

QC Batch: MSV/1760 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Oxygenates
Associated Lab Samples: 927415001, 927415002, 927415003, 927415004, 927415005, 927415006, 927415007

METHOD BLANK: 39710
Associated Lab Samples: 927415001, 927415002, 927415003, 927415004, 927415005, 927415006, 927415007

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	
1,2-Dichloroethane	ug/L	ND	5.0	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	
Benzene	ug/L	ND	5.0	
Diisopropyl ether	ug/L	ND	5.0	
Ethanol	ug/L	ND	200	
Ethyl-tert-butyl ether	ug/L	ND	10.0	
Ethylbenzene	ug/L	ND	5.0	
m&p-Xylene	ug/L	ND	10.0	
Methyl-tert-butyl ether	ug/L	ND	5.0	
Naphthalene	ug/L	ND	5.0	
o-Xylene	ug/L	ND	5.0	
tert-Amyl Alcohol	ug/L	ND	100	
tert-Amylmethyl ether	ug/L	ND	10.0	
tert-Butyl Alcohol	ug/L	ND	100	
tert-Butyl Formate	ug/L	ND	50.0	
Toluene	ug/L	ND	5.0	
Xylene (Total)	ug/L	ND	10.0	
1,2-Dichloroethane-d4 (S)	%	108	79-120	
4-Bromofluorobenzene (S)	%	97	87-109	
Dibromofluoromethane (S)	%	101	85-115	
Toluene-d8 (S)	%	100	70-120	

LABORATORY CONTROL SAMPLE: 39711

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	50	57.3	115	81-125	
1,2-Dichloroethane	ug/L	50	61.4	123	72-126	
3,3-Dimethyl-1-Butanol	ug/L	1000	940	94	55-148	
Benzene	ug/L	50	59.4	119	78-128	
Diisopropyl ether	ug/L	50	63.5	127	74-131	
Ethanol	ug/L	2000	1480	74	53-150	
Ethyl-tert-butyl ether	ug/L	100	123	123	77-136	
Ethylbenzene	ug/L	50	62.1	124	80-127	
m&p-Xylene	ug/L	100	120	120	82-127	
Methyl-tert-butyl ether	ug/L	50	60.0	120	71-130	
Naphthalene	ug/L	50	48.6	97	52-136	
o-Xylene	ug/L	50	58.6	117	83-124	
tert-Amyl Alcohol	ug/L	1000	1030	103	50-150	
tert-Amylmethyl ether	ug/L	100	124	124	50-150	
tert-Butyl Alcohol	ug/L	500	545	109	50-150	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

LABORATORY CONTROL SAMPLE: 39711

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	200	224	112	50-150	
Toluene	ug/L	50	60.4	121	76-126	
Xylene (Total)	ug/L	150	182	121	83-125	
1,2-Dichloroethane-d4 (S)	%			105	79-120	
4-Bromofluorobenzene (S)	%			101	87-109	
Dibromofluoromethane (S)	%			103	85-115	
Toluene-d8 (S)	%			102	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 39712 39713

Parameter	Units	927415001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Benzene	ug/L	ND	50	50	59.8	59.3	120	119	74-136	.9	
Toluene	ug/L	ND	50	50	71.6	70.2	143	140	73-131	2	M1
1,2-Dichloroethane-d4 (S)	%						111	112	79-120		
4-Bromofluorobenzene (S)	%						99	98	87-109		
Dibromofluoromethane (S)	%						104	102	85-115		
Toluene-d8 (S)	%						99	100	70-120		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

QC Batch: MSV/1761 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Oxygenates
Associated Lab Samples: 927415008, 927415009

METHOD BLANK: 39714
Associated Lab Samples: 927415008, 927415009

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	
1,2-Dichloroethane	ug/L	ND	5.0	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	
Benzene	ug/L	ND	5.0	
Diisopropyl ether	ug/L	ND	5.0	
Ethanol	ug/L	ND	200	
Ethyl-tert-butyl ether	ug/L	ND	10.0	
Ethylbenzene	ug/L	ND	5.0	
m&p-Xylene	ug/L	ND	10.0	
Methyl-tert-butyl ether	ug/L	ND	5.0	
Naphthalene	ug/L	ND	5.0	
o-Xylene	ug/L	ND	5.0	
tert-Amyl Alcohol	ug/L	ND	100	
tert-Amylmethyl ether	ug/L	ND	10.0	
tert-Butyl Alcohol	ug/L	ND	100	
tert-Butyl Formate	ug/L	ND	50.0	
Toluene	ug/L	ND	5.0	
Xylene (Total)	ug/L	ND	10.0	
1,2-Dichloroethane-d4 (S)	%	105	79-120	
4-Bromofluorobenzene (S)	%	98	87-109	
Dibromofluoromethane (S)	%	99	85-115	
Toluene-d8 (S)	%	100	70-120	

LABORATORY CONTROL SAMPLE: 39715

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	50	49.1	98	81-125	
1,2-Dichloroethane	ug/L	50	52.8	106	72-126	
3,3-Dimethyl-1-Butanol	ug/L	1000	959	96	55-148	
Benzene	ug/L	50	51.3	103	78-128	
Diisopropyl ether	ug/L	50	54.5	109	74-131	
Ethanol	ug/L	2000	2040	102	53-150	
Ethyl-tert-butyl ether	ug/L	100	108	108	77-136	
Ethylbenzene	ug/L	50	50.2	100	80-127	
m&p-Xylene	ug/L	100	100	100	82-127	
Methyl-tert-butyl ether	ug/L	50	53.9	108	71-130	
Naphthalene	ug/L	50	54.7	109	52-136	
o-Xylene	ug/L	50	49.0	98	83-124	
tert-Amyl Alcohol	ug/L	1000	1070	107	50-150	
tert-Amylmethyl ether	ug/L	100	113	113	50-150	
tert-Butyl Alcohol	ug/L	500	528	106	50-150	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

LABORATORY CONTROL SAMPLE: 39715

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	200	192	96	50-150	
Toluene	ug/L	50	51.8	104	76-126	
Xylene (Total)	ug/L	150	155	103	83-125	
1,2-Dichloroethane-d4 (S)	%			108	79-120	
4-Bromofluorobenzene (S)	%			99	87-109	
Dibromofluoromethane (S)	%			102	85-115	
Toluene-d8 (S)	%			103	70-120	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

QC Batch: OEXT/1700 — Analysis Method: EPA 8011
QC Batch Method: EPA 8011 — Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 927415001, 927415002, 927415003, 927415004

METHOD BLANK: 39738
Associated Lab Samples: 927415001, 927415002, 927415003, 927415004

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	
1-Chloro-2-bromopropane (S)	%	74	60-140	

LABORATORY CONTROL SAMPLE & LCSD: 39739 39740

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	0.20	76	71	60-140	6	20	
1-Chloro-2-bromopropane (S)	%				71	66	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 39741 39742

Parameter	Units	927217001 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	2.5	.29	.29	3.1	3.1	202	184	60-140	2	1g
1-Chloro-2-bromopropane (S)	%						66	61	60-140		

SAMPLE DUPLICATE: 39743

Parameter	Units	927217002 Result	Dup Result	RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	82.3	79.4	4	
1-Chloro-2-bromopropane (S)	%		0	0	S4

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

QC Batch: OEXT/1702 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 927415005, 927415006, 927415007, 927415008, 927415009

METHOD BLANK: 39750
Associated Lab Samples: 927415005, 927415006, 927415007, 927415008, 927415009

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	
1-Chloro-2-bromopropane (S)	%	80	60-140	

LABORATORY CONTROL SAMPLE & LCSD: 39751 39752

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	0.26	0.27	90	94	60-140	4	20	
1-Chloro-2-bromopropane (S)	%				84	87	60-140			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALIFIERS

Project: COPELAND'S SEV. 05694/CA:30545
Pace Project No.: 927415

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.

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

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
1g	The spike recovery was outside acceptance limits for the MS and/or MSD due to an analyte concentration in the sample at four times greater than the spike concentration. The QC batch was accepted based upon LCS and/or LCSD recoveries within acceptance limits.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1137861

Section A Required Client Information:

Company: SCDHEC-UST
Address: 2600 Bull St, Columbia, SC 29201
Email To:
Phone: 803-896-6240 Fax: 803-896-6245
Requested Due Date/TAT: 7 Days

Section B Required Project Information:

Report To: D. Thoma
Copy To:
Purchase Order No.: 587465
Project Name: Copeland's Service St.
Project Number: 05694/CA: 30545

Section C Invoice Information:

Attention: Finance
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 1315-1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

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

Requested Analysis Filtered (Y/N): BTEX MN (8260B) N; 1,2 DCA N; Oxygenates N; EDB (8011) N

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW-1~~	~~WT~~	~~G~~						~~6~~				~~6~~						
2	MW-3	WT	G	11/07	1210	—	—	—	6				6						927415.001
3	MW-4	WT	G		1245	—	—	—	6				6						2
4	MW-5	WT	G		1225	—	—	—	6				6						3
5	MW-6	WT	G		1145	—	—	—	6				6						4
6	MW-7	WT	G		1135	—	—	—	6				6						5
7	MW-8	WT	G		1120	—	—	—	6				6						6 Slight Odor
8	DW-1	WT	G		1305	—	—	—	6				6						7 Sulfur Odor
9	AFVR-1	WT	G		1330	—	—	—	~~12~~				~~12~~						8 See Below
10	AFVR-2	WT	G		1345	—	—	—	6				6						9 Strong Odor
11	~~AFVR-3~~	~~WT~~	~~G~~						~~6~~				~~6~~						
12																			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*AFVR-1: Only enough H2O for (2) vials - 1 has bubble, Slight odor	Dalton Beames	11/08/07	1100	[illegible]	11/9/07	1115	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Dalton Beames

SIGNATURE of SAMPLER: Dalton Beames

DATE Signed (MM/DD/YY): 11/07/07

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

SITE ACTIVITY SUMMARY

UST PERMIT # 05694
FACILITY NAME COPELAND'S SERVICE STATION, INC.
COUNTY LAURENS
NAME OF SAMPLER DALTON REAMES

Sample ID	sampled?	Date	Time	Depth of Well	Depth to Water	Depth to Product	FP Thickness	# gal purged	comments
MW-1	N	11/07/07	—	35.00	33.62	31.20	2.42	—	Product Present
MW-3	Y		1210	35.00	31.45	—	—	—	—
MW-4	Y		1045	35.00	32.39	—	—	—	—
MW-5	Y		1225	35.00	26.17	—	—	—	—
MW-6	Y		1145	35.00	28.35	—	—	—	Fire Cut Mounted in Vault; —
MW-7	Y		1135	35.00	30.95	—	—	—	—
MW-8	Y		1120	35.00	31.93	—	—	—	~~[illegible]~~ Slight Odor
DW-1	Y		1305	85.00	32.46	—	—	5.0	Sulfur Odor; Did not drum
AFVR-1	Y		1330	35.00	33.35	—	—	—	*See Below
AFVR-2	Y		1345	35.00	32.37	—	—	—	Strong Odor
AFVR-3	N		—	35.00	31.43	31.08	0.35	—	Product Present

* AFVR-1: Only enough H_2O for (2) 40 ml vials – bubble in EDB vial.; Slight Odor.

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/07/07

Field Personnel: Dalton Reames

General Weather Conditions: Sunny / Cool

Ambient Air Temperature: ____ °C 54°F

Quality Assurance

pH Meter		Conductivity Meter	
serial no.	09642	serial no.	103631
pH=4.0	/	standard	/
pH=7.0	/	standard	/
pH=10.0	/	standard	/

Chain of Custody

Relinquished by ____ Date/Time ____ Received by ____ Date/Time ____

Facility Name: COPELAND'S SERVICE STATION, Inc.

Site ID#: 05698 **Monitoring Well #** DW-1

Water Supply Well **Public** ____ **Private** ____

Monitoring Well Diameter (D): .166 feet

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: / feet
Depth to Free Product (DFP) / feet
Depth to Ground Water (DGW) 32.46 feet
Total Well Depth (TWD) 85.00 feet
Length of the water column (LWC=TWD-DGW) 52.54 feet
1 casing volume (CV=LWC X C)=52.54 X .166 = 8.75 gals
3 casing volume (3 X CV)= 26.25 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 5.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol 2.0	2nd Vol 2.0	3rd Vol 1.0	4th Vol	5th Vol	Post Sampling	
Time (military)	/	1257	1302	1305				
pH (s.u.)		7.08	6.96	6.86				
Specific Conductivity (µmhos/cm)		131.5	131.9	131.6				
Water Temperature (°C)		21.8	20.6	20.1				
Dissolved Oxygen	N/A							
PID readings, if required	/							

Remarks: Sulfur Odor - ~~[illegible]~~ Did not Drum Sampled @ 1305

Midlands Environmental Consultants, Inc.

March 25, 2011

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

UST APR 0 5 2011 PROGRAM

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #40573
MECI Project Number 11-3269A
Certified Site Rehabilitation Contractor UCC-0009

jotech UST DOCKET

Dear Ms. Briney,

On behalf of Mr. H. Wayne Copeland, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on March 24, 2011. The event was conducted on monitoring wells MW-13 and AFVR-5 to remove free phase petroleum product. Free phase petroleum product was detected in monitoring well MW-13 at a thickness of 2.07 feet and in AFVR-5 at a thickness of 1.04 feet prior to the AFVR event. The event was conducted continuously for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was detected in monitoring well AFVR-5 at a thickness of 0.01 feet immediately following the event. Free phase petroleum product was not detected in monitoring well MW-13 immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 10.60 pounds or approximately 1.83 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 1.33 pounds per hour. Concentrations of off gas produced during the event were recorded from 1,896 parts per million by volume (PPM) to 3,554 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at 22.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1A.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2A. Monitoring well locations are depicted on attached Figure.

A total of 150 gallons of liquid was removed from MW-13 and AFVR-5 during this event. Free phase petroleum product was observed at a thickness of 0.10 feet in the sight tube of the knock-out tank at the end of the event. The fluids produced were transported to TK Tank Services, Inc. of Sumter, SC for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, Mr. H. Wayne Copeland, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Christopher G. Lashley
Field Technician

Brendon P. Kelly
Project Scientist

TABLE 1A
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269A
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
AFVR-5	03/24/11	8:00	0.50	22.0	1,896	460	41.40	0.94	0.47
MW-13	03/24/11	8:30	0.50	22.0	3,554	470	42.30	1.80	0.90
	03/24/11	9:00	0.50	22.0	2,110	510	45.90	1.16	0.58
	03/24/11	9:30	0.50	22.0	2,356	500	45.00	1.27	0.64
	03/24/11	10:00	0.50	22.0	2,286	510	45.90	1.26	0.63
	03/24/11	10:30	0.50	22.0	2,427	480	43.20	1.26	0.63
	03/24/11	11:00	0.50	22.0	2,348	490	44.10	1.24	0.62
	03/24/11	11:30	0.50	22.0	2,409	520	46.80	1.35	0.68
	03/24/11	12:00	0.50	22.0	2,171	600	54.00	1.41	0.70
	03/24/11	12:30	0.50	22.0	2,084	570	51.30	1.28	0.64
	03/24/11	13:00	0.50	22.0	1,963	510	45.90	1.08	0.54
	03/24/11	13:30	0.50	22.0	2,005	590	53.10	1.28	0.64
	03/24/11	14:00	0.50	22.0	1,963	610	54.90	1.29	0.65
	03/24/11	14:30	0.50	22.0	2,183	580	52.20	1.37	0.68
	03/24/11	15:00	0.50	22.0	2,092	500	45.00	1.13	0.56
	03/24/11	15:30	0.50	22.0	1,997	480	43.20	1.04	0.52
	03/24/11	16:00	0.50	22.0	2,092	460	41.40	1.04	0.52
									TOTAL
									10.60

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
AFVR-5	2"	Total Depth (34.35)	32.78	33.82	1.04	33.70	33.71	0.01	0.77
MW-13	2"	25-35	32.58	34.65	2.07	***	34.40	***	1.51

Vacuum Truck Information		Well ID	Stinger Depth
Subcontractor:	MECI	AFVR-5	34.00**
Truck Operator:	B. Kelly	MW-13	34.50**
Stack I.D. (feet)	0.33 feet		

** = Stingers set 0.50 feet shallower than normal, due to proximity to bottom of well.

Corrected depth to water prior to AFVR event in AFVR-5 = 32.94

Corrected depth to water prior to AFVR event in MW-13= 32.89

Recovery / Disposal Information		
Hydro carbons Removed (vapor):	10.60	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	1.83	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	150	Gallons

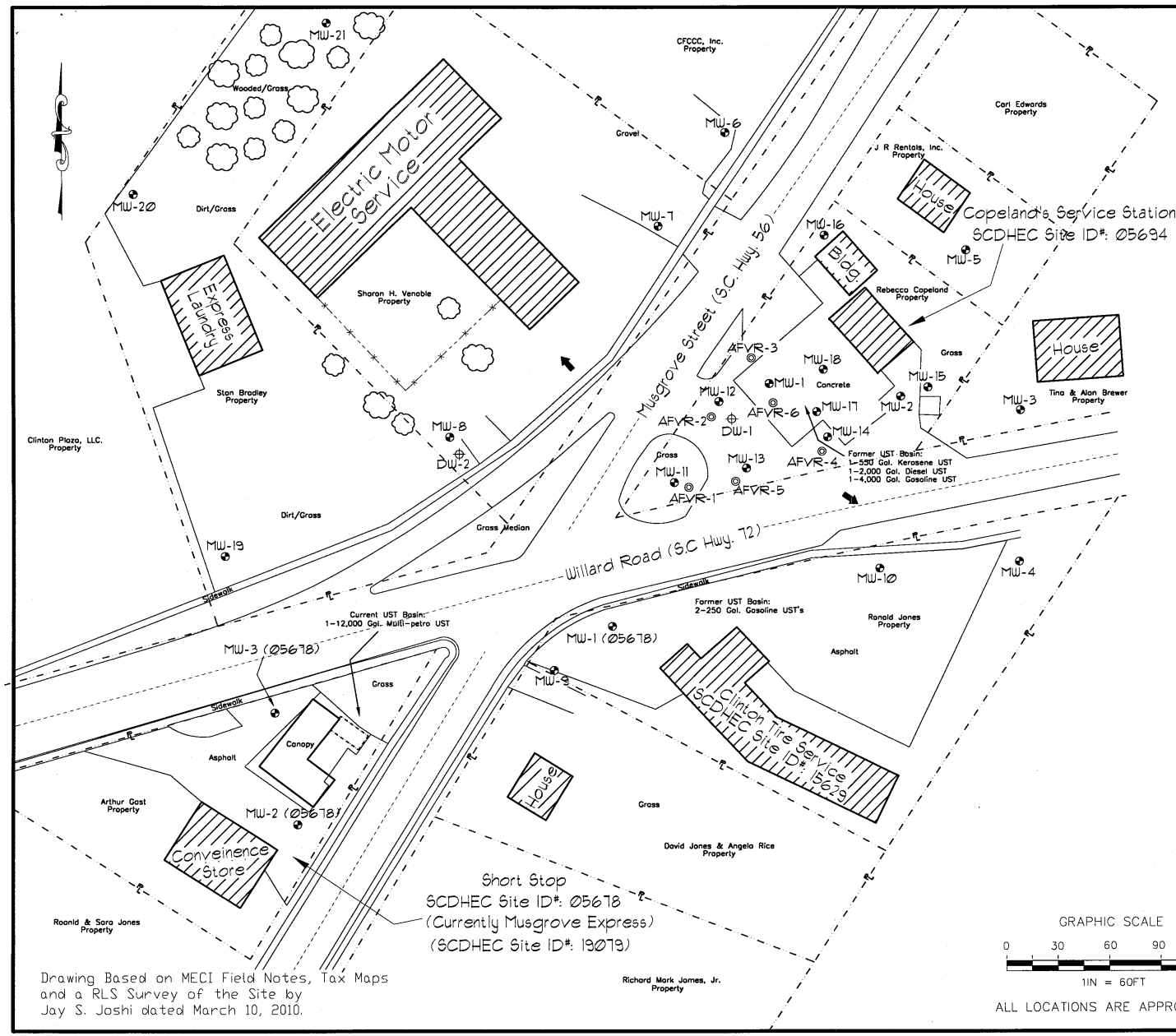
TABLE 2A
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269A
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-11	**AFVR-1**	**AFVR-2**
Nearest Extraction Well:		MW-13	AFVR-5	MW-13
Approximate Distance:		40 ft	28 ft	37 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
8:00	0.0	0	0.5	0.5
8:30	0.5	0	0.5	0.5
9:00	1.0	0	0.5	0.5
9:30	1.5	0	0.5	0.5
10:00	2.0	0	0.5	0.5
10:30	2.5	0	0.5	0.5
11:00	3.0	0	0.5	0.5
11:30	3.5	0	0.5	0.5
12:00	4.0	0	0.5	0.5
12:30	4.5	0	0.5	0.5
13:00	5.0	0	0.5	0.5
13:30	5.5	0	0.5	0.5
14:00	6.0	0	0.5	0.5
14:30	6.5	0	0.5	0.5
15:00	7.0	0	0.5	0.5
15:30	7.5	0	0.5	0.5
16:00	8.0	0	0.5	0.5
Maximum Change:		**0**	**0.5**	**0.5**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-11	**AFVR-1**	**AFVR-2**
Nearest Extraction Well:		MW-13	AFVR-5	MW-13
Approximate Distance:		40 ft	28 ft	37 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		34.08	33.81	33.15
12:00	4 hours	34.15	33.80	33.18
16:00	8 hours	34.15	33.80	33.18
Maximum Change:		-0.07	0.01	-0.03



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	2

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)

MIDLANDS ENVIRONMENTAL
1194 TWO NOTCH ROAD
LEXINGTON, SC 29072

Generator's Phone:

6. Transporter 1 Company Name
U.S. EPA ID Number

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

8. Designated Facility Name and Site Address
U.S. EPA ID Number

Facility's Phone:

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. NON HAZARDOUS PETROLEUM CONTAMINATED WATER	1	tt	AP 3760 GAL	
2.				
3.				
4.				

Site:	UST Permit #:	Gallons Produced:
Former Royal Petroleum	19426	325
Newberry Airport	15590	325
Gibbs Grocery	03463	530
BJ's Wholesale Club	18529	150
BJ's Wholesale Club	18529	150
Pickney Road Property	19360	150
Chester School Bus	02044	175
Anderson Patrol	00769	150
Bay Creek Villas	18662	100
Cleland's One Stop	05273	60
Copeland's Service	05694	150
Richland County Landfill	11808	220
Bank of America	19190	250
Rogers Auto Parts	00428	0
Pantry 3418	05042	150
Movie Gallery	19077	150
USA Petro	07907	150
USA Petro	07907	325
Phillips Rental	19328	125
Former Gulf	18447	125

13. Special I

14. GENERA
Generator's/C
ulations for reporting proper disposal of Hazardous Waste.
Month Day Year

15. Internatio
Transporter S
Port of entry/exit:
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Joseph W. Stanton
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

169-BLC-O 5 11977 (Rev. 8/06)

GENERATOR'S/SHIPPER'S INITIAL COPY

Midlands
Environmental
Consultants, Inc.

April 8, 2011

UST
APR 13 2011
PROGRAM

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

UST
DOCKET
21 Tech

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #40573
MECI Project Number 11-3269B
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Briney,

On behalf of Mr. H. Wayne Copeland, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on April 6 & 7, 2011. The event was conducted on monitoring well MW-14 to remove free phast petroleum product and on AFVR-4 to reduce dissolved CoC concentrations. Free phase petroleum product was detected in monitoring well MW-14 at a thickness of 0.22 feet prior to the AFVR event. The event was conducted continuously for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was not detected in the monitoring wells immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 9.32 pounds or approximately 1.61 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 1.17 pounds per hour. Concentrations of off gas produced during the event were recorded from 1,082 parts per million by volume (PPM) to 5,309 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at 20.0 inches to 28.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1B.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2B. Monitoring well locations are depicted on attached Figure.

A total of 100 gallons of liquid was removed from MW-14 and AFVR-4 during this event. The fluids produced were transported to TK Tank Services, Inc. of Sumter, SC for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, Mr. H. Wayne Copeland, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Ryan D. Ariail
Staff Biologist

Brendon P. Kelly
Project Scientist

Attachments:

TABLE 1B
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269B
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
AFVR-4	04/06/11	20:00	0.50	20.0	1,082	620	55.80	0.72	0.36
MW-14	04/06/11	20:30	0.50	24.0	1,552	350	31.50	0.59	0.29
	04/06/11	21:00	0.50	24.0	1,628	350	31.50	0.62	0.31
	04/06/11	21:30	0.50	28.0	3,102	300	27.00	1.01	0.50
	04/06/11	22:00	0.50	26.0	2,632	300	27.00	0.85	0.43
	04/06/11	22:30	0.50	26.0	2,417	300	27.00	0.78	0.39
	04/06/11	23:00	0.50	26.0	2,072	300	27.00	0.67	0.34
	04/06/11	23:30	0.50	28.0	2,329	300	27.00	0.75	0.38
***	04/07/11	0:00	0.50	28.0	2,553	300	27.00	0.83	0.41
	04/07/11	0:30	0.50	28.0	3,151	300	27.00	1.02	0.51
	04/07/11	1:00	0.50	28.0	4,697	300	27.00	1.52	0.76
	04/07/11	1:30	0.50	28.0	4,891	300	27.00	1.58	0.79
	04/07/11	2:00	0.50	28.0	4,571	300	27.00	1.48	0.74
	04/07/11	2:30	0.50	28.0	4,686	300	27.00	1.52	0.76
	04/07/11	3:00	0.50	28.0	4,352	300	27.00	1.41	0.71
	04/07/11	3:30	0.50	28.0	4,852	300	27.00	1.57	0.79
	04/07/11	4:00	0.50	28.0	5,309	300	27.00	1.72	0.86
									TOTAL
									9.32

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
AFVR-4	2"	25-35	***	33.82	***	***	33.85	***	0.03
MW-14	2"	25-35	32.43	32.65	0.22	***	DRY	***	2.54

Vacuum Truck Information		Well ID	Stinger Depth
Subcontractor:	MECI	AFVR-4	33.00
Truck Operator:	R. Ariail	MW-14	33.00
Stack I.D. (feet)	0.33 feet		

***Added 1.00 foot to stinger length on MW-14

Corrected depth to water prior to AFVR event in MW-14 = 32.46

Recovery / Disposal Information

Hydro carbons Removed (vapor):	9.32	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	1.61	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	100	Gallons

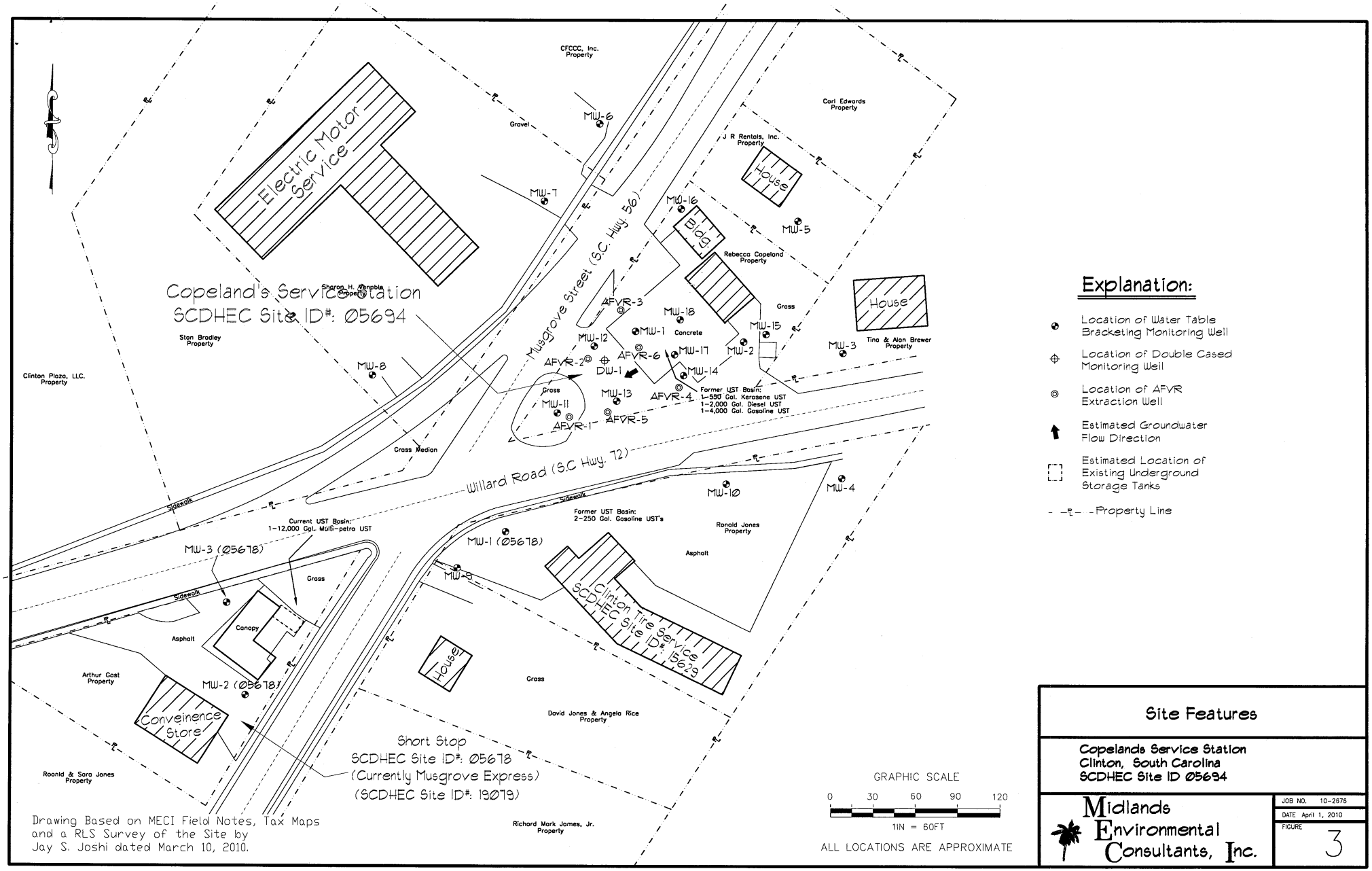
TABLE 2B
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269B
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-11	**MW-15**	**MW-18**
Nearest Extraction Well:		AFVR-4	MW-14	MW-14
Approximate Distance:		81 ft	66 ft	39 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
20:00	0.0	0	0	0
20:30	0.5	0	0	0
21:00	1.0	0	0	0
21:30	1.5	0	0	0
22:00	2.0	0	0	0
22:30	2.5	0	0	0
23:00	3.0	0	0	0
23:30	3.5	0	0	0
0:00	4.0	0	0	0
0:30	4.5	0	0	0
1:00	5.0	0	0	0
1:30	5.5	0	0	0
2:00	6.0	0	0	0
2:30	6.5	0	0	0
3:00	7.0	0	0	0
3:30	7.5	0	0	0
4:00	8.0	0	0	0
Maximum Change:		**0**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-11	**MW-15**	**MW-18**
Nearest Extraction Well:		AFVR-4	MW-14	MW-14
Approximate Distance:		81 ft	66 ft	39 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		34.06	28.15	30.64
0:00	4 hours	34.07	28.16	30.62
4:00	8 hours	34.06	28.20	30.66
Maximum Change:		0.01	-0.05	-0.04



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	3

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
MIDLANDS ENVIRONMENTAL
1144 TWO NOTCH ROAD
LEXINGTON, SC 29073

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: TK TANK SERVICE — SUMTER, SC — U.S. EPA ID Number: 987573557

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

8. Designated Facility Name and Site Address
TK TANK SERVICES
425 BOULEVARD ROAD
SUMTER, SC 29153

U.S. EPA ID Number: 987573557

Facility's Phone: 803-418-5314

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. NON HAZARDOUS PETROLEUM CONTAMINATED WATER	1	TT	AP 4220 GAL	
2.				
3.				
4.				

13. Special Hai

Site	UST#	Gallons	Site	UST#	Gallons
Wando Lounge	19485	150	Zee Mart	7176	150
Bay Creek Villas	18662	150	Zee Mart	7176	100
BJ's Wholesale Club	18529	175	Blacksburg Hardware	1924	100
BJ's Wholesale Club	18529	150	Blacksburg Hardware	1924	100
Former McCoy Oil Site	19002	345	Squire Village Food Store	15385	200
Friendly Marks	11693	325	Marion Corners	12223	150
BB&T	19443	325	Chester School Bus Stop	2044	200
Mack's Camp	1253	175	M J Tadlock	15816	100
Quick Pantry #12	6926	150	Green Ave. BP	13084	200
Sweatman's Grocery	17292	400	Copelands Service Station	5694	100
Sportsman's Corner	12151	175	Town of Winnsboro	14433	150
Carson's Amoco	3027	150			

GENERATOR

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's/Offeror's Printed/Typed Name — Signature — Month — Day — Year

INT'L

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

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Joseph W. Stanford — Signature — Month: 4 — Day: 9 — Year: 11

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

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

169-BLC-O 5 11977 (Rev. 8/06)

GENERATOR'S/SHIPPER'S INITIAL COPY

Midlands
Environmental
Consultants, Inc.

May 4, 2011

UST
MAY 18 2011
PROGRAM

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

22tch
UST
DOCKET

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694, CA #40573
MECI Project Number 11-3269C
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Briney,

On behalf of Mr. H. Wayne Copeland, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on April 26 & 27, 2011. The event was conducted on monitoring well MW-1 and AFVR-6 to remove free phase petroleum product. Free phase petroleum product was detected in monitoring well MW-1 at a thickness of 1.42 feet and in AFVR-6 at a thickness of 2.35 feet prior to the AFVR event. The event was conducted continuously for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was not detected in the monitoring wells immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 20.13 pounds or approximately 3.48 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 2.55 pounds per hour. Concentrations of off gas produced during the event were recorded from 1,187 parts per million by volume (PPM) to 4,682 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at 12.0 inches to 23.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1C.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2C. Monitoring well locations are depicted on attached Figure.

A total of 150 gallons of liquid was removed from MW-1 and AFVR-6 during this event. Free phase petroleum product was observed in the sight tube of the knock out tank at a thickness of 0.083 feet at the end of the event. The fluids produced were transported to TK Tank Services, Inc. of Sumter, SC for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, Mr. H. Wayne Copeland, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

Brendon P. Kelly
Project Scientist

Attachments:

TABLE 1C
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269C
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
AFVR-6 MW-1	04/26/11	20:00	0.50	13.0	1,901	1,580	142.20	3.24	1.62
	04/26/11	20:30	0.50	12.0	1,692	1,730	155.70	3.16	1.58
	04/26/11	21:00	0.50	23.0	1,806	370	33.30	0.72	0.36
	04/26/11	21:30	0.50	23.0	1,957	330	29.70	0.70	0.35
	04/26/11	22:00	0.50	23.0	2,127	370	33.30	0.85	0.42
	04/26/11	22:30	0.50	23.0	3,237	390	35.10	1.36	0.68
	04/26/11	23:00	0.50	23.0	2,850	370	33.30	1.14	0.57
	04/26/11	23:30	0.50	23.0	2,933	370	33.30	1.17	0.59
	04/27/11	0:00	0.50	23.0	2,964	340	30.60	1.09	0.54
	04/27/11	0:30	0.50	23.0	4,682	360	32.40	1.82	0.91
	04/27/11	1:00	0.50	18.0	4,048	980	88.20	4.28	2.14
	04/27/11	1:30	0.50	16.0	4,242	1,130	101.70	5.18	2.59
	04/27/11	2:00	0.50	14.0	2,621	1,320	118.80	3.74	1.87
	04/27/11	2:30	0.50	14.0	2,788	1,330	119.70	4.00	2.00
	04/27/11	3:00	0.50	14.0	2,973	1,330	119.70	4.27	2.14
	04/27/11	3:30	0.50	14.0	1,187	1,320	118.80	1.69	0.85
	04/27/11	4:00	0.50	14.0	1,276	1,330	119.70	1.83	0.92
									TOTAL **20.13**

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
AFVR-6	2"	TD = 35.36	31.52	33.87	2.35	***	33.99	***	0.12
MW-1	2"	TD = 33.95	31.97	33.39	1.42	***	33.26	***	2.82

Vacuum Truck Information		Well ID	Stinger Depth
Subcontractor:	MECI	AFVR-6	34.50
Truck Operator:	R. Ariail	MW-1	34.00
Stack I.D. (feet)	0.33 feet		
Corrected depth to water prior to AFVR event in AFVR-6 =			31.87
Corrected depth to water prior to AFVR event in MW-1 =			32.18

Recovery / Disposal Information		
Hydro carbons Removed (vapor):	20.13	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	3.48	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	150	Gallons

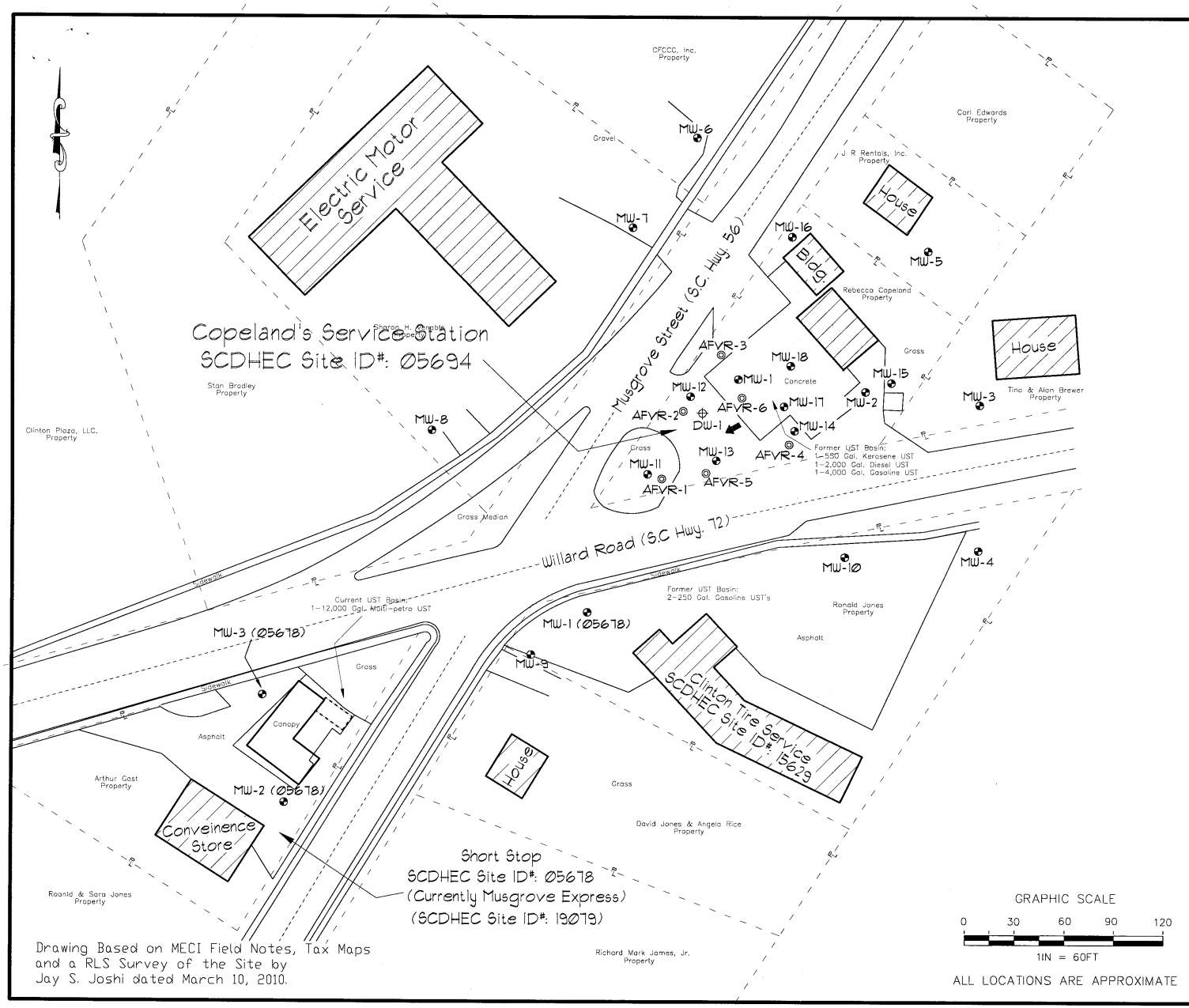
TABLE 2C
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269C
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-11	**MW-17**	**MW-18**
Nearest Extraction Well:		AFVR-6	AFVR-6	MW-1
Approximate Distance:		74 ft	26 ft	33 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
20:00	0.0	0	0	0
20:30	0.5	0	0	0
21:00	1.0	0	0	0
21:30	1.5	0	0	0
22:00	2.0	0	0	0
22:30	2.5	0	0	0
23:00	3.0	0	0	0
23:30	3.5	0	0	0
0:00	4.0	0	0	0
0:30	4.5	0	0	0
1:00	5.0	0	0	0
1:30	5.5	0	0	0
2:00	6.0	0	0	0
2:30	6.5	0	0	0
3:00	7.0	0	0	0
3:30	7.5	0	0	0
4:00	8.0	0	0	0
Maximum Change:		**0**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-11	**MW-17**	**MW-18**
Nearest Extraction Well:		AFVR-6	AFVR-6	MW-1
Approximate Distance:		81 ft	66 ft	39 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		33.90	31.98	30.60
0:00	4 hours	33.91	31.95	30.66
4:00	8 hours	33.90	32.00	30.69
Maximum Change:		-0.01	-0.05	-0.09



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	3

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

MIDLANDS ENVIRONMENTAL
1134 TWO NOTCH ROAD
LEXINGTON, SC 29073

Generator's Site Address (if different than mailing address) TR1041

Generator's Phone:

6. Transporter 1 Company Name — U.S. EPA ID Number

TK TANK SERVICE SUMTER, SC

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

8. Designated Facility Name and Site Address — U.S. EPA ID Number

TK TANK SERVICES
365 BOULEVARD ROAD
SUMTER, SC 29152

Facility's Phone: 803-418-5714

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. NON HAZARDOUS PETROLEUM CONTAMINATED WATER	1	TT	3,376	gallons
2.				
3.				
4.				

Site:	UST Permit #:	Gallons Produced:
Ancrum	01617	150
Former Minute Saver	19340	100
Former Gulf Station	18477	150
H&H Transfer	17195	100
Pantry 3418	05042	200
Movie Gallery	19077	125
Green Avenue BP	13084	225
Copeland's Service	15694	150
Hillcrest Grocery	09383	1
Chester School Bus	02044	200
Pickney Road	19360	150
Richland County	11808	225
EZ Stop Food Shop	14555	275
Mack's Camp	01253	200
Quick Pantry 12	06926	150
Friendly Marks	11693	325
Squire Village	15385	150
Marion Corners	12223	175
Brown Brothers	04145	150
Pelzer Gas Mart	00480	175

13. Sp

14. GE

General

bject to federal regulations for reporting proper disposal of Hazardous Waste.

Signature — Month — Day — Year

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: Steve A. Gamble — Signature: Steve A. Gamble — Month: 5 — Day: 4 — 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:

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

169-BLC-O 5 11977 (Rev. 8/06)

GENERATOR'S/SHIPPER'S INITIAL COPY

Midlands Environmental Consultants, Inc.

May 17, 2011

UST MAY 18 2011 PROGRAM

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

UST DOCKET

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #40573
MECI Project Number 11-3269D
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Briney,

On behalf of Mr. H. Wayne Copeland, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on May 12, 2011. The event was conducted on monitoring wells MW-12 and AFVR-3 to remove free phase petroleum product. Free phase petroleum product was detected in monitoring well MW-12 at a thickness of 0.07 feet and in AFVR-3 at a thickness of 0.32 feet prior to the AFVR event. The event was conducted continuously for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was not detected in the monitoring wells immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 14.50 pounds or approximately 2.51 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 1.81 pounds per hour. Concentrations of off gas produced during the event were recorded from 889 parts per million by volume (PPM) to 2,308 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at 13.0 inches to 22.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1D.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2D. Monitoring well locations are depicted on attached Figure.

A total of 325 gallons of liquid was removed from MW-12 and AFVR-3 during this event. Free phase petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to TK Tank Services, Inc. of Sumter, SC for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, Mr. H. Wayne Copeland, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

Brendon P. Kelly
Project Scientist

Attachments:

TABLE 1D
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269D
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
AFVR-3 MW-12	05/12/11	1:15	0.50	22.0	972	800	72.00	0.84	0.42
	05/12/11	1:45	0.50	22.0	915	840	75.60	0.83	0.42
	05/12/11	2:15	0.50	22.0	889	820	73.80	0.79	0.39
	05/12/11	2:45	0.50	22.0	1,011	800	72.00	0.87	0.44
	05/12/11	3:15	0.50	22.0	1,487	780	70.20	1.25	0.63
	05/12/11	3:45	0.50	22.0	2,308	740	66.60	1.84	0.92
	05/12/11	4:15	0.50	22.0	2,123	710	63.90	1.63	0.81
	05/12/11	4:45	0.50	22.0	1,850	700	63.00	1.40	0.70
	05/12/11	5:15	0.50	22.0	1,587	660	59.40	1.13	0.57
	05/12/11	5:45	0.50	22.0	1,513	650	58.50	1.06	0.53
	05/12/11	6:15	0.50	22.0	1,699	640	57.60	1.17	0.59
	05/12/11	6:45	0.50	13.0	1,207	1,680	151.20	2.19	1.09
	05/12/11	7:15	0.50	13.0	1,748	1,660	149.40	3.13	1.57
	05/12/11	7:45	0.50	13.0	1,525	1,640	147.60	2.70	1.35
	05/12/11	8:15	0.50	13.0	1,615	1,610	144.90	2.81	1.40
	05/12/11	8:45	0.50	13.0	1,367	1,580	142.20	2.33	1.17
	05/12/11	9:15	0.50	13.0	1,780	1,570	141.30	3.02	1.51
									TOTAL **14.50**

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
AFVR-3	2"	TD = 34.10	31.61	31.93	0.32	***	31.30	***	-0.63
MW-12	2"	25-35	32.60	32.67	0.07	***	34.40	***	2.39

Vacuum Truck Information		Well ID	Stinger Depth
Subcontractor:	MECI	AFVR-3	34.50
Truck Operator:	R. Ariail	MW-12	34.00
Stack I.D. (feet)	0.33 feet		

Corrected depth to water prior to AFVR event in AFVR-3 = 31.66
Corrected depth to water prior to AFVR event in MW-12 = 32.61

Recovery / Disposal Information		
Hydro carbons Removed (vapor):	14.50	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	2.51	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	325	Gallons

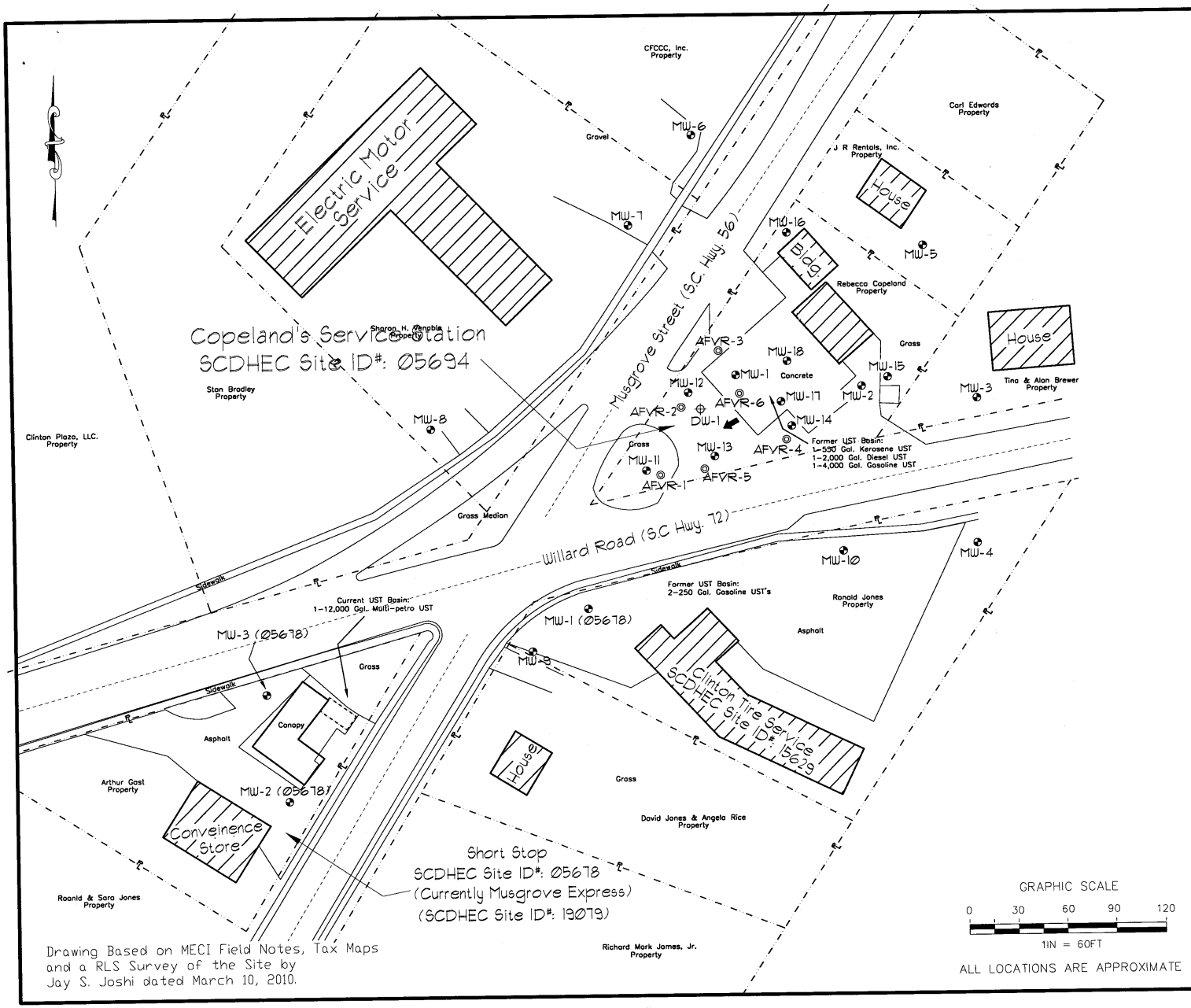
TABLE 2D
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269D
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-1	**MW-17**	**MW-18**
Nearest Extraction Well:		AFVR-3	AFVR-3	AFVR-3
Approximate Distance:		18 ft	49 ft	42 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
1:15	0.0	3	0	0
1:45	0.5	3	0	0
2:15	1.0	4	0	0
2:45	1.5	4	0	0
3:15	2.0	3	0	0
3:45	2.5	3	0	0
4:15	3.0	3	0	0
4:45	3.5	3	0	0
5:15	4.0	3	0	0
5:45	4.5	3	0	0
6:15	5.0	2	0	0
6:45	5.5	2	0	0
7:15	6.0	2	0	0
7:45	6.5	2	0	0
8:15	7.0	2	0	0
8:45	7.5	2	0	0
9:15	8.0	2	0	0
Maximum Change:		**4**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-1	**MW-17**	**MW-18**
Nearest Extraction Well:		AFVR-3	AFVR-3	AFVR-3
Approximate Distance:		18 ft	49 ft	42 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		32.21	32.00	30.72
5:15	4 hours	34.52	32.00	30.79
9:15	8 hours	DRY	32.00	30.80
Maximum Change:		-2.31	0.00	-0.08



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	3

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number: TN10434

5. Generator's Name and Mailing Address: MIDLANDS ENVIRONMENTAL, 1144 TWO NOTCH ROAD, LEXINGTON, SC 29072

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: TK TANK SERVICE, SUMTER, SC — U.S. EPA ID Number: 98757355?

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

8. Designated Facility Name and Site Address: TK TANK SERVICE, 435 BOULEVARD ROAD, SUMTER, SC 29150 — U.S. EPA ID Number: 98757355?

Facility's Phone: 803-418-5314

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1. NON HAZARDOUS PETROLEUM CONTAMINATED WATER	1	tt	AP 3235 (gal)	
2.				
3.				
4.				

13. Special Hi

Site	UST#	Gallons	Site	UST#	Gallons
Zee Mart	07176	175	Carson's Amoco	03027	150
Zee Mart	07176	150	H&H Transfer & Storage	17195	150
Burrows Service	12487	400	M J Tadlock Grocery	15816	200
BB&T	19443	125	Gregory's Store	08979	200
Blythewood Stop & Shop	10503	60	Nelson Neal	08979	75
Blythewood Stop & Shop	10503	425	Copelands Service	05694	325
Blacksburg Hardware	01924	100	Midway Service Station	13046	100
Blacksburg Hardware	01624	100	Brown Brothers Gulf	04145	110
Sportsmans Corner	12151	175	West State Line Gulf	08606	215

GENERATOR

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's/Offeror's Printed/Typed Name — Signature — Month Day Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Joseph W. STANTON — Signature — Month 5 Day 17 Year 11

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

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

169-BLC-O 5 11977 (Rev. 8/06)

GENERATOR'S/SHIPPER'S INITIAL COPY

Midlands
Environmental
Consultants, Inc.

June 6, 2011

UST
JUN 14 2011
PROGRAM

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

23tech
UST
DOCKET

Subject: Aggressive Fluid Vapor Recovery Report
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #40573
MECI Project Number 11-3269E
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Briney,

On behalf of Mr. H. Wayne Copeland, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Copelands Service Station on May 25 & 26, 2011. The event was conducted on monitoring wells MW-13 and AFVR-5 to remove free phase petroleum product. Free phase petroleum product was detected in monitoring well MW-13 at a thickness of 2.16feet and in AFVR-5 at a thickness of 0.61 feet prior to the AFVR event. The event was conducted continuously for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was not detected in the monitoring wells immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 18.09 pounds or approximately 3.12 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 2.26 pounds per hour. Concentrations of off gas produced during the event were recorded from 1,275 parts per million by volume (PPM) to 2,259 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded from15.0 to 24.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1E.

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2E. Monitoring well locations are depicted on attached Figure.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

A total of 225 gallons of liquid was removed from MW-13 and AFVR-5 during this event. Free phase petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to TK Tank Services, Inc. of Sumter, SC for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, Mr. H. Wayne Copeland, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

Brendon P. Kelly
Project Scientist

TABLE 1E
AFVR MONITORING DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269E
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
AFVR-5 MW-13	05/25/11	18:30	0.50	15.0	1,379	1,860	167.40	2.77	1.39
	05/25/11	19:00	0.50	15.0	1,453	2,050	184.50	3.22	1.61
	05/25/11	19:30	0.50	15.0	1,581	2,160	194.40	3.69	1.84
	05/25/11	20:00	0.50	15.0	1,275	2,180	196.20	3.00	1.50
	05/25/11	20:30	0.50	20.0	1,420	1,370	123.30	2.10	1.05
	05/25/11	21:00	0.50	19.0	1,481	1,340	120.60	2.14	1.07
	05/25/11	21:30	0.50	19.0	1,466	1,360	122.40	2.15	1.08
	05/25/11	22:00	0.50	20.0	1,535	1,280	115.20	2.12	1.06
	05/25/11	22:30	0.50	20.0	1,594	1,240	111.60	2.13	1.07
	05/25/11	23:00	0.50	23.0	1,487	910	81.90	1.46	0.73
	05/25/11	23:30	0.50	23.0	1,541	850	76.50	1.41	0.71
	05/26/11	0:00	0.50	23.0	1,720	820	73.80	1.52	0.76
	05/26/11	0:30	0.50	23.0	1,736	800	72.00	1.50	0.75
	05/26/11	1:00	0.50	24.0	1,974	750	67.50	1.60	0.80
	05/26/11	1:30	0.50	24.0	2,103	770	69.30	1.75	0.87
	05/26/11	2:00	0.50	24.0	2,127	780	70.20	1.79	0.90
	05/26/11	2:30	0.50	24.0	2,259	740	66.60	1.81	0.90
									TOTAL **18.09**

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
AFVR-5	2"	Total Depth (34.35)	33.05	33.66	0.61	***	33.92	***	0.78
MW-13	2"	25-35	32.35	34.51	2.16	***	34.35	***	1.68

Vacuum Truck Information		Well ID	Stinger Depth
Subcontractor:	MECI	AFVR-5	34.00
Truck Operator:	G. Globensky	MW-13	35.00
Stack I.D. (feet)	0.33 feet		
Corrected depth to water prior to AFVR event in AFVR-5 =			33.14
Corrected depth to water prior to AFVR event in MW-13=			32.67

Recovery / Disposal Information

Hydro carbons Removed (vapor):	18.09	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	3.12	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	TK Tank Services, Inc.	
Total Liquids Removed:	225	Gallons

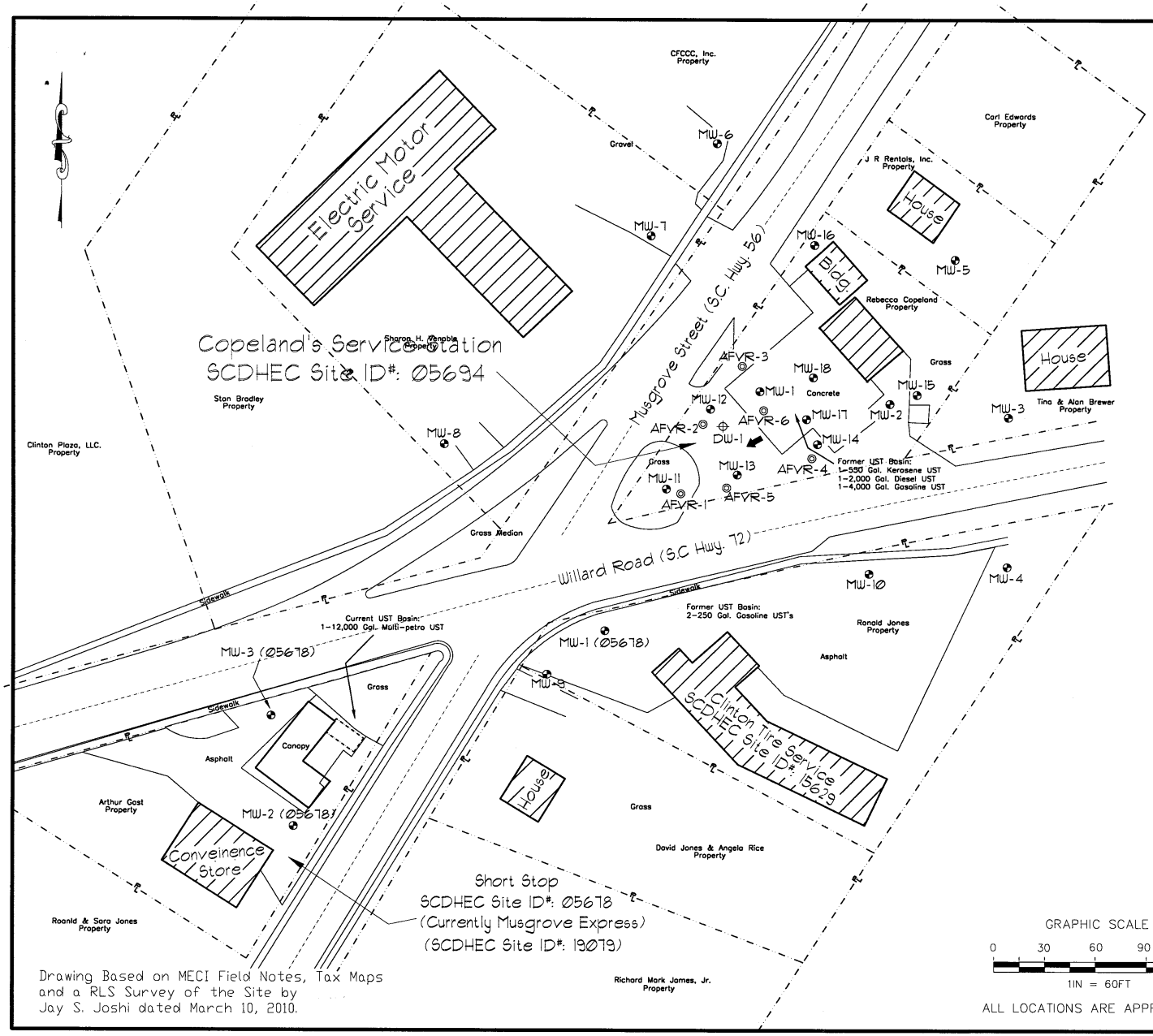
TABLE 2A
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269A
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-10	**MW-11**	**AFVR-1**
Nearest Extraction Well:		AFVR-5	MW-13	AFVR-5
Approximate Distance:		98 ft	40 ft	28 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
18:30	0.0	0	0	0
19:00	0.5	0	0	0
19:30	1.0	0	0	0
20:00	1.5	0	0	0
20:30	2.0	0	0	0
21:00	2.5	0	0	0
21:30	3.0	0	0	0
22:00	3.5	0	0	0
22:30	4.0	0	0	0
23:00	4.5	0	0	0
23:30	5.0	0	0	0
0:00	5.5	0	0	0
0:30	6.0	0	0	0
1:00	6.5	0	0	0
1:30	7.0	0	0	0
2:00	7.5	0	0	0
2:30	8.0	0	0	0
Maximum Change:		**0**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-10	**MW-11**	**AFVR-1**
Nearest Extraction Well:		AFVR-5	MW-13	AFVR-5
Approximate Distance:		98 ft	40 ft	28 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior toAFVR		32.52	33.71	33.66
22:30	4 hours	32.52	33.75	33.68
2:30	8 hours	32.52	33.81	33.73
Maximum Change:		0.00	-0.10	-0.07



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	3

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
2. Page 1 of
3. Emergency Response Phone
4. Waste Tracking Number: TKD-024

5. Generator's Name and Mailing Address: MIDLANDS ENVIRONMENTAL, 1144 TWO NOTCH ROAD, LEXINGTON, SC 29073

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: TK TANK SERVICE SUMTER, SC — U.S. EPA ID Number: 287577557

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

8. Designated Facility Name and Site Address: TK TANK SERVICES, 425 BOULEVARD ROAD, SUMTER, SC 29153 — U.S. EPA ID Number

Facility's Phone: 803-418-5314 — 287575557

GENERATOR

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
NON HAZARDOUS PETROLEUM CONTAMINATED WATER	1	TT	4100	gal/gal

Site:	UST Permit #:	Gallons Produced:
Littleton's Grocery	18574	175
Highway 11 Grocery	03439	150
Littleton's Grocery	18574	175
Highway 11 Grocery	03439	150
Davis Site	15120	100
Louis Brown	05751	150
Rock Hill Maintenance	09160	75
Chester School Bus	02044	175
Royal Petroleum	19426	325
Town of Winnsboro	14433	100
Highway 11 Grocery	03439	175
Former Adams Oil	19416	150
Former Krispy Kreme	19367	150
Pantry 3418	05042	175
Pinkney Road Property	19360	100
Copeland's Service	05694	225
Burrow's Service Station	12487	525
BB&T	19443	125
EZ Stop	14555	150
Phillips Rental Property	19328	100
Brown Brothers	04145	150
Pelzer Gas Mart	00480	175
Ancrum	01617	200
Former Minute Saver	19340	125

13. S

14. G — Gene — t subject to federal regulations for reporting proper disposal of Hazardous Waste.

Signature — Month — Day — Year

TRANSPORTER INTL

15. Ir — Tran — ort from U.S. — Port of entry/exit: — Date leaving U.S.:

16. T

Transporter 1 Printed/Typed Name: Steve A. Gamble — Signature: Steve A. Gamble — Month: 6 — Day: 3 — Year: 11

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

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

Midlands
Environmental
Consultants, Inc.

July 11, 2011

UST
JUL 18 2011
PROGRAM

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

UST
DOCKET
24 Ice

Subject: Report of Monitoring Well Gauging
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694, CA # 40573
MECI Project Number 11-3269
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Briney,

On behalf of Mr. H. Wayne Copeland, Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Monitoring Well Gauging for the referenced site. This report describes assessment activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

MONITORING WELL GAUGING

MECI conducted five 8-hour AFVR events at the subject site between March 24 and May 26, 2011. As requested, MECI conducted a monitoring well gauging event on monitoring wells MW-1, MW-12, MW-13, MW-14, and AFVR-3 through AFVR-6 to determine the effectiveness of the AFVR events. This gauging event was conducted on July 11, 2011 after an approximate 45 day stabilization period. All monitoring wells gauged contained measurable free phase petroleum product. See Table 1 for product thickness of current groundwater elevations.

Results from the gauging event show that free phase petroleum product thickness has been reduced in 4 of the 8 (MW-1, MW-12, MW-13 and AFVR-5) monitoring wells gauged compared to the November 2010 gauging event. Monitoring wells AFVR-3 and AFVR-4 showed an increase in free phase petroleum product thickness. Free phase petroleum product thicknesses in MW-14 and AFVR-6 have not changed from the November 2010 gauging event. The AFVR events appear to have been effective in reducing the amount of free phase product in the monitoring well that have historically exhibited the greatest about of free phase product.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

MECI recommends an additional series of AFVR events on all eight monitoring wells to continue to reduce free phase petroleum product. Following an additional series of AFVR events, a comprehensive groundwater sampling event should be conducted on the entire monitoring well network. This sampling event will allow us to evaluate the effectiveness of the AFVR events on reducing free phase petroleum product and dissolved CoC concentrations.

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Brendon P. Kelly
Project Scientist

Jeff L. Coleman
Senior Scientist

Attachments

TABLES

TABLE 1
PAGE 1 OF 2
FIELD PARAMETERS
JULY 11, 2011 GAUGING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Dissolved CO_2 (mg/l)	Dissolved Oxygen (mg/l)	Temperature (^{o} Celsius)	pH (Initial)	pH (Final)	Conductivity (Initial)	Conductivity (Final)	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-1	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=33.95	30.79	33.63	2.84	659.98	628.76
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=33.95	31.35	32.80	1.45	659.98	628.41
	7/11/2011	NT	NT	NT	NT	NT	NT	NT	TD=33.95	32.48	32.81	0.33	659.98	627.45
MW-2	2/3/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	TD=12.05	DRY	DRY	DRY	659.57	DRY
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	TD=12.05	DRY	DRY	DRY	659.57	DRY
MW-3	2/3/2010	105	3.07	18.7	5.51	NT	42.7	NT	25-35	***	26.50	***	658.21	631.71
	11/2/2010	175	0.81	18.7	5.61	NT	72.7	NT	-	***	31.06	***	658.21	627.15
MW-4	2/3/2010	65	4.21	18.4	5.99	NT	55.1	NT	25-35	***	30.53	***	658.41	627.88
	11/2/2010	75	1.32	16.7	6.22	NT	70.4	NT	-	***	31.83	***	658.41	626.58
MW-5	2/3/2010	25	6.90	14.5	6.08	6.77	46.5	43.9	25-35	***	15.14	***	653.79	638.65
	11/2/2010	125	1.76	17.6	6.11	NT	68.7	NT	-	***	25.60	***	653.79	628.19
MW-6	2/3/2010	60	3.01	18.5	6.20	NT	44.9	NT	25-35	***	28.03	***	656.32	628.29
	11/2/2010	75	1.13	19.5	5.91	NT	63.0	NT	-	***	28.39	***	656.32	627.93
MW-7	2/3/2010	130	1.56	18.9	6.07	NT	45.9	NT	25-35	***	30.76	***	658.96	628.20
	11/2/2010	100	0.97	19.8	5.42	NT	37.0	NT	-	***	30.95	***	658.96	628.01
MW-8	2/3/2010	INS	INS	INS	INS	INS	INS	INS	25-35	***	32.81	***	659.94	627.13
	11/2/2010	200+	0.91	19.5	10.84	NT	266.3	NT	-	***	31.87	***	659.94	628.07
MW-9	2/3/2010	200+	0.58	20.2	6.25	NT	217.1	NT	25-35	***	33.03	***	660.49	627.46
	11/2/2010	105	1.55	19.3	5.98	NT	68.5	NT	-	***	32.50	***	660.49	627.99
MW-10	2/3/2010	150	2.30	17.9	5.95	NT	67.0	NT	25-35	***	31.34	***	659.53	628.19
	11/2/2010	150	1.69	18.3	5.57	NT	69.8	NT	-	***	32.31	***	659.53	627.22
MW-11	2/3/2010	INS	INS	INS	INS	INS	INS	INS	25-35	***	33.05	***	661.23	628.18
	11/2/2010	160	1.05	20.5	5.64	NT	76.0	NT	-	***	33.25	***	661.23	627.98
MW-12	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	31.55	32.80	1.25	660.14	628.40
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	32.00	32.08	0.08	660.14	628.13
	7/11/2011	NT	NT	NT	NT	NT	NT	NT	-	32.93	32.94	0.01	660.14	627.21
MW-13	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	31.78	33.81	2.03	661.12	629.04
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	31.93	34.68	2.75	661.12	628.78
	7/11/2011	NT	NT	NT	NT	NT	NT	NT	-	32.71	34.70	1.99	661.12	628.11
MW-14	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	30.60	31.46	0.86	660.25	629.52
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	32.18	32.27	0.09	660.25	628.06
	7/11/2011	NT	NT	NT	NT	NT	NT	NT	-	32.95	33.04	0.09	660.25	627.29

Notes:

1. mg/l = milligrams per liter.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Stabalized groundwater levels measured 11/02/10.
4. NT = Not Tested.
5. INS = Insufficient Water for Field Measurements
6. Dissolved oxygen, dissolved carbon dioxide, initial pH, initial conductivity, and temperature measurements obtained on 11/02/10 & 11/08/10.
7. PROD= Free Phase Petroleum Product.
8. Groundwater elevation for MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-5, and AFV-6 corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85

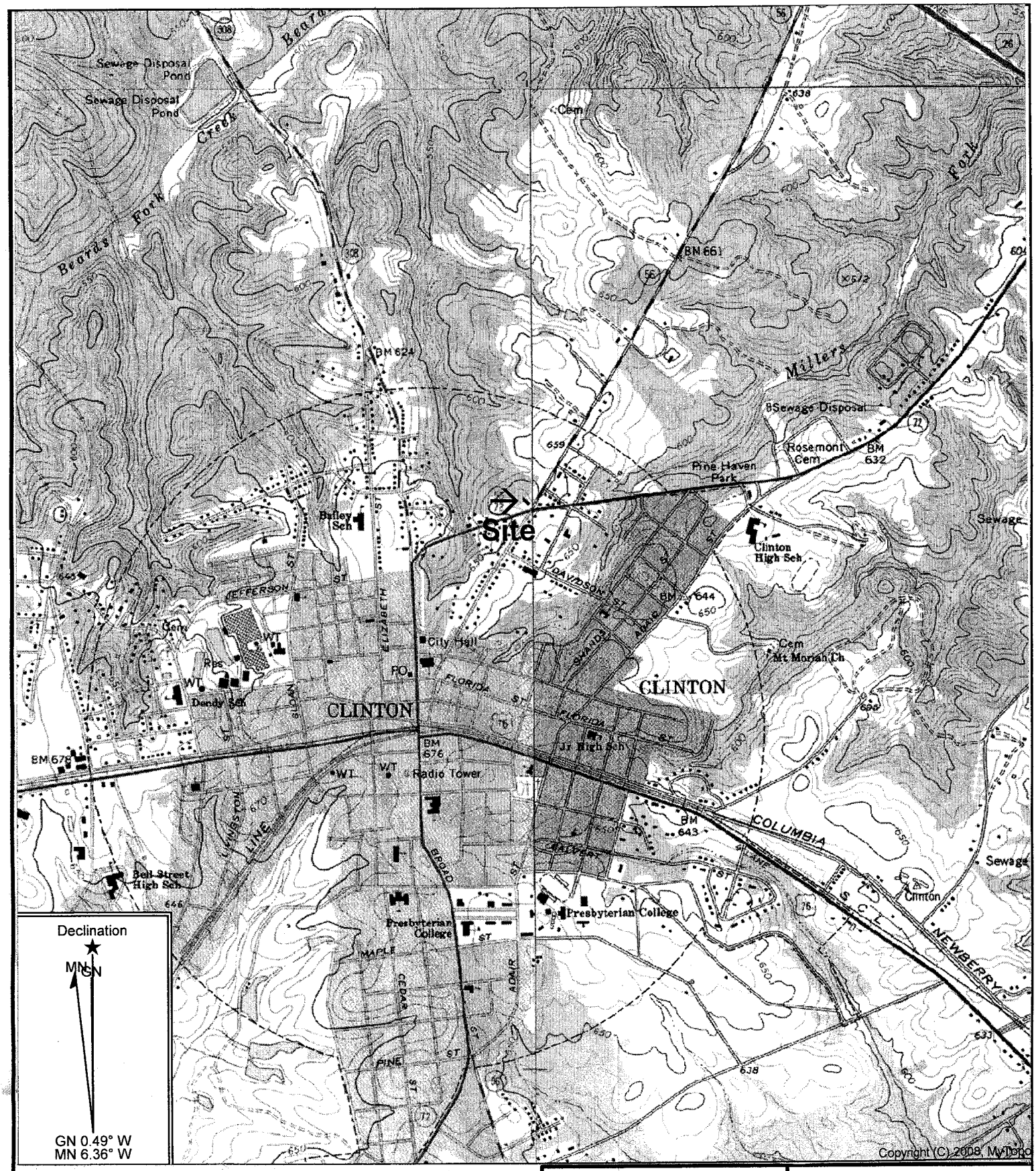
TABLE 1
PAGE 2 OF 2
FIELD PARAMETERS
JULY 11, 2011 GAUGING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 11-3269
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Dissolved CO_2 (mg/l)	Dissolved Oxygen (mg/l)	Temperature (^{o} Celsius)	pH (Initial)	pH (Final)	Conductivity (Initial)	Conductivity (Final)	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-15	2/3/2010	45	2.44	19.2	5.92	NT	70.4	NT	25-35	***	25.35	***	659.54	634.19
	11/2/2010	190	1.66	19.1	5.40	NT	48.0	NT	-	***	31.27	***	659.54	628.27
MW-16	2/3/2010	155	2.43	18.6	6.24	NT	184.1	NT	25-35	***	29.41	***	658.22	628.81
	11/2/2010	165	0.76	19.0	5.80	NT	166.3	NT	-	***	30.04	***	658.22	628.18
MW-17	2/19/2010	110	3.78	20.7	6.60	6.54	164.4	194.5	30-40	***	30.14	***	660.19	630.05
	11/2/2010	90	0.70	21.5	6.00	NT	155.4	NT	-	***	31.76	***	660.19	628.43
MW-18	2/19/2010	140	2.28	20.8	6.46	6.42	139.9	177.1	30-40	***	28.74	***	659.50	630.76
	11/2/2010	115	0.60	20.8	5.40	NT	141.7	NT	-	***	30.56	***	659.50	628.94
MW-19	11/2/2010	50	1.35	19.9	9.79	8.79	138.2	107.0	23-33	***	26.43	***	654.46	628.03
MW-20	11/2/2010	95	5.74	20.0	8.58	8.50	106.1	97.6	23-33	***	27.80	***	654.26	626.46
MW-21	11/2/2010	150	3.49	18.0	8.31	7.97	65.0	72.0	23-33	***	27.19	***	653.53	626.34
DW-1	2/3/2010	40	1.21	19.1	6.78	6.75	91.8	101.4	75-85	***	32.02	***	660.41	628.39
	11/2/2010	50	2.00	19.8	6.59	6.48	93.4	90.5	-	***	32.41	***	660.41	628.00
DW-2	11/2/2010	25	5.17	22.7	10.99	11.93	3,279	533.0	56-61	***	31.59	***	659.59	628.00
AFVR-1	2/3/2010	INS	INS	INS	INS	INS	INS	INS	TD=33.96	***	33.09	***	661.55	628.46
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	-	***	DRY	***	661.55	DRY
AFVR-2	2/3/2010	INS	INS	INS	INS	INS	INS	INS	TD=34.45	***	32.13	***	660.51	628.38
	11/2/2010	200+	1.06	21.3	5.45	NT	83.0	NT	-	***	32.35	***	660.51	628.16
AFVR-3	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.10	30.85	30.97	0.12	659.34	628.47
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	31.06	31.34	0.28	659.34	628.24
	7/11/2011	NT	NT	NT	NT	NT	NT	NT	-	31.89	32.46	0.57	659.34	627.36
AFVR-4	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.45	30.88	30.92	0.04	660.14	629.25
	11/2/2010	200+	1.08	20.5	6.05	NT	227.0	NT	-	***	32.15	***	660.14	627.99
	7/11/2011	NT	NT	NT	NT	NT	NT	NT	-	32.93	33.01	0.08	660.14	627.20
AFVR-5	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.35	31.55	34.65	3.10	661.21	629.20
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	32.13	33.81	1.68	661.21	628.83
	7/11/2011	NT	NT	NT	NT	NT	NT	NT	-	33.58	33.80	0.22	661.21	627.60
AFVR-6	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.36	31.93	34.00	2.07	659.95	627.71
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	-	31.20	31.76	0.56	659.95	628.67
	7/11/2011	NT	NT	NT	NT	NT	NT	NT	-	32.28	32.84	0.56	659.95	627.59

Notes:

1. mg/l = milligrams per liter.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Stabalized groundwater levels measured 7/11/11.
4. NT = Not Tested.
5. INS = Insufficient Water for Field Measurements
6. Dissolved oxygen, dissolved carbon dioxide, initial pH, initial conductivity, and temperature measurements obtained on 11/02/10 & 11/08/10.
7. PROD= Free Phase Petroleum Product.
8. Groundwater elevation for MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-5, and AFV-6 corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85

FIGURES



GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Clinton, South Carolina
Joanna, South Carolina
USGS 7.5 Min. Quad
Countour Interval – 10 Feet

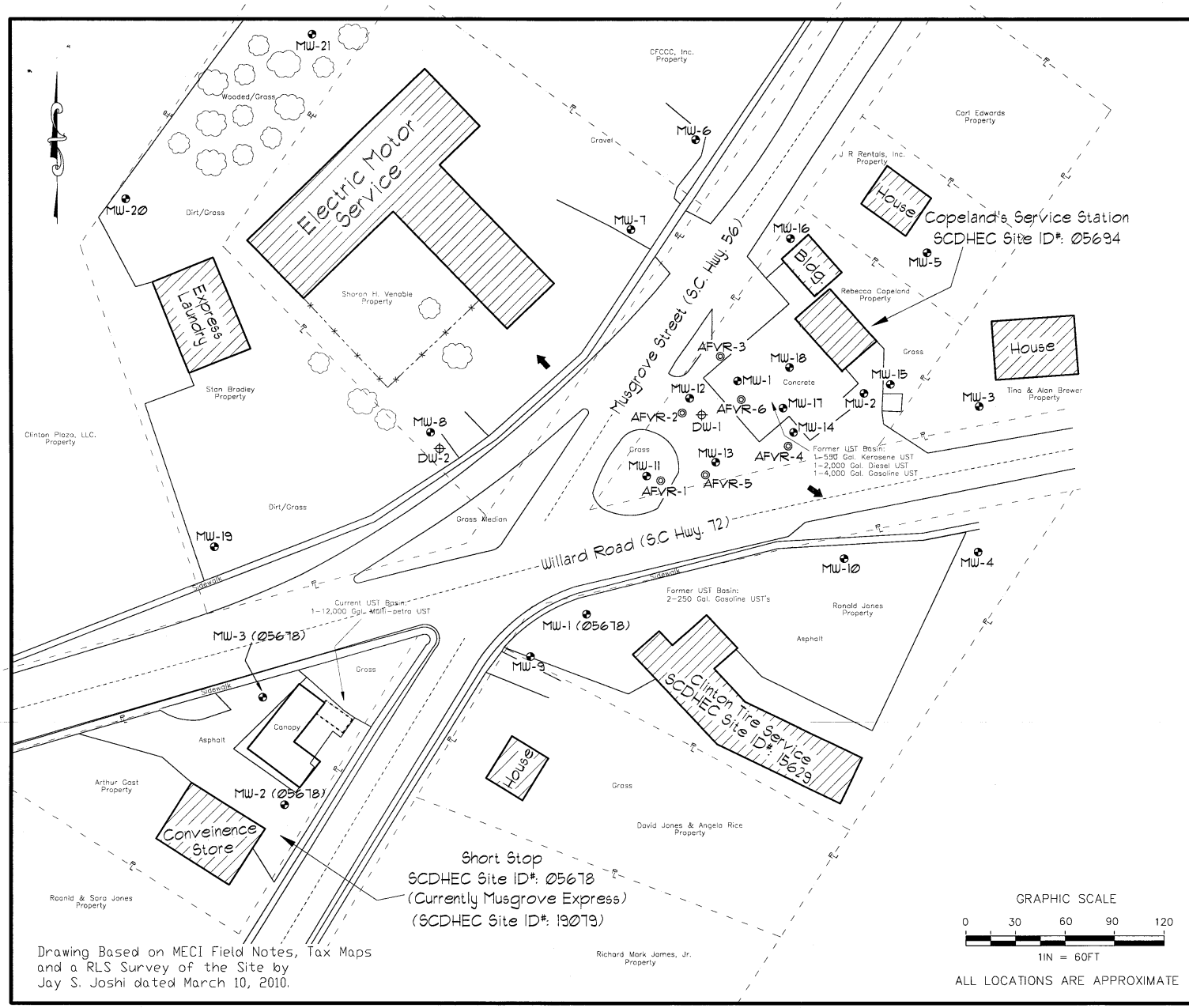
Midlands Environmental Consultants, Inc.

Site Location

Copelands Service Station
700 Musgrove Street, Clinton, SC
SCDHEC Site ID# 05694

Figure 1

MECI 11-3269



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694

Midlands Environmental Consultants, Inc.

JOB NO.	11-3269
DATE	July 14, 2011
FIGURE	2

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

MAR 25 2014

UST DOCKETING 25tech

Re: **Aggressive Fluid and Vapor Directive**
Copelands Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694; CA#47757
Release Reported June 24, 1993
Laurens County

Dear Mr. Copeland:

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 Midlands Environmental Consultants, Inc. as your contractor.

In accordance with Section 280.64 of the South Carolina Underground Storage Tank Control Regulations, an Aggressive Fluid and Vapor Recovery (AFVR) event may proceed immediately upon receipt of this letter as outlined in the UST Quality Assurance Program Plan (QAPP) Revision 2.0. **Please be aware that the AFVR Procedures have been updated.** Midlands will need to gauge the monitoring wells highlighted on the enclosed map and contact the Agency before scheduling the AFVR event. The 96-hour event will utilize monitoring wells designated after the gauging event. The stingers shall be lowered at six inch intervals starting at the water table interface to a target depth of 30 feet in the wells. A copy of Agency QAPP Version 2.0 for the Underground Storage Tank Division is available at http://www.dhec.sc.gov/environment/lwm/usthome/QAPP.htm.

As soon as the beginning date of the event has been scheduled, please contact Sonya Utz at utzst@dhec.sc.gov.

The AFVR Report should be submitted within 90 days from the date of this correspondence. 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 #47757 has been approved in the amount shown on the enclosed cost agreement. Midlands 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 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.

On all correspondence concerning this site, please reference UST Permit # 05694. If there are any questions concerning this project, feel free to contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or by e-mail at utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Site map of UST# 05694
Approved Cost Agreement

cc: Kyle Pudney, Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC 29701 (w/enc.)
Technical file (w/enc.)

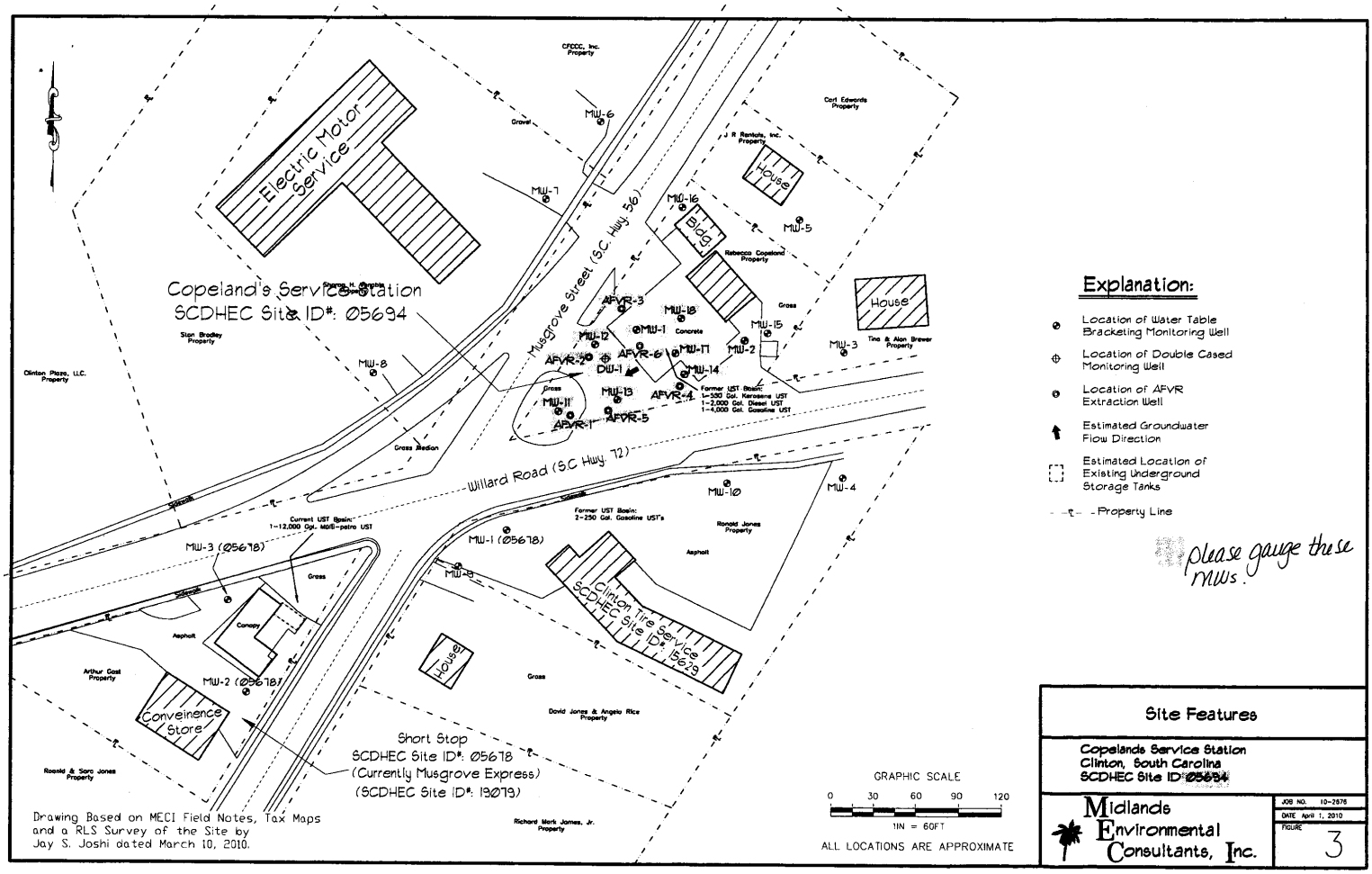
Approved Cost Agreement 47757

Facility: 05694 COPELANDS SERVICE STATION INC

UTZST

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		B1	PERSONNEL	1.0000	423.00	423.00
10 SAMPLE COLLECTION						
		E1	GAUGE WELL ONLY	15.0000	7.00	105.00
19 RPT/PROJECT MNGT & COORDINATIO						
		PERC	REPORT PREPARATION	0.1000	20,318.50	2,031.85
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
		E1	ADDITIONAL WELL HOOK-UPS	2.0000	25.75	51.50
		F	EFFLUENT DISPOSAL	20,000.0000	0.30	6,000.00
		G	AFVR EQUIPMENT MOB	1.0000	391.50	391.50
				Total Amount		22,350.35


Electric Motor Service
Copeland's Service Station
SCDHEC Site ID#: 05694
Musgrove Street (S.C. Hwy. 56)
Willard Road (S.C. Hwy. 72)
CFCCC, Inc. Property
Gravel
MW-6
MW-7
MW-8
MW-16
MW-5
MW-15
MW-2
MW-3
MW-10
MW-4
MW-1 (05678)
MW-3 (05678)
MW-2 (05678)
MW-9
MW-1
MW-12
MW-18
MW-17
MW-14
MW-13
MW-11
AFVR-1
AFVR-2
AFVR-3
AFVR-4
AFVR-5
AFVR-6
DW-1
House
Bldg.
Concrete
Grass
Grass Median
Asphalt
Canopy
Conveinence Store
Short Stop
SCDHEC Site ID#: 05678
(Currently Musgrove Express)
(SCDHEC Site ID#: 19079)
Clinton Tire Service
SCDHEC Site ID#: 15679
Former UST Basin:
1-500 Gal. Kerosene UST
1-2,000 Gal. Diesel UST
1-4,000 Gal. Gasoline UST
Current UST Basin:
1-12,000 Gal. MGB-petro UST
Former UST Basin:
2-250 Gal. Gasoline UST's
Carl Edwards Property
J R Rentals, Inc. Property
Rebecca Copeland Property
Tina & Alan Brewer Property
Ronald Jones Property
David Jones & Angela Rice Property
Richard Mark James, Jr. Property
Sion Bradley Property
Clinton Plaza, LLC. Property
Arthur Gast Property
Ronald & Sara Jones Property
Explanation:
Location of Water Table Bracketing Monitoring Well
Location of Double Cased Monitoring Well
Location of AFVR Extraction Well
Estimated Groundwater Flow Direction
Estimated Location of Existing Underground Storage Tanks
Property Line
please gauge these MWs.
GRAPHIC SCALE
0 30 60 90 120
1IN = 60FT
ALL LOCATIONS ARE APPROXIMATE
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.
Site Features
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID#: 05694
Midlands Environmental Consultants, Inc.
JOB NO. 10-2676
DATE April 1, 2010
FIGURE 3

Midlands Environmental Consultants, Inc.

December 12, 2013

UST MAY 0 5 2014 DIVISION

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

Subject: Aggressive Fluid Vapor Recovery Report
Copeland's Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID # 05694; CA #47757
MECI Project Number 14-4785
Certified Site Rehabilitation Contractor UCC-0009

UST DOCKETING 26 fee

Dear Ms. Utz,

On behalf of Mr. Wayne Copeland, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines set forth in the UST Quality Assurance Program Plan (QAPP), Revision 2.0.

AGGRESSIVE FLUID VAPOR RECOVERY

A site visit was conducted at Copeland's Service Station on April 3, 2014 to locate/gauge monitoring wells and to evaluate current site conditions. MECI personnel commenced a 96-Hour Aggressive Fluid Vapor Recovery (AFVR) event at the former Copeland's Service Station on April 14, 2014 and completed the event on April 18, 2014. The event was conducted on monitoring wells MW-1, MW-13, AFVR-5, AFVR-6 and MW-12 to reduce elevated dissolved CoC concentrations and remove free phase petroleum product at the referenced site. Prior to the AFVR event, free phase petroleum product gauged utilizing an Heron H.Oil Oil/Water Interface Meter. The following table presents depth to product, depth to product, and product thickness measurements obtained prior to the commencement of the 96-Hour:

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Pre-AFVR Well Data			
Well ID#	***Depth to Product (ft.)***	***Depth to Water (ft.)***	***Product Thickness (ft.)***
MW-1	30.91	31.92	1.01
MW-13	31.50	34.25	2.75
AFVR-5	31.60	33.80	2.20
AFVR-6	30.10	33.40	3.30
MW-12	Not Detected	32.84	Not Detected

The event was continuously conducted for ninety-six (96) hours by MECI personnel utilizing a vacuum extraction unit. Following the extended AFVR event, free product and groundwater levels were measured and recorded. The following table presents the post-AFVR free product and groundwater measurements obtained after completion of the AFVR event:

Post-AFVR Well Data			
Well ID#	***Depth to Product (ft.)***	***Depth to Water (ft.)***	***Product Thickness (ft.)***
MW-1	Not Detected	32.21	Not Detected
MW-13	Not Detected	34.31	Not Detected
AFVR-5	Not Detected	34.04	Not Detected
AFVR-6	Not Detected	33.53	Not Dectected
MW-12	Not Detected	32.01	Not Detected

MECI treated the off gas produced during the AFVR event using an activated carbon filter system, which achieved an average calculated reduction rate of 98.24% throughout the duration of the referenced event. Calculated total petroleum hydrocarbons removed during the event were 95.72 pounds or approximately 16.53 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 1.00 pound per hour. Concentrations of off gas (Pre-Treatment) produced during the event were recorded from 668 parts per million by volume (PPM) to 2,186 PPM. Vacuum readings were recorded at a range of 15.0 to 24.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1.

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2. Monitoring well locations are depicted on attached Figure 2.

A total of 3,850 gallons of liquid was removed from the site during this event. Free Phase Petroleum product was not observed in the holding tanks at the end of the event. The fluids produced were transported to Regulatory Solutions, Inc. in Gaston, SC for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, Mr. Wayne Copeland and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Staff Biologist

Jeff A. Coleman
Senior Scientist

TABLE 1
AFVR MONITORING DATA
COPELAND'S SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4785
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Pre-Treatment Concentration (PPM)	Post-Treatment Concentration (PPM)	Treatment Reduction Rate (%)	Offgas Velocity (ft/min)	Flow Rate (CFM)	Removal Rate (Lbs/Hr)	Interval Removal (Lbs)
MW-1	04/14/14	9:30	0.50	23.0	1,586	12.9	99.19%	480	43.20	0.82	0.41
MW-13	04/14/14	10:00	0.50	23.0	1,129	18.6	98.35%	550	49.50	0.67	0.34
AFVR-5	04/14/14	10:30	0.50	23.0	987	20.2	97.95%	520	46.80	0.55	0.28
AFVR-6	04/14/14	11:00	0.50	23.0	742	15.4	97.92%	530	47.70	0.42	0.21
MW-12	04/14/14	11:30	0.50	23.0	668	10.8	98.38%	490	44.10	0.35	0.18
	04/14/14	12:00	0.50	23.0	679	12.4	98.17%	500	45.00	0.37	0.18
	04/14/14	12:30	0.50	23.0	712	10.9	98.47%	510	45.90	0.39	0.20
	04/14/14	13:00	0.50	23.0	786	16.8	97.86%	520	46.80	0.44	0.22
	04/14/14	13:30	0.50	23.0	895	12.9	98.56%	530	47.70	0.51	0.26
	04/14/14	14:00	0.50	23.0	927	18.7	97.98%	500	45.00	0.50	0.25
	04/14/14	14:30	0.50	23.0	1,041	22.1	97.88%	490	44.10	0.55	0.28
	04/14/14	15:00	0.50	23.0	1,265	23.8	98.12%	480	43.20	0.66	0.33
	04/14/14	15:30	0.50	23.0	1,212	24.5	97.98%	500	45.00	0.65	0.33
	04/14/14	16:00	0.50	23.0	1,092	20.4	98.13%	550	49.50	0.65	0.32
	04/14/14	16:30	0.50	23.0	1,181	15.6	98.68%	570	51.30	0.73	0.36
	04/14/14	17:00	0.50	23.0	975	12.2	98.75%	550	49.50	0.58	0.29
	04/14/14	17:30	0.50	23.0	776	10.0	98.71%	500	45.00	0.42	0.21
	04/14/14	18:30	1.00	23.0	1,037	15.7	98.49%	510	45.90	0.57	0.57
	04/14/14	19:30	1.00	24.0	949	18.1	98.09%	520	46.80	0.53	0.53
▼(MW-1/MW-12)	04/14/14	20:30	1.00	24.0	1,131	22.2	98.04%	500	45.00	0.61	0.61
	04/14/14	21:30	1.00	24.0	1,276	22.0	98.28%	490	44.10	0.68	0.68
	04/14/14	22:30	1.00	24.0	1,054	19.7	98.13%	520	46.80	0.59	0.59
	04/14/14	23:30	1.00	23.0	1,060	19.8	98.13%	520	46.80	0.60	0.60
	04/15/14	0:30	1.00	23.0	1,063	20.9	98.03%	540	48.60	0.62	0.62
	04/15/14	1:30	1.00	23.0	1,067	18.7	98.25%	550	49.50	0.63	0.63
	04/15/14	2:30	1.00	23.0	1,071	18.9	98.24%	560	50.40	0.65	0.65
	04/15/14	3:30	1.00	23.0	1,072	22.5	97.90%	560	50.40	0.65	0.65
	04/15/14	4:30	1.00	23.0	1,074	29.7	97.23%	550	49.50	0.64	0.64
	04/15/14	5:30	1.00	23.0	1,075	30.2	97.19%	540	48.60	0.63	0.63
	04/15/14	6:30	1.00	23.0	1,079	20.4	98.11%	520	46.80	0.61	0.61
▼(MW-1/MW-12)	04/15/14	7:30	1.00	23.0	1,081	19.7	98.18%	520	46.80	0.61	0.61
	04/15/14	8:30	1.00	23.0	1,079	15.4	98.57%	520	46.80	0.61	0.61
	04/15/14	9:30	1.00	23.0	1,077	20.6	98.09%	510	45.90	0.59	0.59
	04/15/14	11:30	2.00	23.0	1,101	18.7	98.30%	550	49.50	0.65	1.31
	04/15/14	13:30	2.00	22.0	1,176	30.2	97.43%	570	51.30	0.72	1.45
	04/15/14	15:30	2.00	22.0	1,197	29.7	97.52%	590	53.10	0.76	1.53
	04/15/14	17:30	2.00	22.0	1,223	20.2	98.35%	550	49.50	0.73	1.45
	04/15/14	19:30	2.00	22.0	1,295	17.6	98.64%	570	51.30	0.80	1.59
	04/15/14	21:30	2.00	22.0	1,304	15.9	98.78%	580	52.20	0.82	1.63
	04/15/14	23:30	2.00	22.0	1,378	16.4	98.81%	560	50.40	0.83	1.67
	04/16/14	1:30	2.00	22.0	1,441	16.8	98.83%	590	53.10	0.92	1.84
	04/16/14	3:30	2.00	22.0	1,502	27.1	98.20%	580	52.20	0.94	1.88
	04/16/14	5:30	2.00	22.0	1,538	29.9	98.06%	590	53.10	0.98	1.96
	04/16/14	7:30	2.00	22.0	1,473	26.2	98.22%	580	52.20	0.92	1.85
	04/16/14	9:30	2.00	22.0	1,425	25.8	98.19%	590	53.10	0.91	1.82
	04/16/14	11:30	2.00	20.0	1,660	32.6	98.04%	610	54.90	1.09	2.19
	04/16/14	13:30	2.00	19.0	1,770	32.0	98.19%	560	50.40	1.07	2.14
	04/16/14	15:30	2.00	20.0	1,592	28.1	98.23%	570	51.30	0.98	1.96
	04/16/14	17:30	2.00	20.0	1,808	29.8	98.35%	490	44.10	0.96	1.91
▼	04/16/14	19:30	2.00	21.0	1,827	31.1	98.30%	540	48.60	1.07	2.13
	04/16/14	21:30	2.00	22.0	1,864	32.0	98.28%	530	47.70	1.07	2.13
	04/16/14	23:30	2.00	21.0	1,897	31.1	98.36%	490	44.10	1.00	2.01
	04/17/14	1:30	2.00	21.0	1,911	31.3	98.36%	520	46.80	1.07	2.15
	04/17/14	3:30	2.00	15.0	1,888	31.9	98.31%	540	48.60	1.10	2.20
	04/17/14	5:30	2.00	15.0	1,873	31.7	98.31%	570	51.30	1.15	2.31
	04/17/14	7:30	2.00	15.0	1,861	30.9	98.34%	570	51.30	1.15	2.29
	04/17/14	9:30	2.00	15.0	1,864	32.1	98.28%	590	53.10	1.19	2.38
	04/17/14	11:30	2.00	15.0	1,848	33.1	98.21%	760	68.40	1.52	3.03
	04/17/14	13:30	2.00	15.0	1,868	33.4	98.21%	690	62.10	1.39	2.78
	04/17/14	15:30	2.00	19.0	1,907	32.9	98.28%	670	60.30	1.38	2.76
	04/17/14	17:30	2.00	19.0	1,885	32.6	98.27%	670	60.30	1.36	2.73
	04/17/14	19:30	2.00	20.0	1,914	32.7	98.29%	670	60.30	1.38	2.77
	04/17/14	21:30	2.00	20.0	1,938	32.9	98.30%	690	62.10	1.44	2.89
	04/17/14	23:30	2.00	20.0	1,963	33.4	98.30%	710	63.90	1.51	3.01
	04/18/14	1:30	2.00	20.0	2,014	33.8	98.32%	690	62.10	1.50	3.00
	04/18/14	3:30	2.00	20.0	2,029	33.9	98.33%	710	63.90	1.56	3.11
	04/18/14	5:30	2.00	20.0	2,084	34.1	98.36%	670	60.30	1.51	3.02
	04/18/14	7:30	2.00	20.0	2,142	35.3	98.35%	610	54.90	1.41	2.82
	04/18/14	9:30	2.00	20.0	2,186	32.9	98.49%	760	68.40	1.79	3.59

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
MW-1	2"	TD:33.95	30.91	31.92	1.01	***	32.21	***	-0.29
MW-13	2"	25-35	31.50	34.25	2.75	***	34.31	***	-0.06
AFVR-5	2"	TD:34.35	31.60	33.80	2.20	***	34.04	***	-0.24
AFVR-6	2"	TD:34.36	30.10	33.40	3.30	***	33.53	***	-0.13
MW-12	2"	25-35	***	32.84	***	***	32.01	***	0.83

Vacuum Truck Information		Well ID	Initial Stinger Depth (ft)
Contractor:	MECI	MW-1	32.50
Truck Operator:	K. Pudney	MW-12	34.00
	W. Huss	AFVR-5	34.00
	D. McCartha	AFVR-6	34.00
	R. Ariail	MW-12	33.50
Stack I.D. (feet)	0.33 feet		

Notes:

▼= Stinger Depth lowered 0.50 Feet
(Maximum Stinger Depth = 34.5 Feet)

Recovery / Disposal Information

Hydrocarbons Removed (vapor):	95.72	Pounds
Hydrocarbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	16.53	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Total Liquids Removed	11,404	Gallons
Disposal Facility	Regulatory Solutions, Inc.	
Average Treatment System Reduction Rate:	98.24%	

TABLE 2
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELAND'S SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4785
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		AFVR-1	AFVR-3	AFVR-4
Nearest Extraction Well:		AFVR-5	MW-1	AFVR-6
Approximate Distance:		27 ft	18 ft	40 ft
Time	Elapsed Time	Differential Pressure Readings (inches of water)		
Prior to AFVR		0.0	0.0	0.0
9:30	0.0	0.0	4.5	0.0
10:00	0.5	0.0	4.5	0.0
10:30	1.0	0.0	4.5	0.0
11:00	1.5	0.0	4.5	0.0
11:30	2.0	0.5	4.5	0.0
12:00	2.5	0.5	4.5	0.0
12:30	3.0	0.5	4.5	0.0
13:00	3.5	0.5	4.5	0.0
13:30	4.0	0.5	4.5	0.0
14:00	4.5	0.5	4.5	0.0
14:30	5.0	0.5	4.5	0.0
15:00	5.5	0.5	4.5	0.0
15:30	6.0	0.5	4.5	0.0
16:00	6.5	0.5	4.5	0.0
16:30	7.0	0.5	4.5	0.0
17:00	7.5	0.5	4.5	0.0
17:30	8.0	0.5	4.5	0.0
18:30	9.0	0.5	4.5	0.0
19:30	10.0	0.5	4.5	0.0
20:30	11.0	0.5	4.5	0.0
21:30	12.0	0.5	4.5	0.0
22:30	13.0	0.5	4.5	0.0
23:30	14.0	0.5	4.5	0.0
0:30	15.0	0.5	4.5	0.0
1:30	16.0	0.5	4.5	0.0
2:30	17.0	0.5	4.5	0.0
3:30	18.0	0.5	4.5	0.0
4:30	19.0	0.5	4.5	0.0
5:30	20.0	0.5	4.5	0.0
6:30	21.0	0.5	4.5	0.0
7:30	22.0	0.5	4.5	0.0
8:30	23.0	0.5	4.5	0.0
9:30	24.0	0.5	4.5	0.0
11:30	26.0	0.5	4.0	0.0
13:30	28.0	0.5	4.0	0.0
15:30	30.0	0.5	4.5	0.0
17:30	32.0	0.5	4.5	0.0
19:30	34.0	0.5	4.5	0.0
21:30	36.0	0.5	4.5	0.0
23:30	38.0	0.5	4.5	0.0
1:30	40.0	0.5	4.5	0.0
3:30	42.0	0.5	4.5	0.0
5:30	44.0	0.5	4.5	0.0
7:30	46.0	0.5	4.5	0.0
9:30	48.0	0.5	4.5	0.0
11:30	50.0	1.0	4.5	1.5
13:30	52.0	1.0	4.5	1.5
15:30	54.0	1.5	4.5	2.0
17:30	56.0	1.5	4.5	1.5
19:30	58.0	1.5	4.5	1.5
21:30	60.0	1.5	4.5	1.5
23:30	62.0	1.5	4.5	1.5
1:30	64.0	1.5	4.5	1.5
3:30	66.0	1.5	4.5	1.5
5:30	68.0	1.5	4.5	1.5
7:30	70.0	1.5	4.5	1.5
9:30	72.0	1.5	4.5	1.5
11:30	74.0	1.5	4.5	1.5
13:30	76.0	1.5	4.5	1.5
15:30	78.0	1.5	4.5	2.0
17:30	80.0	1.5	4.5	2.0
19:30	82.0	1.5	4.5	2.0
21:30	84.0	1.5	4.5	2.0
23:30	86.0	1.5	4.5	2.0
1:30	88.0	1.5	4.5	2.0
3:30	90.0	1.5	4.5	2.0
5:30	92.0	1.5	4.5	2.0
7:30	94.0	1.5	4.5	2.0
9:30	96.0	1.5	4.5	2.0
Maximum Change:		1.5	4.5	2.0

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		AFVR-1	AFVR-3	AFVR-4
Nearest Extraction Well:		AFVR-5	MW-1	AFVR-6
Approximate Distance:		27 ft	18 ft	40 ft
Time	Elapsed Time	Depth to Liquid (feet below of casing):		
Prior to AFVR		32.75	30.76	30.50
13:30	4 hours	32.77	30.80	30.50
17:30	8 hours	32.78	30.70	30.51
21:30	12 hours	32.80	30.68	30.49
1:30	16 hours	32.80	30.76	30.49
5:30	20 hours	32.81	30.76	30.48
9:30	24 hours	32.81	30.50	30.48
13:30	28 hours	32.80	30.79	30.51
17:30	32 hours	32.86	30.84	30.51
21:30	36 hours	32.92	30.88	30.51
1:30	40 hours	32.97	30.86	30.64
5:30	44 hours	33.00	30.87	30.70
9:30	48 hours	33.02	30.88	30.74
13:30	52 hours	32.94	30.88	30.72
17:30	56 hours	32.94	30.88	30.69
21:30	60 hours	32.95	30.88	30.71
1:30	64 hours	32.96	30.88	30.72
5:30	68 hours	32.98	30.88	30.73
9:30	72 hours	33.01	30.88	30.74
13:30	76 hours	33.04	30.89	30.74
17:30	80 hours	33.03	30.89	30.73
21:30	84 hours	33.04	30.89	30.74
1:30	88 hours	33.02	30.90	30.75
5:30	92 hours	33.05	30.91	30.73
9:30	96 hours	33.05	30.91	30.74
Maximum Change:		-0.30	-0.23	-0.25

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
2. Page 1 of 1
3. Emergency Response Phone 803-926-0089
4. Waste Tracking Number 19469

GENERATOR

5. Generator's Name and Mailing Address
Midlands Environmental Consultants
P.O Box 854
Lexington, SC 29071-
803 808-2042
Generator's Phone:

Generator's Site Address (if different than mailing address)
235 Dooley Road
Lexington, SC 29073

6. Transporter 1 Company Name
Regulatory Solutions, Inc 803-926-0089
U.S. EPA ID Number

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

8. Designated Facility Name and Site Address
Regulatory Solutions, Inc.
40 Pascon Court
Gaston, SC, 29053-
803-926-0089
Facility's Phone:
U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON-RCRA, NON-DOT REGULATED MATERIAL 10662 - 1045	1	T T	3,850	g
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
Clinton

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/Offeror's Printed/Typed Name | Signature | Month | Day | Year

INT'L

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

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Justin Conley | Signature | Month 4 | Day 18 | Year 14

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

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

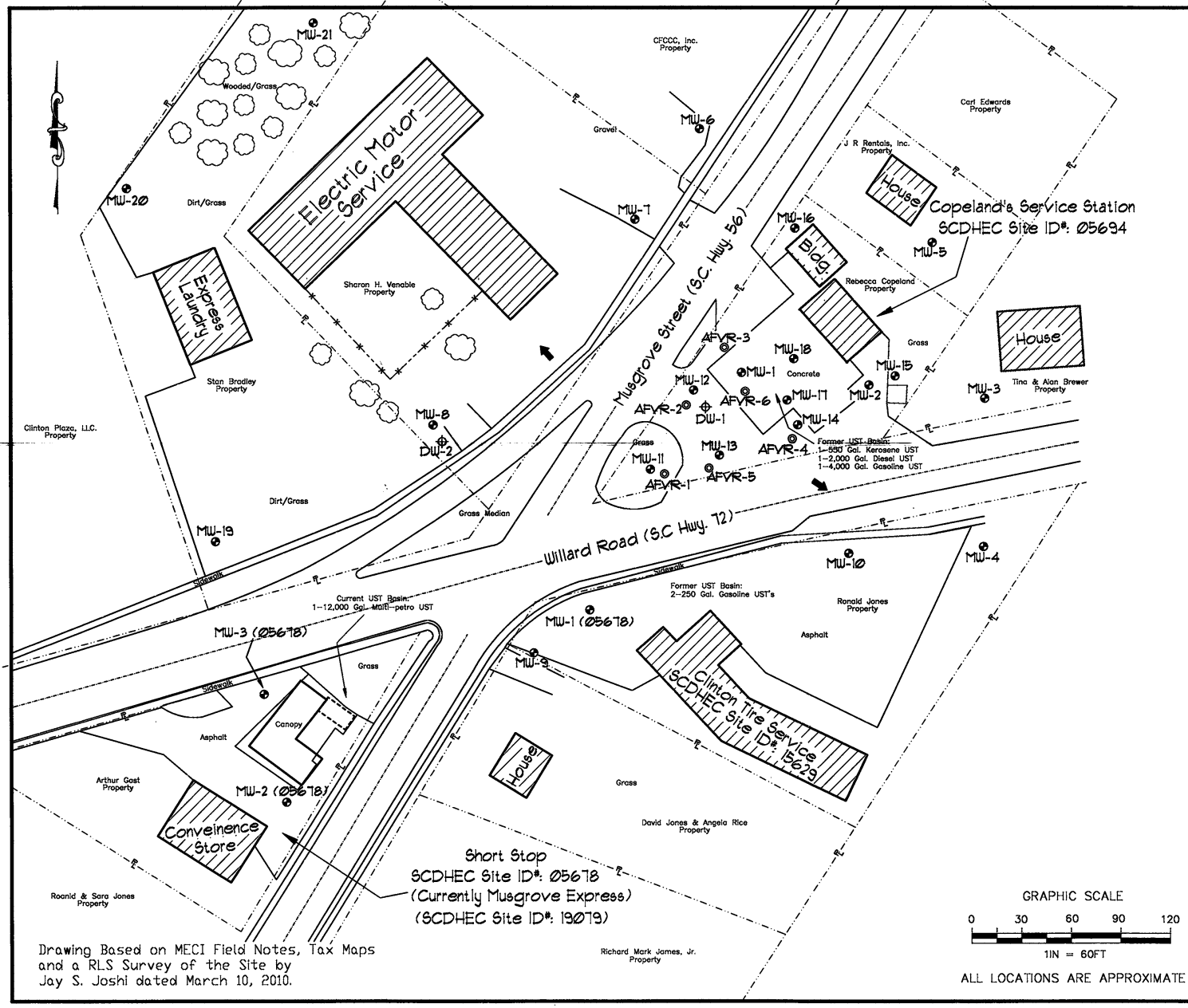
Manifest Reference Number:

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



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Site Features

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	14-4785
DATE	April 24, 2014
FIGURE	2

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MAY 14 2014

UST 27 tech DOCKETING

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

Re: Aggressive Fluid Vapor Recovery (AFVR) Report Review letter
Copelands Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694
Release Reported June 24, 1993
AFVR report received May 5, 2014
Laurens County

Dear Mr. Copeland:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report and noted the findings (see enclosures). The next scope of work deemed necessary is to conduct a site visit to determine the effectiveness of the extended Aggressive Fluid and Vapor Recovery (AFVR) event.

On all correspondence regarding this site, please reference the UST Permit # 05694. If you have questions concerning this correspondence or would like to submit additional information, please contact me by phone at (803) 898-0634, by fax at (803) 898-0673, or by email at utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: AFVR report

cc: Technical File (w/out enc)

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Monitoring Well Gauging

Site Information		
Date: 6/19/14	Site ID #: 05694	Site Name: Copelands Service Station
County: Laurens	Project Manager: S. Utz	Field Personnel: J. McLain

Well Gauging Information

Well ID:	Total Well Depth (ft.)	Screened Interval (ft.)	Depth to Free Product (ft.)	Depth to Ground water (ft.)	Free Product Thickness (ft.)	Confirmed with Bailer?	Photos Taken ?	Well Pad OK?	Bolts in Well Cover?	Water in Well Vault?
MW-1			—	30.65	—	—	—	N/A	No	Yes
MW-2			Obstructed at 11.97 (even after removing ink pen from well)					Yes	No	No
MW-9	35	25-35	—	31.50	—	—	—	Yes	Yes	No
MW-10	35	25-35	—	29.98	—	—	—	N/A	Yes	No
MW-11	35	25-35	—	32.30	—	—	—	Yes	Missing 1	No
MW-12	35	25-35	—	31.12	—	—	—	Cracked	Yes	No
MW-13	35	25-35	31.75	31.79	0.04	No	No	Cracked	No	Little
MW-14	35	25-35	—	30.53	—	—	—	Cracked	No	Yes
MW-15	35	25-35	—	28.40	—	—	—	N/A	Missing 1	No
MW-16	35	25-35	—	29.03	—	—	—	Yes	No	Yes
MW-17	40	30-40	Obstructed at 25.50					Yes	Yes	Yes
MW-18	40	30-40	Obstructed at 25.56					Yes	Yes	Yes
DW-1	85	75-85	—	31.43	—	—	—	Cracked	No	No

Notes: Ronnie Jones from Clinton Tire stopped by. His son, David, has put an offer in for purchasing facility (Copelands). Wanted to know status of situation. Referred him to PM.

Signature: Jessica P. McLain

UST 28-T CKETING

-UST Field Data Information Sheet – Monitoring Well Gauging

-Purpose of the form is to record information gathered during a monitoring well gauging event
-DHEC UST Project Managers and Field Staff
-Item-by-item instructions for completing the form:
    Fill in all Site Information boxes
    Record Well Gauging Information for all necessary wells
    Record any applicable notes
    Sign the form
-Form is scanned and saved electronically; Record Group Number 169, Retention Schedule 10304

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Monitoring Well Gauging

Site Information

Date: 6/19/14	Site ID #: 05694	Site Name: Copelands Service Station
County: Laurens	Project Manager: S. Utz	Field Personnel: J. McLain

Well Gauging Information

Well ID:	Total Well Depth (ft.)	Screened Interval (ft.)	Depth to Free Product (ft.)	Depth to Ground water (ft.)	Free Product Thickness (ft.)	Confirmed with Bailer?	Photos Taken ?	Well Pad OK?	Bolts in Well Cover?	Water in Well Vault?
AFVR-1			—	32.33	—	—	—	Yes	No	No
AFVR-2			—	31.43	—	—	—	Yes	No	No
AFVR-3			—	30.25	—	—	—	Cracked	Yes	No
AFVR-4			—	30.53	—	—	—	Cracked	Missing!	No
AFVR-5			31.89	31.92	0.03	No	No	Yes	No	No
AFVR-6			30.55	30.60	0.05	No	No	Yes	No	No
Well by MW-17			—	30.32	—	—	—	N/A	Yes	No
Well by MW-18			—	29.26	—	—	—	Yes	Yes	Yes

Notes: _____

Signature: Jessica P. McLain

DHEC 0424 (10/2012)

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

-UST Field Data Information Sheet – Monitoring Well Gauging

-Purpose of the form is to record information gathered during a monitoring well gauging event
-DHEC UST Project Managers and Field Staff
-Item-by-item instructions for completing the form:
    Fill in all Site Information boxes
    Record Well Gauging Information for all necessary wells
    Record any applicable notes
    Sign the form
-Form is scanned and saved electronically; Record Group Number 169, Retention Schedule 10304

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

UST 29tech DOCKETING

JUN 2 5 2014

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

Re: **Corrective Action Options**
Copeland's Service Station, 700 Musgrove St., Clinton, SC
UST Permit #**05694**
Release reported June 24, 1993
AFVR Report received May 5, 2014
Laurens County

Dear Mr. Copeland,

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 Midlands Environmental Consultants, 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 for the release reported on December 30, 1991, 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 of the 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 **#05694**. If you have any questions, please contact me at (803) 898-0634 or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, 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: Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC 29701 (w/ enc)
Technical File (w/ enc)

State Lead Option

PERMISSION FORM

UNDERGROUND STORAGE TANK AND PROPERTY OWNER

UST Permit # **05694**

If you are both the owner of the former or existing underground storage tanks for the release reported on June 24, 1003 and the current property owner, please complete this form.

I, _____, certify that I am the identified legal owner of the underground storage tanks for the release reported on June 24, 1993 and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (Agency) to secure on my behalf contractor services to conduct assessment and corrective action activities as required, and authorize the Agency, or a contractor selected by the Agency, to enter this property at reasonable times only to accomplish these site rehabilitation tasks. The contractor(s) will be designated as my contractor for only the required site rehabilitation activities. Compensation to the contractor(s) will be from the SUPERB Account and I will have no obligation to pay the contractor(s). I understand that the Agency or its contractor will be responsible for notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility _____Copeland's Service Station_____Phone # _____

Street Address of Facility _____700 Musgrove St._____

Town, City, District, Suburb _____Clinton, SC_____

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 _____

Is the property currently leased or rented to someone? (yes or no) _____. If yes, please provide their name _____and phone number _____ _____and let them know about the pending site rehabilitation activities. If vehicles or other mobile structures are parked over the monitoring wells, they should be moved before the Agency's contractor arrives at the site.

NAME of UST/property owner (Please Print):_____

Phone Number (home)_____(work)_____

Signature of UST/property Owner:_____

Witness:_____

Date:_____Month _____Day_____Year

State Lead Option

PERMISSION FORM

UNDERGROUND STORAGE TANK OWNER

UST Permit **#05694**

If you are the owner of the former or existing underground storage tanks for the release reported on June 24, 1993 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/or existing underground storage tank(s) located at the facility identified below and for the release reported on June 24, 1993 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 Copeland's Service Station Phone # _____

Street Address of Facility 700 Musgrove St

Town, City, District, Suburb Clinton, SC

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

State Lead Option

RIGHT-OF-ENTRY FORM

PROPERTY OWNER

UST Permit **#05694**

If you are the Property Owner or are the authorized representative for that person, but did not own the former or existing underground storage tanks at the time the release was reported, please complete this form.

I, _____, certify that I am the legal owner of the property identified below or serve as the authorized representative for the property owner. I authorize the South Carolina Department of Health and Environmental Control (Agency), or a contractor selected by the Agency, to enter this property at reasonable times only to conduct assessment and corrective action activities, as required. The contractor will be designated as the contractor for the UST owner or operator 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 notify me of all activities that are necessary prior to their initiation and will promptly provide to me a summary of the data upon request.

Name of Facility _____Copeland's Service Station_____Phone # _____

Street Address of Facility _____700 Musgrove St._____

Town, City, District, Suburb _____Cliinton, SC_____

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 _____

Is the property currently leased or rented to someone? (yes or no) _____. If yes, please provide their name _____and phone number _____ and let them know about the pending site rehabilitation activities. If vehicles or other mobile structures are parked over the monitoring wells, they should be moved before the Agency's contractor arrives at the site.

NAME of Property owner (Please Print):_____

Phone Number (home)_____ (work)_____

Current Mailing Address:_____

Signature of Property Owner:_____

Witness:_____

Date:_____Month _____Day_____Year

Owner/ Operator Lead Option

ACTIVE CORRECTIVE ACTION OPTIONS FORM

UST PERMIT #05694

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 June 24, 1993 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:_____

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

OCT 2 1 2009

3tech UST DOCKET

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

Re: **Notice to Proceed-Groundwater Sampling**
Bid # IFB-33335-3/11/08-EMW; PO# 719459

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct nine (9) groundwater-sampling events. The packets contain all necessary information for work to begin. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order # 719459 on the appropriate invoice submitted for payment against the facility.

UST Permit #	Facility	County	# wells	UST Project Manager	Sampling Due Date	Parameters-Groundwater	PACE CA#	MECI CA#
02032	Southern Store 583	Cherokee	34	S. Fulmer	11/27/09	BTEXMN, DCA, EDB & Oxygenates	37385	37384
05694	Copelands	Laurens	17	S. Briney	11/27/09	BTEXMN, DCA, EDB, Oxygenates, & total lead	37444	37445
07318	Reva of Clemson	Pickens	13	J. Padgett	11/27/09	BTEXMN & Oxygenates	37412	37411
09120	Calcutt's Grocery	Williamsburg	25	J. Martin	11/27/09	BTEXMN, DCA, & EDB	37392	37391
06404	Mt Carmel Section	McCormick	29	J. Koon	11/27/09	BTEXMN, DCA, & EDB	37431	37432
18876	Bill Reaves Station	Pickens	6	A. Smith	11/27/09	BTEXMN, DCA, & EDB	29143	29144
18529	BJ Wholesale	Greenville	37	A. Smith	11/27/09	BTEXMN, DCA, EDB, Oxygenates, & Total Lead	35882	35881
18363	Short Stop Clinton	Laurens	21	A. Smith	11/27/09	BTEXMN, DCA, EDB, Oxygenates, & Total Lead	35620	35622
19190	Bank of America	Spartanburg	11	A. Smith	11/27/09	BTEXMN, DCA, & EDB	36946	36947

MECI will perform services at the sites on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. Contact information has been provided in the information packet. 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. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs. **Please note, the final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed.**

Please contact me with the sampling schedule before commencing work at these facilities. If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma

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

enc: Information Packets
Approved Cost Agreements

cc: Renee Spencer, PACE Analytical, 9800 Kincey Ave. Ste. 100, Huntersville, NC, 28078 (w/ Approved CAs)
Technical Files (w/o. enc.)

Approved Cost Agreement 37444

Facility: 05694 COPELANDS SERVICE STATION INC

BRINEYSM

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
11 ANALYSES						
	GW GROUNDWATER	A	BTEX+NAPTH+MTBE	17.0000	23.00	391.00
		E	LEAD	17.0000	10.00	170.00
		F	EDB	17.0000	25.00	425.00
		P	8 OXYGENATES	17.0000	30.00	510.00
				Total Amount		1,496.00

Approved Cost Agreement 37445

Facility: 05694 COPELANDS SERVICE STATION INC
BRINEYSM
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		B	PERSONNEL	1.0000	150.00	150.00
10 SAMPLE COLLECTION						
		A	GROUND WATER	1.0000	12.00	12.00
		D	GROUNDWATER NO-PURGE	16.0000	10.00	160.00
		E	GAUGE WELL ONLY	6.0000	8.00	48.00
				Total Amount		370.00

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

JUL 0 8 2014

UST DOCKETING 30 Tech

Re: **Aggressive Fluid and Vapor Directive**
Copelands Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694; CA#48368
Release Reported June 24, 1993
AFVR report received May5, 2014
Laurens County

Dear Mr. Copeland:

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 Midlands Environmental Consultants, Inc. as your contractor.

In accordance with Section 280.64 of the South Carolina Underground Storage Tank Control Regulations, an Aggressive Fluid and Vapor Recovery (AFVR) event may proceed immediately upon receipt of this letter as outlined in the UST Quality Assurance Program Plan (QAPP) Revision 2.0. **Please be aware that the AFVR Procedures have been updated.** One 96-hour event will utilize monitoring wells MW-13, AFVR-5, and AFVR-6. The stingers shall be lowered at six inch intervals starting at the water table interface to a target depth of 30 feet in the wells. A copy of Agency QAPP Version 2.0 for the Underground Storage Tank Division is available at http://www.dhec.sc.gov/environment/lwm/usthome/QAPP.htm.

As soon as the beginning date of the event has been scheduled, please contact Sonya Utz at utzst@dhec.sc.gov.

The AFVR Report should be submitted within 90 days from the date of this correspondence. 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 #48368 has been approved in the amount shown on the enclosed cost agreement. Midlands 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 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.

On all correspondence concerning this site, please reference UST Permit # 05694. If there are any questions concerning this project, feel free to contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or by e-mail at utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Approved Cost Agreement

cc: Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC 29701 (w/enc.)
Technical file (w/enc.)

Approved Cost Agreement 48368

Facility· 05694 COPELANDS SERVICE STATION INC

UTZST

PO Number.

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
19 RPT/PROJECT MNGT & COORDINATIO						
		PRT	REPORT PREPARATION	0.1200	22,768 00	2,732 16
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
		E1	ADDITIONAL WELL HOOK-UPS	1.0000	25 75	25 75
		F1	EFFLUENT DISPOSAL	20,000.0000	0 44	8,800 00
		G	AFVR EQUIPMENT MOB	1 0000	391.50	391 50
				Total Amount		25,500 16

State Lead Option

UST Sonya JUL 10 2014 PROGRAM

PERMISSION FORM

UNDERGROUND STORAGE TANK OWNER

UST Permit **#05694**

If you are the owner of the former or existing underground storage tanks for the release reported on June 24, 1993 or are designated as their authorized representative, but do not own the property, please complete this form.

I, Rebecca P Copeland certify that I am the legal owner of the former and/or existing underground storage tank(s) located at the facility identified below and for the release reported on June 24, 1993 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 Copeland's Service Station Phone # 864-923-3361 Wayne Copeland Husband

Street Address of Facility 700 Musgrove St (Cell)

Town, City, District, Suburb Clinton, SC 29325-5438

Name of nearest intersecting street, road, highway, alley Highway 72 East

Is this facility within the city limits? (yes or no) yes

Does a public water or sewer utility service this facility? (yes or no) yes, 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 City of Clinton Utility Dept, phone number 864-833-7520

NAME of UST owner (Please Print): Rebecca P Copeland

Phone Number (home) 864-833-5785 (work) Cell 864-923-3361 Husband, Wayne Copeland

Signature of UST Owner: Rebecca P Copeland

Witness: Harold Wayne Copeland

Date: July Month 7 Day 2014 Year

UST 31 Tech MEETING

State Lead Option

UST JUL 10 2014 PROGRAM

UST DOCKETING

PERMISSION FORM

UNDERGROUND STORAGE TANK AND PROPERTY OWNER

UST Permit # **05694**

If you are both the owner of the former or existing underground storage tanks for the release reported on June 24, 1003 and the current property owner, please complete this form.

I, Rebecca P Copeland (Wayne Copeland), certify that I am the identified legal owner of the underground storage tanks for the release reported on June 24, 1993 and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (Agency) to secure on my behalf contractor services to conduct assessment and corrective action activities as required, and authorize the Agency, or a contractor selected by the Agency, to enter this property at reasonable times only to accomplish these site rehabilitation tasks. The contractor(s) will be designated as my contractor for only the required site rehabilitation activities. Compensation to the contractor(s) will be from the SUPERB Account and I will have no obligation to pay the contractor(s). I understand that the Agency or its contractor will be responsible for notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility Copeland's Service Station Phone # _____

Street Address of Facility 700 Musgrove St. 864-923-3361 H. Wayne Copeland (Husband) Cell

Town, City, District, Suburb Clinton, SC 29325-5438

Name of nearest intersecting street, road, highway, alley Highway 72 East

Is this facility within the city limits? (yes or no) yes

Does a public water or sewer utility service this facility? (yes or no) yes, 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 _____

Is the property currently leased or rented to someone? (yes or no) yes. If yes, please provide their name Marathon Staffing and phone number 864-833-4929 and let them know about the pending site rehabilitation activities. If vehicles or other mobile structures are parked over the monitoring wells, they should be moved before the Agency's contractor arrives at the site.

NAME of UST/property owner (Please Print): Rebecca P Copeland (Wayne Copeland - husband)

Phone Number (home) 864-833-5785 (work) 864-923-3361 (Husband - Wayne)

Signature of UST/property Owner: Rebecca P Copeland

Witness: Harold Wayne Copeland

Date: July Month 7 Day 2014 Year

UST 32 tech DOCKETING

Midlands
Environmental
Consultants, Inc.

July 21, 2014

UST
AUG 07 2014
PROGRAM

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

UST
33 tech
DOCKETING

Subject: Aggressive Fluid Vapor Recovery Report
Copeland's Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID # 05694; CA # 48368
MECI Project Number 14-4871
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Utz,

On behalf of Mr. Wayne Copeland, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines set forth in the UST Quality Assurance Program Plan (QAPP), Revision 2.0.

AGGRESSIVE FLUID VAPOR RECOVERY

A site visit was conducted at Copeland's Service Station on July 10, 2014 to locate/gauge monitoring wells and to evaluate current site conditions. MECI personnel commenced a 96-Hour Aggressive Fluid Vapor Recovery (AFVR) event at the former Copeland's Service Station on July 14, 2014 and completed the event on July 18, 2014. The event was conducted on monitoring wells MW-13, AFVR-5, and AFVR-6 to remove free phase petroleum product at the referenced site. Prior to the AFVR event, free phase petroleum product gauged utilizing an Heron H.Oil Oil/Water Interface Meter. The following table presents depth to product, depth to product, and product thickness measurements obtained prior to the commencement of the 96-Hour:

Pre-AFVR Well Data			
Well ID#	***Depth to Product (ft.)***	***Depth to Water (ft.)***	***Product Thickness (ft.)***
MW-13	31.75	31.85	0.10
AFVR-5	31.92	32.02	0.10
AFVR-6	30.65	30.75	0.10

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • Fax: (803) 808-2048

The event was continuously conducted for ninety-six (96) hours by MECI personnel utilizing a vacuum extraction unit. Following the extended AFVR event, free product and groundwater levels were measured and recorded. The following table presents the post-AFVR free product and groundwater measurements obtained after completion of the AFVR event:

Post-AFVR Well Data			
Well ID#	***Depth to Product (ft.)***	***Depth to Water (ft.)***	***Product Thickness (ft.)***
MW-13	Not Detected	34.10	Not Detected
AFVR-5	Not Detected	33.84	Not Detected
AFVR-6	Not Detected	32.25	Not Dectected

MECI treated the off gas produced during the AFVR event using an activated carbon filter system, which achieved an average calculated reduction rate of 99.30% throughout the duration of the referenced event. Calculated total petroleum hydrocarbons removed during the event were 121.47 pounds or approximately 20.98 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 1.27 pounds per hour. Concentrations of off gas (Pre-Treatment) produced during the event were recorded from 1,429 parts per million by volume (PPM) to 3,509 PPM. Vacuum readings were recorded at a range of 23.0 to 25.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1.

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2. Monitoring well locations are depicted on attached Figure 2.

A total of 3,000 gallons of liquid was removed from the site during this event. Free Phase Petroleum product was not observed in the holding tanks at the end of the event. The fluids produced were transported to VLS Recovery Service, Inc. in Mauldin, SC for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, Mr. Wayne Copeland and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Project Biologist

Jeff L. Coleman
Senior Scientist

TABLE 1
AFVR MONITORING DATA
COPELAND'S SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4871
SCDHEC SITE ID NUMBER 05694

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements: Pre-Treatment Concentration (PPM)	Post-Treatment Concentration (PPM)	Treatment Reduction Rate (%)	Offgas Velocity (ft/min)	Flow Rate (CFM)	Removal Rate (Lbs/Hr)	Interval Removal (Lbs)
MW-13	07/14/14	10 00	0 50	25 0	1,517	7 9	99.48%	410	36 90	0 67	0 34
AFVR-5	07/14/14	10 30	0 50	25.0	1,531	9 2	99 40%	420	37 80	0 69	0 35
AFVR-6	07/14/14	11 00	0 50	25.0	1,642	9 5	99.42%	410	36 90	0 73	0 36
	07/14/14	11.30	0 50	25 0	1,753	9 6	99 45%	400	36 00	0 76	0 38
	07/14/14	12 00	0 50	25 0	1,814	10 1	99 44%	390	35 10	0 76	0 38
	07/14/14	12 30	0 50	25 0	1,841	10 0	99 46%	410	36 90	0.82	0 41
▼	07/14/14	13 00	0 50	25 0	1,862	10.2	99 45%	400	36 00	0 80	0 40
	07/14/14	13 30	0 50	25 0	1,876	10.3	99.45%	390	35 10	0 79	0 40
	07/14/14	14 00	0 50	25 0	1,887	10 2	99 46%	400	36 00	0 82	0 41
	07/14/14	14 30	0 50	25 0	1,861	10 3	99 45%	410	36 90	0 82	0 41
	07/14/14	15 00	0 50	24 0	1,849	10 2	99 45%	420	37 80	0 84	0 42
	07/14/14	15 30	0 50	24 0	1,824	10 1	99 45%	410	36 90	0 81	0 40
	07/14/14	16 00	0 50	24 0	1,748	9 9	99 43%	420	37 80	0 79	0 40
	07/14/14	16 30	0 50	24 0	1,618	9 7	99 40%	430	38 70	0 75	0 38
▼	07/14/14	17 00	0 50	24 0	1,562	9 9	99 37%	440	39 60	0 74	0 37
	07/14/14	17 30	0 50	24 0	1,466	9 8	99 33%	450	40 50	0 71	0 36
	07/14/14	18 00	0 50	24 0	1,429	9 7	99 32%	470	42 30	0 73	0 36
	07/14/14	19 00	1 00	25 0	1,547	10 4	99.33%	400	36 00	0 67	0 67
	07/14/14	20 00	1.00	25 0	1,613	10 3	99 36%	390	35 10	0 68	0 68
	07/14/14	21 00	1 00	25 0	1,689	10 4	99 38%	400	36 00	0 73	0 73
▼	07/14/14	22 00	1 00	25.0	1,801	10 8	99 40%	380	34 20	0 74	0 74
	07/14/14	23 00	1 00	24 0	1,809	10 9	99 40%	410	36 90	0 80	0 80
	07/15/14	0 00	1.00	24 0	1,791	10 6	99 41%	400	36 00	0 77	0 77
	07/15/14	1 00	1 00	24 0	1,772	10 4	99.41%	420	37 80	0 80	0 80
	07/15/14	2 00	1 00	24 0	1,811	10 7	99 41%	430	38 70	0 84	0 84
	07/15/14	3 00	1 00	24 0	1,820	10 8	99 41%	420	37 80	0 83	0 83
	07/15/14	4 00	1 00	24 0	1,802	10 7	99 41%	390	35 10	0 76	0 76
	07/15/14	5 00	1 00	24 0	1,787	10 4	99 42%	400	36 00	0 77	0 77
	07/15/14	6 00	1 00	24 0	1,780	10.3	99 42%	410	36 90	0 79	0 79
	07/15/14	7 00	1 00	24 0	1,794	10 7	99 40%	440	39 60	0 85	0 85
▼(AFVR-6)	07/15/14	8 00	1 00	24 0	1,775	10 4	99 41%	410	36 90	0 79	0 79
	07/15/14	9 00	1 00	24 0	1,762	10 5	99.40%	400	36 00	0 76	0 76
	07/15/14	10 00	1 00	24 0	1,778	10.9	99 39%	420	37 80	0 81	0 81
	07/15/14	12 00	2 00	24 0	1,801	12 1	99 33%	410	36 90	0 80	1 59
▼(AFVR-6)	07/15/14	14 00	2 00	24 0	1,729	13 3	99 23%	420	37 80	0 78	1 57
	07/15/14	16 00	2 00	24 0	1,754	13 9	99 21%	430	38 70	0 81	1 63
	07/15/14	18 00	2 00	23 0	1,743	14.5	99 17%	410	36 90	0 77	1 54
	07/15/14	20 00	2 00	23 0	1,761	14 8	99 16%	400	36 00	0 76	1 52
	07/15/14	22 00	2 00	23 0	1,773	15 1	99.15%	410	36 90	0 79	1 57
	07/16/14	0 00	2 00	23 0	1,779	15.1	99.15%	430	38 70	0 83	1 65
	07/16/14	2 00	2 00	23 0	1,762	14 9	99 15%	440	39 60	0 84	1 67
	07/16/14	4 00	2 00	23 0	1,774	15.0	99 15%	450	40 50	0 86	1 72
	07/16/14	6 00	2 00	23 0	1,787	15 1	99 16%	440	39 60	0 85	1 70
	07/16/14	8 00	2 00	23 0	1,796	15 1	99 16%	440	39 60	0 85	1 71
	07/16/14	10 00	2 00	23 0	1,802	15 2	99 16%	450	40 50	0 88	1 75
	07/16/14	12 00	2 00	24 0	1,983	15 8	99.20%	450	40 50	0 96	1 93
	07/16/14	14 00	2 00	24 0	1,904	16 3	99 14%	460	41 40	0 95	1 89
	07/16/14	16 00	2 00	25 0	2,098	17 2	99 18%	460	41 40	1 04	2 08
	07/16/14	18 00	2 00	25 0	2,173	17 7	99.19%	470	42 30	1 10	2.21
	07/16/14	20 00	2 00	25 0	2,285	18 4	99 19%	480	43 20	1 18	2.37
	07/16/14	22 00	2 00	25 0	2,378	18 9	99 21%	490	44 10	1 26	2 52
	07/17/14	0 00	2 00	24.0	2,452	19 2	99 22%	510	45 90	1 35	2 70
	07/17/14	2 00	2 00	24 0	2,498	19 6	99 22%	520	46 80	1 40	2 81
	07/17/14	4 00	2 00	24 0	2,561	19 7	99 23%	540	48.60	1 49	2 99
	07/17/14	6 00	2 00	24 0	2,587	20.1	99 22%	540	48 60	1 51	3 02
	07/17/14	8 00	2 00	24 0	2,617	20 7	99 21%	560	50 40	1 58	3 17
	07/17/14	10 00	2 00	24 0	2,658	20 9	99 21%	570	51 30	1 64	3 27
	07/17/14	12 00	2 00	24 0	2,691	21 2	99 21%	580	52 20	1.69	3 37
	07/17/14	14 00	2 00	24 0	2,732	21 5	99 21%	600	54 00	1 77	3 54
	07/17/14	16 00	2 00	24 0	2,645	21.8	99 18%	620	55 80	1 77	3 54
	07/17/14	18 00	2 00	24 0	2,499	22 0	99 12%	650	58 50	1 75	3 51
	07/17/14	20 00	2 00	24 0	2,537	22 3	99 12%	670	60 30	1 84	3 67
	07/17/14	22 00	2 00	24.0	2,694	22 5	99 16%	660	59 40	1 92	3 84
	07/18/14	0 00	2 00	24 0	2,893	22 8	99 21%	690	62 10	2 16	4 31
	07/18/14	2 00	2 00	24 0	2,937	23 2	99 21%	710	63 90	2 25	4 50
	07/18/14	4 00	2 00	24 0	3,212	23 3	99 27%	720	64 80	2 50	5 00
	07/18/14	6 00	2 00	24 0	3,321	23 6	99.29%	750	67 50	2 69	5 38
	07/18/14	8 00	2 00	24 0	3,478	23 7	99.32%	740	66 60	2 78	5 56
	07/18/14	10 00	2 00	24 0	3,509	23 8	99.32%	760	68.40	2 88	5 76

Well Data: Well No.	Diameter (in)	Screened Interval (ft)	Pre AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Post AFVR Event: Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Corrected Depth to Water Change (ft)
MW-13	2"	25-35	31 75	31 85	0 10	***	34 10	***	2 34
AFVR-5	2"	TD:34 35	31 92	32 02	0.10	***	33 84	***	1 91
AFVR-6	2"	TD.34 36	30 65	30 75	0.10	***	32.25	***	1.59

Vacuum Truck Information		Well ID	Initial Stinger Depth (ft)
Contractor:	MECI	MW-13	32 50
Truck Operator:	F Mitlin	AFVR-5	32 50
	A Looper	AFVR-6	31 50
	D McCartha		
	T Elder		
Stack I.D. (feet)	0 33 feet		

Recovery / Disposal Information

Hydrocarbons Removed (vapor):	121 47	Pounds
Hydrocarbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	20 98	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Total Liquids Removed	3,000	Gallons
Disposal Facility	VLS Recovery	
Average Treatment System Reduction Rate:	99 30%	

Notes:

▼= Stinger Depth lowered 0 50 Feet
(Maximum Stinger Depth = 34 0 Feet)

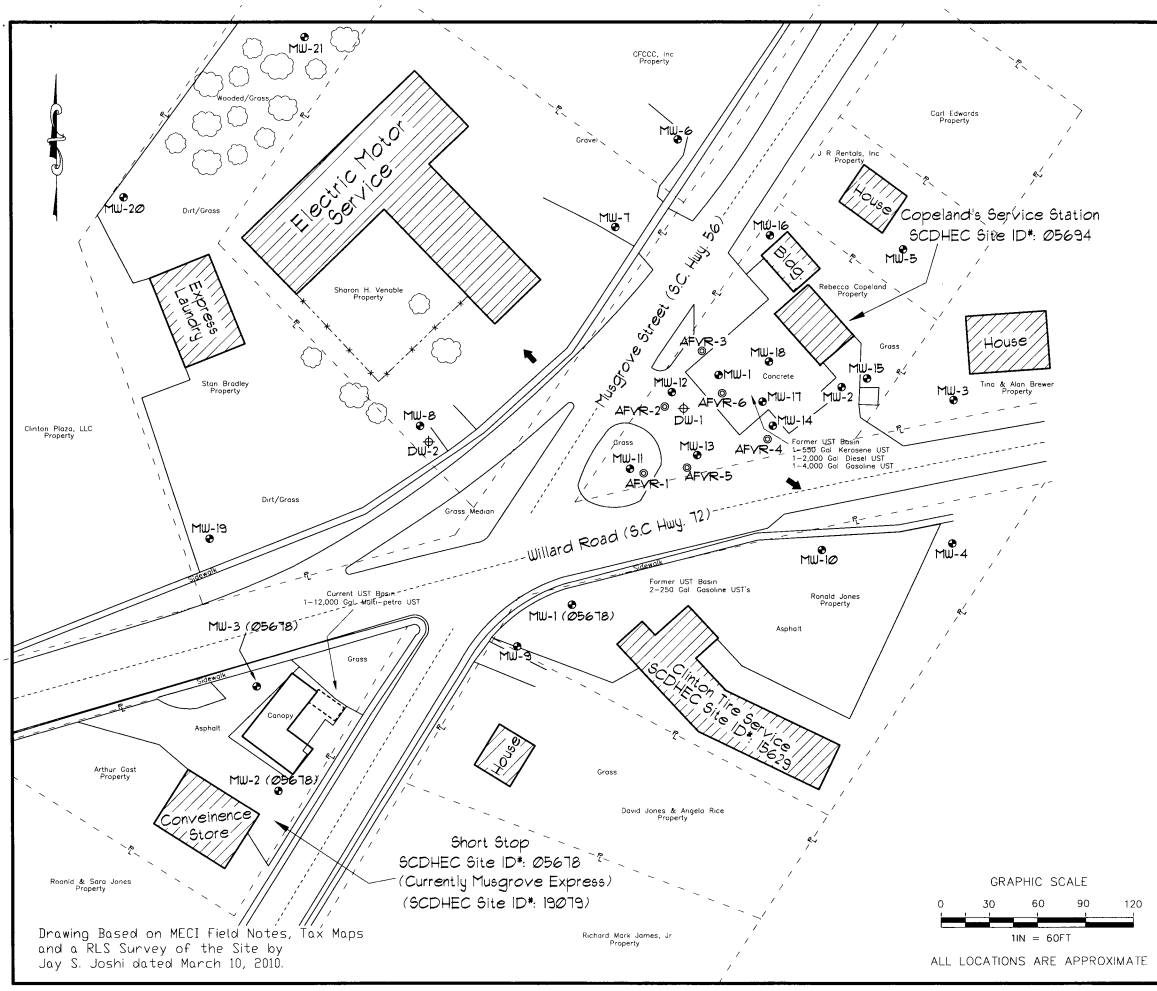
TABLE 2
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
COPELAND'S SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4871
SCDHEC SITE ID NUMBER 05694

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		AFVR-1	AFVR-2	AFVR-4
Nearest Extraction Well:		AFVR-5	MW-13	AFVR-6
Approximate Distance:		27 ft	36 ft	40 ft
Time	Elapsed Time	Differential Pressure Readings (inches of water)		
Prior to AFVR		0.0	0.0	0.0
10:00	0 0	0 5	0.0	0 5
10:30	0.5	0.5	0.0	0.5
11:00	1.0	0.5	0.0	0.5
11:30	1.5	0.5	0.0	0.5
12:00	2.0	0.5	0.0	0 5
12:30	2.5	0.5	0.0	0 5
13:00	3.0	0 5	0.0	0.5
13:30	3.5	0.5	0.0	0.5
14.00	4.0	0.5	0.0	0 5
14:30	4.5	0.5	0.0	0.5
15:00	5 0	0.5	0.0	0.5
15:30	5.5	0.5	0.0	0 5
16:00	6.0	0.5	0 0	0 5
16:30	6.5	0.5	0.0	0 5
17.00	7 0	0.5	0.0	0.5
17:30	7.5	0.5	0.0	0.5
18:00	8.0	0.5	0.0	0 5
19 00	9 0	0 5	0.0	0.5
20 00	10.0	0.5	0 0	0.5
21:00	11.0	0.5	0.0	0 5
22:00	12.0	0.5	0.0	0 5
23:00	13.0	0.5	0.0	0.5
0:00	14.0	0.5	0.0	0.5
1:00	15 0	0.5	0.0	0.5
2.00	16.0	0.5	0.0	0 5
3.00	17.0	0.5	0 0	0 5
4:00	18.0	0.5	0.0	0.5
5:00	19.0	0.5	0.0	0.5
6:00	20.0	0.5	0.0	0.5
7:00	21.0	0.5	0.0	0 5
8.00	22.0	0.5	0.0	0 5
9.00	23 0	0.5	0.0	0.5
10 00	24.0	0.5	0.0	0.5
12 00	26.0	0.5	0 0	0 5
14:00	28.0	0 5	0.0	0 5
16:00	30.0	0.5	0.0	0.5
18.00	32.0	0.5	0.0	0.5
20:00	34.0	0.5	0.0	0.5
22:00	36.0	0.5	0.0	0 5
0:00	38.0	0.5	0 0	0.5
2:00	40.0	0.5	0.0	0 5
4:00	42.0	0.5	0.0	0.5
6:00	44.0	0 5	0.0	0.5
8:00	46.0	0.5	0 0	0.5
10:00	48.0	0.5	0 0	0 5
12:00	50.0	0.5	0.0	0.5
14:00	52.0	0 5	0.0	0 5
16.00	54 0	0.5	0.0	0 5
18:00	56 0	0.5	0.0	0.5
20:00	58.0	0.5	0.5	0.5
22:00	60.0	0.5	0.5	0 5
0.00	62.0	0 5	0.5	0 5
2:00	64.0	0.5	0.5	0.5
4:00	66 0	0.5	0.5	0.5
6.00	68.0	0.5	0.5	0 5
8:00	70.0	0.5	0.5	0 5
10:00	72 0	0.5	0.5	0.5
12:00	74.0	0.5	0 5	0 5
14:00	76.0	0 5	0.5	0 5
16 00	78.0	0 5	0 5	0.5
18:00	80 0	0.5	0.5	0 5
20:00	82.0	0 5	0 5	0 5
22.00	84 0	0.5	0.5	0.5
0.00	86 0	0.5	0.5	0.5
2:00	88.0	0.5	0.5	0.5
4.00	90.0	0.5	0.5	0.5
6:00	92.0	0.5	0 5	0.5
8:00	94 0	0.5	0.5	0 5
10.00	96.0	0.5	0.5	0 5
Maximum Change:		0.5	0.5	0.5

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		AFVR-1	AFVR-2	AFVR-4
Nearest Extraction Well:		AFVR-5	MW-13	AFVR-6
Approximate Distance:		27 ft	36 ft	40 ft
Time	Elapsed Time	Depth to Liquid (feet below of casing):		
Prior to AFVR		32.45	31.53	30.84
14.00	4 hours	32.45	31.54	30.85
18:00	8 hours	32.45	31.53	30.85
22.00	12 hours	32.48	31.57	30 86
2:00	16 hours	32.50	31.58	30.88
6.00	20 hours	32.51	31.59	30.90
10:00	24 hours	32.53	31.60	30 91
14:00	28 hours	32.51	31.58	30.91
18:00	32 hours	32.51	31.58	30 92
22:00	36 hours	32.53	31 58	30 92
2 00	40 hours	32.55	31.60	30.94
6:00	44 hours	32.57	31.62	30.95
10:00	48 hours	32.59	31.64	30.97
14 00	52 hours	32.58	31.64	31 01
18:00	56 hours	32.57	31 66	31.04
22:00	60 hours	32 59	31.67	31.06
2:00	64 hours	32 62	31.67	31.08
6.00	68 hours	32.63	31.68	31 10
10:00	72 hours	32.65	31 70	31.11
14:00	76 hours	32.66	31.70	31.12
18:00	80 hours	32.67	31.70	31.13
22:00	84 hours	32.66	31 70	31 14
2:00	88 hours	32.65	31.72	31.15
6:00	92 hours	32.69	31.74	31 16
10:00	96 hours	32.72	31.75	31 22
Maximum Change:		-0.27	-0.18	-0.38



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	14-4871
DATE	July 31, 2014
FIGURE	2

VLS recovery SERVICES, LLC

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number GRN3

GENERATOR

5. Generator's Name and Mailing Address
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON, SC 29071
Generator's Phone: 803-808-2043-4415

Generator's Site Address (if different than mailing address)
700 MUSGROVE STREET
CLINTON, SC

6. Transporter 1 Company Name: SPARKS INDUSTRIAL SERVICES — U.S. EPA ID Number:

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

8. Designated Facility Name and Site Address
VLS RECOVERY SERVICES, LLC
306 S. MAIN STREET
MAULDIN, SC 29662
Facility's Phone: 864-962-9953

U.S. EPA ID Number: SCR000762468

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1	NON HAZARDOUS NON REGULATED PETROLEUM CONTAMINATED GROUNDWATER 17340	001	TT	3000	G	
2						
3						
4.						

13. Special Handling Instructions and Additional Information

TIME 4:30 PM TIME OUT 5:10 JHRV

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/Offeror's Printed/Typed Name: NO SIGNATURE ON FILE — Signature: RN — Month 7 Day 18 Year 14

INT'L

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

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Randy Nichols — Signature: Randy Nichols — Month 7 Day 18 Year 14

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

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: Steven Wilson — Signature: Steven Wilson — Month 7 Day 18 Year 14

№ 28021

SCALE TICKET

Scale Company: VLS

Weighed By: Ray

Carrier: Sparks

Customer: ~~Mc~~ Midtrade Environmental

PO/BOL/Manifest

Tractor Number: 35

Trailer Number: 32

Driver Signature: Ray

WHITE - Driver YELLOW - Driver CARD - Scale

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

UST DOCKETING 34Ke

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

AUG 1 5 2014

Re: **Site Specific Work Plan Request**
Copeland's Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694
Release reported June 24, 1993
AFVR report received August 7, 2014
Laurens County

Dear Mr. Copeland:

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 Midlands Environmental Consultants, Inc. as your contractor. The UST Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report and 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 UST Quality Assurance Program Plan (QAPP) revision 2.0 and must be conducted in compliance with all applicable regulations. Groundwater samples should be collected from all monitoring wells associated with the release and analyzed for BTEX, naphthalene, MtBE, 1,2 DCA, 8 oxygenates, and EDB. Analyses should be in accordance with Appendix E of the QAPP to include duplicate samples, field and trip blanks. **All monitoring wells will need to be purged since it has been greater than 12 months since the last sampling event in accordance with the QAPP**. A copy of the Agency QAPP for the UST Management Division is available at http://www.scdhec.gov/environment/docs/QAPP_Rev-2_April2013.pdf

Please have your contractor complete and submit the Site Specific Work Plan and Cost Agreement within thirty (30) days of the date of this letter. The Site Specific Work Plan form can be found at http://www.scdhec.gov/environment/PermitCentral/ApplicationForms/#UST. 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 #05694. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or by e-mail at utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz

Sonya T. Utz, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

cc: Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC 29071
Technical File

Midlands Environmental Consultants, Inc.

August 21, 2014

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

UST AUG 22 2014 DIVISION

UST 35 DOCKETING

Subject: Site-Specific Work Plan
Copeland's Service Station
Clinton, South Carolina
SCDHEC Site ID Number 05694
MECI Project Number 14-4885
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Utz,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On August 19, 2014, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

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

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Project Biologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Midlands Environmental Consultants, Inc.

D H E C

PROMOTE PROTECT PROSPER

Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division

To: Ms. Sonya Utz (SCDHEC Project Manager)
From: Mr. Jeff Coleman (Contractor Project Manager)
Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Copeland's Service Station UST Permit #: 05694
Facility Address: 700 Musgrove Street, Clinton, SC
Responsible Party: Mr. H. Wayne Copeland Phone: 864-923-2494
RP Address: 2961 Hurrincane Church Road, Clinton, SC 29325
Property Owner (if different): SAA
Property Owner Address: SAA
Current Use of Property: Vacant Store Front

Scope of Work (Please check all that apply)

- ☐ IGWA
- ☐ Tier I
- ☐ Tier II
- ☐ Monitoring Well Installation
- ☑ Groundwater Sampling
- ☐ Other _____
- ☐ GAC

Analyses (Please check all that apply)

Groundwater/Surface Water:

- ☑ BTEXNMDCA (8260B)
- ☑ Oxygenates (8260B)
- ☑ EDB (8011)
- ☐ PAH (8270D)
- ☐ Lead
- ☐ 8 RCRA Metals
- ☐ TPH
- ☐ pH
- ☐ BOD
- ☐ Nitrate
- ☐ Sulfate
- ☐ Other _____
- ☐ Methane
- ☐ Ethanol
- ☐ Dissolved Iron

Soil:

- ☐ BTEXN
- ☐ PAH
- ☐ 8 RCRA Metals
- ☐ Oil & Grease (9071)
- ☐ TPH-DRO (3550B/8015B)
- ☐ TPH-GRO (5030B/8015B)
- ☐ Grain Size
- ☐ TOC

Air:

- ☐ BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)

____ Soil	____ Water Supply Wells	____ Air	1 Field Blank
29 Monitoring Wells	____ Surface Water	2 Duplicate	1 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 #: 05694 Facility Name: Copeland's Service Station

Implementation Schedule (Number of calendar days from approval)
Field Work Start-Up: 9/1/2014 Field Work Completion: 10/1/2014
Report Submittal: 11/1/2014 # of Copies Provided to Property Owners: _____

Aquifer Characterization
Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

Investigation Derived Waste Disposal
Soil: _____ Tons Purge Water: 200.00 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/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.

Compliance With Annual Contractor Quality Assurance Plan (ACQAP)
No 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

N/A Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

Yes Other variations from ACQAP. Please describe below.
MECI has submitted ammended ACQAP for review. The ammeded ACQAP documents MECI's intention to utilize PACE Analytical Services, Inc. as our primary lab. This ammended ACQAP is still under review, however MECI is requesting approval to send samples collected from the above referenced site to PACE Analytical Services, Inc.

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
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664

D H E C

PROMOTE PROTECT PROSPER

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

Facility Name: **Copeland's Service Station**

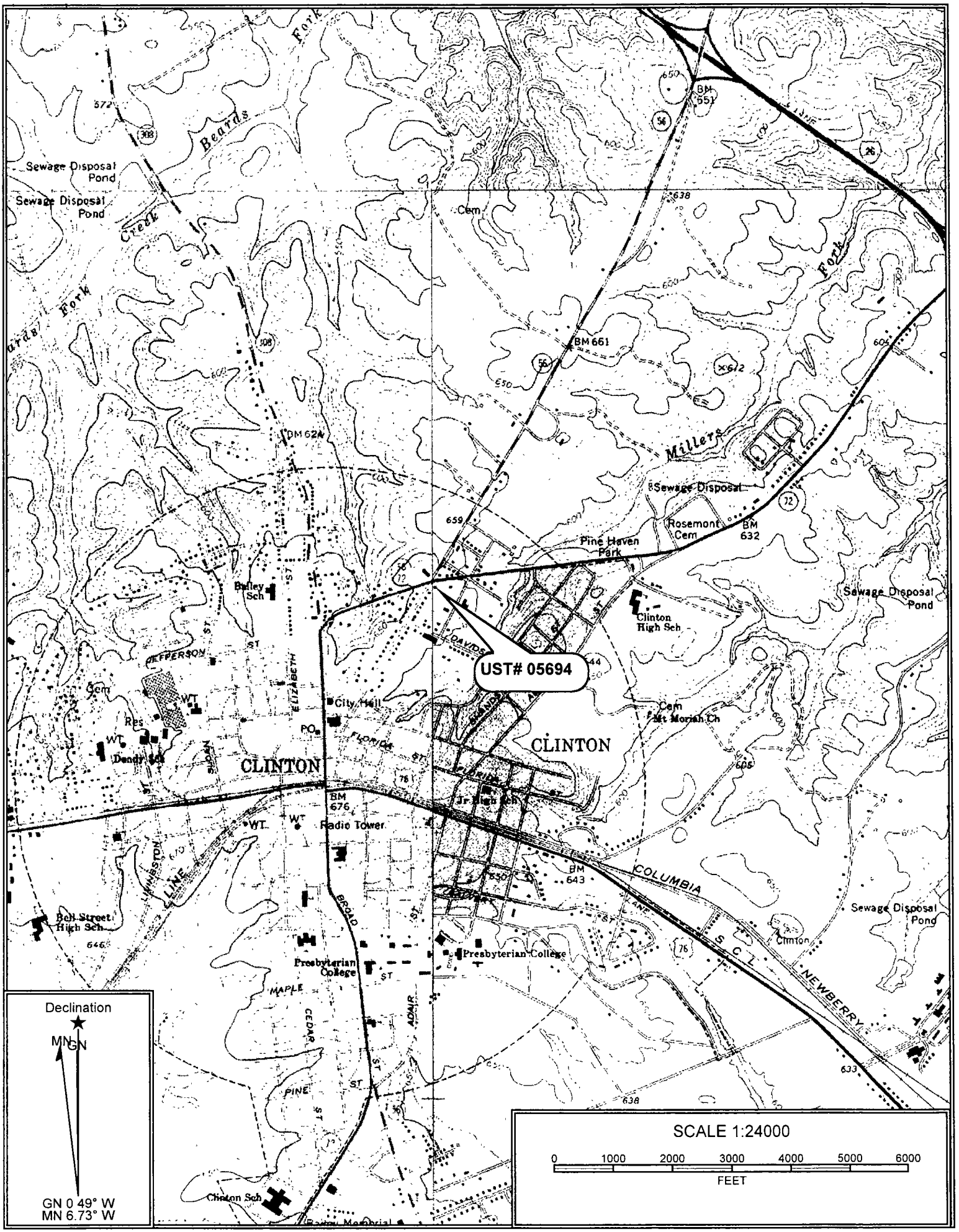
UST Permit #: 05694 **Cost Agreement #:** Proposal

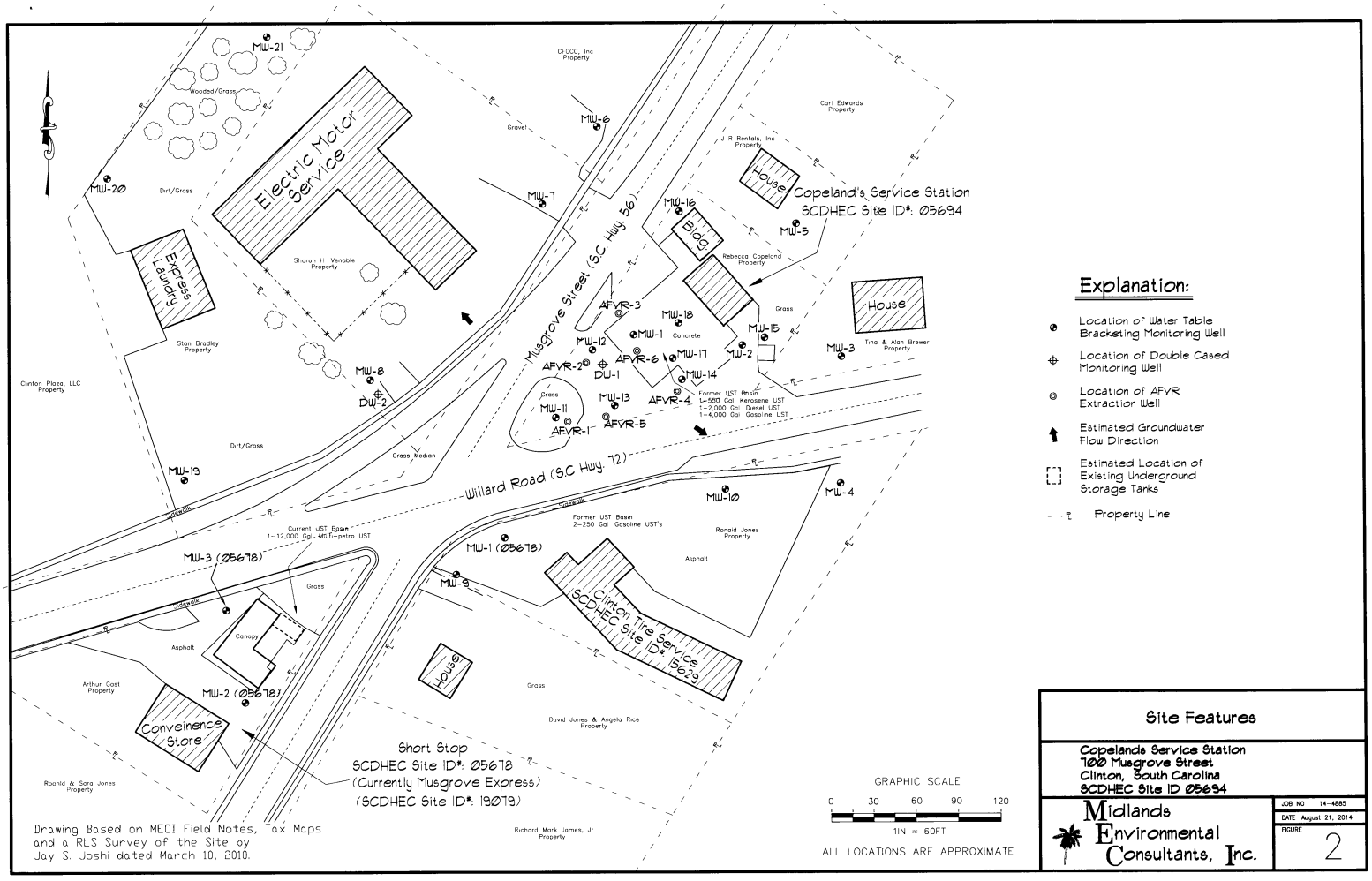
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. **Plan Preparation**				
A1. Site-specific Work Plan	1	each	$150.00	$150.00
B1. Tax Map		each	$70.00	$0.00
C1. Tier II or Comp. Plan /QAPP Appendix B		each	$250.00	$0.00
2. A1. **Receptor Survey ***		each	$551.00	$0.00
3. **Survey (500 ft x 500 ft)**				
A1. Comprehensive 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
4. **Mob/Demob**				
A1. Equipment		each	$1,020.00	$0.00
B1. Personnel	3	each	$423.00	$1,269.00
C1. Adverse Terrain Vehicle		each	$500.00	$0.00
5. A1. **Soil Borings (hand auger)***		foot	$5.00	$0.00
6. **Soil Borings (requiring equipment, push technology, etc)* or Field Screening (including water ssample, soil sample, soil gas sample, etc.)***				
AA. Standard		per foot	$15.00	$0.00
C1. Fractured Rock		per foot	$20.20	$0.00
7. A1. **Soil Leachability Model**		each	$60.00	$0.00
8. **Abandonment (per foot)***				
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
9. **Well Installation (per foot)***				
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. Rotosonic (2" diameter)		per foot	$44.00	$0.00
K. Re-develop Existing Well		per foot	$11.00	$0.00
10. **Groundwater Sample Collection / Gauge Depth to Water or Product ***				
A1. Groundwater Purge	29	per well/receptor	$60.00	$1,740.00
B1. Air or Vapors		per receptor	$12.00	$0.00
C1. Water Supply		per well/receptor	$22.00	$0.00
D1. Groundwater No Purge or Duplicate	2	per well/receptor	$28.00	$56.00
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	1	each	$24.60	$24.60

11. Laboratory Analyses-Groundwater					
A2. BTEXNM+Oxyg's+1,2 DCA+Eth(8260B)	33	per sample	$122.00		$4,026.00
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	32	per sample	$45.20		$1,446.40
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
11. Analyses-Soil					
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
11. Analyses-Air					
Y1. BTEX + Naphthalene		per sample	$216.00		$0.00
11. Analyses-Free Phase Product					
Z1. Hydrocarbon Fuel Identification		per sample	$357.00		$0.00
12. Aquifer Characterization					
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
13. A1. **Free Product Recovery Rate Test***		each	$38.00		$0.00
14. Fate/Transport Modeling					
A1. Mathematical Model		each	$100.00		$0.00
B1. Computer Model		each	$100.00		$0.00
15. Risk Evaluation					
A. Tier I Risk Evaluation		each	$300.00		$0.00
B1. Tier II Risk Evaluation		each	$100.00		$0.00
16. A1. **Subsequent Survey***		each	$260.00		$0.00
17. Disposal (gallons or tons)*					
AA. Wastewater	200	gallon	$0.56		$112.00
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
18. Miscellaneous (attach receipts)					
		each	$0.00		$0.00
		each	$0.00		$0.00
		each	$0.00		$0.00
20. Tier I Assessment (Use DHEC 3665 form)		standard			$0.00
21. IGWA (Use DHEC 3666 form)		standard			$0.00
22. Corrective Action (Use DHEC 3667 form)		PFP Bid			$0.00

23. **Aggressive Fluid & Vapor Recovery (AFVR)**					
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
24. **Granulated Activated Carbon (GAC) filter system installation & service:**					
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
25. **Well Repair**					
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
Report Prep & Project Management	12%	percent	$8,824.00		$1,058.88
TOTAL					$9,882.88

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


UST# 05694
Sewage Disposal Pond
Sewage Disposal Pond
Beards Fork Creek
Cem
BM 651
BM 661
BM 624
Millers Fork
Sewage Disposal
Rosemont Cem
BM 632
Pine Haven Park
Clinton High Sch
Sewage Disposal Pond
Bailey Sch
JEFFERSON ST
ELIZABETH ST
City Hall
PO
Cem
Res
WT
Dendy Sch
CLINTON
FLORIDA ST
DAVIDS
Cem
Mt Moriah Ch
CLINTON
Jr High Sch
BM 676
Radio Tower
BM 643
COLUMBIA
S C L
NEWBERRY
Sewage Disposal Pond
Clinton
Bell Street High Sch
Presbyterian College
Presbyterian College
BROAD ST
MAPLE
CEDAR
ADAIR
PINE ST
Clinton Sch
Declination
MN GN
GN 0 49° W
MN 6.73° W
SCALE 1:24000
0 1000 2000 3000 4000 5000 6000
FEET



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO	14-4885
DATE	August 21, 2014
FIGURE	2

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

H WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

SEP 2 5 2014

UST 36 tech DOCKETING

Re: **Groundwater Sampling Directive**
Copeland's Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694; CA# 48587
Release reported June 24, 1993
Site Specific Work Plan received August 22, 2014
Laurens County

Dear Mr. Copeland:

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 Midlands Environmental Consultants, Inc. The next appropriate scope of work at the site is a comprehensive groundwater sampling event. 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/docs/QAPP_Rev-2_April2013.pdf.

Groundwater sampling activities at the site should begin immediately upon receipt of this letter. Cost agreement #48587 has been approved for the amount shown on the enclosed cost agreement form for sampling all monitoring wells associated with the referenced release. Groundwater samples should be collected and analyzed for BTEX, naphthalene, MtBE, 1,2 DCA, 8 oxygenates, 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 Revision 2.0, a weekly status report of the project should be provided via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

The Monitoring Report, contractor checklist (QAPP Appendix K), and invoice are due within 60 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.

Midlands 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 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 chemical of concerns (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 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.

Please notify the Agency four days prior to any environmental work being conducted so the project manager or regional personnel may attend, if available On all correspondence regarding this site, please reference UST Permit #05694. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or by e-mail at utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz

Sonya T. Utz, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Approved Cost Agreement

cc: Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC (with enc.)
Technical File (with enc.)

Approved Cost Agreement 48587

Facility 05694 COPELANDS SERVICE STATION INC

UTZST

PO Number

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
01 PLAN						
		A1	SITE SPECIFIC WORK PLAN	1 0000	150 00	150 00
04 MOB/DEMOB						
		B1	PERSONNEL	3 0000	423 00	1,269 00
10 SAMPLE COLLECTION						
		A1	GROUNDWATER (PURGE)	29 0000	60 00	1,740 00
		D1	GROUNDWATER NO PURGE/DUPLICATE	2 0000	28 00	56 00
		H1	FIELD BLANK	1 0000	24 60	24 60
11 ANALYSES						
	GW GROUNDWATER	A2	BTEXNM+OXYGS+1,2-DCA+ETH-8260B	33 0000	122 00	4,026 00
		F1	EDB BY 8011	32 0000	45 20	1,446 40
17 DISPOSAL						
		AA	WASTEWATER	200 0000	0 56	112 00
19 RPT/PROJECT MNGT & COORDINATIO						
		PRT	REPORT PREPARATION	0 1200	8,824 00	1,058 88
				Total Amount		9,882 88

Document Receipt Information

☐ Hard Copy ☒ CD ☐ Email

Date Received 11-18-14

Permit Number 05694

Project Manager Sonya Utz - Vacant - Lee

Name of Contractor MECI

UST Certification Number

Docket Number 37tech

Scanned

GWS/Chemical

REPORT OF GROUNDWATER SAMPLING AND CHEMICAL ANALYSES

Copeland's Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC SITE ID 05694
CA # 48587

Prepared By:

Midlands
Environmental
Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

November 11, 2014

MECI Project No. 14-4885

Midlands Environmental Consultants, Inc.

November 11, 2014

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

Subject: Report of Groundwater Sampling and Chemical Analyses
Copeland's Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID# 05694, CA # 48587
MECI Project Number 14-4885
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Utz,

On behalf of H. Wayne Copeland, Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling and Chemical Analyses for the referenced site. This report describes assessment activities conducted at the site and results of those activities in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines, including adherence to the UST Division Programmatic Quality Assurance Program Plan (QAPP, Revision 2.0).

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Jeff L. Coleman
Senior Scientist

Bryan T. Shane, P.G.
Principal Geologist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 PROJECT INFORMATION 1
2.0 SURROUNDING PROPERTY USAGE 1
3.0 AREA GEOLOGY AND HYDROGEOLOGY 2
3.1 LOCAL SUBSURFACE CONDITIONS 2
4.0 FIELD EXPLORATION 3
4.1 MONITORING WELL SAMPLING AND CHEMICAL ANALYSES 3
5.0 TEST RESULTS AND EVALUATION 4
5.1 GROUNDWATER ANALYTICAL RESULTS 5
6.0 ASSESSMENT SUMMARY & RECOMMENDATIONS 5
7.0 QUALIFICATIONS OF REPORT 7

TABLE OF CONTENTS (cont.)

TABLES:

**Table 1 – SOIL ANALYTICAL RESULTS
Table 2 – POTENTIOMETRIC DATA
Table 3 – GROUNDWATER COC CONCENTRATION DATA
Table 3A – GROUNDWATER COC CONCENTRATION DATA (OXYGENATES)
**Table 4 – AQUIFER CHARACTERISTICS
**Table 5 – SITE CONCEPTUAL MODEL

FIGURES:

Figure 1 – TOPOGRAPHIC MAP
Figure 2 – SITE BASE MAP
**Figure 3 – SOIL COC SITE MAP
Figure 4 – GROUNDWATER COC SITE MAP (TOTAL BTEX ISOPLETH)
Figure 4A – GROUNDWATER COC SITE MAP (NAPHTHALENE ISOPLETH)
Figure 4B – GROUNDWATER COC SITE MAP (EDB ISOPLETH)
Figure 4C – GROUNDWATER COC SITE MAP (OXYGENATES)
Figure 5 – POTENTIOMETRIC DATA SITE MAP

**APPENDIX A – SITE SURVEY
APPENDIX B – SAMPLING LOGS, LABORATORY DATA SHEETS AND CHAIN OF CUSTODY FORMS
**APPENDIX C – TAX MAP DATA
**APPENDIX D – SOIL BORING/FIELD SCREENING LOGS & 1903 FORMS
**APPENDIX E – WELL LOGS & 1903 FORMS
**APPENDIX F – AQUIFER EVALUATION SUMMARY FORMS, DATA, GRAPHS, EQUATIONS
APPENDIX G – DISPOSAL MANIFESTS
**APPENDIX H – LOCAL ZONING REGULATIONS
**APPENDIX I – FATE & TRANSPORT MODELING
**APPENDIX J – ACCESS AGREEMENTS
APPENDIX K – DATA VERIFICATION CHECKLIST

NOTE: ITEMS LISTED WITH AN ** BESIDE IT WERE NOT NEEDED AS A PART OF THIS SCOPE OF WORK

1.0 INTRODUCTION

A. **Owner/Operator Information**

Facility Name:	Copeland's Service Station	UST Permit #:	05694
Facility Address:	700 Musgrove Street, Clinton, SC 29325		
Name:	H. Wayne Copeland		
Address:	2961 Hurricane Church Road, Clinton, SC 29325		
Telephone #:	(864) 923-3361 or (864) 923-2494		

B. **Property Owner Information**

Name	Rebecca P. Copeland
Tax Map #:	Laurens Co. Tax Map#: 901-07-12-001
Address	2961 Hurricane Church Road, Clinton, SC 29325
Telephone #	(864) 923-3361 or (864) 923-2494

C. **Contractor Information**

Name:	Midlands Environmental Consultants, Inc.
Certification #:	9
Address:	P. O. Box 854, Lexington, SC 29071
Telephone #:	(803) 808-2043

D. **SCDHEC Certified Laboratory**

Name:	Pace Analytical Services, Inc.
Certification #:	99006001
Address:	9800 Kincey Avenue / Suite 100, Huntersville, NC 28078
Telephone #:	(704) 875-9092

1.1 PROJECT INFORMATION

The subject site (Copeland's Service Station) is located at 700 Musgrove Street in Clinton, Laurens County, South Carolina (see Figure 1). The site formerly maintained one 550 gallon kerosene UST, one 2,000 gallon diesel UST, and one 4,000 gallon gasoline UST. The South Carolina Department of Health and Environmental Control (SCDHEC) reported release of petroleum product from three single walled underground storage tanks (UST) at the subject site in June of 1993, which was confirmed in July of 1994. The site is currently ranked a 2BA, due to historical free phase product thickness exceeding 1.00 foot.

The above project information is based on MECI field notes and SCDHEC files.

2.0 SURROUNDING PROPERTY USAGE

The site is located inside the city limits of Clinton, Laurens County, South Carolina. The property is located in a mixed commercial/residential area. Willard Road (S.C. Highway 72) forms the southern border of the site, beyond which is a commercial property which houses Clinton Tire Service/UST Permit# 15629. Additionally to the southwest, at the southwest intersection of Musgrove Street and Willard Road is Short Stop/UST Permit# 05678 (Currently operating as Musgrove Express/UST Permit# 19079). Musgrove Street (S.C. Highway 56) forms the western property boundary, beyond which is a commercial property operating as Electric Motor Service. North and east of the subject site are residential properties.

3.0 AREA GEOLOGY AND HYDROGEOLOGY

The mean elevation of the property, as depicted on the local USGS quadrangle (Joanna, SC), appears to be approximately 660 feet above sea level. The site is located in the Piedmont Physiographic Province of South Carolina, an area underlain by ancient igneous and metamorphic rocks. The soils in this province are generally residual soils that are underlain by rock at highly varying depths.

The soils encountered in this area are the product of in-place weathering of rocks similar to the rocks underlying the site. In areas not altered by erosion or disturbed by the activities of man, the typical residual soil profile consists of near surface clayey soils and underlying sandy silt and sand. The boundary between soil and rock is gradational. A transitional zone termed "weathered rock" is normally found overlying the parent bedrock. This zone is typically the most transmissive zone for groundwater movement. Consequently, the topography of the bedrock surface is uneven, even over short horizontal distances. It is not unusual to find lenses and boulders of hard rock and zones of weathered rock within the soil mantle well above the general bedrock level.

Local precipitation is the source of practically all of the groundwater in Laurens County. A portion of the precipitation infiltrates into the ground and moves under the influence of gravity to the surficial aquifer. After the water has reached the surficial aquifer, the direction of movement is generally parallel to the hydraulic gradient. In the Piedmont Province, the slope of the surficial aquifer's surface under static conditions (no pumping interference) approximates the topography of an area. Thus, the movement of groundwater within the soil mantel is typically in the direction of the topographic slope. Local groundwater flow patterns may be affected by disturbed areas such as tank pits, utility trenches, building foundations, borings, wells, etc. Groundwater flow in fractured rock is often difficult to interpret due to the variability of fracture connectivity and orientation.

Locally, in the surficial aquifer, groundwater discharges into streams, lakes or springs where the groundwater table intersects lows occupied by these water bodies. The apparent direction (based on hydraulic gradient) of groundwater flow is semi-radial, flowing to the northwest toward drainage features associated with the Beards Fork Creek and to east toward drainage features associated with Millers Fork Creek.

3.1 LOCAL SUBSURFACE CONDITIONS

Piedmont soils were encountered during drilling activities conducted at the site during assessment related activities performed at the site on October of 2010. The soils encountered generally consisted of micaceous fine grained sandy silts near surface, which were underlain by layers of more coarse silty sands with depths to approximately 40.00' feet below ground surface (BGS).

On October 31, 2014, stabilized groundwater levels were measured in the surrounding monitoring wells. Depth to groundwater ranged from 27.12 to 33.22 feet below the top of casings in the wells measured. The groundwater measurements are summarized in tabular form in Table 2 and on Figure 5. A groundwater contour map illustrating the groundwater flow direction at the site is also depicted on Figure 5.

Groundwater levels may fluctuate several feet with seasonal and rainfall variations and with change in the water level of adjacent drainage features. Normally, the highest groundwater levels occur in late winter and spring. The lowest levels occur in late summer and fall.

4.0 FIELD EXPLORATION

Field exploration conducted at the site included:

- Gauging of six (6) groundwater monitoring wells;
- Sampling of twenty-three (23) groundwater monitoring wells; and,
- chemical analyses of water samples.

4.1 MONITORING WELL SAMPLING AND CHEMICAL ANALYSES

On October 31, 2014, MECI personnel collected groundwater samples from twenty-three (23) monitoring wells at the subject site. During sampling activities, six (6) monitoring wells were gauged. Monitoring well MW-2 was gauged and determined to be dry and the well appears to be obstructed at 12.20' feet BGS. Monitoring well MW-1, MW-13, AFVR-3, AFVR-5 and AFVR-6 were gauged and determined to contain measurable free phase petroleum product. As requested by SCDHEC, all monitoring wells sampled were to be purged prior to sample collection; however due to insufficient water in monitoring wells MW-8 and AFVR-1 were unable to be adequately purged prior to sample collection. Twenty-one (21) monitoring wells were purged prior to sample collection. Purging was completed by bailing at least three to five well volumes of water from the well, until pH, conductivity, dissolved oxygen, and turbidity stabilized, or until all water was evacuated from the well, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, water temperature, and turbidity were obtained before well sampling process. MECI utilized YSI550A meter for DO (mg/L) and temperature readings (°C), YSI63 meters for pH and conductivity (uS) readings, and MicroTPI/TPW Turbidimeter for turbidity readings (NTU). The attached Field Data Information Sheets and Table 2 present the results of the field measurements obtained during purging processes. The wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP Revision 2.0) and MECI's Standard Operating Procedures (MECI SOP, Dated January, 2014). Groundwater samples obtained were sent to Pace Analytical Services, Inc. of Huntersville, North Carolina (SCDHEC Laboratory Certification # 99006001) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Gauge Well Only	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	1,2 DCA (EPA Method 8260-B)	Ethanol (EPA Method 8260-B)	EDB (EPA Method 8011)	Total Lead (EPA Method 6010)	Filtered Lead (EPA Method 6010)	8 RCRA Metals (EPA Method 6010)	TPH (EPA Method 9071)	PAH's (EPA Method 8270)
				Analyte Sampled									
MW-1			X										
MW-2			X										
MW-3	X			X	X	X	X	X					
MW-4	X			X	X	X	X	X					

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

**** = Indicates Field Duplicate**

Monitoring Well	Purge	No Purge	Gauge Well Only	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	1,2 DCA (EPA Method 8260-B)	Ethanol (EPA Method 8260-B)	EDB (EPA Method 8011)	Total Lead (EPA Method 6010)	Filtered Lead (EPA Method 6010)	8 RCRA Metals (EPA Method 6010)	TPH (EPA Method 9071)	PAH's (EPA Method 8270)
				Analyte Sampled									
MW-5	X			X	X	X	X	X					
MW-6	X			X	X	X	X	X					
MW-7	X			X	X	X	X	X					
MW-8		X		X	X	X	X	X					
MW-9	X			X	X	X	X	X					
MW-10	X			X	X	X	X	X					
MW-11	X			X	X	X	X	X					
MW-12	X			X	X	X	X	X					
MW-13	X			X	X	X	X	X					
MW-14	X			X	X	X	X	X					
MW-15	X			X	X	X	X	X					
MW-16	X			X	X	X	X	X					
MW-17	X			X	X	X	X	X					
MW-18	X			X	X	X	X	X					
MW-19	X			X	X	X	X	X					
MW-20	X			X	X	X	X	X					
MW-21	X			X	X	X	X	X					
DW-1	X			X	X	X	X	X					
DW-2	X			X	X	X	X	X					
AFVR-1		X		X	X	X	X	X					
AFVR-2	X			X	X	X	X	X					
AFVR-3			X										
AFVR-4	X			X	X	X	X	X					
AFVR-5			X										
AFVR-6			X										
MW-12 Dup.**		X		X	X	X	X	X					
AFVR-2 Dup.**		X		X	X	X	X	X					
Field Blank				X	X	X	X	X					
Trip Blank				X	X	X	X	X					

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

**** = Indicates Field Duplicate**

The results of the laboratory analyses are summarized in Table 3 & 3A and presented in Appendix B.

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 61.75 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is presented in Appendix G.

5.0 TEST RESULTS AND EVALUATION

The following sections discuss groundwater test results for the subject site.

5.1 GROUNDWATER ANALYTICAL RESULTS

As discussed in Section 4.1, groundwater samples obtained from the monitoring wells were analyzed for dissolved phase petroleum constituents. Free phase petroleum product was detected in monitoring well MW-1, MW-13, AFVR-3, AFVR-5 and AFVR-6 during the subject sampling event and groundwater samples were not collected beneath the product layer. The analytical results indicated dissolved petroleum impact to the surficial aquifer, with the highest concentrations being detected in the area of MW-14. Of the twenty-three monitoring wells sampled, sixteen wells (MW-1, MW-8, MW-11, MW-12, MW-13, MW-14, MW-17, MW-18, MW-21, DW-2, AFVR-1, AFVR-2, AFVR-3, AFVR-4, AFVR-5 and AFVR-6) either contained measurable free phase petroleum product or detected petroleum constituents above Risk-Based Screening Levels (RBSL's). Petroleum constituents detected above the established RBSL include:

Compound	***RBSL (ug/l)***	***Wells Above RBSL***
Product	0.01 (ft)	MW-1, MW-13, AFVR-3, AFVR-5 & AFVR-6
Benzene	5	MW-8, MW-11, MW-12, MW-14, MW-17, MW-18, MW-21, DW-2, AFVR-2 & AFVR-4
Toluene	1,000	MW-12, MW-14, MW-17, MW-18, AFVR-2 & AFVR-4
Ethylbenzene	700	MW-12, MW-14, MW-17, MW-18, AFVR-2 & AFVR-4
Total Xylenes	10,000	MW-12, MW-14, MW-17, MW-18, AFVR-2 & AFVR-4
Naphthalene	25	MW-8, MW-11, MW-12, MW-14, MW-17, MW-18, MW-21, DW-2, AFVR-1, AFVR-2 & AFVR-4
MTBE	40	MW-17 & MW-18
1,2 DCA	5	MW-14, MW-17, DW-2 & AFVR-4
EDB	0.05	MW-8, MW-11, MW-12, MW-14, MW-17, MW-18, MW-21, DW-2, AFVR-1, AFVR-2 & AFVR-4

In addition, the analytical results also detected petroleum constituents above the laboratory method detection limit in monitoring wells MW-4, MW-7, MW-9 and MW-10; however the concentrations detected did not exceed the RBSL. The results of the analyses for each monitoring well and specific parameters are listed on Table 3, Table 3A, and provided in Appendix B.

6.0 ASSESSMENT SUMMARY & RECOMMENDATIONS

Based on the results of our assessment activities, it appears that impact to the surficial aquifer has occurred due to a release of petroleum hydrocarbons. Free phase petroleum product was detected in MW-1 at a thickness of 0.26' feet, in MW-13 at a thickness of 0.03' feet, in AFVR-3 at a thickness of 0.01' feet, in AFVR-5 at a thickness of 0.04' feet and in AFVR-6 at a thickness of 0.05' feet. The analytical results indicate dissolved petroleum impact to the surficial aquifer, with the highest dissolved concentrations being detected in the area of MW-14. Groundwater appears to be moving semi-radial, flowing to the northwest toward drainage features associated with the Beards Fork Creek and to east toward drainage features associated with Millers Fork Creek. Contaminant pathways appear to flow along the northwesterly flow direction than the easterly flow direction.

Free phase petroleum product was detected in monitoring well MW-1, MW-13, AFVR-3, AFVR-5 and AFVR-6 during the subject sampling event and groundwater samples were not collected beneath the product layer. The analytical results indicated dissolved petroleum impact to the surficial aquifer, with the highest concentrations being detected in the area of MW-14. Of the twenty-three monitoring wells sampled, sixteen wells (MW-1, MW-8, MW-11, MW-12, MW-13, MW-14, MW-17, MW-18, MW-21, DW-2, AFVR-1, AFVR-2, AFVR-3, AFVR-4, AFVR-5 and AFVR-6) either

contained measurable free phase petroleum product or detected petroleum constituents above Risk-Based Screening Levels (RBSL's). Petroleum constituents detected above the established RBSL include:

Compound	***RBSL (ug/l)***	***Wells Above RBSL***
Product	0.01 (ft)	MW-1, MW-13, AFVR-3, AFVR-5 & AFVR-6
Benzene	5	MW-8, MW-11, MW-12, MW-14, MW-17, MW-18, MW-21, DW-2, AFVR-2 & AFVR-4
Toluene	1,000	MW-12, MW-14, MW-17, MW-18, AFVR-2 & AFVR-4
Ethylbenzene	700	MW-12, MW-14, MW-17, MW-18, AFVR-2 & AFVR-4
Total Xylenes	10,000	MW-12, MW-14, MW-17, MW-18, AFVR-2 & AFVR-4
Naphthalene	25	MW-8, MW-11, MW-12, MW-14, MW-17, MW-18, MW-21, DW-2, AFVR-1, AFVR-2 & AFVR-4
MTBE	40	MW-17 & MW-18
1,2 DCA	5	MW-14, MW-17, DW-2 & AFVR-4
EDB	0.05	MW-8, MW-11, MW-12, MW-14, MW-17, MW-18, MW-21, DW-2, AFVR-1, AFVR-2 & AFVR-4

In addition, the analytical results also detected petroleum constituents above the laboratory method detection limit in monitoring wells MW-4, MW-7, MW-9 and MW-10; however the concentrations detected did not exceed the RBSL. The results of the analyses for each monitoring well and specific parameters are listed on Table 3, Table 3A, and provided in Appendix B.

Figure 4 depicts graphically the concentrations of Total BTEX in the monitoring wells which bracket the watertable at the site. Figure 4A presents the concentrations of Naphthalene in the monitoring wells which bracket the watertable at the site. Figure 4B presents the concentrations of EDB in the monitoring wells which bracket the watertable at the site. Figure 4C presents the 8 oxygenates analytical data from all monitoring wells installed in conjunction with the subject UST release.

Since the November 2, 2010 groundwater sampling event, free phase petroleum product levels have significantly decreased. This may be the direct result of successful Aggressive Fluid Vapor Recovery (AFVR) events recently conducted at the site. Though advances have been made toward in reducing levels of light-non aqueous phase liquids (LANPL), current analytical data suggest the dissolved petroleum plume emanating from the referenced site is not defined horizontally, downgradient of monitoring well MW-21 or vertically, downgradient of DW-2. Since the November 2, 2010, groundwater sampling event, concentrations of chemicals of concern (CoC's) from monitoring well MW-21 have generally remained constant; however a significant increase in CoC concentrations has occurred in monitoring well DW-2. This increase in CoC's detected in DW-2 may be the result of migration or may be attributed to locale of the adjacent Short Stop/UST# 05678, which may suggest potential intermingling of the plumes.

MECI recommends conducting groundwater field screening to define the extent of CoC's horizontally and vertically downgradient of MW-21 and DW-2. Following the proposed groundwater field screening activities, a series of additional monitoring wells should be installed to better define the plume(s). Once the proposed monitoring wells are installed, a comprehensive groundwater sampling event (to include monitoring wells installed in association with UST Permit# 05678) should be conducted to determine the plume(s) are defined and to approximate the edges of each plume. In addition, it may be advantageous to conduct a series of extended AFVR events on monitoring wells which exhibit free phase petroleum product and to stem the spread of dissolved phase petroleum contaminants.

7.0 QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Contents of this report are intended for the sole use of H. Wayne Copeland, MECI, and SCDHEC under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

-oOo-

TABLES

TABLE 2
PAGE 1 OF 2
POTENTIOMETRIC DATA
OCTOBER 31, 2014 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4885
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-1	2/3/2010**	TD=33.95	30.79	33.63	2.84	659.98	628.76
	11/2/2010**	-	31.35	32.80	1.45	659.98	628.41
	10/31/2014**	-	31.25	31.51	0.26	659.98	628.69
MW-2	2/3/2010	TD=12.05	DRY	DRY	DRY	659.57	DRY
	11/2/2010	-	DRY	DRY	DRY	659.57	DRY
	10/31/2014	-	DRY	DRY	DRY	659.57	DRY
MW-3	2/3/2010	25-35	***	26.50	***	658.21	631.71
	11/2/2010	-	***	31.06	***	658.21	627.15
	10/31/2014	-	***	31.71	***	658.21	626.50
MW-4	2/3/2010	25-35	***	30.53	***	658.41	627.88
	11/2/2010	-	***	31.83	***	658.41	626.58
	10/31/2014	-	***	30.61	***	658.41	627.80
MW-5	2/3/2010	25-35	***	15.14	***	653.79	638.65
	11/2/2010	-	***	25.60	***	653.79	628.19
	10/31/2014	-	***	29.04	***	653.79	624.75
MW-6	2/3/2010	25-35	***	28.03	***	656.32	628.29
	11/2/2010	-	***	28.39	***	656.32	627.93
	10/31/2014	-	***	28.46	***	656.32	627.86
MW-7	2/3/2010	25-35	***	30.76	***	658.96	628.20
	11/2/2010	-	***	30.95	***	658.96	628.01
	10/31/2014	-	***	31.00	***	658.96	627.96
MW-8	2/3/2010	25-35	***	32.81	***	659.94	627.13
	11/2/2010	-	***	31.87	***	659.94	628.07
	10/31/2014	-	***	31.89	***	659.94	628.05
MW-9	2/3/2010	25-35	***	33.03	***	660.49	627.46
	11/2/2010	-	***	32.50	***	660.49	627.99
	10/31/2014	-	***	30.43	***	660.49	630.06
MW-10	2/3/2010	25-35	***	31.34	***	659.53	628.19
	11/2/2010	-	***	32.31	***	659.53	627.22
	10/31/2014	-	***	31.43	***	659.53	628.10
MW-11	2/3/2010	25-35	***	33.05	***	661.23	628.18
	11/2/2010	-	***	33.25	***	661.23	627.98
	10/31/2014	-	***	33.22	***	661.23	628.01
MW-12	2/3/2010**	25-35	31.55	32.80	1.25	660.14	628.40
	11/2/2010**	-	32.00	32.08	0.08	660.14	628.13
	10/31/2014	-	***	31.98	***	660.14	628.16
MW-13	2/3/2010**	25-35	31.78	33.81	2.03	661.12	629.04
	11/2/2010**	-	31.93	34.68	2.75	661.12	628.78
	10/31/2014**	-	32.54	32.57	0.03	661.12	628.58
MW-14	2/3/2010**	25-35	30.60	31.46	0.86	660.25	629.52
	11/2/2010**	-	32.18	32.27	0.09	660.25	628.06
	10/31/2014	-	***	31.93	***	660.25	628.32

Notes:

1. Groundwater depths were measured from the top of the PVC riser.
2. Stabalized groundwater levels measured 11/02/10.
3. Site datum based on USGS Elevation.
4. DRY =Monitorign Well Gauged Dry
5. ** = Groundwater elevation for corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85
6. TD = Total Depth

TABLE 2
PAGE 2 OF 2
POTENTIOMETRIC DATA
OCTOBER 31, 2014 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4885
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-15	2/3/2010	25-35	***	25.35	***	659.54	634.19
	11/2/2010	-	***	31.27	***	659.54	628.27
	10/31/2014	-	***	30.83	***	659.54	628.71
MW-16	2/3/2010	25-35	***	29.41	***	658.22	628.81
	11/2/2010	-	***	30.04	***	658.22	628.18
	10/31/2014	-	***	31.02	***	658.22	627.20
MW-17	2/19/2010	30-40	***	30.14	***	660.19	630.05
	11/2/2010	-	***	31.76	***	660.19	628.43
	10/31/2014	-	***	32.61	***	660.19	627.58
MW-18	2/19/2010	30-40	***	28.74	***	659.50	630.76
	11/2/2010	-	***	30.56	***	659.50	628.94
	10/31/2014	-	***	31.14	***	659.50	628.36
MW-19	11/2/2010	23-33	***	26.43	***	654.46	628.03
	10/31/2014	-	***	27.19	***	654.46	627.27
MW-20	11/2/2010	23-33	***	27.80	***	654.26	626.46
	10/31/2014	-	***	27.78	***	654.26	626.48
MW-21	11/2/2010	23-33	***	27.19	***	653.53	626.34
	10/31/2014	-	***	27.12	***	653.53	626.41
DW-1	2/3/2010	75-85	***	32.02	***	660.41	628.39
	11/2/2010	-	***	32.41	***	660.41	628.00
	10/31/2014	-	***	32.37	***	660.41	628.04
DW-2	11/2/2010	56-61	***	31.59	***	659.59	628.00
	10/31/2014	-	***	31.17	***	659.59	628.42
AFVR-1	2/3/2010	TD=33.96	***	33.09	***	661.55	628.46
	11/2/2010	-	***	DRY	***	661.55	DRY
	10/31/2014	-	***	33.19	***	661.55	628.36
AFVR-2	2/3/2010	TD=34.45	***	32.13	***	660.51	628.38
	11/2/2010	-	***	32.35	***	660.51	628.16
	10/31/2014	-	***	32.28	***	660.51	628.23
AFVR-3	2/3/2010**	TD=34.10	30.85	30.97	0.12	659.34	628.47
	11/2/2010**	-	31.06	31.34	0.28	659.34	628.24
	10/31/2014**	-	31.06	31.07	0.01	659.34	628.28
AFVR-4	2/3/2010**	TD=34.45	30.88	30.92	0.04	660.14	629.25
	11/2/2010	-	***	32.15	***	660.14	627.99
	10/31/2014	-	***	31.90	***	660.14	628.24
AFVR-5	2/3/2010**	TD=34.35	31.55	34.65	3.10	661.21	629.20
	11/2/2010**	-	32.13	33.81	1.68	661.21	628.83
	10/31/2014**	-	32.71	32.75	0.04	661.21	628.49
AFVR-6	2/3/2010**	TD=34.36	31.93	34.00	2.07	659.95	627.71
	11/2/2010**	-	31.20	31.76	0.56	659.95	628.67
	10/31/2014**	-	31.39	31.44	0.05	659.95	628.55

Notes:

1. Groundwater depths were measured from the top of the PVC riser.
2. Stabalized groundwater levels measured 11/02/10.
3. Site datum based on USGS Elevation.
4. DRY =Monitorign Well Gauged Dry
5. ** = Groundwater elevation for corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85
6. TD = Total Depth

TABLE 3
PAGE 1 OF 2
GROUNDWATER COC CONCENTRATION DATA
OCTOBER 31, 2014 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4885
SCDHEC ID NUMBER 05694

Well Number	Sample Date	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	Total BTEX (µg/l)	Naphthalene (µg/l)	MTBE (µg/l)	1,2 DCA (µg/l)	EDB (µg/l)	Total Lead (µg/l)
MW-1	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	2/3/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/31/2014	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	2/3/2010	<5.0	105	61.2	388	554.2	44.8	<5.0	NT	0.22	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
MW-4	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.1J	<5.0	<0.020	NT
MW-5	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	4.8J
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
MW-6	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	7.1
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	5.4
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
MW-7	2/3/2010	12.5	27.8	94.4	323	457.7	38.3	<10.0	NT	0.078	<5.0
	11/2/2010	<5.0	<5.0	<5.0	14.1	14.1	<5.0	<5.0	NT	0.045	<5.0
	10/31/2014	<5.0	<5.0	1.8J	7.0J	8.8J	2.2J	<5.0	<5.0	<0.020	NT
MW-8	2/3/2010	989	<25.0	40.7	24.6J	1,054.3J	619	<25.0	NT	<0.019	<5.0
	11/2/2010	113	203	140	284	740	287	20.7	NT	<0.020	<5.0
	10/31/2014	13.7	<5.0	6.2	<10.0	19.9	161	<5.0	<5.0	<0.020	NT
MW-9	2/3/2010	4,820	32,600	3,190	17,600	58,010	623	<5.0	NT	59.3	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	2.8J	<5.0	<5.0	<0.020	NT
MW-10	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.2J	<5.0	<0.020	NT
MW-11	2/3/2010	<250	101J	1,310	15,200	16,611J	1,280	<250	NT	<0.020	17.3
	11/2/2010	<250	251	1,640	16,300	18,191	1,360	<250	NT	<0.020	8.9
	10/31/2014	42.3	173	522	3,730	4,467	417	<25.0	<25.0	<0.020	NT
MW-12	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	1,970	22,300	2,900	18,800	45,970	698	<50.0	<50.0	12.8	NT
MW-13	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	17,500	39,300	3,650	20,800	81,250	562	<500	833	186	NT
MW-15	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	<5.0
	11/2/2010	<5.0	1.8J	<5.0	<10.0	1.8J	<5.0	<5.0	NT	<0.019	55.2
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. DRY = Well gauged dry
4. MTBE = Methyl-Tertiary-Butyl Ether
5. EDB = Ethylene Dibromide
6. 1,2 DCA = 1,2-Dichloroethane
7. NT = Not Tested
8. See Appendix for Laboratory Detection Limits
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free Phase Petroleum Product

TABLE 3
PAGE 2 OF 2
GROUNDWATER COC CONCENTRATION DATA
OCTOBER 31, 2014 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4885
SCDHEC ID NUMBER 05694

Well Number	Sample Date	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	Total BTEX (µg/l)	Naphthalene (µg/l)	MTBE (µg/l)	1,2 DCA (µg/l)	EDB (µg/l)	Total Lead (µg/l)
MW-16	2/3/2010	<10.0	10.6	263	1,040	1,313.6	247	<10.0	NT	<0.020	<5.0
	11/2/2010	<5.0	3.9J	26.8	503	533.7J	165	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
MW-17	2/19/2010	9,790	15,500	2,490	12,700	40,480	380J	87.3	NT	14.5	<5.0
	11/2/2010	10,900	19,500	3,000	19,000	52,400	432	15.0	NT	39.4	7.1
	10/31/2014	12,200	16,500	2,750	16,900	48,350	489J	766	754	23.7	NT
MW-18	2/19/2010	8,250	32,900	3,440	19,000	63,590	<1,000	597J	NT	50.7	13.7
	11/2/2010	8,070	34,500	3,440	19,600	65,610	1,330	910	NT	64.2	12.4
	10/31/2014	4,540	26,800	3,350	18,700	53,390	540	120J	<250	19.6	NT
MW-19	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
MW-20	11/2/2010	<5.0	4.0J	<5.0	4.9J	8.9J	4.4J	<5.0	NT	<0.027	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
MW-21	11/2/2010	25.5	3.4J	<5.0	88.7	117.6J	9.1	<5.0	NT	0.24	<5.0
	10/31/2014	22.6	<5.0	<5.0	84.9	107.5	8.9	<5.0	<5.0	0.087	NT
DW-1	2/3/2010	653	<25.0	<25.0	24.0J	677.0J	32.6	<25.0	NT	<0.020	<5.0
	11/2/2010	6.0	1.9J	<5.0	3.0J	10.9J	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
DW-2	11/2/2010	100	<5.0	<5.0	11.5	111.5	2.9J	<5.0	NT	<0.021	<5.0
	10/31/2014	8,520	<500	<500	751J	9,271J	325J	<500	598	0.074	NT
AFVR-1	2/3/2010	<100	106	1,220	8,730	10,056	636	<100	NT	0.075	4.8J
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NT	DRY	DRY
	10/31/2014	<25.0	11.1J	149	1,740	1,900.1J	113	<25.0	<25.0	<0.022	NT
AFVR-2	2/3/2010	2,930	18,400	872J	16,000	38,202J	606J	<1,000	NT	10.6	15.4
	11/2/2010	3,950	28,600	2,480	24,800	59,830	653	<250	NT	15.4	<5.0
	10/31/2014	1,420	19,300	2,790	25,200	48,710	879J	<1,000	<1,000	4.1	NT
AFVR-3	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	20,500	31,300	3,250	19,900	74,950	541	<125	NT	305	29.9
	10/31/2014	16,700	22,500	1,590	27,400	68,190	1,110J	<1,250	1,740	271	NT
AFVR-5	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-6	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-12 Dup.	10/31/2014	1,800	19,200	2,610	19,000	42,610	564J	<625	<625	12.8	NT
AFVR-2 Dup.	10/31/2014	1,500	22,800	4,550	35,300	64,150	1,530	<1,000	<1,000	4.1	NT
Field Blank	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
Trip Blank	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT

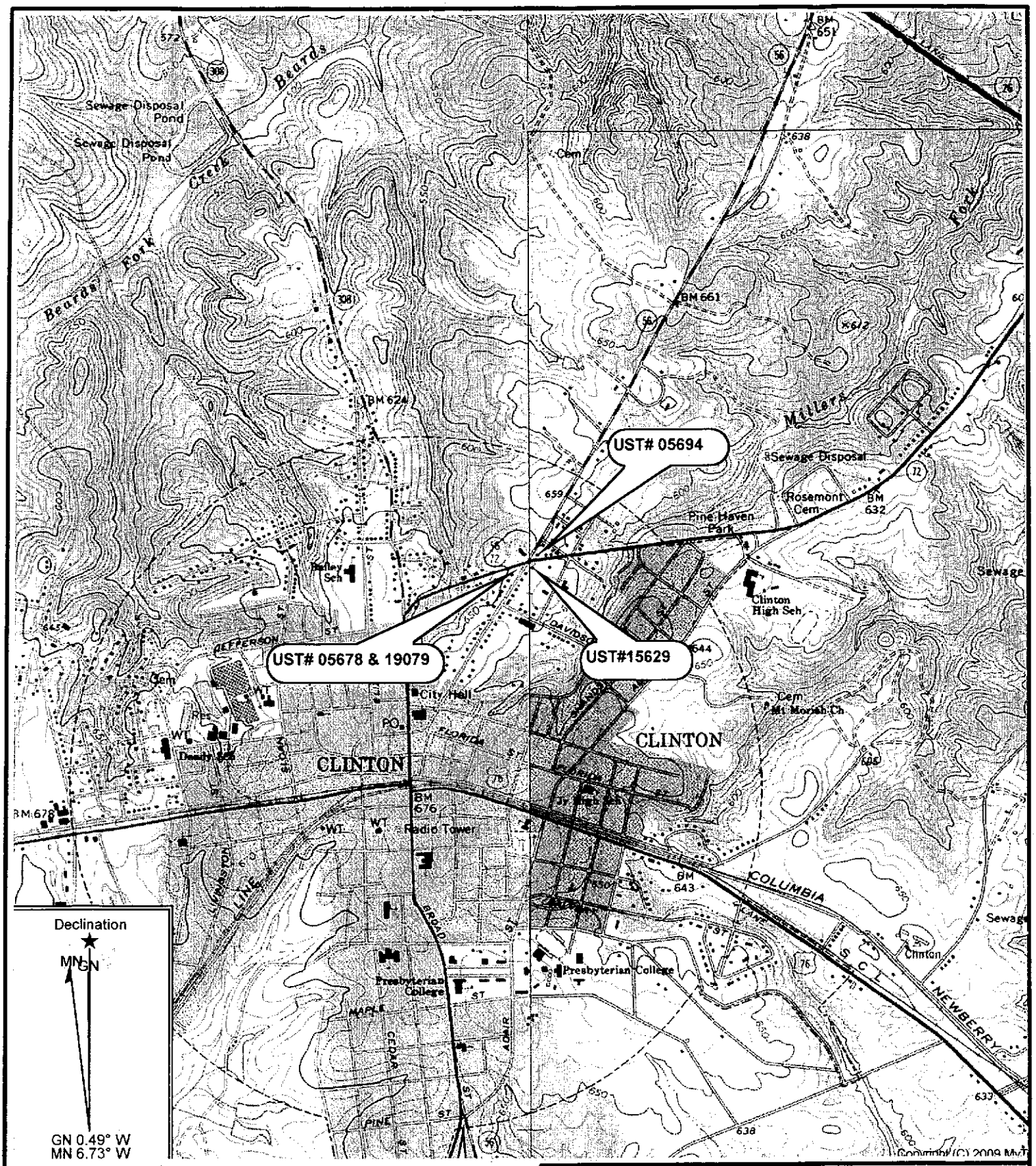
Notes:
1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. DRY = Well gauged dry
4. MTBE = Methyl-Tertiary-Butyl Ether
5. EDB = Ethylene Dibromide
6. 1,2 DCA = 1,2-Dichloroethane
7. NT = Not Tested
8. See Appendix for Laboratory Detection Limits
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free Phase Petroleum Product

TABLE 3A
GROUNDWATER COC CONCENTRATION DATA (OXYGENATES)
OCTOBER 31, 2014 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4885
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	TAA (µg/l)	TAME (µg/l)	3,3-Dimethyl-1-butanol (µg/l)	TBA (µg/l)	TBF (µg/l)	DIPE (µg/l)	Ethanol (µg/l)	ETBE (µg/l)
MW-1	10/31/2014	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
MW-2	10/31/2014	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-4	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-5	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-6	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-7	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-8	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-9	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-10	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-11	10/31/2014	**15,800**	<50.0	<500	**1,400**	<250	<25.0	<1,000	<50.0
MW-12	10/31/2014	**3,600**	<100	<1,000	<1,000	<500	**53.2**	<2,000	<100
MW-13	10/31/2014	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
MW-14	10/31/2014	**58,400**	<1,000	<10,000	<10,000	<5,000	**1,420**	<20,000	<1,000
MW-15	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-16	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-17	10/31/2014	**85,300**	<1,250	<12,500	**11,500J**	<6,250	**2,000**	<25,000	<1,250
MW-18	10/31/2014	<5,000	<500	<5,000	<5,000	<2,500	**462**	<10,000	<500
MW-19	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-20	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-21	10/31/2014	<100	<10.0	<100	<100	<50.0	**2.4J**	<200	<10.0
DW-1	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
DW-2	10/31/2014	**16,900**	<1,000	<10,000	<10,000	<5,000	**913**	<20,000	<1,000
AFVR-1	10/31/2014	<500	<50.0	<500	<500	<250	<25.0	<1,000	<50.0
AFVR-2	10/31/2014	<20,000	<2,000	<20,000	<20,000	<10,000	<1,000	<40,000	<2,000
AFVR-3	10/31/2014	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
AFVR-4	10/31/2014	**76,500**	<2,500	<25,000	<25,000	<12,500	**2,600**	<50,000	<2,500
AFVR-5	10/31/2014	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
AFVR-6	10/31/2014	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**	**PROD**
MW-12 Dup.	10/31/2014	<12,500	<1,250	<12,500	<12,500	<6,250	<625	<25,000	<1,250
AFVR-2 Dup.	10/31/2014	<20,000	<2,000	<20,000	<20,000	<10,000	**340J**	<40,000	<2,000
Field Blank	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
Trip Blank	10/31/2014	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0

Notes:
1. ug/l = micrograms per liter
2. NL = Not Located
3. DIPE = Diisopropyl Ether
4. ETBE = Ethyl tert-butyl Ether
5. TAA = tert-Amyl Alcohol
6. TAME = tert-Amyl Methyl Ether
7. TBA = tert-Butyl Alcohol
8. TBF = tert-Butyl Formate
9. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
10. NS = Not Sampled (Well Gauged Dry)

FIGURES



GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Clinton, South Carolina
Joanna, South Carolina
USGS 7.5 Min. Quad
Countour Interval – 10 Feet

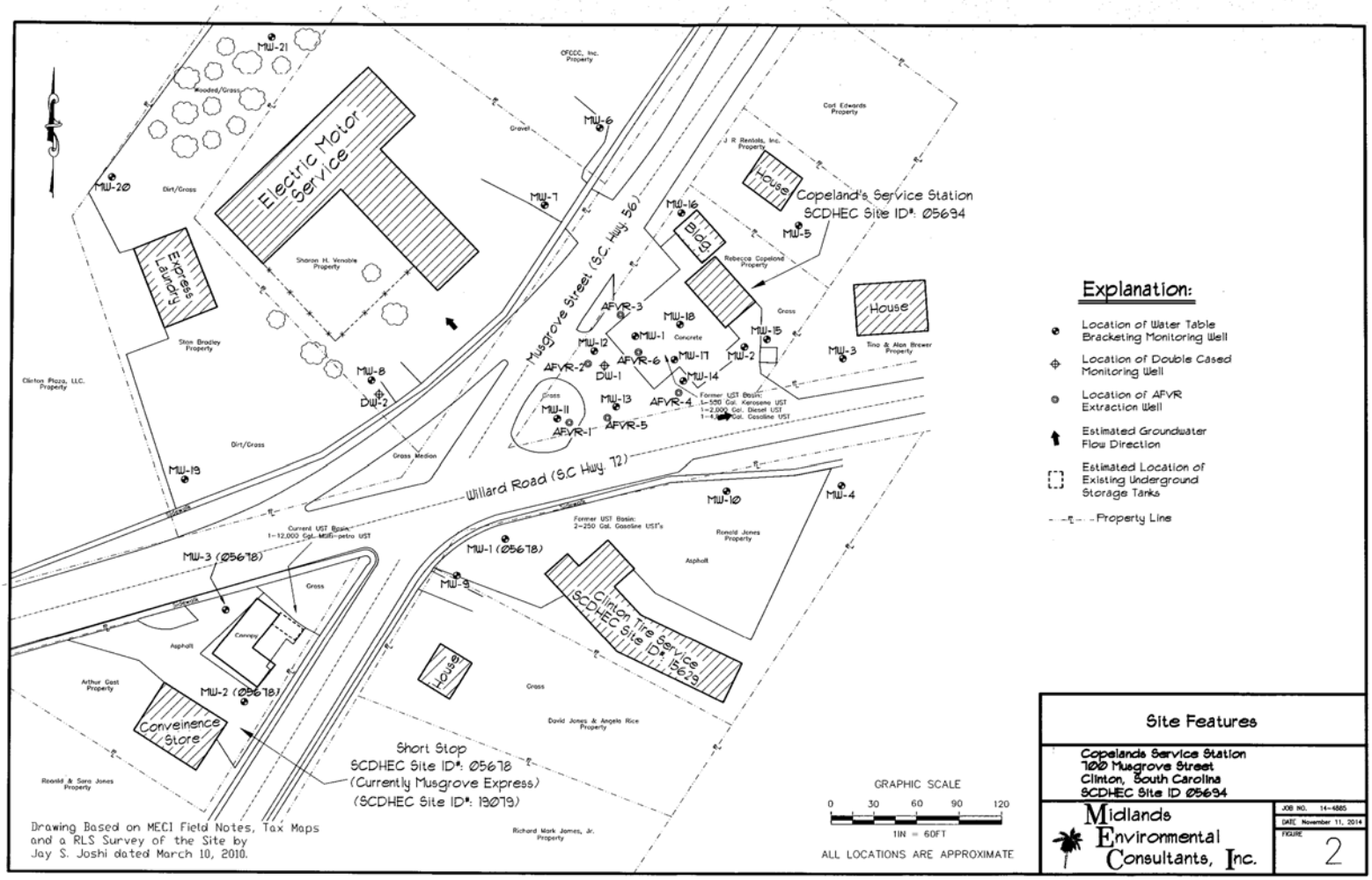
Midlands Environmental Consultants, Inc.

Site Location

Copelands Service Station
700 Musgrove Street, Clinton, SC
SCDHEC Site ID# 05694

Figure 1

MECI 14-4885

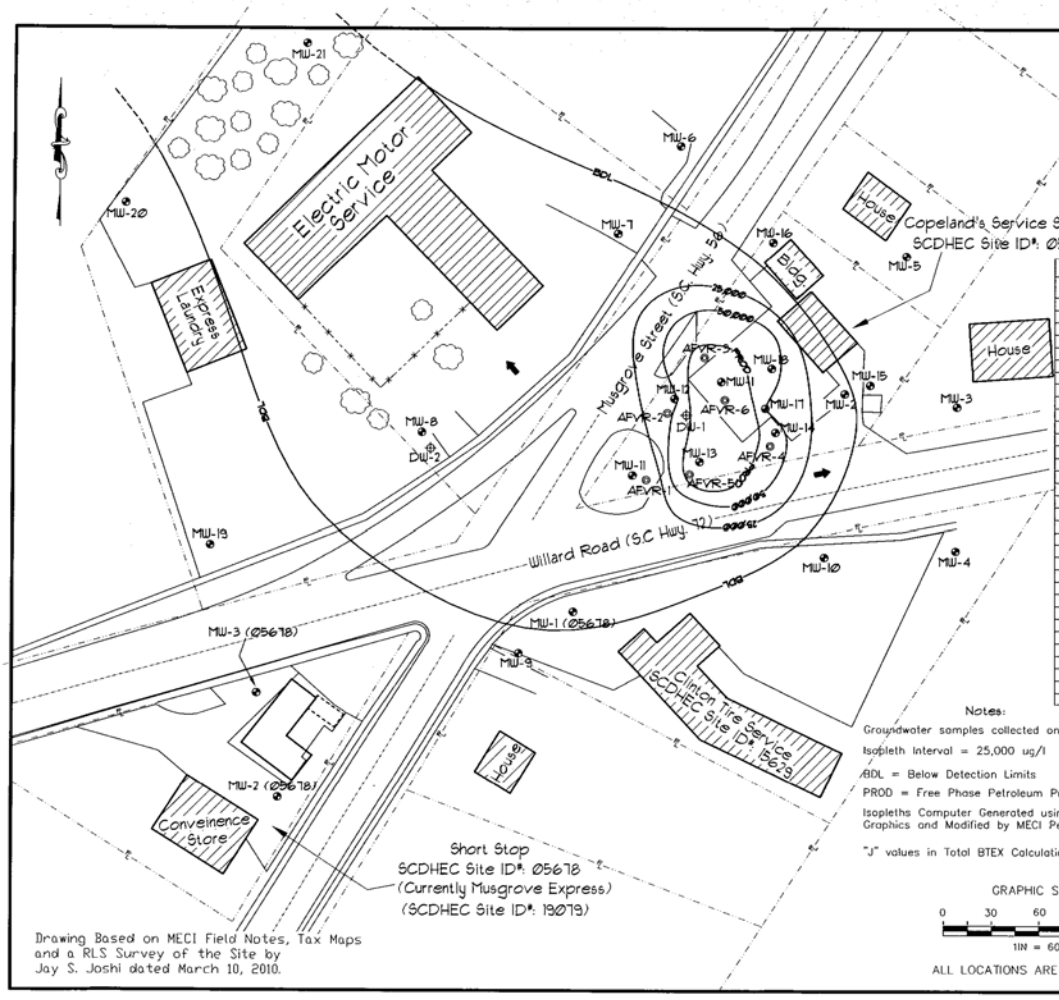


Site Features

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 14-4885
DATE November 11, 2014
FIGURE 2



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of AFVR Extraction Well
- Total BTEX Concentration Isopleth (ug/l)

Groundwater CoC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)	12 DCA (ug/l)	EDB (ug/l)
MW-1	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-4	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.1J	<5.0	<0.020
MW-5	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-6	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-7	<5.0	<5.0	1.8J	7.0J	8.8J	2.2J	<5.0	<5.0	<0.020
MW-8	13.7	<5.0	6.2	<10.0	19.9	151	<5.0	<5.0	<0.020
MW-9	<5.0	<5.0	<5.0	<10.0	BDL	2.8J	<5.0	<5.0	<0.020
MW-10	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.2J	<5.0	<0.020
MW-11	42.3	173	522	3,730	4,467	417	<25.0	<25.0	<0.020
MW-12	1,970	22,300	2,900	18,800	45,970	698	<50.0	<50.0	12.8
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	17,500	39,300	3,650	20,800	81,250	562	<500	833	186
MW-15	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-16	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-17	12,200	16,500	2,750	16,900	48,350	489J	766	754	23.7
MW-18	4,540	26,800	3,350	18,700	53,390	540	120J	<250	19.6
MW-19	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-20	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-21	22.6	<5.0	<5.0	84.9	107.5	8.9	<5.0	<5.0	0.087
DW-1	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
DW-2	8,520	<500	<500	751J	9,271J	325J	<500	598	0.074
AFVR-1	<25.0	11.1J	149	1,740	1,900.1J	113	<25.0	<25.0	<0.022
AFVR-2	1,420	19,300	2,790	25,200	48,710	879J	<1,000	<1,000	4.1
AFVR-3	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	16,700	22,500	1,590	27,400	68,190	1,110J	<1,250	1,740	271
AFVR-5	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AGVR-6	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-12 Dup.	1,800	19,200	2,810	19,000	42,810	564J	<625	<625	12.8
AFVR-2 Dup.	1,500	22,800	4,550	35,300	64,150	1,530	<1,000	<1,000	4.1
Field Blank	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.019
Trip Blank	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020

Notes:

Groundwater samples collected on October 31, 2014.

Isopleth Interval = 25,000 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

"J" values in Total BTEX Calculations.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

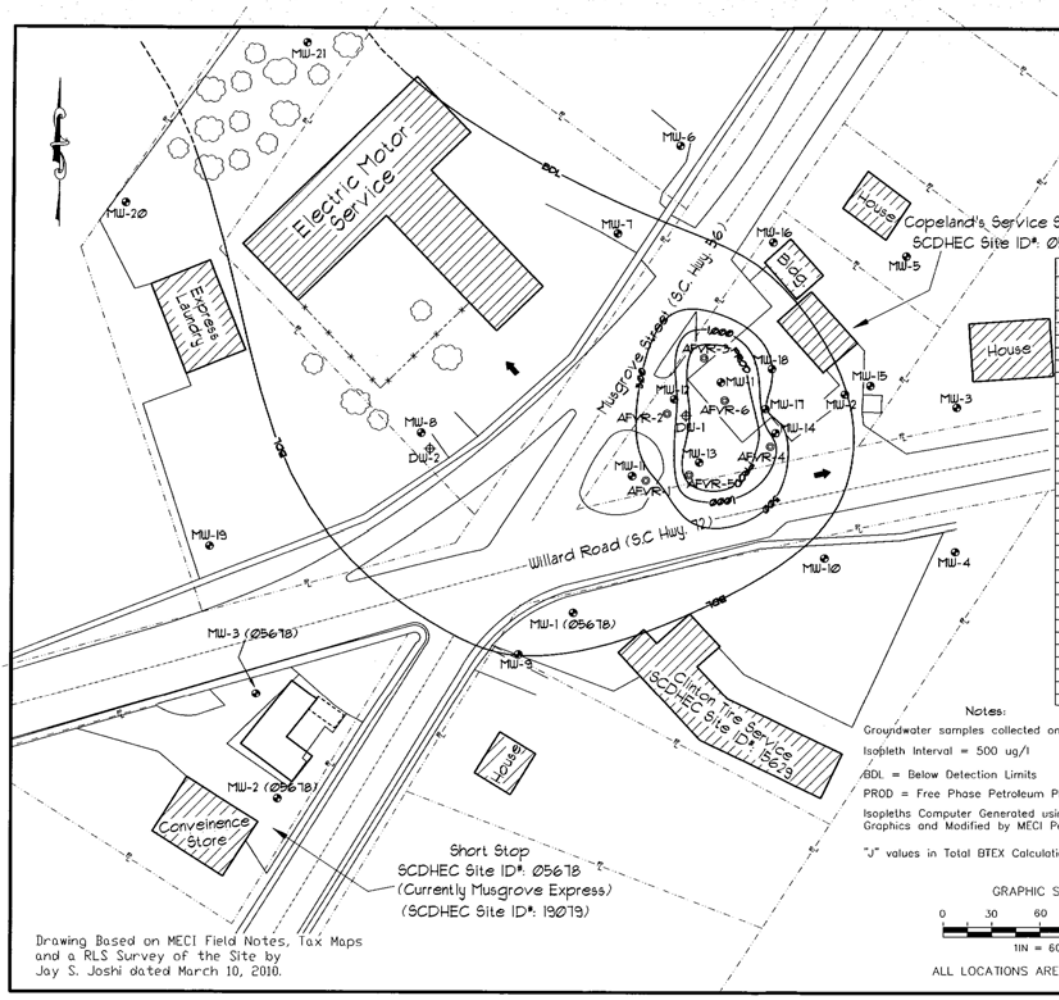
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Groundwater CoC Site Map
(Total BTEX Isopleth)

Copelands Service Station
100 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 14-4885
DATE November 11, 2014
FIGURE 4



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of AFVR Extraction Well
- Naphthalene Concentration Isopleth (ug/l)

Groundwater CoC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)	1,2 DCA (ug/l)	EDB (ug/l)
MW-1	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-4	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.1J	<5.0	<0.020
MW-5	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-6	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-7	<5.0	<5.0	1.8J	7.0J	8.8J	2.2J	<5.0	<5.0	<0.020
MW-8	13.7	<5.0	6.2	<10.0	19.9	151	<5.0	<5.0	<0.020
MW-9	<5.0	<5.0	<5.0	<10.0	BDL	2.8J	<5.0	<5.0	<0.020
MW-10	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.2J	<5.0	<0.020
MW-11	42.3	173	522	3,730	4,467	417	<25.0	<25.0	<0.020
MW-12	1,970	22,300	2,900	18,800	45,970	698	<50.0	<50.0	12.8
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	17,500	39,300	3,650	20,800	81,250	562	<500	833	186
MW-15	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-16	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-17	12,200	16,500	2,750	16,900	48,350	489J	766	754	23.7
MW-18	4,540	26,800	3,350	18,700	53,390	540	120J	<250	19.6
MW-19	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-20	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-21	22.6	<5.0	<5.0	84.9	107.5	8.9	<5.0	<5.0	0.087
DW-1	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
DW-2	8,520	<500	<500	751J	9,271J	325J	<500	598	0.074
AFVR-1	<25.0	11.1J	149	1,740	1,900.1J	113	<25.0	<25.0	<0.022
AFVR-2	1,420	19,300	2,790	25,200	48,710	879J	<1,000	<1,000	4.1
AFVR-3	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	16,700	22,500	1,590	27,400	68,190	1,110J	<1,250	1,740	271
AFVR-5	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AGVR-6	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-12 Dup.	1,800	19,200	2,610	19,000	42,610	564J	<625	<625	12.8
AFVR-2 Dup.	1,500	22,800	4,550	35,300	64,150	1,530	<1,000	<1,000	4.1
Field Blank	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.019
Trip Blank	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020

Notes:

Groundwater samples collected on October 31, 2014.

Isopleth Interval = 500 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

"J" values in Total BTEX Calculations.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

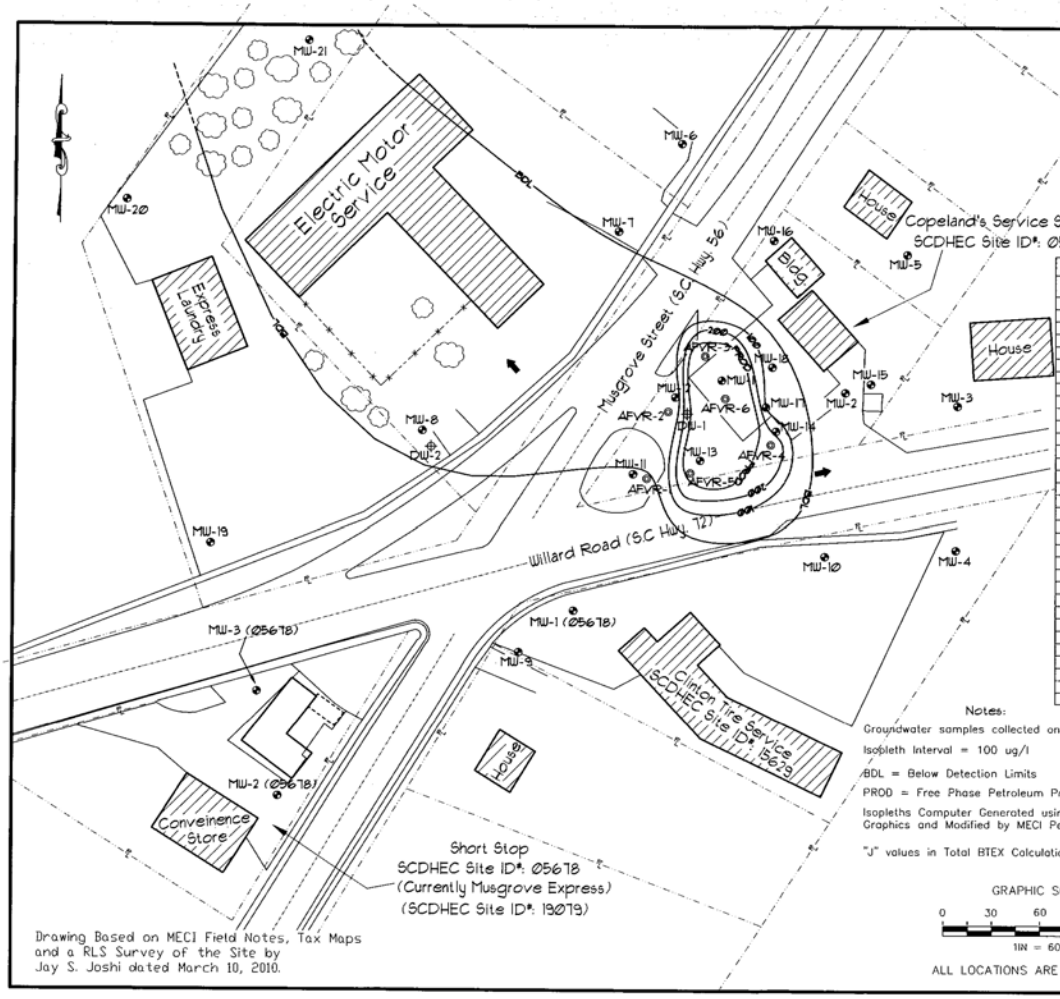
ALL LOCATIONS ARE APPROXIMATE

Groundwater CoC Site Map
(Naphthalene Isopleth)

Copelands Service Station
100 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 14-4885
DATE November 11, 2014
FIGURE 4A



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of AFVR Extraction Well
- EDB Concentration Isopleth (ug/l)

Groundwater CoC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)	12 DCA (ug/l)	EDB (ug/l)
MW-1	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-4	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.1J	<5.0	<0.020
MW-5	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-6	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-7	<5.0	<5.0	1.8J	7.0J	8.8J	2.2J	<5.0	<5.0	<0.020
MW-8	13.7	<5.0	6.2	<10.0	19.9	151	<5.0	<5.0	<0.020
MW-9	<5.0	<5.0	<5.0	<10.0	BDL	2.8J	<5.0	<5.0	<0.020
MW-10	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.2J	<5.0	<0.020
MW-11	42.3	173	522	3,730	4,467	417	<25.0	<25.0	<0.020
MW-12	1,970	22,300	2,900	18,800	45,970	698	<50.0	<50.0	12.8
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	17,500	39,300	3,650	20,800	81,250	562	<500	833	186
MW-15	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-16	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-17	12,200	16,500	2,750	16,900	48,350	489J	766	754	23.7
MW-18	4,540	28,800	3,350	18,700	53,390	540	120J	<250	19.6
MW-19	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-20	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-21	22.6	<5.0	<5.0	84.9	107.5	8.9	<5.0	<5.0	0.087
DW-1	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020
DW-2	8,520	<500	<500	751J	9,271J	325J	<500	598	0.074
AFVR-1	<25.0	11.1J	149	1,740	1,900.1J	113	<25.0	<25.0	<0.022
AFVR-2	1,420	19,300	2,790	25,200	48,710	879J	<1,000	<1,000	4.1
AFVR-3	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	16,700	22,500	1,590	27,400	68,190	1,110J	<1,250	1,740	271
AFVR-5	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AGVR-6	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-12 Dup.	1,800	19,200	2,610	19,000	42,610	564J	<625	<625	12.8
AFVR-2 Dup.	1,500	22,800	4,550	35,300	64,150	1,530	<1,000	<1,000	4.1
Field Blank	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.019
Trip Blank	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020

Notes:

Groundwater samples collected on October 31, 2014.

Isopleth Interval = 100 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

"J" values in Total BTEX Calculations.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

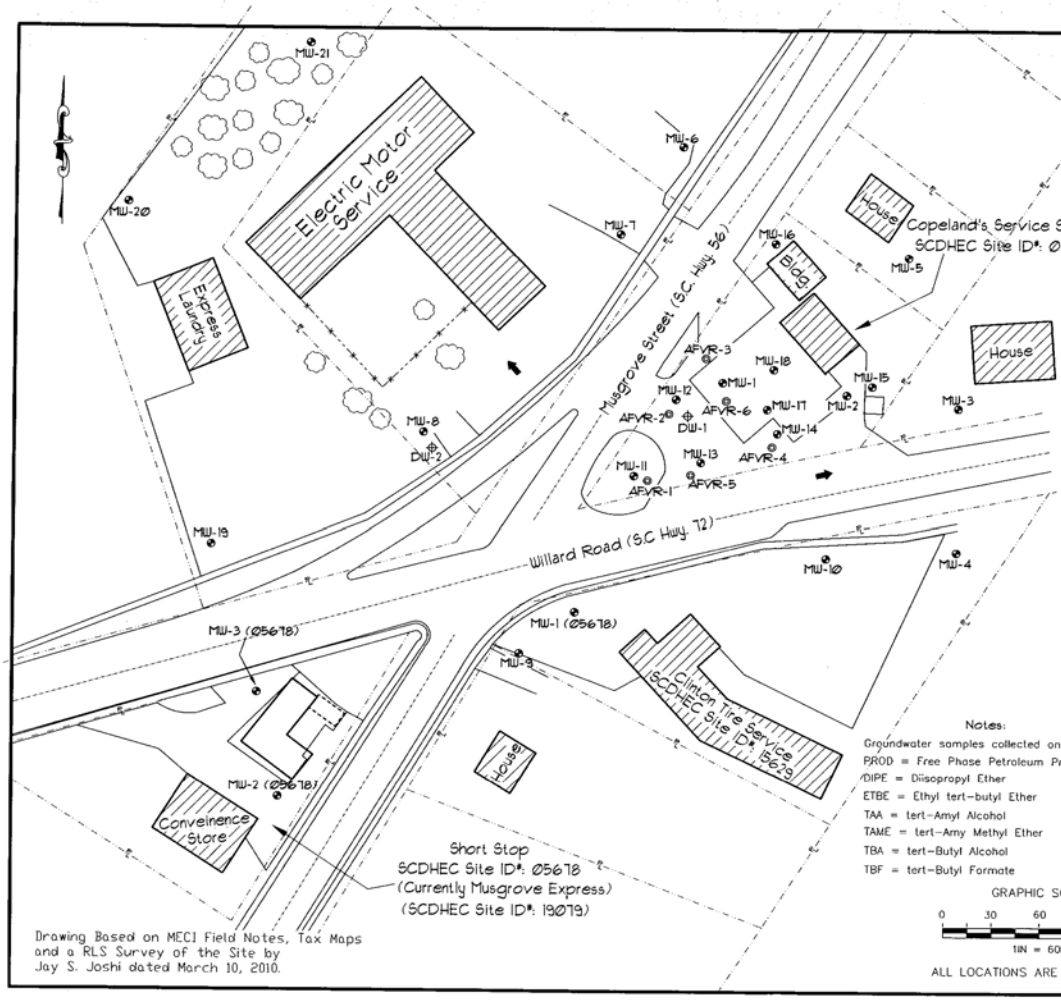
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Groundwater CoC Site Map
(EDB Isopleth)

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 14-4885
DATE November 11, 2014
FIGURE 4B



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks

Groundwater CoC Concentration Data - Oxygenates

Sample #	TAA (ug/l)	TAME (ug/l)	3,3-Dimethyl-1-butanol (ug/l)	TBA (ug/l)	TBF (ug/l)	DIPE (ug/l)	Ethanol (ug/l)	ETBE (ug/l)
MW-1	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-4	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-5	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-6	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-7	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-8	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-9	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-10	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-11	15,800	<50.0	<500	1,400	<250	<25.0	<1,000	<50.0
MW-12	3,600	<100	<1,000	<1,000	<500	53.2	<2,000	<100
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	58,400	<1,000	<10,000	<10,000	<5,000	1,420	<20,000	<1,000
MW-15	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-16	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-17	85,300	<1,250	<12,500	11,500J	<6,250	2,000	<25,000	<1,250
MW-18	<5,000	<500	<5,000	<5,000	<2,500	462	<10,000	<500
MW-19	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-20	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
MW-21	<100	<10.0	<100	<100	<50.0	2.4J	<200	<10.0
DW-1	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
DW-2	16,900	<1,000	<10,000	<10,000	<5,000	913	<20,000	<1,000
AFVR-1	<500	<50.0	<500	<500	<250	<25.0	<1,000	<50.0
AFVR-2	<20,000	<2,000	<20,000	<20,000	<10,000	<1,000	<40,000	<2,000
AFVR-3	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	76,500	<2,500	<25,000	<25,000	<12,500	2,600	<50,000	<2,500
AFVR-5	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-6	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-12 Dup.	<12,500	<1,250	<12,500	<12,500	<6,250	<625	<25,000	<1,250
AFVR-2 Dup.	<20,000	<2,000	<20,000	<20,000	<10,000	340J	<40,000	<2,000
Field Blank	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0
Trip Blank	<100	<10.0	<100	<100	<50.0	<5.0	<200	<10.0

Notes:

Groundwater samples collected on October 31, 2014.

PROD = Free Phase Petroleum Product

DIPE = Diisopropyl Ether

ETBE = Ethyl tert-butyl Ether

TAA = tert-Amyl Alcohol

TAME = tert-Amy Methyl Ether

TBA = tert-Butyl Alcohol

TBF = tert-Butyl Formate

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Groundwater CoC Site Map
(Oxygenates)

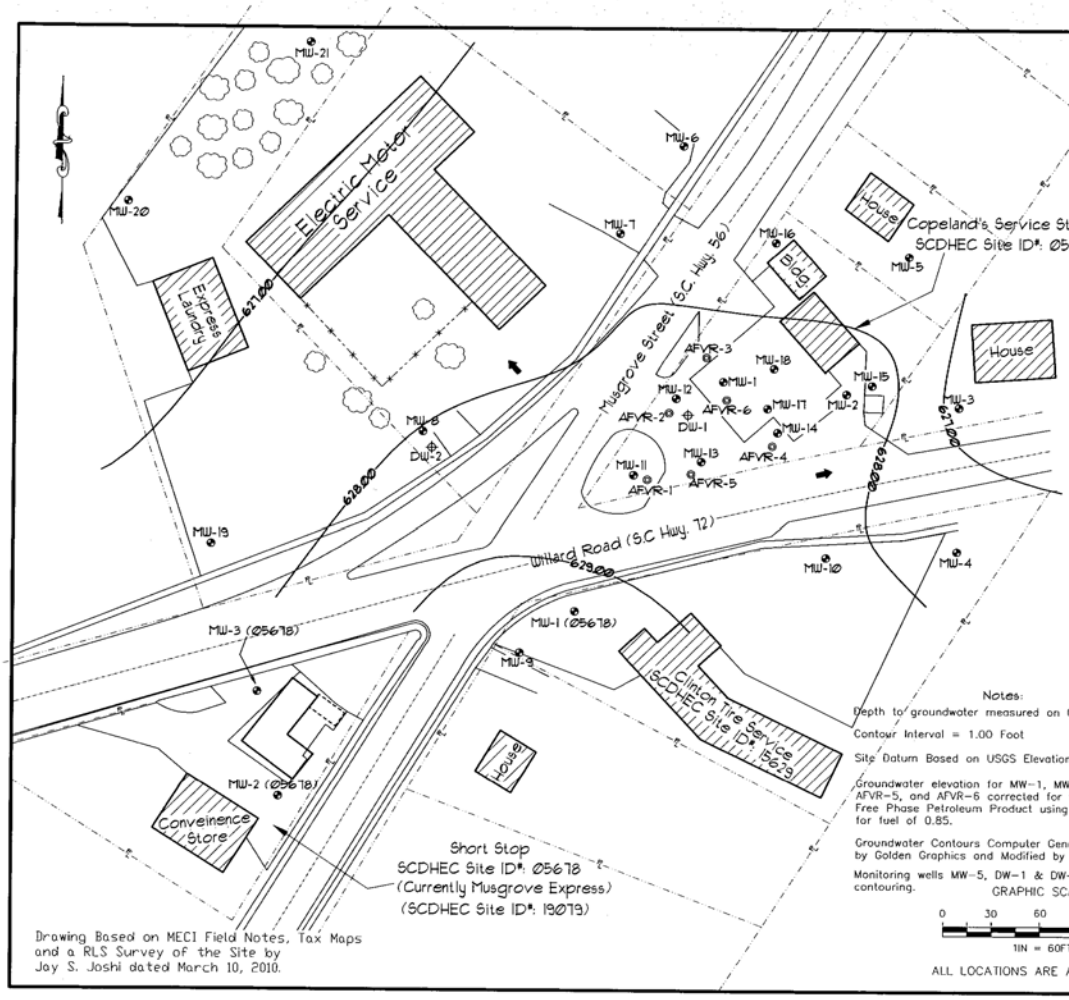
Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 14-4885

DATE November 11, 2014

FIGURE 4C



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Groundwater Elevation Contour (feet)

Potentiometric Data

Well #	Screened Interval (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well Head Elevation	Groundwater Elevation
MW-1	TD:33.95	31.25	31.51	0.26	659.98	628.65
MW-2	TD:12.05	---	DRY	---	659.57	DRY
MW-3	25-35	---	31.71	---	658.21	626.50
MW-4	25-35	---	30.61	---	658.41	627.80
MW-5	25-35	---	29.04	---	653.79	624.75
MW-6	25-35	---	28.46	---	656.32	627.86
MW-7	25-35	---	31.00	---	658.96	627.96
MW-8	25-35	---	31.89	---	659.94	628.05
MW-9	25-35	---	30.43	---	660.49	630.06
MW-10	25-35	---	31.43	---	659.53	628.10
MW-11	25-35	---	33.22	---	661.23	628.01
MW-12	25-35	---	31.98	---	660.14	628.16
MW-13	25-35	32.54	32.57	0.03	661.12	628.58
MW-14	25-35	---	31.93	---	660.25	628.32
MW-15	25-35	---	30.83	---	659.54	628.71
MW-16	25-35	---	31.02	---	658.22	627.20
MW-17	30-40	---	32.61	---	660.19	627.58
MW-18	30-40	---	31.14	---	659.50	628.36
MW-19	23-33	---	27.19	---	654.46	627.27
MW-20	23-33	---	27.78	---	654.26	626.48
MW-21	23-33	---	27.12	---	653.53	626.41
DW-1	75-85	---	32.37	---	660.41	628.04
DW-2	56-61	---	31.77	---	659.59	628.42
AFVR-1	TD:33.96	---	33.79	---	661.55	628.36
AFVR-2	TD:34.45	---	32.28	---	660.51	628.23
AFVR-3	TD:34.10	31.06	31.07	0.01	659.34	628.28
AFVR-4	TD:34.45	---	31.90	---	660.14	628.24
AFVR-5	TD:34.35	32.71	32.75	0.04	661.21	628.49
AFVR-6	TD:34.36	31.99	31.44	0.05	659.95	628.55

Notes:

Depth to groundwater measured on October 31, 2014.

Contour Interval = 1.00 Foot

Site Datum Based on USGS Elevations.

Groundwater elevation for MW-1, MW-13, AFVR-3, AFVR-5, and AFVR-6 corrected for the presence of Free Phase Petroleum Product using a specific gravity for fuel of 0.85.

Groundwater Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

Monitoring wells MW-5, DW-1 & DW-2 not used in contouring.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Potentiometric Data Site Map
(Groundwater Contour)

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 14-4580
DATE November 11, 2014
FIGURE 5

APPENDIX A:

SITE SURVEY

(Not Applicable)

APPENDIX B:

SAMPLING LOGS, LABORATORY DATA SHEETS, & CHAIN-OF-CUSTODY FORMS

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-1

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:	*0.26*			feet
Depth to Free Product (DFP)	31.25			feet
Depth to Ground Water (DGW)	31.51			feet
Total Well Depth (TWD)	33.95			feet
Length of the water column (LWC=TWD-DGW)			2.44	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.40	gallons
5 casing volume (3 X CV)=		5	1.99	gallons

Total Volume of Water Purged Before Sampling ***PROD*** gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	***PROD***							
pH (s.u.)	***PROD***							
Specific Conductivity (µmhos/cm)	***PROD***							
Water Temperature (°C)	***PROD***							
Dissolved Oxygen	***PROD***							
Turbidity (NTU)	***PROD***							

Remarks: Sample Time: ***PROD*** ***PROD = Free Product Detected***
Well Not Sampled

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-2

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	DRY		feet
Total Well Depth (TWD)	12.05		feet
Length of the water column (LWC=TWD-DGW)		#VALUE!	feet
1 casing volume (CV=LWC X C)= _____ X	0.163	#VALUE!	gallons
5 casing volume (3 X CV)=	5	#VALUE!	gallons

Total Volume of Water Purged Before Sampling ***DRY*** gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	***DRY***							
pH (s.u.)	***DRY***							
Specific Conductivity (µmhos/cm)	***DRY***							
Water Temperature (°C)	***DRY***							
Dissolved Oxygen	***DRY***							
Turbidity (NTU)	***DRY***							

Remarks: Sample Time: ***DRY*** ***DRY = Well Gauged DRY***
Well Not Sampled

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-3

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.71			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			3.29	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.54	gallons
5 casing volume (3 X CV)=		5	2.68	gallons

Total Volume of Water Purged Before Sampling 1 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:54	14:55						
pH (s.u.)	7.02	6.91						
Specific Conductivity (µmhos/cm)	101.90	80.6						
Water Temperature (°C)	19.90	19.7						
Dissolved Oxygen	2.61	2.32						
Turbidity (NTU)	21.42	195.70						

Remarks: Sample Time: 14:55 **Dry @ 1.0 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-4

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	30.61			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			4.39	feet
1 casing volume (CV=LWC X C)=	_____ X	0.163	0.72	gallons
5 casing volume (3 X CV)=		5	3.58	gallons

Total Volume of Water Purged Before Sampling 1 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:03	15:04						
pH (s.u.)	7.47	7.02						
Specific Conductivity (µmhos/cm)	55.8	42.6						
Water Temperature (°C)	19.9	19.4						
Dissolved Oxygen	3.43	3.32						
Turbidity (NTU)	24.84	244.60						

Remarks: Sample Time: 15:04 **Dry @ 1.0 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-5

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	29.04			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			5.96	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.97	gallons
5 casing volume (3 X CV)=		5	4.86	gallons

Total Volume of Water Purged Before Sampling 1.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:44	15:45						
pH (s.u.)	7.88	7.62						
Specific Conductivity (μmhos/cm)	81.1	60.3						
Water Temperature (°C)	21.4	21.1						
Dissolved Oxygen	4.84	4.61						
Turbidity (NTU)	20.20	161.30						

Remarks: Sample Time: 15:45 **Dry @ 1.5 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-6

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	28.46			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			6.54	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	1.07	gallons
5 casing volume (3 X CV)=		5	5.33	gallons

Total Volume of Water Purged Before Sampling 1.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:07	12:08						
pH (s.u.)	7.42	7.39						
Specific Conductivity (μmhos/cm)	101.7	85.6						
Water Temperature (°C)	20.0	19.3						
Dissolved Oxygen	4.04	3.97						
Turbidity (NTU)	13.83	195.50						

Remarks: Sample Time: 12:08 **Dry @ 1.5 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-7

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.00			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			4	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.65	gallons
5 casing volume (3 X CV)=		5	3.26	gallons

Total Volume of Water Purged Before Sampling 0.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:54	11:55						
pH (s.u.)	7.81	7.74						
Specific Conductivity (µmhos/cm)	88.7	72.4						
Water Temperature (°C)	20.4	20.1						
Dissolved Oxygen	3.03	2.84						
Turbidity (NTU)	12.84	144.60						

Remarks: Sample Time: 11:55 **Dry @ 0.5 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-8

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.89			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			3.11	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.51	gallons
5 casing volume (3 X CV)=		5	2.53	gallons

Total Volume of Water Purged Before Sampling 0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:02	11:03						
pH (s.u.)	8.28	INS.						
Specific Conductivity (µmhos/cm)	196.3	INS.						
Water Temperature (°C)	19.9	INS.						
Dissolved Oxygen	2.13	INS.						
Turbidity (NTU)	24.47	INS.						

Remarks: Sample Time: 11:03 **Well dry after 1 bail**

INS.=Insufficient Water

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-9

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	30.43			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			4.57	feet
1 casing volume (CV=LWC X C)=	X	0.163	0.74	gallons
5 casing volume (3 X CV)=		5	3.72	gallons

Total Volume of Water Purged Before Sampling 1 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:27	15:28						
pH (s.u.)	7.07	7.00						
Specific Conductivity (μmhos/cm)	88.3	54.2						
Water Temperature (°C)	20.0	19.7						
Dissolved Oxygen	3.80	3.34						
Turbidity (NTU)	21.95	199.90						

Remarks: Sample Time: 15:28 **Dry @ 1.0 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-10

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.43			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			3.57	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.58	gallons
5 casing volume (3 X CV)=		5	2.91	gallons

Total Volume of Water Purged Before Sampling 0.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:12	15:13						
pH (s.u.)	7.72	7.64						
Specific Conductivity (µmhos/cm)	89.6	55.4						
Water Temperature (°C)	21.4	20.8						
Dissolved Oxygen	4.41	3.83						
Turbidity (NTU)	27.73	313.60						

Remarks: Sample Time: 15:13 **Dry @ 0.5 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-11

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	33.22			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			1.78	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.29	gallons
5 casing volume (3 X CV)=		5	1.45	gallons

Total Volume of Water Purged Before Sampling 0.25 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:19	12:20						
pH (s.u.)	7.94	INS.						
Specific Conductivity (µmhos/cm)	141.2	INS.						
Water Temperature (°C)	20.0	INS.						
Dissolved Oxygen	3.95	INS.						
Turbidity (NTU)	24.82	INS.						

Remarks: Sample Time: 12:20 **Dry @ 0.25 Gallons**

INS.=Insufficient Water for 2nd Reading

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-12

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.98			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			3.02	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.49	gallons
5 casing volume (3 X CV)=		5	2.46	gallons

Total Volume of Water Purged Before Sampling 0.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:27	12:28						
pH (s.u.)	7.61	7.44						
Specific Conductivity (µmhos/cm)	191.7	213.4						
Water Temperature (°C)	21.1	20.8						
Dissolved Oxygen	2.43	2.12						
Turbidity (NTU)	19.81	181.90						

Remarks: Sample Time: 12:28 **Dry @ 0.50 Gallons**
Duplicate Sample Collected

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-13

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:	*0.03*			feet
Depth to Free Product (DFP)	32.54			feet
Depth to Ground Water (DGW)	32.57			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			2.43	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.40	gallons
5 casing volume (3 X CV)=		5	1.98	gallons

Total Volume of Water Purged Before Sampling ***PROD*** gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	***PROD***							
pH (s.u.)	***PROD***							
Specific Conductivity (µmhos/cm)	***PROD***							
Water Temperature (°C)	***PROD***							
Dissolved Oxygen	***PROD***							
Turbidity (NTU)	***PROD***							

Remarks: Sample Time: ***PROD*** ***PROD = Free Product Detected***
Well Not Sampled

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-14

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.93			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			3.07	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.50	gallons
5 casing volume (3 X CV)=		5	2.50	gallons

Total Volume of Water Purged Before Sampling 0.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:12	14:13						
pH (s.u.)	Sheen	Sheen						
Specific Conductivity (μmhos/cm)	Sheen	Sheen						
Water Temperature (°C)	Sheen	Sheen						
Dissolved Oxygen	Sheen	Sheen						
Turbidity (NTU)	Sheen	Sheen						

Remarks: Sample Time: 14:13 **Dry @ 0.50 Gallons**

Sheen = Noticable Petroleum Sheen

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-15

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	30.83			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			4.17	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.68	gallons
5 casing volume (3 X CV)=		5	3.40	gallons

Total Volume of Water Purged Before Sampling 1 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:41	14:42						
pH (s.u.)	7.61	7.43						
Specific Conductivity (μmhos/cm)	58.4	49.6						
Water Temperature (°C)	19.9	19.4						
Dissolved Oxygen	3.13	2.81						
Turbidity (NTU)	21.43	286.60						

Remarks: Sample Time: 14:42 **Dry @ 1.00 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-16

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.02			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			3.98	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.65	gallons
5 casing volume (3 X CV)=		5	3.24	gallons

Total Volume of Water Purged Before Sampling 1 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:35	15:36						
pH (s.u.)	7.66	7.44						
Specific Conductivity (μmhos/cm)	77.9	66.4						
Water Temperature (°C)	19.7	19.3						
Dissolved Oxygen	3.43	3.11						
Turbidity (NTU)	24.99	334.80						

Remarks: Sample Time: 15:36 **Dry @ 1.00 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-17

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	32.61			feet
Total Well Depth (TWD)	40			feet
Length of the water column (LWC=TWD-DGW)			7.39	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	1.20	gallons
5 casing volume (3 X CV)=		5	6.02	gallons

Total Volume of Water Purged Before Sampling 1.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:51	13:52						
pH (s.u.)	7.71	7.62						
Specific Conductivity (μmhos/cm)	101.7	82.4						
Water Temperature (°C)	20.7	19.9						
Dissolved Oxygen	2.62	2.43						
Turbidity (NTU)	81.44	177.60						

Remarks: Sample Time: 13:52 **Dry @ 1.50 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-18

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.14			feet
Total Well Depth (TWD)	40			feet
Length of the water column (LWC=TWD-DGW)			8.86	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	1.44	gallons
5 casing volume (3 X CV)=		5	7.22	gallons

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:00	14:02						
pH (s.u.)	7.44	7.33						
Specific Conductivity (µmhos/cm)	119.6	99.3						
Water Temperature (°C)	21.0	20.8						
Dissolved Oxygen	1.95	2.04						
Turbidity (NTU)	26.86	334.50						

Remarks: Sample Time: 14:02 **Dry @ 2.50 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-19

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	27.19			feet
Total Well Depth (TWD)	33			feet
Length of the water column (LWC=TWD-DGW)			5.81	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.95	gallons
5 casing volume (3 X CV)=		5	4.74	gallons

Total Volume of Water Purged Before Sampling 1 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:45	11:46						
pH (s.u.)	7.60	7.43						
Specific Conductivity (µmhos/cm)	88.3	70.4						
Water Temperature (°C)	21.0	19.6						
Dissolved Oxygen	2.62	2.41						
Turbidity (NTU)	21.66	294.80						

Remarks: Sample Time: 11:46 **Dry @ 1.00 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-20

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	27.78			feet
Total Well Depth (TWD)	33			feet
Length of the water column (LWC=TWD-DGW)			5.22	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.85	gallons
5 casing volume (3 X CV)=		5	4.25	gallons

Total Volume of Water Purged Before Sampling 0.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:46	10:47						
pH (s.u.)	8.26	8.02						
Specific Conductivity (μmhos/cm)	56.9	62.6						
Water Temperature (°C)	20.6	19.9						
Dissolved Oxygen	7.08	4.43						
Turbidity (NTU)	14.47	337.90						

Remarks: Sample Time: 10:47 **Dry @ 0.5 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** MW-21

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	27.12			feet
Total Well Depth (TWD)	33			feet
Length of the water column (LWC=TWD-DGW)			5.88	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.96	gallons
5 casing volume (3 X CV)=		5	4.79	gallons

Total Volume of Water Purged Before Sampling 0.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:29	10:30						
pH (s.u.)	8.19	7.74						
Specific Conductivity (µmhos/cm)	65.5	81.6						
Water Temperature (°C)	18.7	19.0						
Dissolved Oxygen	5.76	4.43						
Turbidity (NTU)	24.46	226.70						

Remarks: Sample Time: 10:30 **Dry @ 0.5 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** DW-1

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	32.37			feet
Total Well Depth (TWD)	85			feet
Length of the water column (LWC=TWD-DGW)			52.63	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	8.58	gallons
5 casing volume (3 X CV)=		5	42.89	gallons

Total Volume of Water Purged Before Sampling 20 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:42	12:50	12:58					
pH (s.u.)	8.03	7.74	7.62					
Specific Conductivity (µmhos/cm)	71.9	143.6	132.1					
Water Temperature (°C)	20.2	19.9	19.6					
Dissolved Oxygen	4.04	3.83	3.62					
Turbidity (NTU)	17.87	39.84	77.31					

Remarks: Sample Time: 12:58 **Dry @ 20.0 Gallons**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** DW-2

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.17			feet
Total Well Depth (TWD)	61			feet
Length of the water column (LWC=TWD-DGW)			29.83	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	4.86	gallons
5 casing volume (3 X CV)=		5	24.31	gallons

Total Volume of Water Purged Before Sampling 24.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:12	11:17	11:22	11:27	11:32	11:37		
pH (s.u.)	8.89	8.62	8.31	8.02	7.81	7.41		
Specific Conductivity (μmhos/cm)	125.7	134.7	142.3	155.9	161.3	179.4		
Water Temperature (°C)	20.0	19.9	19.7	19.0	18.6	17.9		
Dissolved Oxygen	5.78	5.62	5.14	4.02	3.83	3.01		
Turbidity (NTU)	17.73	27.73	32.41	39.66	40.43	44.81		

Remarks: Sample Time: 11:37

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** AFVR-1

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.17			feet
Total Well Depth (TWD)	33.96			feet
Length of the water column (LWC=TWD-DGW)			2.79	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.45	gallons
5 casing volume (3 X CV)=		5	2.27	gallons

Total Volume of Water Purged Before Sampling 0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:14							
pH (s.u.)	INS.							
Specific Conductivity (µmhos/cm)	INS.							
Water Temperature (°C)	INS.							
Dissolved Oxygen	INS.							
Turbidity (NTU)	INS.							

Remarks: Sample Time: 12:14 **INS. = Insufficient to purge or collect readings**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** AFVR-2

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	32.28			feet
Total Well Depth (TWD)	34.45			feet
Length of the water column (LWC=TWD-DGW)			2.17	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.35	gallons
5 casing volume (3 X CV)=		5	1.77	gallons

Total Volume of Water Purged Before Sampling 0.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:04	13:05						
pH (s.u.)	Sheen	Sheen						
Specific Conductivity (µmhos/cm)	Sheen	Sheen						
Water Temperature (°C)	Sheen	Sheen						
Dissolved Oxygen	Sheen	Sheen						
Turbidity (NTU)	Sheen	Sheen						

Remarks: Sample Time: 13:05 **Dry @ 0.5 Gallons**
Duplicate Sample Collected

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** AFVR-3

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:	***0.01***			feet
Depth to Free Product (DFP)	31.06			feet
Depth to Ground Water (DGW)	31.07			feet
Total Well Depth (TWD)	34.1			feet
Length of the water column (LWC=TWD-DGW)			3.03	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.49	gallons
5 casing volume (3 X CV)=		5	2.47	gallons

Total Volume of Water Purged Before Sampling ***PROD*** gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	***PROD***							
pH (s.u.)	***PROD***							
Specific Conductivity (μmhos/cm)	***PROD***							
Water Temperature (°C)	***PROD***							
Dissolved Oxygen	***PROD***							
Turbidity (NTU)	***PROD***							

Remarks: Sample Time: ***PROD*** ***PROD = Free Product Detected***
Well Not Sampled

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** AFVR-4

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.90			feet
Total Well Depth (TWD)	34.45			feet
Length of the water column (LWC=TWD-DGW)			2.55	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.42	gallons
5 casing volume (3 X CV)=		5	2.08	gallons

Total Volume of Water Purged Before Sampling 0.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:21	14:22						
pH (s.u.)	Sheen	Sheen						
Specific Conductivity (μmhos/cm)	Sheen	Sheen						
Water Temperature (°C)	Sheen	Sheen						
Dissolved Oxygen	Sheen	Sheen						
Turbidity (NTU)	Sheen	Sheen						

Remarks: Sample Time: 14:22 **Dry @ 0.5 Gallons**
Duplicate Sample Collected

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** AFVR-5

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:	*0.04*			feet
Depth to Free Product (DFP)	32.71			feet
Depth to Ground Water (DGW)	32.75			feet
Total Well Depth (TWD)	34.35			feet
Length of the water column (LWC=TWD-DGW)			1.6	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.26	gallons
5 casing volume (3 X CV)=		5	1.30	gallons

Total Volume of Water Purged Before Sampling ***PROD*** gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	***PROD***							
pH (s.u.)	***PROD***							
Specific Conductivity (μmhos/cm)	***PROD***							
Water Temperature (°C)	***PROD***							
Dissolved Oxygen	***PROD***							
Turbidity (NTU)	***PROD***							

Remarks: Sample Time: ***PROD*** ***PROD = Free Product Detected***
Well Not Sampled

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 10/31/2014

Field Personnel: Wes Huss & Adam Looper

General Weather Conditions: Overcast

Ambient Air Temperature: 17.2 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	
pH=7.0	X	standard	X
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copeland's Service Station

Site ID#: 05694 **Monitoring Well #** AFVR-6

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:	*0.05*			feet
Depth to Free Product (DFP)	31.39			feet
Depth to Ground Water (DGW)	31.44			feet
Total Well Depth (TWD)	34.36			feet
Length of the water column (LWC=TWD-DGW)			2.92	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	0.48	gallons
5 casing volume (3 X CV)=		5	2.38	gallons

Total Volume of Water Purged Before Sampling ***PROD*** gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	***PROD***							
pH (s.u.)	***PROD***							
Specific Conductivity (μmhos/cm)	***PROD***							
Water Temperature (°C)	***PROD***							
Dissolved Oxygen	***PROD***							
Turbidity (NTU)	***PROD***							

Remarks: Sample Time: ***PROD*** ***PROD = Free Product Detected***
Well Not Sampled

Pace Analytical
www.pacelabs.com

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

October 27, 2014

Mr. Bryan Shane
Midlands Environmental
PO Box 854
Lexington, SC 29071

RE: Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Dear Mr. Shane:
Enclosed are the analytical results for sample(s) received by the laboratory on October 14, 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,

Angela M. Baioni

Angela Baioni
angela.baioni@pacelabs.com
Project Manager

Enclosures

cc: Mr. Ryan Ariail, Midlands Environmental
Mr. Jeff Coleman, Midlands Environmental
Mr. Kyle Pudney, Midlands Environmental

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

CERTIFICATIONS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

SAMPLE SUMMARY

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92221353001	MW-3	Water	10/13/14 14:55	10/14/14 16:35
92221353002	MW-4	Water	10/13/14 15:05	10/14/14 16:35
92221353003	MW-5	Water	10/13/14 15:45	10/14/14 16:35
92221353004	MW-6	Water	10/13/14 12:08	10/14/14 16:35
92221353005	MW-7	Water	10/13/14 11:55	10/14/14 16:35
92221353006	MW-8	Water	10/13/14 11:03	10/14/14 16:35
92221353007	MW-9	Water	10/13/14 15:28	10/14/14 16:35
92221353008	MW-10	Water	10/13/14 15:13	10/14/14 16:35
92221353009	MW-11	Water	10/13/14 12:20	10/14/14 16:35
92221353010	MW-12	Water	10/13/14 12:28	10/14/14 16:35
92221353011	MW-14	Water	10/13/14 14:13	10/14/14 16:35
92221353012	MW-15	Water	10/13/14 14:42	10/14/14 16:35
92221353013	MW-16	Water	10/13/14 15:36	10/14/14 16:35
92221353014	MW-17	Water	10/13/14 13:52	10/14/14 16:35
92221353015	MW-18	Water	10/13/14 14:02	10/14/14 16:35
92221353016	MW-19	Water	10/13/14 11:46	10/14/14 16:35
92221353017	MW-20	Water	10/13/14 10:46	10/14/14 16:35
92221353018	MW-21	Water	10/13/14 10:30	10/14/14 16:35
92221353019	DW-1	Water	10/13/14 12:58	10/14/14 16:35
92221353020	DW-2	Water	10/13/14 11:37	10/14/14 16:35
92221353021	AFVR-1	Water	10/13/14 12:14	10/14/14 16:35
92221353022	AFVR-2	Water	10/13/14 13:05	10/14/14 16:35
92221353023	AFVR-4	Water	10/13/14 14:22	10/14/14 16:35
92221353024	MW-12 DUP	Water	10/13/14 12:28	10/14/14 16:35
92221353025	AFVR2 DUP	Water	10/13/14 13:05	10/14/14 16:35
92221353026	FIELD BLANK	Water	10/13/14 10:25	10/14/14 16:35
92221353027	TRIP BLANK	Water	10/13/14 10:25	10/14/14 16:35

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

SAMPLE ANALYTE COUNT

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92221353001	MW-3	EPA 8011	JMC	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92221353002	MW-4	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353003	MW-5	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353004	MW-6	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353005	MW-7	EPA 8011	JMC	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92221353006	MW-8	EPA 8011	JMC	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92221353007	MW-9	EPA 8011	JMC	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92221353008	MW-10	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353009	MW-11	EPA 8011	JMC	2	PASI-C
		EPA 8260	CAH, CCL	20	PASI-C
92221353010	MW-12	EPA 8011	JMC	2	PASI-C
		EPA 8260	CAH, CCL	20	PASI-C
92221353011	MW-14	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353012	MW-15	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353013	MW-16	EPA 8011	JMC	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92221353014	MW-17	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353015	MW-18	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353016	MW-19	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353017	MW-20	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353018	MW-21	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353019	DW-1	EPA 8011	JMC	2	PASI-C

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

SAMPLE ANALYTE COUNT

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	JDW1	20	PASI-C
92221353020	DW-2	EPA 8011	JMC	2	PASI-C
		EPA 8260	JDW1	20	PASI-C
92221353021	AFVR-1	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353022	AFVR-2	EPA 8011	JMC	2	PASI-C
		EPA 8260	CAH	20	PASI-C
92221353023	AFVR-4	EPA 8011	JMC	2	PASI-C
		EPA 8260	CAH	20	PASI-C
92221353024	MW-12 DUP	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353025	AFVR2 DUP	EPA 8011	JMC	2	PASI-C
		EPA 8260	CAH	20	PASI-C
92221353026	FIELD BLANK	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92221353027	TRIP BLANK	EPA 8011	JMC	2	PASI-C
		EPA 8260	GAW	20	PASI-C

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-3 **Lab ID: 92221353001** Collected: 10/13/14 14:55 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 15:30	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	120	%	60-140		1	10/16/14 11:28	10/16/14 15:30	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/22/14 18:40	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/22/14 18:40	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/22/14 18:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/22/14 18:40	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/22/14 18:40	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/22/14 18:40	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/22/14 18:40	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/22/14 18:40	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/22/14 18:40	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/22/14 18:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/22/14 18:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/22/14 18:40	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/22/14 18:40	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/22/14 18:40	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/22/14 18:40	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/22/14 18:40	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/22/14 18:40	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		10/22/14 18:40	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/22/14 18:40	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		10/22/14 18:40	2037-26-5	

Sample: MW-4 **Lab ID: 92221353002** Collected: 10/13/14 15:05 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 15:50	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	119	%	60-140		1	10/16/14 11:28	10/16/14 15:50	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 07:23	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 07:23	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 07:23	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 07:23	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 07:23	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 07:23	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 07:23	107-06-2	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-4 **Lab ID: 92221353002** Collected: 10/13/14 15:05 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 07:23	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 07:23	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 07:23	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 07:23	637-92-3	
Methyl-tert-butyl ether	**2.1J**	ug/L	5.0	1.7	1		10/21/14 07:23	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 07:23	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 07:23	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 07:23	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 07:23	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 07:23	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/21/14 07:23	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		10/21/14 07:23	17060-07-0	
Toluene-d8 (S)	92	%	70-130		1		10/21/14 07:23	2037-26-5	

Sample: MW-5 **Lab ID: 92221353003** Collected: 10/13/14 15:45 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 16:49	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	114	%	60-140		1	10/16/14 11:28	10/16/14 16:49	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 07:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 07:39	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 07:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 07:39	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 07:39	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 07:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 07:39	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 07:39	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 07:39	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 07:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 07:39	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/21/14 07:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 07:39	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 07:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 07:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 07:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 07:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		10/21/14 07:39	460-00-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-5 **Lab ID: 92221353003** Collected: 10/13/14 15:45 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/21/14 07:39	17060-07-0	
Toluene-d8 (S)	91	%	70-130		1		10/21/14 07:39	2037-26-5	

Sample: MW-6 **Lab ID: 92221353004** Collected: 10/13/14 12:08 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 17:28	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	114	%	60-140		1	10/16/14 11:28	10/16/14 17:28	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 07:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 07:56	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 07:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 07:56	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 07:56	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 07:56	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 07:56	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 07:56	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 07:56	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 07:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 07:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/21/14 07:56	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 07:56	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 07:56	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 07:56	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 07:56	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 07:56	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/21/14 07:56	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		10/21/14 07:56	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/21/14 07:56	2037-26-5	

Sample: MW-7 **Lab ID: 92221353005** Collected: 10/13/14 11:55 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 17:47	106-93-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-7 **Lab ID: 92221353005** Collected: 10/13/14 11:55 Received: 10/14/14 16:35 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								
Surrogates									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	10/16/14 11:28	10/16/14 17:47	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/22/14 18:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/22/14 18:56	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/22/14 18:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/22/14 18:56	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/22/14 18:56	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/22/14 18:56	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/22/14 18:56	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/22/14 18:56	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/22/14 18:56	64-17-5	
Ethylbenzene	**1.8J**	ug/L	5.0	1.6	1		10/22/14 18:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/22/14 18:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/22/14 18:56	1634-04-4	
Naphthalene	**2.2J**	ug/L	5.0	2.0	1		10/22/14 18:56	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/22/14 18:56	108-88-3	
Xylene (Total)	**7.0J**	ug/L	10.0	2.7	1		10/22/14 18:56	1330-20-7	
m&p-Xylene	**7.9J**	ug/L	10.0	3.1	1		10/22/14 18:56	179601-23-1	
o-Xylene	**7.0**	ug/L	5.0	1.6	1		10/22/14 18:56	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		10/22/14 18:56	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		10/22/14 18:56	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		10/22/14 18:56	2037-26-5	

Sample: MW-8 **Lab ID: 92221353006** Collected: 10/13/14 11:03 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 18:07	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	122	%	60-140		1	10/16/14 11:28	10/16/14 18:07	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/22/14 19:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/22/14 19:12	994-05-8	
Benzene	**13.7**	ug/L	5.0	1.7	1		10/22/14 19:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/22/14 19:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/22/14 19:12	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/22/14 19:12	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/22/14 19:12	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/22/14 19:12	108-20-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-8 **Lab ID: 92221353006** Collected: 10/13/14 11:03 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Ethanol	ND	ug/L	200	138	1		10/22/14 19:12	64-17-5	
Ethylbenzene	**6.2**	ug/L	5.0	1.6	1		10/22/14 19:12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/22/14 19:12	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/22/14 19:12	1634-04-4	
Naphthalene	**151**	ug/L	5.0	2.0	1		10/22/14 19:12	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/22/14 19:12	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/22/14 19:12	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/22/14 19:12	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/22/14 19:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/22/14 19:12	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		10/22/14 19:12	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		10/22/14 19:12	2037-26-5	

Sample: MW-9 **Lab ID: 92221353007** Collected: 10/13/14 15:28 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 18:27	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	117	%	60-140		1	10/16/14 11:28	10/16/14 18:27	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/22/14 19:28	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/22/14 19:28	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/22/14 19:28	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/22/14 19:28	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/22/14 19:28	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/22/14 19:28	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/22/14 19:28	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/22/14 19:28	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/22/14 19:28	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/22/14 19:28	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/22/14 19:28	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/22/14 19:28	1634-04-4	
Naphthalene	**2.8J**	ug/L	5.0	2.0	1		10/22/14 19:28	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/22/14 19:28	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/22/14 19:28	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/22/14 19:28	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/22/14 19:28	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		10/22/14 19:28	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		10/22/14 19:28	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-9 **Lab ID: 92221353007** Collected: 10/13/14 15:28 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	97	%	70-130		1		10/22/14 19:28	2037-26-5	

Sample: MW-10 **Lab ID: 92221353008** Collected: 10/13/14 15:13 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 18:46	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	113	%	60-140		1	10/16/14 11:28	10/16/14 18:46	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 08:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 08:12	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 08:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 08:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 08:12	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 08:12	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 08:12	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 08:12	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 08:12	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 08:12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 08:12	637-92-3	
Methyl-tert-butyl ether	**2.2J**	ug/L	5.0	1.7	1		10/21/14 08:12	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 08:12	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 08:12	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 08:12	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 08:12	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 08:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		10/21/14 08:12	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		10/21/14 08:12	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		10/21/14 08:12	2037-26-5	

Sample: MW-11 **Lab ID: 92221353009** Collected: 10/13/14 12:20 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 19:06	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	142	%	60-140		1	10/16/14 11:28	10/16/14 19:06	301-79-56	S3

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-11 **Lab ID: 92221353009** Collected: 10/13/14 12:20 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**15800**	ug/L	500	384	5		10/22/14 20:32	75-85-4	
tert-Amylmethyl ether	ND	ug/L	50.0	17.0	5		10/22/14 20:32	994-05-8	
Benzene	**42.3**	ug/L	25.0	8.5	5		10/22/14 20:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	500	160	5		10/22/14 20:32	624-95-3	
tert-Butyl Alcohol	**1400**	ug/L	500	288	5		10/22/14 20:32	75-65-0	
tert-Butyl Formate	ND	ug/L	250	36.5	5		10/22/14 20:32	762-75-4	
1,2-Dichloroethane	ND	ug/L	25.0	9.0	5		10/22/14 20:32	107-06-2	
Diisopropyl ether	ND	ug/L	25.0	8.5	5		10/22/14 20:32	108-20-3	
Ethanol	ND	ug/L	1000	689	5		10/22/14 20:32	64-17-5	
Ethylbenzene	**522**	ug/L	25.0	8.0	5		10/22/14 20:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	50.0	18.0	5		10/22/14 20:32	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	25.0	8.5	5		10/22/14 20:32	1634-04-4	
Naphthalene	**417**	ug/L	25.0	10.0	5		10/22/14 20:32	91-20-3	
Toluene	**173**	ug/L	25.0	8.0	5		10/22/14 20:32	108-88-3	
Xylene (Total)	**3730**	ug/L	125	33.8	12.5		10/24/14 13:40	1330-20-7	
m&p-Xylene	**2800**	ug/L	125	38.8	12.5		10/24/14 13:40	179601-23-1	
o-Xylene	**928**	ug/L	62.5	20.0	12.5		10/24/14 13:40	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		5		10/22/14 20:32	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		5		10/22/14 20:32	17060-07-0	
Toluene-d8 (S)	102	%	70-130		5		10/22/14 20:32	2037-26-5	

Sample: MW-12 **Lab ID: 92221353010** Collected: 10/13/14 12:28 Received: 10/14/14 16:35 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)	**12.8**	ug/L	0.39	0.39	20	10/16/14 11:28	10/19/14 02:15	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		20	10/16/14 11:28	10/19/14 02:15	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**3600**	ug/L	1000	768	10		10/22/14 20:48	75-85-4	
tert-Amylmethyl ether	ND	ug/L	100	34.0	10		10/22/14 20:48	994-05-8	
Benzene	**1970**	ug/L	1000	340	200		10/24/14 13:57	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		10/22/14 20:48	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		10/22/14 20:48	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73.0	10		10/22/14 20:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	50.0	18.0	10		10/22/14 20:48	107-06-2	
Diisopropyl ether	**53.2**	ug/L	50.0	17.0	10		10/22/14 20:48	108-20-3	
Ethanol	ND	ug/L	2000	1380	10		10/22/14 20:48	64-17-5	
Ethylbenzene	**2900**	ug/L	1000	320	200		10/24/14 13:57	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36.0	10		10/22/14 20:48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	50.0	17.0	10		10/22/14 20:48	1634-04-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-12 **Lab ID: 92221353010** Collected: 10/13/14 12:28 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Naphthalene	**698**	ug/L	50.0	20.0	10		10/22/14 20:48	91-20-3	
Toluene	**22300**	ug/L	1000	320	200		10/24/14 13:57	108-88-3	
Xylene (Total)	**18800**	ug/L	2000	540	200		10/24/14 13:57	1330-20-7	
m&p-Xylene	**12600**	ug/L	2000	620	200		10/24/14 13:57	179601-23-1	
o-Xylene	**6290**	ug/L	1000	320	200		10/24/14 13:57	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		10		10/22/14 20:48	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		10		10/22/14 20:48	17060-07-0	
Toluene-d8 (S)	100	%	70-130		10		10/22/14 20:48	2037-26-5	

Sample: MW-14 **Lab ID: 92221353011** Collected: 10/13/14 14:13 Received: 10/14/14 16:35 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)	**186**	ug/L	8.0	8.0	400	10/16/14 11:28	10/19/14 02:35	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		400	10/16/14 11:28	10/19/14 02:35	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**58400**	ug/L	10000	7680	100		10/24/14 22:32	75-85-4	
tert-Amylmethyl ether	ND	ug/L	1000	340	100		10/24/14 22:32	994-05-8	
Benzene	**17500**	ug/L	500	170	100		10/24/14 22:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	10000	3210	100		10/24/14 22:32	624-95-3	
tert-Butyl Alcohol	ND	ug/L	10000	5770	100		10/24/14 22:32	75-65-0	
tert-Butyl Formate	ND	ug/L	5000	730	100		10/24/14 22:32	762-75-4	
1,2-Dichloroethane	**833**	ug/L	500	180	100		10/24/14 22:32	107-06-2	
Diisopropyl ether	**1420**	ug/L	500	170	100		10/24/14 22:32	108-20-3	
Ethanol	ND	ug/L	20000	13800	100		10/24/14 22:32	64-17-5	
Ethylbenzene	**3650**	ug/L	500	160	100		10/24/14 22:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1000	360	100		10/24/14 22:32	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	500	170	100		10/24/14 22:32	1634-04-4	
Naphthalene	**562**	ug/L	500	200	100		10/24/14 22:32	91-20-3	
Toluene	**39300**	ug/L	1250	400	250		10/25/14 13:51	108-88-3	
Xylene (Total)	**20800**	ug/L	1000	270	100		10/24/14 22:32	1330-20-7	
m&p-Xylene	**14600**	ug/L	1000	310	100		10/24/14 22:32	179601-23-1	
o-Xylene	**6230**	ug/L	500	160	100		10/24/14 22:32	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		100		10/24/14 22:32	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		100		10/24/14 22:32	17060-07-0	
Toluene-d8 (S)	97	%	70-130		100		10/24/14 22:32	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-15 **Lab ID: 92221353012** Collected: 10/13/14 14:42 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 20:04	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	118	%	60-140		1	10/16/14 11:28	10/16/14 20:04	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 08:29	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 08:29	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 08:29	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 08:29	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 08:29	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 08:29	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 08:29	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 08:29	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 08:29	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 08:29	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 08:29	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/21/14 08:29	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 08:29	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 08:29	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 08:29	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 08:29	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 08:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		10/21/14 08:29	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/21/14 08:29	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/21/14 08:29	2037-26-5	

Sample: MW-16 **Lab ID: 92221353013** Collected: 10/13/14 15:36 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 20:24	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	115	%	60-140		1	10/16/14 11:28	10/16/14 20:24	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/22/14 20:00	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/22/14 20:00	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/22/14 20:00	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/22/14 20:00	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/22/14 20:00	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/22/14 20:00	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/22/14 20:00	107-06-2	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-16 **Lab ID: 92221353013** Collected: 10/13/14 15:36 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/22/14 20:00	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/22/14 20:00	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/22/14 20:00	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/22/14 20:00	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/22/14 20:00	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/22/14 20:00	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/22/14 20:00	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/22/14 20:00	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/22/14 20:00	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/22/14 20:00	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		10/22/14 20:00	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		10/22/14 20:00	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		10/22/14 20:00	2037-26-5	

Sample: MW-17 **Lab ID: 92221353014** Collected: 10/13/14 13:52 Received: 10/14/14 16:35 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)	**23.7**	ug/L	1.0	1.0	50	10/16/14 11:28	10/19/14 02:54	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		50	10/16/14 11:28	10/19/14 02:54	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**85300**	ug/L	12500	9600	125		10/24/14 22:49	75-85-4	
tert-Amylmethyl ether	ND	ug/L	1250	425	125		10/24/14 22:49	994-05-8	
Benzene	**12200**	ug/L	625	212	125		10/24/14 22:49	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	12500	4010	125		10/24/14 22:49	624-95-3	
tert-Butyl Alcohol	**11500J**	ug/L	12500	7210	125		10/24/14 22:49	75-65-0	
tert-Butyl Formate	ND	ug/L	6250	912	125		10/24/14 22:49	762-75-4	
1,2-Dichloroethane	**754**	ug/L	625	225	125		10/24/14 22:49	107-06-2	
Diisopropyl ether	**2000**	ug/L	625	212	125		10/24/14 22:49	108-20-3	
Ethanol	ND	ug/L	25000	17200	125		10/24/14 22:49	64-17-5	
Ethylbenzene	**2750**	ug/L	625	200	125		10/24/14 22:49	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1250	450	125		10/24/14 22:49	637-92-3	
Methyl-tert-butyl ether	**766**	ug/L	625	212	125		10/24/14 22:49	1634-04-4	
Naphthalene	**489J**	ug/L	625	250	125		10/24/14 22:49	91-20-3	
Toluene	**16500**	ug/L	625	200	125		10/24/14 22:49	108-88-3	
Xylene (Total)	**16900**	ug/L	1250	338	125		10/24/14 22:49	1330-20-7	
m&p-Xylene	**12100**	ug/L	1250	388	125		10/24/14 22:49	179601-23-1	
o-Xylene	**4830**	ug/L	625	200	125		10/24/14 22:49	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		125		10/24/14 22:49	460-00-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-17 **Lab ID: 92221353014** Collected: 10/13/14 13:52 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	70-130		125		10/24/14 22:49	17060-07-0	
Toluene-d8 (S)	98	%	70-130		125		10/24/14 22:49	2037-26-5	

Sample: MW-18 **Lab ID: 92221353015** Collected: 10/13/14 14:02 Received: 10/14/14 16:35 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)	**19.6**	ug/L	1.0	1.0	50	10/16/14 11:28	10/19/14 03:14	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		50	10/16/14 11:28	10/19/14 03:14	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	5000	3840	50		10/24/14 22:16	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	170	50		10/24/14 22:16	994-05-8	
Benzene	**4540**	ug/L	250	85.0	50		10/24/14 22:16	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	1600	50		10/24/14 22:16	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	2880	50		10/24/14 22:16	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	365	50		10/24/14 22:16	762-75-4	
1,2-Dichloroethane	ND	ug/L	250	90.0	50		10/24/14 22:16	107-06-2	
Diisopropyl ether	**462**	ug/L	250	85.0	50		10/24/14 22:16	108-20-3	
Ethanol	ND	ug/L	10000	6890	50		10/24/14 22:16	64-17-5	
Ethylbenzene	**3350**	ug/L	250	80.0	50		10/24/14 22:16	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	180	50		10/24/14 22:16	637-92-3	
Methyl-tert-butyl ether	**120J**	ug/L	250	85.0	50		10/24/14 22:16	1634-04-4	
Naphthalene	**540**	ug/L	250	100	50		10/24/14 22:16	91-20-3	
Toluene	**26800**	ug/L	1250	400	250		10/25/14 13:35	108-88-3	
Xylene (Total)	**18700**	ug/L	500	135	50		10/24/14 22:16	1330-20-7	
m&p-Xylene	**13100**	ug/L	500	155	50		10/24/14 22:16	179601-23-1	
o-Xylene	**5580**	ug/L	250	80.0	50		10/24/14 22:16	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		50		10/24/14 22:16	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		50		10/24/14 22:16	17060-07-0	
Toluene-d8 (S)	97	%	70-130		50		10/24/14 22:16	2037-26-5	

Sample: MW-19 **Lab ID: 92221353016** Collected: 10/13/14 11:46 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 21:22	106-93-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-19 **Lab ID: 92221353016** Collected: 10/13/14 11:46 Received: 10/14/14 16:35 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								
Surrogates									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	10/16/14 11:28	10/16/14 21:22	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 08:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 08:45	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 08:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 08:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 08:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 08:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 08:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 08:45	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 08:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 08:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 08:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/21/14 08:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 08:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 08:45	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 08:45	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 08:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 08:45	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		10/21/14 08:45	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		10/21/14 08:45	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/21/14 08:45	2037-26-5	

Sample: MW-20 **Lab ID: 92221353017** Collected: 10/13/14 10:46 Received: 10/14/14 16:35 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	10/16/14 11:28	10/16/14 21:42	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	112	%	60-140		1	10/16/14 11:28	10/16/14 21:42	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 09:01	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 09:01	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 09:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 09:01	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 09:01	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 09:01	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 09:01	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 09:01	108-20-3	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-20 **Lab ID: 92221353017** Collected: 10/13/14 10:46 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Ethanol	ND	ug/L	200	138	1		10/21/14 09:01	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 09:01	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 09:01	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/21/14 09:01	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 09:01	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 09:01	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 09:01	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 09:01	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 09:01	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	127	%	70-130		1		10/21/14 09:01	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		10/21/14 09:01	17060-07-0	
Toluene-d8 (S)	88	%	70-130		1		10/21/14 09:01	2037-26-5	

Sample: MW-21 **Lab ID: 92221353018** Collected: 10/13/14 10:30 Received: 10/14/14 16:35 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)	**0.087**	ug/L	0.020	0.020	1	10/16/14 11:29	10/16/14 22:01	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	92	%	60-140		1	10/16/14 11:29	10/16/14 22:01	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 09:18	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 09:18	994-05-8	
Benzene	**22.6**	ug/L	5.0	1.7	1		10/21/14 09:18	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 09:18	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 09:18	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 09:18	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 09:18	107-06-2	
Diisopropyl ether	**2.4J**	ug/L	5.0	1.7	1		10/21/14 09:18	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 09:18	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 09:18	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 09:18	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/21/14 09:18	1634-04-4	
Naphthalene	**8.9**	ug/L	5.0	2.0	1		10/21/14 09:18	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 09:18	108-88-3	
Xylene (Total)	**84.9**	ug/L	10.0	2.7	1		10/21/14 09:18	1330-20-7	
m&p-Xylene	**46.2**	ug/L	10.0	3.1	1		10/21/14 09:18	179601-23-1	
o-Xylene	**38.7**	ug/L	5.0	1.6	1		10/21/14 09:18	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		10/21/14 09:18	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		10/21/14 09:18	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-21 **Lab ID: 92221353018** Collected: 10/13/14 10:30 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	97	%	70-130		1		10/21/14 09:18	2037-26-5	

Sample: DW-1 **Lab ID: 92221353019** Collected: 10/13/14 12:58 Received: 10/14/14 16:35 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	10/16/14 11:29	10/16/14 22:21	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	120	%	60-140		1	10/16/14 11:29	10/16/14 22:21	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/25/14 00:07	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/25/14 00:07	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/25/14 00:07	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/25/14 00:07	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/25/14 00:07	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/25/14 00:07	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/25/14 00:07	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/25/14 00:07	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/25/14 00:07	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/25/14 00:07	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/25/14 00:07	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/25/14 00:07	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/25/14 00:07	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/25/14 00:07	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/25/14 00:07	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/25/14 00:07	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/25/14 00:07	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		10/25/14 00:07	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		10/25/14 00:07	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		10/25/14 00:07	2037-26-5	

Sample: DW-2 **Lab ID: 92221353020** Collected: 10/13/14 11:37 Received: 10/14/14 16:35 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)	**0.074**	ug/L	0.020	0.020	1	10/16/14 11:29	10/16/14 22:41	106-93-4	C2
Surrogates									
1-Chloro-2-bromopropane (S)	116	%	60-140		1	10/16/14 11:29	10/16/14 22:41	301-79-56	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: DW-2 **Lab ID: 92221353020** Collected: 10/13/14 11:37 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**16900**	ug/L	10000	7680	100		10/25/14 02:27	75-85-4	
tert-Amylmethyl ether	ND	ug/L	1000	340	100		10/25/14 02:27	994-05-8	
Benzene	**8520**	ug/L	500	170	100		10/25/14 02:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	10000	3210	100		10/25/14 02:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	10000	5770	100		10/25/14 02:27	75-65-0	
tert-Butyl Formate	ND	ug/L	5000	730	100		10/25/14 02:27	762-75-4	
1,2-Dichloroethane	**598**	ug/L	500	180	100		10/25/14 02:27	107-06-2	
Diisopropyl ether	**913**	ug/L	500	170	100		10/25/14 02:27	108-20-3	
Ethanol	ND	ug/L	20000	13800	100		10/25/14 02:27	64-17-5	
Ethylbenzene	ND	ug/L	500	160	100		10/25/14 02:27	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1000	360	100		10/25/14 02:27	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	500	170	100		10/25/14 02:27	1634-04-4	
Naphthalene	**325J**	ug/L	500	200	100		10/25/14 02:27	91-20-3	
Toluene	ND	ug/L	500	160	100		10/25/14 02:27	108-88-3	
Xylene (Total)	**751J**	ug/L	1000	270	100		10/25/14 02:27	1330-20-7	
m&p-Xylene	**610J**	ug/L	1000	310	100		10/25/14 02:27	179601-23-1	
o-Xylene	**751**	ug/L	500	160	100		10/25/14 02:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		100		10/25/14 02:27	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		100		10/25/14 02:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130		100		10/25/14 02:27	2037-26-5	

Sample: AFVR-1 **Lab ID: 92221353021** Collected: 10/13/14 12:14 Received: 10/14/14 16:35 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	0.022	0.022	1	10/16/14 11:43	10/17/14 00:19	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	115	%	60-140		1	10/16/14 11:43	10/17/14 00:19	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	500	384	5		10/24/14 20:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	50.0	17.0	5		10/24/14 20:21	994-05-8	
Benzene	ND	ug/L	25.0	8.5	5		10/24/14 20:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	500	160	5		10/24/14 20:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	500	288	5		10/24/14 20:21	75-65-0	
tert-Butyl Formate	ND	ug/L	250	36.5	5		10/24/14 20:21	762-75-4	
1,2-Dichloroethane	ND	ug/L	25.0	9.0	5		10/24/14 20:21	107-06-2	
Diisopropyl ether	ND	ug/L	25.0	8.5	5		10/24/14 20:21	108-20-3	
Ethanol	ND	ug/L	1000	689	5		10/24/14 20:21	64-17-5	
Ethylbenzene	**149**	ug/L	25.0	8.0	5		10/24/14 20:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	50.0	18.0	5		10/24/14 20:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	25.0	8.5	5		10/24/14 20:21	1634-04-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: AFVR-1 **Lab ID: 92221353021** Collected: 10/13/14 12:14 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Naphthalene	**113**	ug/L	25.0	10.0	5		10/24/14 20:21	91-20-3	
Toluene	**11.1J**	ug/L	25.0	8.0	5		10/24/14 20:21	108-88-3	
Xylene (Total)	**1740**	ug/L	50.0	13.5	5		10/24/14 20:21	1330-20-7	
m&p-Xylene	**1270**	ug/L	50.0	15.5	5		10/24/14 20:21	179601-23-1	
o-Xylene	**476**	ug/L	25.0	8.0	5		10/24/14 20:21	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		5		10/24/14 20:21	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		5		10/24/14 20:21	17060-07-0	
Toluene-d8 (S)	99	%	70-130		5		10/24/14 20:21	2037-26-5	

Sample: AFVR-2 **Lab ID: 92221353022** Collected: 10/13/14 13:05 Received: 10/14/14 16:35 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)	**4.1**	ug/L	0.10	0.10	5	10/16/14 11:43	10/19/14 03:34	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		5	10/16/14 11:43	10/19/14 03:34	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	20000	15400	200		10/25/14 16:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	2000	680	200		10/25/14 16:52	994-05-8	
Benzene	**1420**	ug/L	1000	340	200		10/25/14 16:52	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	20000	6420	200		10/25/14 16:52	624-95-3	
tert-Butyl Alcohol	ND	ug/L	20000	11500	200		10/25/14 16:52	75-65-0	
tert-Butyl Formate	ND	ug/L	10000	1460	200		10/25/14 16:52	762-75-4	
1,2-Dichloroethane	ND	ug/L	1000	360	200		10/25/14 16:52	107-06-2	
Diisopropyl ether	ND	ug/L	1000	340	200		10/25/14 16:52	108-20-3	
Ethanol	ND	ug/L	40000	27600	200		10/25/14 16:52	64-17-5	
Ethylbenzene	**2790**	ug/L	1000	320	200		10/25/14 16:52	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	2000	720	200		10/25/14 16:52	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1000	340	200		10/25/14 16:52	1634-04-4	
Naphthalene	**879J**	ug/L	1000	400	200		10/25/14 16:52	91-20-3	
Toluene	**19300**	ug/L	1000	320	200		10/25/14 16:52	108-88-3	
Xylene (Total)	**25200**	ug/L	2000	540	200		10/25/14 16:52	1330-20-7	
m&p-Xylene	**16200**	ug/L	2000	620	200		10/25/14 16:52	179601-23-1	
o-Xylene	**8960**	ug/L	1000	320	200		10/25/14 16:52	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		200		10/25/14 16:52	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		200		10/25/14 16:52	17060-07-0	
Toluene-d8 (S)	100	%	70-130		200		10/25/14 16:52	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: AFVR-4 **Lab ID: 92221353023** Collected: 10/13/14 14:22 Received: 10/14/14 16:35 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)	**271**	ug/L	8.0	8.0	400	10/16/14 11:43	10/19/14 03:54	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		400	10/16/14 11:43	10/19/14 03:54	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**76500**	ug/L	25000	19200	250		10/25/14 17:09	75-85-4	
tert-Amylmethyl ether	ND	ug/L	2500	850	250		10/25/14 17:09	994-05-8	
Benzene	**16700**	ug/L	1250	425	250		10/25/14 17:09	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	25000	8020	250		10/25/14 17:09	624-95-3	
tert-Butyl Alcohol	ND	ug/L	25000	14400	250		10/25/14 17:09	75-65-0	
tert-Butyl Formate	ND	ug/L	12500	1820	250		10/25/14 17:09	762-75-4	
1,2-Dichloroethane	**1740**	ug/L	1250	450	250		10/25/14 17:09	107-06-2	
Diisopropyl ether	**2600**	ug/L	1250	425	250		10/25/14 17:09	108-20-3	
Ethanol	ND	ug/L	50000	34400	250		10/25/14 17:09	64-17-5	
Ethylbenzene	**1590**	ug/L	1250	400	250		10/25/14 17:09	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	2500	900	250		10/25/14 17:09	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1250	425	250		10/25/14 17:09	1634-04-4	
Naphthalene	**1110J**	ug/L	1250	500	250		10/25/14 17:09	91-20-3	
Toluene	**22500**	ug/L	1250	400	250		10/25/14 17:09	108-88-3	
Xylene (Total)	**27400**	ug/L	2500	675	250		10/25/14 17:09	1330-20-7	
m&p-Xylene	**18400**	ug/L	2500	775	250		10/25/14 17:09	179601-23-1	
o-Xylene	**8970**	ug/L	1250	400	250		10/25/14 17:09	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		250		10/25/14 17:09	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		250		10/25/14 17:09	17060-07-0	
Toluene-d8 (S)	99	%	70-130		250		10/25/14 17:09	2037-26-5	

Sample: MW-12 DUP **Lab ID: 92221353024** Collected: 10/13/14 12:28 Received: 10/14/14 16:35 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)	**12.8**	ug/L	0.41	0.41	20	10/16/14 11:43	10/19/14 04:13	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		20	10/16/14 11:43	10/19/14 04:13	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	12500	9600	125		10/24/14 23:05	75-85-4	
tert-Amylmethyl ether	ND	ug/L	1250	425	125		10/24/14 23:05	994-05-8	
Benzene	**1800**	ug/L	625	212	125		10/24/14 23:05	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	12500	4010	125		10/24/14 23:05	624-95-3	
tert-Butyl Alcohol	ND	ug/L	12500	7210	125		10/24/14 23:05	75-65-0	
tert-Butyl Formate	ND	ug/L	6250	912	125		10/24/14 23:05	762-75-4	
1,2-Dichloroethane	ND	ug/L	625	225	125		10/24/14 23:05	107-06-2	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: MW-12 DUP **Lab ID: 92221353024** Collected: 10/13/14 12:28 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Diisopropyl ether	ND	ug/L	625	212	125		10/24/14 23:05	108-20-3	
Ethanol	ND	ug/L	25000	17200	125		10/24/14 23:05	64-17-5	
Ethylbenzene	**2610**	ug/L	625	200	125		10/24/14 23:05	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1250	450	125		10/24/14 23:05	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	625	212	125		10/24/14 23:05	1634-04-4	
Naphthalene	**564J**	ug/L	625	250	125		10/24/14 23:05	91-20-3	
Toluene	**19200**	ug/L	625	200	125		10/24/14 23:05	108-88-3	
Xylene (Total)	**19000**	ug/L	1250	338	125		10/24/14 23:05	1330-20-7	
m&p-Xylene	**12800**	ug/L	1250	388	125		10/24/14 23:05	179601-23-1	
o-Xylene	**6180**	ug/L	625	200	125		10/24/14 23:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		125		10/24/14 23:05	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		125		10/24/14 23:05	17060-07-0	
Toluene-d8 (S)	97	%	70-130		125		10/24/14 23:05	2037-26-5	

Sample: AFVR2 DUP **Lab ID: 92221353025** Collected: 10/13/14 13:05 Received: 10/14/14 16:35 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)	**4.1**	ug/L	0.10	0.10	5	10/16/14 11:43	10/19/14 04:33	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		5	10/16/14 11:43	10/19/14 04:33	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	20000	15400	200		10/25/14 17:26	75-85-4	
tert-Amylmethyl ether	ND	ug/L	2000	680	200		10/25/14 17:26	994-05-8	
Benzene	**1500**	ug/L	1000	340	200		10/25/14 17:26	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	20000	6420	200		10/25/14 17:26	624-95-3	
tert-Butyl Alcohol	ND	ug/L	20000	11500	200		10/25/14 17:26	75-65-0	
tert-Butyl Formate	ND	ug/L	10000	1460	200		10/25/14 17:26	762-75-4	
1,2-Dichloroethane	ND	ug/L	1000	360	200		10/25/14 17:26	107-06-2	
Diisopropyl ether	**340J**	ug/L	1000	340	200		10/25/14 17:26	108-20-3	
Ethanol	ND	ug/L	40000	27600	200		10/25/14 17:26	64-17-5	
Ethylbenzene	**4550**	ug/L	1000	320	200		10/25/14 17:26	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	2000	720	200		10/25/14 17:26	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1000	340	200		10/25/14 17:26	1634-04-4	
Naphthalene	**1530**	ug/L	1000	400	200		10/25/14 17:26	91-20-3	
Toluene	**22800**	ug/L	1000	320	200		10/25/14 17:26	108-88-3	
Xylene (Total)	**35300**	ug/L	2000	540	200		10/25/14 17:26	1330-20-7	
m&p-Xylene	**23000**	ug/L	2000	620	200		10/25/14 17:26	179601-23-1	
o-Xylene	**12300**	ug/L	1000	320	200		10/25/14 17:26	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		200		10/25/14 17:26	460-00-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: AFVR2 DUP **Lab ID: 92221353025** Collected: 10/13/14 13:05 Received: 10/14/14 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%	70-130		200		10/25/14 17:26	17060-07-0	
Toluene-d8 (S)	100	%	70-130		200		10/25/14 17:26	2037-26-5	

Sample: FIELD BLANK **Lab ID: 92221353026** Collected: 10/13/14 10:25 Received: 10/14/14 16:35 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	10/16/14 11:43	10/17/14 01:58	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	10/16/14 11:43	10/17/14 01:58	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 05:28	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 05:28	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 05:28	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 05:28	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 05:28	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 05:28	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 05:28	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 05:28	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 05:28	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 05:28	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 05:28	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/21/14 05:28	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 05:28	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 05:28	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 05:28	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 05:28	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 05:28	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		10/21/14 05:28	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		10/21/14 05:28	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		10/21/14 05:28	2037-26-5	

Sample: TRIP BLANK **Lab ID: 92221353027** Collected: 10/13/14 10:25 Received: 10/14/14 16:35 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	10/16/14 11:43	10/17/14 02:18	106-93-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical
www.pacelabs.com

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

ANALYTICAL RESULTS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Sample: TRIP BLANK **Lab ID: 92221353027** Collected: 10/13/14 10:25 Received: 10/14/14 16:35 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								
Surrogates									
1-Chloro-2-bromopropane (S)	115	%	60-140		1	10/16/14 11:43	10/17/14 02:18	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		10/21/14 05:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		10/21/14 05:45	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		10/21/14 05:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		10/21/14 05:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		10/21/14 05:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		10/21/14 05:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		10/21/14 05:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		10/21/14 05:45	108-20-3	
Ethanol	ND	ug/L	200	138	1		10/21/14 05:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		10/21/14 05:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		10/21/14 05:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		10/21/14 05:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		10/21/14 05:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		10/21/14 05:45	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		10/21/14 05:45	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		10/21/14 05:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		10/21/14 05:45	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		10/21/14 05:45	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		10/21/14 05:45	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		10/21/14 05:45	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

QC Batch: MSV/28835 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92221353002, 92221353003, 92221353004, 92221353008, 92221353012, 92221353016, 92221353017, 92221353018, 92221353026, 92221353027

METHOD BLANK: 1311025 Matrix: Water
Associated Lab Samples: 92221353002, 92221353003, 92221353004, 92221353008, 92221353012, 92221353016, 92221353017, 92221353018, 92221353026, 92221353027

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/21/14 00:02	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/21/14 00:02	
Benzene	ug/L	ND	5.0	10/21/14 00:02	
Diisopropyl ether	ug/L	ND	5.0	10/21/14 00:02	
Ethanol	ug/L	ND	200	10/21/14 00:02	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/21/14 00:02	
Ethylbenzene	ug/L	ND	5.0	10/21/14 00:02	
m&p-Xylene	ug/L	ND	10.0	10/21/14 00:02	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/21/14 00:02	
Naphthalene	ug/L	ND	5.0	10/21/14 00:02	
o-Xylene	ug/L	ND	5.0	10/21/14 00:02	
tert-Amyl Alcohol	ug/L	ND	100	10/21/14 00:02	
tert-Amylmethyl ether	ug/L	ND	10.0	10/21/14 00:02	
tert-Butyl Alcohol	ug/L	ND	100	10/21/14 00:02	
tert-Butyl Formate	ug/L	ND	50.0	10/21/14 00:02	
Toluene	ug/L	ND	5.0	10/21/14 00:02	
Xylene (Total)	ug/L	ND	10.0	10/21/14 00:02	
1,2-Dichloroethane-d4 (S)	%	104	70-130	10/21/14 00:02	
4-Bromofluorobenzene (S)	%	106	70-130	10/21/14 00:02	
Toluene-d8 (S)	%	87	70-130	10/21/14 00:02	

LABORATORY CONTROL SAMPLE: 1311026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	40.8	82	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1140	114	70-130	
Benzene	ug/L	50	55.9	112	70-130	
Diisopropyl ether	ug/L	50	47.8	96	70-130	
Ethanol	ug/L	2000	1820	91	70-130	
Ethyl-tert-butyl ether	ug/L	100	92.1	92	70-130	
Ethylbenzene	ug/L	50	46.1	92	70-130	
m&p-Xylene	ug/L	100	89.8	90	70-130	
Methyl-tert-butyl ether	ug/L	50	41.5	83	70-130	
Naphthalene	ug/L	50	62.9	126	70-130	
o-Xylene	ug/L	50	45.6	91	70-130	
tert-Amyl Alcohol	ug/L	1000	1100	110	70-130	
tert-Amylmethyl ether	ug/L	100	128	128	70-130	
tert-Butyl Alcohol	ug/L	500	410	82	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.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

LABORATORY CONTROL SAMPLE: 1311026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	370	93	70-130	
Toluene	ug/L	50	51.5	103	70-130	
Xylene (Total)	ug/L	150	135	90	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			94	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 1311028

Parameter	Units	92221207014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	18.6	93	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	384	96	70-130	
Benzene	ug/L	ND	20	24.3	122	70-130	
Diisopropyl ether	ug/L	ND	20	26.3	131	70-130	M0
Ethanol	ug/L	ND	800	557	70	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	48.0	120	70-130	
Ethylbenzene	ug/L	ND	20	20.7	104	70-130	
m&p-Xylene	ug/L	ND	40	39.7	99	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	24.3	122	70-130	
Naphthalene	ug/L	ND	20	27.8	139	70-130	M0
o-Xylene	ug/L	ND	20	19.2	96	70-130	
tert-Amyl Alcohol	ug/L	ND	400	376	94	70-130	
tert-Amylmethyl ether	ug/L	ND	40	42.3	106	70-130	
tert-Butyl Alcohol	ug/L	ND	200	295	148	70-130	M0
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
Toluene	ug/L	ND	20	23.3	117	70-130	
1,2-Dichloroethane-d4 (S)	%				105	70-130	
4-Bromofluorobenzene (S)	%				86	70-130	
Toluene-d8 (S)	%				104	70-130	

SAMPLE DUPLICATE: 1311027

Parameter	Units	92221207013 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

SAMPLE DUPLICATE: 1311027

Parameter	Units	92221207013 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	101	99	2		
4-Bromofluorobenzene (S)	%	99	100	1		
Toluene-d8 (S)	%	97	99	3		

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.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

QC Batch: MSV/28854 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92221353001, 92221353005, 92221353006, 92221353007, 92221353009, 92221353010, 92221353013

METHOD BLANK: 1312260 Matrix: Water
Associated Lab Samples: 92221353001, 92221353005, 92221353006, 92221353007, 92221353009, 92221353010, 92221353013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/22/14 12:48	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/22/14 12:48	
Benzene	ug/L	ND	5.0	10/22/14 12:48	
Diisopropyl ether	ug/L	ND	5.0	10/22/14 12:48	
Ethanol	ug/L	ND	200	10/22/14 12:48	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/22/14 12:48	
Ethylbenzene	ug/L	ND	5.0	10/22/14 12:48	
m&p-Xylene	ug/L	ND	10.0	10/22/14 12:48	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/22/14 12:48	
Naphthalene	ug/L	ND	5.0	10/22/14 12:48	
o-Xylene	ug/L	ND	5.0	10/22/14 12:48	
tert-Amyl Alcohol	ug/L	ND	100	10/22/14 12:48	
tert-Amylmethyl ether	ug/L	ND	10.0	10/22/14 12:48	
tert-Butyl Alcohol	ug/L	ND	100	10/22/14 12:48	
tert-Butyl Formate	ug/L	ND	50.0	10/22/14 12:48	
Toluene	ug/L	ND	5.0	10/22/14 12:48	
Xylene (Total)	ug/L	ND	10.0	10/22/14 12:48	
1,2-Dichloroethane-d4 (S)	%	100	70-130	10/22/14 12:48	
4-Bromofluorobenzene (S)	%	103	70-130	10/22/14 12:48	
Toluene-d8 (S)	%	96	70-130	10/22/14 12:48	

LABORATORY CONTROL SAMPLE: 1312261

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	1170	117	70-130	
Benzene	ug/L	50	52.6	105	70-130	
Diisopropyl ether	ug/L	50	45.2	90	70-130	
Ethanol	ug/L	2000	2750	138	70-130	L3
Ethyl-tert-butyl ether	ug/L	100	93.7	94	70-130	
Ethylbenzene	ug/L	50	55.4	111	70-130	
m&p-Xylene	ug/L	100	109	109	70-130	
Methyl-tert-butyl ether	ug/L	50	45.2	90	70-130	
Naphthalene	ug/L	50	55.7	111	70-130	
o-Xylene	ug/L	50	52.3	105	70-130	
tert-Amyl Alcohol	ug/L	1000	1180	118	70-130	
tert-Amylmethyl ether	ug/L	100	111	111	70-130	
tert-Butyl Alcohol	ug/L	500	532	106	70-130	
tert-Butyl Formate	ug/L	400	379	95	70-130	
Toluene	ug/L	50	51.3	103	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

LABORATORY CONTROL SAMPLE: 1312261

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	162	108	70-130	
1,2-Dichloroethane-d4 (S)	%			81	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1312262

Parameter	Units	92221353006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	19.5	97	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	441	110	70-130	
Benzene	ug/L	13.7	20	40.7	135	70-130	M0
Diisopropyl ether	ug/L	ND	20	19.4	97	70-130	
Ethanol	ug/L	ND	800	989	124	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	40.5	101	70-130	
Ethylbenzene	ug/L	6.2	20	31.0	124	70-130	
m&p-Xylene	ug/L	ND	40	48.3	119	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	18.7	93	70-130	
Naphthalene	ug/L	151	20	191	199	70-130	M0
o-Xylene	ug/L	ND	20	22.4	111	70-130	
tert-Amyl Alcohol	ug/L	ND	400	493	122	70-130	
tert-Amylmethyl ether	ug/L	ND	40	47.7	119	70-130	
tert-Butyl Alcohol	ug/L	ND	200	308	148	70-130	M0
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
Toluene	ug/L	ND	20	24.4	122	70-130	
1,2-Dichloroethane-d4 (S)	%				90	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				97	70-130	

SAMPLE DUPLICATE: 1312263

Parameter	Units	92221353007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	2.8J	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

SAMPLE DUPLICATE: 1312263

Parameter	Units	92221353007 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	105	102	2		
4-Bromofluorobenzene (S)	%	103	102	1		
Toluene-d8 (S)	%	97	97	0		

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.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

QC Batch: MSV/28882 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92221353011, 92221353014, 92221353015, 92221353021, 92221353024

METHOD BLANK: 1313945 Matrix: Water
Associated Lab Samples: 92221353011, 92221353014, 92221353015, 92221353021, 92221353024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/24/14 18:27	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/24/14 18:27	
Benzene	ug/L	ND	5.0	10/24/14 18:27	
Diisopropyl ether	ug/L	ND	5.0	10/24/14 18:27	
Ethanol	ug/L	ND	200	10/24/14 18:27	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/24/14 18:27	
Ethylbenzene	ug/L	ND	5.0	10/24/14 18:27	
m&p-Xylene	ug/L	ND	10.0	10/24/14 18:27	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/24/14 18:27	
Naphthalene	ug/L	ND	5.0	10/24/14 18:27	
o-Xylene	ug/L	ND	5.0	10/24/14 18:27	
tert-Amyl Alcohol	ug/L	ND	100	10/24/14 18:27	
tert-Amylmethyl ether	ug/L	ND	10.0	10/24/14 18:27	
tert-Butyl Alcohol	ug/L	ND	100	10/24/14 18:27	
tert-Butyl Formate	ug/L	ND	50.0	10/24/14 18:27	
Toluene	ug/L	ND	5.0	10/24/14 18:27	
Xylene (Total)	ug/L	ND	10.0	10/24/14 18:27	
1,2-Dichloroethane-d4 (S)	%	98	70-130	10/24/14 18:27	
4-Bromofluorobenzene (S)	%	100	70-130	10/24/14 18:27	
Toluene-d8 (S)	%	98	70-130	10/24/14 18:27	

LABORATORY CONTROL SAMPLE: 1313946

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.7	99	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1020	102	70-130	
Benzene	ug/L	50	49.3	99	70-130	
Diisopropyl ether	ug/L	50	52.0	104	70-130	
Ethanol	ug/L	2000	2070	103	70-130	
Ethyl-tert-butyl ether	ug/L	100	109	109	70-130	
Ethylbenzene	ug/L	50	48.2	96	70-130	
m&p-Xylene	ug/L	100	107	107	70-130	
Methyl-tert-butyl ether	ug/L	50	51.4	103	70-130	
Naphthalene	ug/L	50	48.3	97	70-130	
o-Xylene	ug/L	50	47.0	94	70-130	
tert-Amyl Alcohol	ug/L	1000	1000	100	70-130	
tert-Amylmethyl ether	ug/L	100	102	102	70-130	
tert-Butyl Alcohol	ug/L	500	522	104	70-130	
tert-Butyl Formate	ug/L	400	432	108	70-130	
Toluene	ug/L	50	47.8	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

LABORATORY CONTROL SAMPLE: 1313946

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	154	102	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1313948

Parameter	Units	92221207012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	500	543	109	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	10000	10600	106	70-130	
Benzene	ug/L	96.6J	500	691	119	70-130	
Diisopropyl ether	ug/L	ND	500	565	112	70-130	
Ethanol	ug/L	ND	20000	14200	71	70-130	
Ethyl-tert-butyl ether	ug/L	ND	1000	1180	118	70-130	
Ethylbenzene	ug/L	2160	500	2580	85	70-130	
m&p-Xylene	ug/L	6580	1000	7440	86	70-130	
Methyl-tert-butyl ether	ug/L	ND	500	560	112	70-130	
Naphthalene	ug/L	412	500	945	106	70-130	
o-Xylene	ug/L	2360	500	2840	97	70-130	
tert-Amyl Alcohol	ug/L	ND	10000	10600	105	70-130	
tert-Amylmethyl ether	ug/L	ND	1000	1160	116	70-130	
tert-Butyl Alcohol	ug/L	ND	5000	6520	130	70-130	
tert-Butyl Formate	ug/L	ND	4000	1990	50	70-130	P5
Toluene	ug/L	132	500	706	115	70-130	
1,2-Dichloroethane-d4 (S)	%				98	70-130	
4-Bromofluorobenzene (S)	%				97	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 1313947

Parameter	Units	92221207015 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	412	413	0	30	
Diisopropyl ether	ug/L	24.6J	24.9J		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	204	207	2	30	
m&p-Xylene	ug/L	1120	1140	2	30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	108	106	2	30	
o-Xylene	ug/L	845	858	2	30	
tert-Amyl Alcohol	ug/L	1220	1190	3	30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

SAMPLE DUPLICATE: 1313947

Parameter	Units	92221207015 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	1110	1110	1	30	
Xylene (Total)	ug/L	1970	2000	2	30	
1,2-Dichloroethane-d4 (S)	%	98	97	1		
4-Bromofluorobenzene (S)	%	97	96	0		
Toluene-d8 (S)	%	98	97	1		

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.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

QC Batch: MSV/28896 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV SC
Associated Lab Samples: 92221353019, 92221353020

METHOD BLANK: 1314979 | Matrix: Water
Associated Lab Samples: 92221353019, 92221353020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/24/14 18:41	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/24/14 18:41	
Benzene	ug/L	ND	5.0	10/24/14 18:41	
Diisopropyl ether	ug/L	ND	5.0	10/24/14 18:41	
Ethanol	ug/L	ND	200	10/24/14 18:41	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/24/14 18:41	
Ethylbenzene	ug/L	ND	5.0	10/24/14 18:41	
m&p-Xylene	ug/L	ND	10.0	10/24/14 18:41	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/24/14 18:41	
Naphthalene	ug/L	ND	5.0	10/24/14 18:41	
o-Xylene	ug/L	ND	5.0	10/24/14 18:41	
tert-Amyl Alcohol	ug/L	ND	100	10/24/14 18:41	
tert-Amylmethyl ether	ug/L	ND	10.0	10/24/14 18:41	
tert-Butyl Alcohol	ug/L	ND	100	10/24/14 18:41	
tert-Butyl Formate	ug/L	ND	50.0	10/24/14 18:41	
Toluene	ug/L	ND	5.0	10/24/14 18:41	
Xylene (Total)	ug/L	ND	10.0	10/24/14 18:41	
1,2-Dichloroethane-d4 (S)	%	92	70-130	10/24/14 18:41	
4-Bromofluorobenzene (S)	%	98	70-130	10/24/14 18:41	
Toluene-d8 (S)	%	99	70-130	10/24/14 18:41	

LABORATORY CONTROL SAMPLE: 1314980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	43.2	86	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	804	80	70-130	
Benzene	ug/L	50	47.4	95	70-130	
Diisopropyl ether	ug/L	50	47.1	94	70-130	
Ethanol	ug/L	2000	2760	138	70-130	L3
Ethyl-tert-butyl ether	ug/L	100	92.0	92	70-130	
Ethylbenzene	ug/L	50	42.4	85	70-130	
m&p-Xylene	ug/L	100	84.4	84	70-130	
Methyl-tert-butyl ether	ug/L	50	45.3	91	70-130	
Naphthalene	ug/L	50	40.2	80	70-130	
o-Xylene	ug/L	50	41.5	83	70-130	
tert-Amyl Alcohol	ug/L	1000	818	82	70-130	
tert-Amylmethyl ether	ug/L	100	88.8	89	70-130	
tert-Butyl Alcohol	ug/L	500	523	105	70-130	
tert-Butyl Formate	ug/L	400	209	52	70-130	L0
Toluene	ug/L	50	48.3	97	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

LABORATORY CONTROL SAMPLE: 1314980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	126	84	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1314981

Parameter	Units	92221207008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	18.5	92	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	253	63	70-130	M0
Benzene	ug/L	ND	20	21.1	106	70-130	
Diisopropyl ether	ug/L	ND	20	19.9	100	70-130	
Ethanol	ug/L	ND	800	1170	146	70-130	M0
Ethyl-tert-butyl ether	ug/L	ND	40	38.3	96	70-130	
Ethylbenzene	ug/L	ND	20	18.9	94	70-130	
m&p-Xylene	ug/L	ND	40	37.4	93	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	18.6	93	70-130	
Naphthalene	ug/L	ND	20	16.3	81	70-130	
o-Xylene	ug/L	ND	20	18.2	91	70-130	
tert-Amyl Alcohol	ug/L	ND	400	314	79	70-130	
tert-Amylmethyl ether	ug/L	ND	40	37.2	93	70-130	
tert-Butyl Alcohol	ug/L	ND	200	223	112	70-130	
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
Toluene	ug/L	ND	20	21.0	105	70-130	
1,2-Dichloroethane-d4 (S)	%				90	70-130	
4-Bromofluorobenzene (S)	%				99	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 1314982

Parameter	Units	92221207009 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

SAMPLE DUPLICATE: 1314982

Parameter	Units	92221207009 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	94	94	0		
4-Bromofluorobenzene (S)	%	99	98	1		
Toluene-d8 (S)	%	99	99	0		

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.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

QC Batch: MSV/28906 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV SC
Associated Lab Samples: 92221353022, 92221353023, 92221353025

METHOD BLANK: 1315480 | Matrix: Water
Associated Lab Samples: 92221353022, 92221353023, 92221353025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	10/25/14 16:00	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	10/25/14 16:00	
Benzene	ug/L	ND	5.0	10/25/14 16:00	
Diisopropyl ether	ug/L	ND	5.0	10/25/14 16:00	
Ethanol	ug/L	ND	200	10/25/14 16:00	
Ethyl-tert-butyl ether	ug/L	ND	10.0	10/25/14 16:00	
Ethylbenzene	ug/L	ND	5.0	10/25/14 16:00	
m&p-Xylene	ug/L	ND	10.0	10/25/14 16:00	
Methyl-tert-butyl ether	ug/L	ND	5.0	10/25/14 16:00	
Naphthalene	ug/L	ND	5.0	10/25/14 16:00	
o-Xylene	ug/L	ND	5.0	10/25/14 16:00	
tert-Amyl Alcohol	ug/L	ND	100	10/25/14 16:00	
tert-Amylmethyl ether	ug/L	ND	10.0	10/25/14 16:00	
tert-Butyl Alcohol	ug/L	ND	100	10/25/14 16:00	
tert-Butyl Formate	ug/L	ND	50.0	10/25/14 16:00	
Toluene	ug/L	ND	5.0	10/25/14 16:00	
Xylene (Total)	ug/L	ND	10.0	10/25/14 16:00	
1,2-Dichloroethane-d4 (S)	%	95	70-130	10/25/14 16:00	
4-Bromofluorobenzene (S)	%	103	70-130	10/25/14 16:00	
Toluene-d8 (S)	%	98	70-130	10/25/14 16:00	

LABORATORY CONTROL SAMPLE: 1315481

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	924	92	70-130	
Benzene	ug/L	50	47.5	95	70-130	
Diisopropyl ether	ug/L	50	47.8	96	70-130	
Ethanol	ug/L	2000	1960	98	70-130	
Ethyl-tert-butyl ether	ug/L	100	101	101	70-130	
Ethylbenzene	ug/L	50	48.1	96	70-130	
m&p-Xylene	ug/L	100	96.2	96	70-130	
Methyl-tert-butyl ether	ug/L	50	47.0	94	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	941	94	70-130	
tert-Amylmethyl ether	ug/L	100	108	108	70-130	
tert-Butyl Alcohol	ug/L	500	470	94	70-130	
tert-Butyl Formate	ug/L	400	363	91	70-130	
Toluene	ug/L	50	48.2	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

LABORATORY CONTROL SAMPLE: 1315481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	144	96	70-130	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1315482

Parameter	Units	92222015015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	14.5	20	33.7	96	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	322	81	70-130	
Benzene	ug/L	39.4	20	59.3	99	70-130	
Diisopropyl ether	ug/L	4.1J	20	22.6	93	70-130	
Ethanol	ug/L	ND	800	559	70	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	40.5	101	70-130	
Ethylbenzene	ug/L	ND	20	19.8	99	70-130	
m&p-Xylene	ug/L	9.6J	40	49.5	100	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19.7	98	70-130	
Naphthalene	ug/L	3.6J	20	22.4	94	70-130	
o-Xylene	ug/L	5.9	20	25.1	96	70-130	
tert-Amyl Alcohol	ug/L	ND	400	415	104	70-130	
tert-Amylmethyl ether	ug/L	ND	40	39.0	98	70-130	
tert-Butyl Alcohol	ug/L	1090	200	1500	206	70-130	M0
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
Toluene	ug/L	ND	20	20.5	103	70-130	
1,2-Dichloroethane-d4 (S)	%				98	70-130	
4-Bromofluorobenzene (S)	%				99	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 1315483

Parameter	Units	92222015020 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

SAMPLE DUPLICATE: 1315483

Parameter	Units	92222015020 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	97	97	0		
4-Bromofluorobenzene (S)	%	103	103	0		
Toluene-d8 (S)	%	99	99	0		

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.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical®
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

QC Batch: OEXT/30483 | Analysis Method: EPA 8011
QC Batch Method: EPA 8011 | Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92221353001, 92221353002, 92221353003, 92221353004, 92221353005, 92221353006, 92221353007, 92221353008, 92221353009, 92221353010, 92221353011, 92221353012, 92221353013, 92221353014, 92221353015, 92221353016, 92221353017, 92221353018, 92221353019, 92221353020

METHOD BLANK: 1308272 | Matrix: Water
Associated Lab Samples: 92221353001, 92221353002, 92221353003, 92221353004, 92221353005, 92221353006, 92221353007, 92221353008, 92221353009, 92221353010, 92221353011, 92221353012, 92221353013, 92221353014, 92221353015, 92221353016, 92221353017, 92221353018, 92221353019, 92221353020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/16/14 14:32	
1-Chloro-2-bromopropane (S)	%	121	60-140	10/16/14 14:32	

LABORATORY CONTROL SAMPLE & LCSD: 1308273 1308274

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	108	104	60-140	5	20	
1-Chloro-2-bromopropane (S)	%				119	120	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1308275 1308276

Parameter	Units	92221353002 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	0.31	0.31	110	110	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						117	116	60-140			

SAMPLE DUPLICATE: 1308277

Parameter	Units	92221353003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	114	117	5		

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALITY CONTROL DATA

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

QC Batch: OEXT/30485 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92221353021, 92221353022, 92221353023, 92221353024, 92221353025, 92221353026, 92221353027

METHOD BLANK: 1308285 Matrix: Water
Associated Lab Samples: 92221353021, 92221353022, 92221353023, 92221353024, 92221353025, 92221353026, 92221353027

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	10/16/14 23:20	
1-Chloro-2-bromopropane (S)	%	115	60-140	10/16/14 23:20	

LABORATORY CONTROL SAMPLE & LCSD: 1308286 1308287

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	108	104	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				115	116	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1308288 1308289

Parameter	Units	92221562002 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	0.28	98	98	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						109	109	60-140			

SAMPLE DUPLICATE: 1308290

Parameter	Units	92221562003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	114	111	2		

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALIFIERS

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

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

C2	Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
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.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical
www.pacelabs.com

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92221353001	MW-3	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353002	MW-4	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353003	MW-5	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353004	MW-6	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353005	MW-7	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353006	MW-8	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353007	MW-9	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353008	MW-10	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353009	MW-11	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353010	MW-12	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353011	MW-14	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353012	MW-15	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353013	MW-16	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353014	MW-17	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353015	MW-18	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353016	MW-19	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353017	MW-20	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353018	MW-21	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353019	DW-1	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353020	DW-2	EPA 8011	OEXT/30483	EPA 8011	GCSV/19203
92221353021	AFVR-1	EPA 8011	OEXT/30485	EPA 8011	GCSV/19204
92221353022	AFVR-2	EPA 8011	OEXT/30485	EPA 8011	GCSV/19204
92221353023	AFVR-4	EPA 8011	OEXT/30485	EPA 8011	GCSV/19204
92221353024	MW-12 DUP	EPA 8011	OEXT/30485	EPA 8011	GCSV/19204
92221353025	AFVR2 DUP	EPA 8011	OEXT/30485	EPA 8011	GCSV/19204
92221353026	FIELD BLANK	EPA 8011	OEXT/30485	EPA 8011	GCSV/19204
92221353027	TRIP BLANK	EPA 8011	OEXT/30485	EPA 8011	GCSV/19204
92221353001	MW-3	EPA 8260	MSV/28854		
92221353002	MW-4	EPA 8260	MSV/28835		
92221353003	MW-5	EPA 8260	MSV/28835		
92221353004	MW-6	EPA 8260	MSV/28835		
92221353005	MW-7	EPA 8260	MSV/28854		
92221353006	MW-8	EPA 8260	MSV/28854		
92221353007	MW-9	EPA 8260	MSV/28854		
92221353008	MW-10	EPA 8260	MSV/28835		
92221353009	MW-11	EPA 8260	MSV/28854		
92221353010	MW-12	EPA 8260	MSV/28854		
92221353011	MW-14	EPA 8260	MSV/28882		
92221353012	MW-15	EPA 8260	MSV/28835		
92221353013	MW-16	EPA 8260	MSV/28854		
92221353014	MW-17	EPA 8260	MSV/28882		
92221353015	MW-18	EPA 8260	MSV/28882		
92221353016	MW-19	EPA 8260	MSV/28835		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: COPELAND'S SERVICE STATION
Pace Project No.: 92221353

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92221353017	MW-20	EPA 8260	MSV/28835		
92221353018	MW-21	EPA 8260	MSV/28835		
92221353019	DW-1	EPA 8260	MSV/28896		
92221353020	DW-2	EPA 8260	MSV/28896		
92221353021	AFVR-1	EPA 8260	MSV/28882		
92221353022	AFVR-2	EPA 8260	MSV/28906		
92221353023	AFVR-4	EPA 8260	MSV/28906		
92221353024	MW-12 DUP	EPA 8260	MSV/28882		
92221353025	AFVR2 DUP	EPA 8260	MSV/28906		
92221353026	FIELD BLANK	EPA 8260	MSV/28835		
92221353027	TRIP BLANK	EPA 8260	MSV/28835		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

Pace Analytical	Sample Condition Upon Receipt (SCUR) Document Number: F-CHR-CS-003-rev.15	Page 1 of 2 Issuing Authority: Pace Huntersville Quality Office

Client Name: MECI

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

[redacted]

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 2.2 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: OP 10/15/14

Temp should be above freezing to 6°C

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

Field Data Required? Y / N

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: AMB Date: 10-15-14

SRF Review: AMB Date: 10-15-14

WO#: 92221353

92221353

(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)

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 3

1723388

Section A Required Client Information:
Company: MECI
Address: 231 Dooley Rd.
Lexington SC 29073
Email To:
Phone: 803 808 2043 Fax:
Requested Due Date/TAT:

Section B Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Copeland's Service Station
Project Number: 14-4885

Section C Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Baioni
Pace Profile #: 836-5

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER
Site Location STATE: SC Laurens

Section D Required Client Information

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

Requested Analysis Filtered (Y/N): BTEX, Naph, MTBE; 1,2 DCA; 2-OXY; EDB

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BTEX, Naph, MTBE	1,2 DCA	2-OXY	EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1					10/13			6				X					Y						92221353 Product
2	MW-2																							Not Sampled
3	MW-3						1455												X	X	X	X		No Odor 001
4	MW-4						1504																	No Odor 2
5	MW-5						1545																	No Odor 3
6	MW-6						1209																	No Odor 4
7	MW-7						1155																	No Odor 5
8	MW-8						1105																	Odor 6
9	MW-9						1528																	No Odor 7
10	MW-10						1513																	No Odor 8
11	MW-11						1220																	Odor 9
12	MW-12					10/13	1228		6				X					Y	Y	Y	Y	Y		Odor 10

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
	[signature]	10/13	17:00	[signature]	10/14	15:00			
	[signature] / Pace	10/14	1635	[signature] / Pace	10/14	1635	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Wesley Hess
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 10/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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.

Pace Analytical
www.pacelabs.com

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

1723387

Section A Required Client Information:
Company: MECI
Address: 231 Dooley Rd
Lexington, SC 29073
Email To:
Phone: 803 808 2068 Fax:
Requested Due Date/TAT:

Section B Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Copeland Service Station
Project Number: 14-4885

Section C Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Baioni
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER ____
Site Location STATE: SC Laurens

Section D Required Client Information:

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

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) BTEX Naph MTBE	12 DCA	1,2-DCA	EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-13					10/13																	Product
2	MW-14						14:13						X					X	X	X	X		Odor 011
3	MW-15						14:42																No Odor 12
4	MW-16						1536																No Odor 13
5	MW-17						1352																Odor 14
6	MW-18						1402																Odor 15
7	MW-19						1146																No Odor 16
8	MW-20						1047																No Odor 17
9	MW-21						1030																No Odor 18
10	DW-1						1258																No Odor 19
11	DW-2						1137																Odor 20
12	AFVR-1					10/13	1214						X					X	X	X	X		Odor 21

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
[signature]	10/13/14	17:00	[signature]	10/14	1500				
[signature]	10/14	1635	[signature] Pace	10/14/14	1635	23	Y	N	Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Wesley Hess
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 10/13/14

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.

Pace Analytical®
www.pacelabs.com

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

1723386

Section A Required Client Information:
Company: MECI
Address: 231 Dooley Rd
Lexington SC 29073
Email To:
Phone: 803 808 2043 Fax:
Requested Due Date/TAT:

Section B Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Copeland's Service Station
Project Number: 14-4885

Section C Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Baioni
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER
Site Location STATE: SC Laurens

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: STEX, Naph, MTBE	1,2 DCA	4-OXY	EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	AFVR-2					10/13	1305											X	X	X	X		Odor 22
2	AFVR-3																						Product
3	AFVR-4						1422											X	X	X	X		Odor 23
4	AFVR-5																						Product
5	AFVR-6																						Product
6	MW-12 Dup						1229											X	X	X	X		Duplicate 24
7	AFVR2 Dup						1205																Duplicate 25
8	Field Blank						1025																Field Blank 26
9	Trip Blank					10/13	1025											X	X	X	X		Trip Blank 27
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature]	10/12/14	17:00							
				Alex Ressmann	10/13/14	16:35	2.3	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Wes Hurst
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 10/13/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

APPENDIX C:

TAX MAP

(Not Applicable)

APPENDIX D:

SOIL BORING/FIELD SCREENING LOGS & 1903 FORMS

(Not Applicable)

APPENDIX E:

WELL COMPLETION LOGS & 1903 FORMS

(Not Applicable)

APPENDIX F:

AQUIFER EVALUATION SUMMARY FORMS, DATA, GRAPHS, EQUATIONS

(Not Applicable)

APPENDIX G:
DISPOSAL MANIFEST

Midlands
Environmental
Consultants, Inc.

November 11, 2014

Re: Treatment of Purge Water
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID Number 05964
MECI Project Number 14-4855

To Whom it May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

61.75 gallons of purge water was treated on October 31, 2014 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Jeff L. Coleman
Senior Scientist

APPENDIX H:

LOCAL ZONING REGULATIONS

(Not Applicable)

APPENDIX I:

FATE AND TRANSPORT MODELING

(Not Applicable)

APPENDIX J:

ACCESS AGREEMENTS

(Not Applicable)

APPENDIX K:

DATA VERIFICATION CHECKLIST

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Are 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? (Table 2 & Figure 5)	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? (Appendix B)	X		
24	If free-product is present, has the thickness been provided?	X		
25	Does the report include a brief discussion of the assessment done and the results?	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? (Tables 3 & 3A)	X		
35	Have the aquifer characteristics been provided and summarized on the appropriate form? (Appendix F)			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? (Figures 4, 4A, 4B, 4C)	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 E)			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? (Appendix K)	X		

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Monitoring Well Gauging

Site Information

Date: 10/22/15	Site ID #: 05694	Site Name: Copelands Service Station
County: Laurens	Project Manager: A. Looper	Field Personnel: A. Looper, R. Ariail, K. Barnes

Well Gauging Information

Well ID:	Total Well Depth (ft.)	Screened Interval (ft.)	Depth to Free Product (ft.)	Depth to Ground water (ft.)	Free Product Thickness (ft.)	Confirmed with Bailer?	Photos Taken ?	Well Pad OK?	Bolts in Well Cover?	Water in Well Vault?
MW-1	33.95	—	28.51	28.52	0.01	No	No	Replace well cap	No	
MW-12	35	25-35	—	28.63	—	No	No		No	
MW-13	35	25-35	29.34	30.01	0.67	No	No	(Replace well cap) yes	No	yes
MW-14	35	25-35	—	29.64	—	No	No		No	
AFVR-3	34.10	—	—	28.04	—	No	No		No	
AFVR-5	34.35	—	—	29.64	—	No	No	yes	No	
AFVR-6	34.36	—	28.71	28.72	0.01	No	No		No	

UST 38 Week DOCKETING

Notes: _____

Signature: Adam Looper

DHEC 0424 (10/2012)

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

-UST Field Data Information Sheet – Monitoring Well Gauging

-Purpose of the form is to record information gathered during a monitoring well gauging event
-DHEC UST Project Managers and Field Staff
-Item-by-item instructions for completing the form:
    Fill in all Site Information boxes
    Record Well Gauging Information for all necessary wells
    Record any applicable notes
    Sign the form
-Form is scanned and saved electronically; Record Group Number 169, Retention Schedule 10304

D H E C

PROMOTE PROTECT PROSPER

Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

FEB 0 5 2016

UST 39 fee DOCKETING

Re: **Site Specific Work Plan Request**
Copeland's Service Station, 700 Musgrove St., Clinton, SC
UST Permit #05694
Release reported June 24, 1993
Monitoring report received November 18, 2014
Laurens County

Dear Mr. Copeland:

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, a groundwater sampling event as outlined in the UST Quality Assurance Program Plan (QAPP) Revision 3.0 is necessary following all assessment related activities. All monitoring wells associated with the release should be sampled for BTEX, naphthalene, MtBE, 1,2-DCA, 8-Oxygenates, and EDB. Analyses should be in accordance with Appendix F of the QAPP to include duplicate samples, field and trip blanks. **All monitoring wells will need to be purged prior to sampling.** A copy of the Agency QAPP for the UST Management Division is available at http://www.scdhec.gov/Environment/docs/QAPPRevision3.0.pdf

Please have your contractor complete and submit the Site Specific Work Plan and Cost Proposal within thirty (30) days of the date of this letter. The Site Specific Work Plan form can be found at http://www.scdhec.gov/environment/PermitCentral/ApplicationForms/#UST. 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 #05694. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0631, by fax at (803) 898-0673, or by e-mail at Looperam@dhec.sc.gov.

Sincerely,

Adam Looper

Adam Looper, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

cc: Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC 29071
Technical File

Midlands Environmental Consultants, Inc.

November 30, 2009

UST
DEC 0 1 2009
PROGRAM

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

UST DOCKET 2 Tech

Subject: Report of Groundwater Sampling
Copelands
Clinton, South Carolina
SCDHEC Site ID Number 05694, CA #37445
MECI Project Number 09-2524

Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Sampling for the referenced site.

On November 25, 2009, twelve monitoring wells (MW-3 through MW-11, MW-15, MW-16 and DW-1) were sampled. Two monitoring wells (MW-5 and DW-1) were purged prior to sampling. Eight monitoring wells (MW-1, MW-12 through MW-14, AFVR-3 through AFVR-6) were gauged and contained free phase petroleum product. Monitoring well MW-2 was gauged and determined to have insufficient water for sampling. Two monitoring wells (AFVR-1 and AFVR-2) were gauged and not sampled. Groundwater samples obtained were transported to Pace Analytical Services, Inc. of Huntersville, NC for analysis.

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 31.0 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

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

Sincerely,
Midlands Environmental Consultants, Inc.

Brian J. Owen
Field Technician

Brendon P. Kelly
Project Scientist

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

SCANNED

Site Activity Summary

UST Permit #: 05694
Facility Name: Copelands Service Station
County: Laurens
Field Personnel: Brian Owen, Kyle Pudney

Midlands Environmental Consultants, Inc.
235-B Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	# Gals. Purged	Comments
MW-1	N	***	***	TD: 33.95	32.08	33.91	1.83	FP	Product Thickness = 1.83 Feet
MW-2	N	***	***	TD: 12.05	DRY	DRY	DRY	DRY	Dry
MW-3	Y	11/25/09	9:48	25-35	***	30.37	***	***	Odor; 2 Bolts Added
MW-4	Y	11/25/09	9:35	25-35	***	32.82	***	***	No Odor
MW-5	Y	11/25/09	10:15	25-35	***	22.57	***	6.0	No Odor
MW-6	Y	11/25/09	9:10	25-35	***	29.12	***	***	No Odor; 2 Bolts Added
MW-7	Y	11/25/09	9:01	25-35	***	31.78	***	***	No Odor; 2 Bolts Added
MW-8	Y	11/25/09	8:52	25-35	***	32.85	***	***	Odor; 1 Bolt Added
MW-9	Y	11/25/09	9:16	25-35	***	33.51	***	***	No Odor
MW-10	Y	11/25/09	9:26	25-35	***	33.08	***	***	No Odor
MW-11	Y	11/25/09	10:41	25-35	***	34.21	***	***	Sheen; 2 Bolt Added; 3 BTEX, 1 EDB Only.
MW-12	N	***	***	25-35	32.61	34.01	1.40	FP	Product Thickness = 1.40 Feet; 2 Bolts Added
MW-13	N	***	***	25-35	32.55	34.66	2.11	FP	Product Thickness = 2.11 Feet; 2 Bolts Added
MW-14	N	***	***	25-35	32.18	33.35	1.17	FP	Product Thickness = 1.17 Feet.
MW-15	Y	11/25/09	9:56	25-35	***	29.05	***	***	No Odor; 2 Bolts Added
								6.0	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 05694
Facility Name: Copelands Service Station
County: Laurens
Field Personnel: Brian Owen, Kyle Pudney

Midlands Environmental Consultants, Inc.
235-B Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	# Gals. Purged	Comments
MW-16	Y	11/25/09	11:20	25-35	***	30.70	***	***	Odor
DW-1	Y	11/25/09	11:00	75-85	***	33.22	***	25.0	No Odor; 1 Bolt Added
AFVR-1	N	***	***	TD: 33.96	DRY	DRY	DRY	DRY	Dry; 2 Bolts Added
AFVR-2	N	***	***	TD: 34.45	***	33.23	***	***	2 Bolts Added
AFVR-3	N	***	***	TD: 34.10	31.91	32.35	0.44	***	Product Thickness = 0.44 Feet
AFVR-4	N	***	***	TD: 34.45	32.51	32.58	0.07	***	Product Thickness = 0.07 Feet
AFVR-5	N	***	***	TD: 34.35	32.73	33.82	1.09	***	Product Thickness = 1.09 Feet
AFVR-6	N	***	***	TD: 34.36	30.76	33.99	3.23	***	Product Thickness = 3.23 Feet
								31.0	**TOTAL GALLONS PURGED**

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/25/2009

Field Personnel: Brian Owen, Kyle Pudney

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copelands

Site ID#: 05694 **Monitoring Well #** MW-5

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	22.57			feet
Total Well Depth (TWD)	35			feet
Length of the water column (LWC=TWD-DGW)			12.43	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	2.03	gallons
3 casing volume (3 X CV)=		3	6.08	gallons

Total Volume of Water Purged Before Sampling 6 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:05	10:08	10:12	10:15				
pH (s.u.)	7.36	7.20	7.10	7.69				
Specific Conductivity (μmhos/cm)	51.3	60.7	56.8	65.6				
Water Temperature (°C)	16.6	16.7	16.7	16.2				
Dissolved Oxygen	4.94	3.95	4.31	3.83				
PID readings, if required								

Remarks: Sample Time: 10:15

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

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 11/25/2009

Field Personnel: Brian Owen, Kyle Pudney

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Copelands

Site ID#: 05694 **Monitoring Well #** DW-1

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

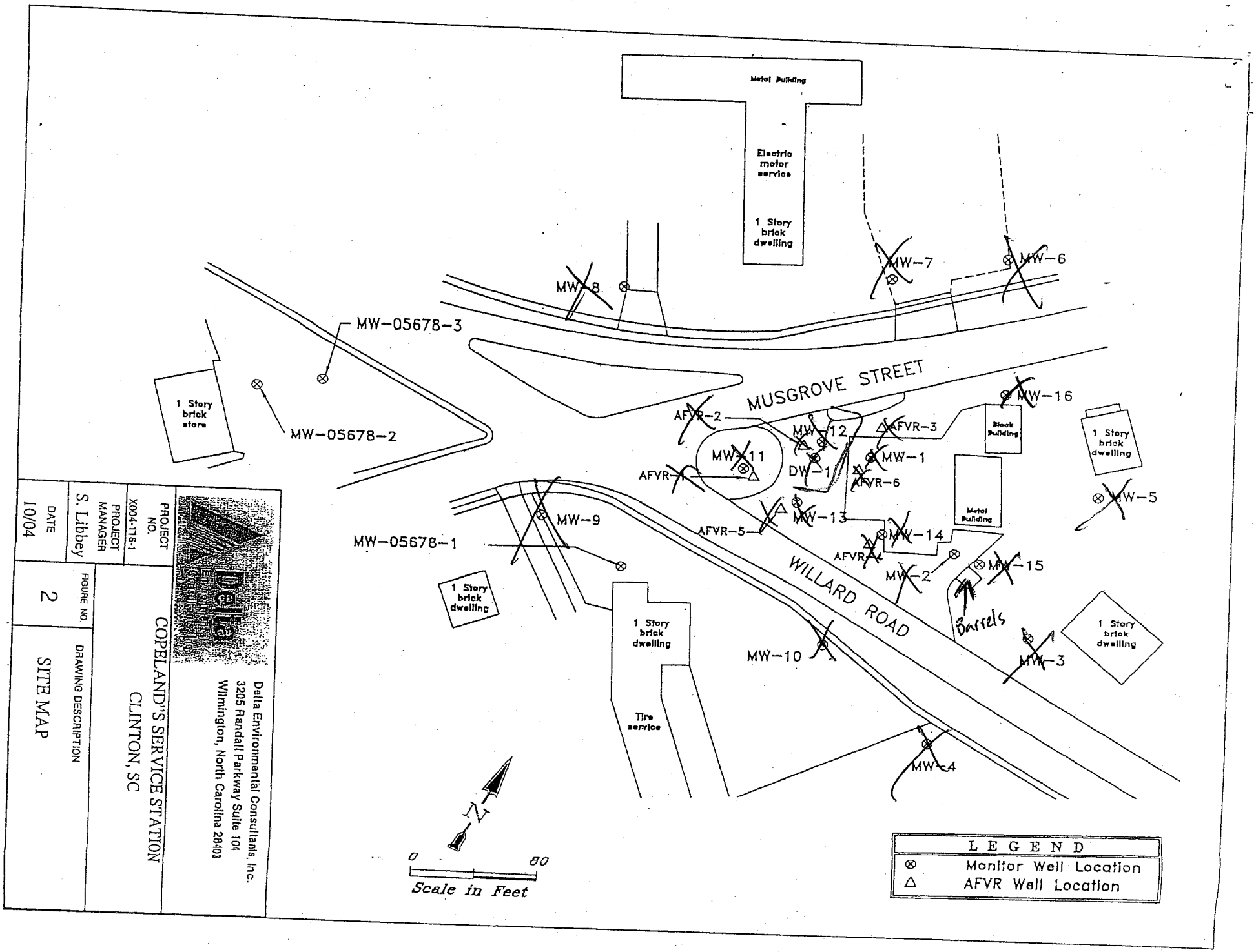
* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	33.22			feet
Total Well Depth (TWD)	85			feet
Length of the water column (LWC=TWD-DGW)			51.78	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	8.44	gallons
3 casing volume (3 X CV)=		3	25.32	gallons

Total Volume of Water Purged Before Sampling 25 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:45	10:50	10:55	11:00				
pH (s.u.)	6.69	6.72	6.73	6.72				
Specific Conductivity (µmhos/cm)	118.8	116.9	117.9	117.2				
Water Temperature (°C)	19.7	19.5	19.3	19.0				
Dissolved Oxygen	1.95	1.22	0.92	0.84				
PID readings, if required								

Remarks: Sample Time: 11:00


Metal Building
Electric motor service
1 Story brick dwelling
MW-7
MW-6
MW-8
MW-05678-3
MUSGROVE STREET
1 Story brick store
MW-05678-2
AFVR-2
MW-12
AFVR-3
MW-16
Block Building
1 Story brick dwelling
MW-11
DW-1
MW-1
AFVR-6
AFVR-1
MW-5
MW-9
MW-13
AFVR-5
MW-14
Metal Building
MW-05678-1
AFVR-4
MW-2
MW-15
WILLARD ROAD
Barrels
1 Story brick dwelling
1 Story brick dwelling
1 Story brick dwelling
MW-10
MW-3
Tire service
MW-4
N
0
80
Scale in Feet
LEGEND
Monitor Well Location
AFVR Well Location
Delta Environmental Consultants, Inc.
3205 Randall Parkway Suite 104
Wilmington, North Carolina 28403
PROJECT NO.
X004-T16-1
PROJECT MANAGER
S. Libbey
DATE
10/04
FIGURE NO.
2
DRAWING DESCRIPTION
SITE MAP
COPELAND"S SERVICE STATION
CLINTON, SC

Pace Analytical®
www.pacelabs.com

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

1331705

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To:
Phone: 803-893-6240 Fax: 803-896-6243
Requested Due Date/TAT:

Section B Required Project Information:

Report To: D. Thoma
Copy To:
Purchase Order No.: 719459
Project Name: Coppelands Service Station
Project Number: 05694/37444

Section C Invoice Information:

Attention: Finance (D. Thoma)
Company Name: SCDHEC - UST
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): BTEX, Naph, MTBE 8260B; 1,2 DCA, 8 Oxygenates; EDB 8011; Total Lead

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	BTEX, Naph, MTBE 8260B	1,2 DCA, 8 Oxygenates	EDB 8011	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW-1~~	WT	G			11/25																	Product
2	~~MW-2~~					11/25																	DRY
3	MW-3	WT	G			11/25	9:48		7			1	6					X	X	X	X		odor
4	MW-4						9:35																no odor
5	MW-5						10:15																no odor
6	MW-6						9:10																no odor
7	MW-7						9:01																no odor
8	MW-8						8:57																odor
9	MW-9						9:16																no odor
10	MW-10						9:06		7			1	6					X	X	X	X		no odor
11	MW-11	WT	G			11/25	10:41		4				4					X	X	X			4 vials ONLY, no lead [illegible]
12	~~MW-12~~	WT	G			11/25																	Product

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Report J values	[signature]	11/30/09	9:16	[signature]	11/30/09	9:16	

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Rodney
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/25/09

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

1331706

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To:
Phone: 803-893-6240 Fax: 803-896-6243
Requested Due Date/TAT:

Section B Required Project Information:

Report To: D. Thoma
Copy To:
Purchase Order No.: 719459
Project Name: Copelands Service Station
Project Number: 05694/37444

Section C Invoice Information:

Attention: Finance (D. Thoma)
Company Name: SCDHEC - UST
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

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

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): BTEX, Methyl-tert Butyl Ether 8260B	1,2 DCA, 8 Oxygenates	EDB 8011	Total Pb	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW-13~~	WT	6			11/25	—																Product
2	~~MW-14~~	WT	6			11/25	—																Product
3	MW-15	WT	6			11/25	9:56		7			1	6					X	X	X	X		no odor
4	MW-16	WT	6			11/25	11:20		7			1	6					X	X	X	X		Slight odor
5	DW-1	WT	6			11/25	11:00		7			1	6					X	X	X	X		no odor
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Report J values	[signature]	11/25/09	9:16	[signature]	11/25/09	9:16	

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Pudney
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/25/09

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

Midlands
Environmental
Consultants, Inc.

November 30, 2009

Re: Treatment of Purge Water
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID Number 05694
MECI Project Number 09-2524

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

A total of 31.0 gallons were treated on November 25, 2009 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Brian Owen
Field Technician

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

December 07, 2009

UST
DEC 11 2009
PROGRAM

Ms. Debra Thoma
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Dear Ms. Thoma:
Enclosed are the analytical results for sample(s) received by the laboratory on November 30, 2009. 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,

Renee Spencer

Renee Spencer

renee.spencer@pacelabs.com
Project Manager

Enclosures

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

CERTIFICATIONS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Charlotte Certification IDs
9800 Kincey 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 #: 990060001
South Carolina Drinking Water Cert. #: 990060003
Tennessee Certification #: 04010
Virginia Certification #: 00213

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 #: 99030002
South Carolina Certification #: 99030001
Tennessee Certification #: 2980
Virginia Certification #: 00072
West Virginia Certification #: 356
Florida/NELAP Certification #: E87648

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

CERTIFICATIONS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Charlotte Certification IDs
9800 Kincey 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 #: 990060001
South Carolina Drinking Water Cert. #: 990060003
Tennessee Certification #: 04010
Virginia Certification #: 00213

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 #: 99030002
South Carolina Certification #: 99030001
Tennessee Certification #: 2980
Virginia Certification #: 00072
West Virginia Certification #: 356
Florida/NELAP Certification #: E87648

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE SUMMARY

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9258450001	MW-3	Water	11/25/09 09:48	11/30/09 11:25
9258450002	MW-4	Water	11/25/09 09:35	11/30/09 11:25
9258450003	MW-5	Water	11/25/09 10:15	11/30/09 11:25
9258450004	MW-6	Water	11/25/09 09:10	11/30/09 11:25
9258450005	MW-7	Water	11/25/09 09:01	11/30/09 11:25
9258450006	MW-8	Water	11/25/09 08:52	11/30/09 11:25
9258450007	MW-9	Water	11/25/09 09:16	11/30/09 11:25
9258450008	MW-10	Water	11/25/09 09:26	11/30/09 11:25
9258450009	MW-15	Water	11/25/09 09:56	11/30/09 11:25
9258450010	MW-16	Water	11/25/09 11:20	11/30/09 11:25
9258450011	DW-1	Water	11/25/09 11:00	11/30/09 11:25
9258450012	MW-11	Water	11/25/09 10:41	11/30/09 11:25

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE ANALYTE COUNT

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Lab ID	Sample ID	Method	Analysts	Analytes Reported
9258450001	MW-3	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450002	MW-4	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450003	MW-5	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450004	MW-6	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450005	MW-7	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450006	MW-8	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450007	MW-9	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450008	MW-10	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450009	MW-15	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450010	MW-16	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450011	DW-1	EPA 6010	JMW	1
		EPA 8011	CAH	2
		EPA 8260	KJM	21
9258450012	MW-11	EPA 8011	CAH	2
		EPA 8260	KJM	21

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-3 **Lab ID: 9258450001** Collected: 11/25/09 09:48 Received: 11/30/09 11:25 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	12/03/09 14:46	12/06/09 06:09	106-93-4	
1-Chloro-2-bromopropane (S)	104	%	60-140		1	12/03/09 14:46	12/06/09 06:09	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 18:32	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 05:27	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 05:27	994-05-8	
Benzene	ND	ug/L	5.0	1.2	1		12/03/09 05:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 05:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	27.0	1		12/03/09 05:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 05:27	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		12/03/09 05:27	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	2.7	1		12/03/09 05:27	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 05:27	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.1	1		12/03/09 05:27	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 05:27	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 05:27	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		12/03/09 05:27	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		12/03/09 05:27	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		12/03/09 05:27	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		12/03/09 05:27	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		12/03/09 05:27	95-47-6	
Dibromofluoromethane (S)	104	%	85-115		1		12/03/09 05:27	1868-53-7	
Toluene-d8 (S)	93	%	70-120		1		12/03/09 05:27	2037-26-5	
4-Bromofluorobenzene (S)	106	%	87-109		1		12/03/09 05:27	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	79-120		1		12/03/09 05:27	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-4 **Lab ID: 9258450002** Collected: 11/25/09 09:35 Received: 11/30/09 11:25 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	12/03/09 14:46	12/06/09 06:29	106-93-4	
1-Chloro-2-bromopropane (S)	107	%	60-140		1	12/03/09 14:46	12/06/09 06:29	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 18:39	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 05:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 05:45	994-05-8	
Benzene	ND	ug/L	5.0	1.2	1		12/03/09 05:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 05:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	27.0	1		12/03/09 05:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 05:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		12/03/09 05:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	2.7	1		12/03/09 05:45	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 05:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.1	1		12/03/09 05:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 05:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 05:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		12/03/09 05:45	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		12/03/09 05:45	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		12/03/09 05:45	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		12/03/09 05:45	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		12/03/09 05:45	95-47-6	
Dibromofluoromethane (S)	102	%	85-115		1		12/03/09 05:45	1868-53-7	
Toluene-d8 (S)	102	%	70-120		1		12/03/09 05:45	2037-26-5	
4-Bromofluorobenzene (S)	101	%	87-109		1		12/03/09 05:45	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	79-120		1		12/03/09 05:45	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-5 **Lab ID: 9258450003** Collected: 11/25/09 10:15 Received: 11/30/09 11:25 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	12/03/09 14:46	12/06/09 06:49	106-93-4	
1-Chloro-2-bromopropane (S)	86	%	60-140		1	12/03/09 14:46	12/06/09 06:49	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**35.9**	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 18:46	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 06:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 06:03	994-05-8	
Benzene	ND	ug/L	5.0	1.2	1		12/03/09 06:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 06:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	27.0	1		12/03/09 06:03	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 06:03	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		12/03/09 06:03	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	2.7	1		12/03/09 06:03	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 06:03	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.1	1		12/03/09 06:03	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 06:03	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 06:03	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		12/03/09 06:03	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		12/03/09 06:03	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		12/03/09 06:03	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		12/03/09 06:03	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		12/03/09 06:03	95-47-6	
Dibromofluoromethane (S)	98	%	85-115		1		12/03/09 06:03	1868-53-7	pH
Toluene-d8 (S)	91	%	70-120		1		12/03/09 06:03	2037-26-5	
4-Bromofluorobenzene (S)	109	%	87-109		1		12/03/09 06:03	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	79-120		1		12/03/09 06:03	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-6 **Lab ID: 9258450004** Collected: 11/25/09 09:10 Received: 11/30/09 11:25 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	12/03/09 14:46	12/06/09 07:09	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	12/03/09 14:46	12/06/09 07:09	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 18:50	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 06:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 06:21	994-05-8	
Benzene	ND	ug/L	5.0	1.2	1		12/03/09 06:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 06:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	27.0	1		12/03/09 06:21	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 06:21	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		12/03/09 06:21	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	2.7	1		12/03/09 06:21	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 06:21	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.1	1		12/03/09 06:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 06:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 06:21	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		12/03/09 06:21	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		12/03/09 06:21	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		12/03/09 06:21	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		12/03/09 06:21	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		12/03/09 06:21	95-47-6	
Dibromofluoromethane (S)	98	%	85-115		1		12/03/09 06:21	1868-53-7	
Toluene-d8 (S)	89	%	70-120		1		12/03/09 06:21	2037-26-5	
4-Bromofluorobenzene (S)	104	%	87-109		1		12/03/09 06:21	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	79-120		1		12/03/09 06:21	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-7 **Lab ID: 9258450005** Collected: 11/25/09 09:01 Received: 11/30/09 11:25 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)	**0.19**	ug/L	0.019	0.019	1	12/03/09 14:46	12/06/09 07:49	106-93-4	
1-Chloro-2-bromopropane (S)	103	%	60-140		1	12/03/09 14:46	12/06/09 07:49	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 18:53	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 06:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 06:39	994-05-8	
Benzene	**4.7J**	ug/L	5.0	1.2	1		12/03/09 06:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 06:39	624-95-3	
tert-Butyl Alcohol	**161**	ug/L	100	27.0	1		12/03/09 06:39	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 06:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		12/03/09 06:39	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	2.7	1		12/03/09 06:39	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 06:39	64-17-5	
Ethylbenzene	**141**	ug/L	5.0	1.1	1		12/03/09 06:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 06:39	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 06:39	1634-04-4	
Naphthalene	**60.4**	ug/L	5.0	2.9	1		12/03/09 06:39	91-20-3	
Toluene	**2.6J**	ug/L	5.0	1.8	1		12/03/09 06:39	108-88-3	
Xylene (Total)	**607**	ug/L	20.0	5.4	2		12/03/09 15:13	1330-20-7	
m&p-Xylene	**249**	ug/L	10.0	2.7	1		12/03/09 06:39	1330-20-7	
o-Xylene	**358**	ug/L	10.0	3.4	2		12/03/09 15:13	95-47-6	
Dibromofluoromethane (S)	100	%	85-115		1		12/03/09 06:39	1868-53-7	
Toluene-d8 (S)	91	%	70-120		1		12/03/09 06:39	2037-26-5	
4-Bromofluorobenzene (S)	104	%	87-109		1		12/03/09 06:39	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	79-120		1		12/03/09 06:39	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-8 **Lab ID: 9258450006** Collected: 11/25/09 08:52 Received: 11/30/09 11:25 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	12/03/09 14:47	12/06/09 08:09	106-93-4	
1-Chloro-2-bromopropane (S)	121	%	60-140		1	12/03/09 14:47	12/06/09 08:09	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 19:07	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	500	310	5		12/03/09 14:31	75-85-4	
tert-Amylmethyl ether	ND	ug/L	50.0	22.5	5		12/03/09 14:31	994-05-8	
Benzene	**668**	ug/L	25.0	6.0	5		12/03/09 14:31	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	500	240	5		12/03/09 14:31	624-95-3	
tert-Butyl Alcohol	ND	ug/L	500	135	5		12/03/09 14:31	75-65-0	
tert-Butyl Formate	ND	ug/L	250	45.0	5		12/03/09 14:31	762-75-4	
1,2-Dichloroethane	ND	ug/L	25.0	6.5	5		12/03/09 14:31	107-06-2	
Diisopropyl ether	ND	ug/L	25.0	13.5	5		12/03/09 14:31	108-20-3	
Ethanol	ND	ug/L	1000	850	5		12/03/09 14:31	64-17-5	
Ethylbenzene	**57.5**	ug/L	25.0	5.5	5		12/03/09 14:31	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	50.0	23.0	5		12/03/09 14:31	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	25.0	10.0	5		12/03/09 14:31	1634-04-4	
Naphthalene	**295**	ug/L	25.0	14.5	5		12/03/09 14:31	91-20-3	
Toluene	ND	ug/L	25.0	9.0	5		12/03/09 14:31	108-88-3	
Xylene (Total)	**14.7J**	ug/L	50.0	13.5	5		12/03/09 14:31	1330-20-7	
m&p-Xylene	ND	ug/L	50.0	13.5	5		12/03/09 14:31	1330-20-7	
o-Xylene	ND	ug/L	25.0	8.5	5		12/03/09 14:31	95-47-6	
Dibromofluoromethane (S)	89	%	85-115		5		12/03/09 14:31	1868-53-7	
Toluene-d8 (S)	107	%	70-120		5		12/03/09 14:31	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-109		5		12/03/09 14:31	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	79-120		5		12/03/09 14:31	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-9 **Lab ID: 9258450007** Collected: 11/25/09 09:16 Received: 11/30/09 11:25 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	12/03/09 14:47	12/06/09 08:29	106-93-4	
1-Chloro-2-bromopropane (S)	97	%	60-140		1	12/03/09 14:47	12/06/09 08:29	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 19:11	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 06:57	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 06:57	994-05-8	
Benzene	ND	ug/L	5.0	1.2	1		12/03/09 06:57	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 06:57	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	27.0	1		12/03/09 06:57	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 06:57	762-75-4	
1,2-Dichloroethane	**2.8J**	ug/L	5.0	1.3	1		12/03/09 06:57	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	2.7	1		12/03/09 06:57	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 06:57	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.1	1		12/03/09 06:57	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 06:57	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 06:57	1634-04-4	
Naphthalene	**3.4J**	ug/L	5.0	2.9	1		12/03/09 06:57	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		12/03/09 06:57	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		12/03/09 06:57	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		12/03/09 06:57	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		12/03/09 06:57	95-47-6	
Dibromofluoromethane (S)	101	%	85-115		1		12/03/09 06:57	1868-53-7	
Toluene-d8 (S)	94	%	70-120		1		12/03/09 06:57	2037-26-5	
4-Bromofluorobenzene (S)	112	%	87-109		1		12/03/09 06:57	460-00-4	S6
1,2-Dichloroethane-d4 (S)	103	%	79-120		1		12/03/09 06:57	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-10 **Lab ID: 9258450008** Collected: 11/25/09 09:26 Received: 11/30/09 11:25 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	12/03/09 14:47	12/06/09 08:49	106-93-4	
1-Chloro-2-bromopropane (S)	104	%	60-140		1	12/03/09 14:47	12/06/09 08:49	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 19:14	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 07:16	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 07:16	994-05-8	
Benzene	ND	ug/L	5.0	1.2	1		12/03/09 07:16	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 07:16	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	27.0	1		12/03/09 07:16	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 07:16	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		12/03/09 07:16	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	2.7	1		12/03/09 07:16	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 07:16	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.1	1		12/03/09 07:16	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 07:16	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 07:16	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		12/03/09 07:16	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		12/03/09 07:16	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		12/03/09 07:16	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		12/03/09 07:16	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		12/03/09 07:16	95-47-6	
Dibromofluoromethane (S)	99	%	85-115		1		12/03/09 07:16	1868-53-7	
Toluene-d8 (S)	93	%	70-120		1		12/03/09 07:16	2037-26-5	
4-Bromofluorobenzene (S)	111	%	87-109		1		12/03/09 07:16	460-00-4	S3
1,2-Dichloroethane-d4 (S)	105	%	79-120		1		12/03/09 07:16	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-15 **Lab ID: 9258450009** Collected: 11/25/09 09:56 Received: 11/30/09 11:25 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	12/04/09 11:26	12/06/09 15:20	106-93-4	
1-Chloro-2-bromopropane (S)	106	%	60-140		1	12/04/09 11:26	12/06/09 15:20	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 19:18	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 07:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 07:34	994-05-8	
Benzene	ND	ug/L	5.0	1.2	1		12/03/09 07:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 07:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	27.0	1		12/03/09 07:34	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 07:34	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		12/03/09 07:34	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	2.7	1		12/03/09 07:34	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 07:34	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.1	1		12/03/09 07:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 07:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 07:34	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		12/03/09 07:34	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		12/03/09 07:34	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		12/03/09 07:34	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		12/03/09 07:34	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		12/03/09 07:34	95-47-6	
Dibromofluoromethane (S)	98	%	85-115		1		12/03/09 07:34	1868-53-7	
Toluene-d8 (S)	91	%	70-120		1		12/03/09 07:34	2037-26-5	
4-Bromofluorobenzene (S)	103	%	87-109		1		12/03/09 07:34	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	79-120		1		12/03/09 07:34	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-16 **Lab ID: 9258450010** Collected: 11/25/09 11:20 Received: 11/30/09 11:25 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	12/04/09 11:26	12/06/09 15:41	106-93-4	
1-Chloro-2-bromopropane (S)	104	%	60-140		1	12/04/09 11:26	12/06/09 15:41	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 19:21	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	200	124	2		12/03/09 09:43	75-85-4	
tert-Amylmethyl ether	ND	ug/L	20.0	9.0	2		12/03/09 09:43	994-05-8	
Benzene	ND	ug/L	10.0	2.4	2		12/03/09 09:43	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	200	96.0	2		12/03/09 09:43	624-95-3	
tert-Butyl Alcohol	ND	ug/L	200	54.0	2		12/03/09 09:43	75-65-0	
tert-Butyl Formate	ND	ug/L	100	18.0	2		12/03/09 09:43	762-75-4	
1,2-Dichloroethane	ND	ug/L	10.0	2.6	2		12/03/09 09:43	107-06-2	
Diisopropyl ether	ND	ug/L	10.0	5.4	2		12/03/09 09:43	108-20-3	
Ethanol	ND	ug/L	400	340	2		12/03/09 09:43	64-17-5	
Ethylbenzene	**73.9**	ug/L	10.0	2.2	2		12/03/09 09:43	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	20.0	9.2	2		12/03/09 09:43	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	10.0	4.0	2		12/03/09 09:43	1634-04-4	
Naphthalene	**133**	ug/L	10.0	5.8	2		12/03/09 09:43	91-20-3	
Toluene	**11.8**	ug/L	10.0	3.6	2		12/03/09 09:43	108-88-3	
Xylene (Total)	**581**	ug/L	20.0	5.4	2		12/03/09 09:43	1330-20-7	
m&p-Xylene	**444**	ug/L	20.0	5.4	2		12/03/09 09:43	1330-20-7	
o-Xylene	**137**	ug/L	10.0	3.4	2		12/03/09 09:43	95-47-6	
Dibromofluoromethane (S)	96	%	85-115		2		12/03/09 09:43	1868-53-7	
Toluene-d8 (S)	105	%	70-120		2		12/03/09 09:43	2037-26-5	
4-Bromofluorobenzene (S)	101	%	87-109		2		12/03/09 09:43	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	79-120		2		12/03/09 09:43	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: DW-1 **Lab ID: 9258450011** Collected: 11/25/09 11:00 Received: 11/30/09 11:25 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	12/04/09 11:26	12/06/09 16:01	106-93-4	
1-Chloro-2-bromopropane (S)	97	%	60-140		1	12/04/09 11:26	12/06/09 16:01	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	12/02/09 14:10	12/03/09 19:26	7439-92-1	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	62.0	1		12/03/09 07:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	4.5	1		12/03/09 07:52	994-05-8	
Benzene	ND	ug/L	5.0	1.2	1		12/03/09 07:52	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	48.0	1		12/03/09 07:52	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	27.0	1		12/03/09 07:52	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	9.0	1		12/03/09 07:52	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		12/03/09 07:52	107-06-2	
Diisopropyl ether	**8.8**	ug/L	5.0	2.7	1		12/03/09 07:52	108-20-3	
Ethanol	ND	ug/L	200	170	1		12/03/09 07:52	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.1	1		12/03/09 07:52	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	4.6	1		12/03/09 07:52	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		12/03/09 07:52	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		12/03/09 07:52	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		12/03/09 07:52	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		12/03/09 07:52	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		12/03/09 07:52	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		12/03/09 07:52	95-47-6	
Dibromofluoromethane (S)	99	%	85-115		1		12/03/09 07:52	1868-53-7	
Toluene-d8 (S)	95	%	70-120		1		12/03/09 07:52	2037-26-5	
4-Bromofluorobenzene (S)	106	%	87-109		1		12/03/09 07:52	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	79-120		1		12/03/09 07:52	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

Sample: MW-11 **Lab ID: 9258450012** Collected: 11/25/09 10:41 Received: 11/30/09 11:25 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)	**0.15**	ug/L	0.020	0.020	1	12/04/09 11:26	12/06/09 16:22	106-93-4	
1-Chloro-2-bromopropane (S)	108	%	60-140		1	12/04/09 11:26	12/06/09 16:22	301-79-56	
8260 MSV Oxygenates	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	5000	3100	50		12/03/09 15:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	225	50		12/03/09 15:34	994-05-8	
Benzene	ND	ug/L	250	60.0	50		12/03/09 15:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	2400	50		12/03/09 15:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	1350	50		12/03/09 15:34	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	450	50		12/03/09 15:34	762-75-4	
1,2-Dichloroethane	ND	ug/L	250	65.0	50		12/03/09 15:34	107-06-2	
Diisopropyl ether	ND	ug/L	250	135	50		12/03/09 15:34	108-20-3	
Ethanol	ND	ug/L	10000	8500	50		12/03/09 15:34	64-17-5	
Ethylbenzene	**1510**	ug/L	250	55.0	50		12/03/09 15:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	230	50		12/03/09 15:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	100	50		12/03/09 15:34	1634-04-4	
Naphthalene	**1090**	ug/L	250	145	50		12/03/09 15:34	91-20-3	
Toluene	**144J**	ug/L	250	90.0	50		12/03/09 15:34	108-88-3	
Xylene (Total)	**15000**	ug/L	500	135	50		12/03/09 15:34	1330-20-7	
m&p-Xylene	**10700**	ug/L	500	135	50		12/03/09 15:34	1330-20-7	
o-Xylene	**4250**	ug/L	250	85.0	50		12/03/09 15:34	95-47-6	
Dibromofluoromethane (S)	94	%	85-115		50		12/03/09 15:34	1868-53-7	
Toluene-d8 (S)	106	%	70-120		50		12/03/09 15:34	2037-26-5	
4-Bromofluorobenzene (S)	102	%	87-109		50		12/03/09 15:34	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	79-120		50		12/03/09 15:34	17060-07-0	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

QC Batch: MSV/9211 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Oxygenates
Associated Lab Samples: 9258450006, 9258450009, 9258450010, 9258450011, 9258450012

METHOD BLANK: 373610 Matrix: Water
Associated Lab Samples: 9258450006, 9258450009, 9258450010, 9258450011, 9258450012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	12/03/09 01:13	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	12/03/09 01:13	
Benzene	ug/L	ND	5.0	12/03/09 01:13	
Diisopropyl ether	ug/L	ND	5.0	12/03/09 01:13	
Ethanol	ug/L	ND	200	12/03/09 01:13	
Ethyl-tert-butyl ether	ug/L	ND	10.0	12/03/09 01:13	
Ethylbenzene	ug/L	ND	5.0	12/03/09 01:13	
m&p-Xylene	ug/L	ND	10.0	12/03/09 01:13	
Methyl-tert-butyl ether	ug/L	ND	5.0	12/03/09 01:13	
Naphthalene	ug/L	ND	5.0	12/03/09 01:13	
o-Xylene	ug/L	ND	5.0	12/03/09 01:13	
tert-Amyl Alcohol	ug/L	ND	100	12/03/09 01:13	
tert-Amylmethyl ether	ug/L	ND	10.0	12/03/09 01:13	
tert-Butyl Alcohol	ug/L	ND	100	12/03/09 01:13	
tert-Butyl Formate	ug/L	ND	50.0	12/03/09 01:13	
Toluene	ug/L	ND	5.0	12/03/09 01:13	
Xylene (Total)	ug/L	ND	10.0	12/03/09 01:13	
1,2-Dichloroethane-d4 (S)	%	104	79-120	12/03/09 01:13	
4-Bromofluorobenzene (S)	%	101	87-109	12/03/09 01:13	
Dibromofluoromethane (S)	%	98	85-115	12/03/09 01:13	
Toluene-d8 (S)	%	92	70-120	12/03/09 01:13	

LABORATORY CONTROL SAMPLE: 373611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	56.9	114	72-126	
3,3-Dimethyl-1-Butanol	ug/L	1000	1200	120	55-148	
Benzene	ug/L	50	47.5	95	78-128	
Diisopropyl ether	ug/L	50	49.3	99	74-131	
Ethanol	ug/L	2000	2280	114	53-150	
Ethyl-tert-butyl ether	ug/L	100	114	114	77-136	
Ethylbenzene	ug/L	50	52.5	105	80-127	
m&p-Xylene	ug/L	100	106	106	82-127	
Methyl-tert-butyl ether	ug/L	50	53.8	108	71-130	
Naphthalene	ug/L	50	57.5	115	52-136	
o-Xylene	ug/L	50	55.4	111	83-124	
tert-Amyl Alcohol	ug/L	1000	1260	126	50-150	
tert-Amylmethyl ether	ug/L	100	106	106	50-150	
tert-Butyl Alcohol	ug/L	500	552	110	50-150	
tert-Butyl Formate	ug/L	400	416	104	50-150	
Toluene	ug/L	50	46.6	93	76-126	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

LABORATORY CONTROL SAMPLE: 373611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	162	108	83-125	
1,2-Dichloroethane-d4 (S)	%			104	79-120	
4-Bromofluorobenzene (S)	%			105	87-109	
Dibromofluoromethane (S)	%			97	85-115	
Toluene-d8 (S)	%			88	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 373612 373613

Parameter	Units	9258450009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	53.9	52.0	108	104	74-136	4	30	
Toluene	ug/L	ND	50	50	62.0	59.6	124	119	73-131	4	30	
1,2-Dichloroethane-d4 (S)	%						104	105	79-120			
4-Bromofluorobenzene (S)	%						101	102	87-109			
Dibromofluoromethane (S)	%						94	95	85-115			
Toluene-d8 (S)	%						104	104	70-120			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

QC Batch: OEXT/8708 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9258450001, 9258450002, 9258450003, 9258450004, 9258450005, 9258450006, 9258450007, 9258450008

METHOD BLANK: 374334 Matrix: Water
Associated Lab Samples: 9258450001, 9258450002, 9258450003, 9258450004, 9258450005, 9258450006, 9258450007, 9258450008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	12/06/09 03:10	
1-Chloro-2-bromopropane (S)	%	104	60-140	12/06/09 03:10	

LABORATORY CONTROL SAMPLE & LCSD: 374335 374336

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	0.33	0.30	116	106	60-140	8	20	
1-Chloro-2-bromopropane (S)	%				109	100	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 374337 374338

Parameter	Units	9258287009 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	0.31	108	112	60-140	4	20	
1-Chloro-2-bromopropane (S)	%						96	100	60-140			

SAMPLE DUPLICATE: 374339

Parameter	Units	9258450004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%		94	5		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

QC Batch: MPRP/5467 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 9258450001, 9258450002, 9258450003, 9258450004, 9258450005, 9258450006, 9258450007, 9258450008, 9258450009, 9258450010, 9258450011

METHOD BLANK: 373325 Matrix: Water
Associated Lab Samples: 9258450001, 9258450002, 9258450003, 9258450004, 9258450005, 9258450006, 9258450007, 9258450008, 9258450009, 9258450010, 9258450011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	12/03/09 18:25	

LABORATORY CONTROL SAMPLE: 373326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	480	96	80-120	

MATRIX SPIKE SAMPLE: 373327

Parameter	Units	9258450001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	478	95	75-125	

SAMPLE DUPLICATE: 373328

Parameter	Units	9258450002 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

QC Batch: OEXT/8718 — Analysis Method: EPA 8011
QC Batch Method: EPA 8011 — Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9258450009, 9258450010, 9258450011, 9258450012

METHOD BLANK: 374685 — Matrix: Water
Associated Lab Samples: 9258450009, 9258450010, 9258450011, 9258450012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	12/06/09 14:19	
1-Chloro-2-bromopropane (S)	%	100	60-140	12/06/09 14:19	

LABORATORY CONTROL SAMPLE & LCSD: 374686 374687

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	0.32	0.30	112	104	60-140	7	20	
1-Chloro-2-bromopropane (S)	%				104	100	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 374689 374690

Parameter	Units	9258272003 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	0.29	104	104	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						98	101	60-140			

SAMPLE DUPLICATE: 374688

Parameter	Units	9258190003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%		101	1		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

QC Batch: MSV/9210 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Oxygenates
Associated Lab Samples: 9258450001, 9258450002, 9258450003, 9258450004, 9258450005, 9258450007, 9258450008

METHOD BLANK: 373561 Matrix: Water
Associated Lab Samples: 9258450001, 9258450002, 9258450003, 9258450004, 9258450005, 9258450007, 9258450008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	12/03/09 00:54	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	12/03/09 00:54	
Benzene	ug/L	ND	5.0	12/03/09 00:54	
Diisopropyl ether	ug/L	ND	5.0	12/03/09 00:54	
Ethanol	ug/L	ND	200	12/03/09 00:54	
Ethyl-tert-butyl ether	ug/L	ND	10.0	12/03/09 00:54	
Ethylbenzene	ug/L	ND	5.0	12/03/09 00:54	
m&p-Xylene	ug/L	ND	10.0	12/03/09 00:54	
Methyl-tert-butyl ether	ug/L	ND	5.0	12/03/09 00:54	
Naphthalene	ug/L	ND	5.0	12/03/09 00:54	
o-Xylene	ug/L	ND	5.0	12/03/09 00:54	
tert-Amyl Alcohol	ug/L	ND	100	12/03/09 00:54	
tert-Amylmethyl ether	ug/L	ND	10.0	12/03/09 00:54	
tert-Butyl Alcohol	ug/L	ND	100	12/03/09 00:54	
tert-Butyl Formate	ug/L	ND	50.0	12/03/09 00:54	
Toluene	ug/L	ND	5.0	12/03/09 00:54	
Xylene (Total)	ug/L	ND	10.0	12/03/09 00:54	
1,2-Dichloroethane-d4 (S)	%	105	79-120	12/03/09 00:54	
4-Bromofluorobenzene (S)	%	106	87-109	12/03/09 00:54	
Dibromofluoromethane (S)	%	101	85-115	12/03/09 00:54	
Toluene-d8 (S)	%	97	70-120	12/03/09 00:54	

LABORATORY CONTROL SAMPLE: 373562

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	58.0	116	72-126	
3,3-Dimethyl-1-Butanol	ug/L	1000	1280	128	55-148	
Benzene	ug/L	50	46.7	93	78-128	
Diisopropyl ether	ug/L	50	49.4	99	74-131	
Ethanol	ug/L	2000	2310	116	53-150	
Ethyl-tert-butyl ether	ug/L	100	116	116	77-136	
Ethylbenzene	ug/L	50	51.9	104	80-127	
m&p-Xylene	ug/L	100	108	108	82-127	
Methyl-tert-butyl ether	ug/L	50	55.5	111	71-130	
Naphthalene	ug/L	50	57.9	116	52-136	
o-Xylene	ug/L	50	53.8	108	83-124	
tert-Amyl Alcohol	ug/L	1000	1350	135	50-150	
tert-Amylmethyl ether	ug/L	100	107	107	50-150	
tert-Butyl Alcohol	ug/L	500	596	119	50-150	
tert-Butyl Formate	ug/L	400	408	102	50-150	
Toluene	ug/L	50	48.3	97	76-126	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

LABORATORY CONTROL SAMPLE: 373562

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	162	108	83-125	
1,2-Dichloroethane-d4 (S)	%			107	79-120	
4-Bromofluorobenzene (S)	%			110	87-109	S0
Dibromofluoromethane (S)	%			98	85-115	
Toluene-d8 (S)	%			93	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 373563 373564

Parameter	Units	9258450001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	52.9	56.9	106	114	74-136	7	30	
Toluene	ug/L	ND	50	50	60.8	65.6	122	131	73-131	8	30	
1,2-Dichloroethane-d4 (S)	%						108	105	79-120			
4-Bromofluorobenzene (S)	%						104	100	87-109			
Dibromofluoromethane (S)	%						96	94	85-115			
Toluene-d8 (S)	%						106	104	70-120			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALIFIERS

Project: COPELANDS SRVC STATION 05694
Pace Project No.: 9258450

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.

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

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

ANALYTE QUALIFIERS

S0	Surrogate recovery outside laboratory control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
S6	Surrogate recovery outside control limits. Data accepted based on valid recovery of applicable surrogates (no analytes associated with this surrogate)
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

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

1331705

Section A Required Client Information:

Company: SCDHEC-UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To:
Phone: 803-893-6240 Fax: 803-896-6343
Requested Due Date/TAT:

Section B Required Project Information:

Report To: D. Thoma
Copy To:
Purchase Order No.: 719459
Project Name: Coppelands Service Station
Project Number: 05694/37444

Section C Invoice Information:

Attention: Finance (D. Thoma)
Company Name: SCDHEC-UST
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #: 849-5

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): BTEX/Naph, MTBE 8260B; 12 MA, 8 Oxygenates; EDB 8011; Total Lead

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BTEX/Naph, MTBE 8260B	12 MA, 8 Oxygenates	EDB 8011	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW-1~~	WT	G					11/25																		
2	~~MW-2~~							11/25																		
3	MW-3	WT	G					11/25	9:48		7			1	6						X	X	X	X		Product
4	MW-4								9:35																	DRY
5	MW-5								10:15																	odor 001
6	MW-6								9:10																	no odor 002
7	MW-7								9:01																	no odor 003
8	MW-8								8:52																	no odor 004
9	MW-9								9:16																	no odor 005
10	MW-10								9:26		7			1	6											odor 006
11	MW-11	WT	G					11/25	10:41		4				4						X	X	X	X		no odor 007
12	~~MW-12~~	WT	G					11/25													X	X	X		0 1 2	no odor 008

4 Vials ONLY, no lead IN H_2O

Product

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Report J values		11/30/09	9:16		11/30/09	9:16				
		11/30/09	11:03		11/30/09	11:03				
		11-30-09	1125	Jmore Pace	1130	1125	4.9	4	N	4

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Pudney

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 11/25/09

*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

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

1331706

Section A Required Client Information:

Company: SCDHEC-UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To:
Phone: 803-896-6240 Fax: 803-896-6243
Requested Due Date/TAT:

Section B Required Project Information:

Report To: D. Thomas
Copy To:
Purchase Order No.: 719459
Project Name: Copelands Service Station
Project Number: DS694/37444

Section C Invoice Information:

Attention: Finance (D. Thomas)
Company Name: SCDHEC-UST
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BTEX, Meth, MTBE 8260B	1,2 DCA, 8 Oxygenates	EDB 8011	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW-13~~	~~WT~~	~~G~~			~~11/25~~																		
2	~~MW-14~~	~~WT~~	~~G~~			~~11/25~~																		
3	MW-15	WT	G			11/25	9:56		7			1	6											Product
4	MW-16	WT	G			11/25	11:20		7			1	6											Product
5	DW-1	WT	G			11/25	11:00		7			1	6						X	X	X	X		no odor 009
6																			X	X	X	X		Slight odor 010
7																			X	X	X	X		no odor 011
8																								
9																								
10																								
11																								
12																								

9258450

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Report J values		11/30/09	9:46		11/30/09	9:46				
		11/30/09	11:03		11/30/09	11:03				
		11-30	11:25		11-30	1155	4.9	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Pudney

SIGNATURE of SAMPLER: Kyle V. Pudney

DATE Signed (MM/DD/YY): 11/25/09

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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 da

UST
FEB 1 9 2016
DIVISION

Midlands Environmental Consultants, Inc.

February 18, 2016

UST
DOCKETING

Mr. Adam Looper, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Site-Specific Work Plan
Copeland's Service Station
Clinton, South Carolina
SCDHEC Site ID Number 05694
MECI Project Number 16-5459
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Looper,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On February 17, 2016, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

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

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Project Biologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Midlands Environmental Consultants, Inc.

D H E C

PROMOTE PROTECT PROSPER

Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division

To: Mr. Adam Looper (SCDHEC Project Manager)
From: Mr. Jeff Coleman (Contractor Project Manager)
Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Copeland's Service Station UST Permit #: 05694
Facility Address: 700 Musgrove Street, Clinton, SC
Responsible Party: Mr. H. Wayne Copeland Phone: 864-923-2494
RP Address: 2961 Hurrincane Church Road, Clinton, SC 29325
Property Owner (if different): SAA
Property Owner Address: SAA
Current Use of Property: Vacant Store Front

Scope of Work (Please check all that apply)

- ☐ IGWA
- ☐ Tier I
- ☐ Tier II
- ☐ Monitoring Well Installation
- ☑ Groundwater Sampling
- ☐ Other _____
- ☐ GAC

Analyses (Please check all that apply)

Groundwater/Surface Water:

- ☑ BTEXNMDCA (8260B)
- ☑ Oxygenates (8260B)
- ☑ EDB (8011)
- ☐ PAH (8270D)
- ☐ Lead
- ☐ 8 RCRA Metals
- ☐ TPH
- ☐ pH
- ☐ BOD
- ☐ Nitrate
- ☐ Sulfate
- ☐ Other _____
- ☐ Methane
- ☐ Ethanol
- ☐ Dissolved Iron

Soil:

- ☐ BTEXN
- ☐ PAH
- ☐ 8 RCRA Metals
- ☐ Oil & Grease (9071)
- ☐ TPH-DRO (3550B/8015B)
- ☐ TPH-GRO (5030B/8015B)
- ☐ Grain Size
- ☐ TOC

Air:

- ☐ BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)

____ Soil	____ Water Supply Wells	____ Air	1 Field Blank
29 Monitoring Wells	____ Surface Water	2 Duplicate	1 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 #: 05694 Facility Name: Copeland's Service Station

Implementation Schedule (Number of calendar days from approval)
Field Work Start-Up: 3/3/2016 Field Work Completion: 4/3/2016
Report Submittal: 5/3/2016 # of Copies Provided to Property Owners: _____

Aquifer Characterization
Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

Investigation Derived Waste Disposal
Soil: _____ Tons Purge Water: 300.00 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/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.
-During the initial site visit, all monitoring wells were located and found to be in good condition.
-All monitoring wells will be purged prior to sample collection and all samples collected will be analyzed for BTEXNM, DCA, Oxy's, and EDB.

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: _____

N/A Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

N/A 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
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664

D H E C

PROMOTE PROTECT PROSPER

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

Facility Name: **Copelands Service Station**

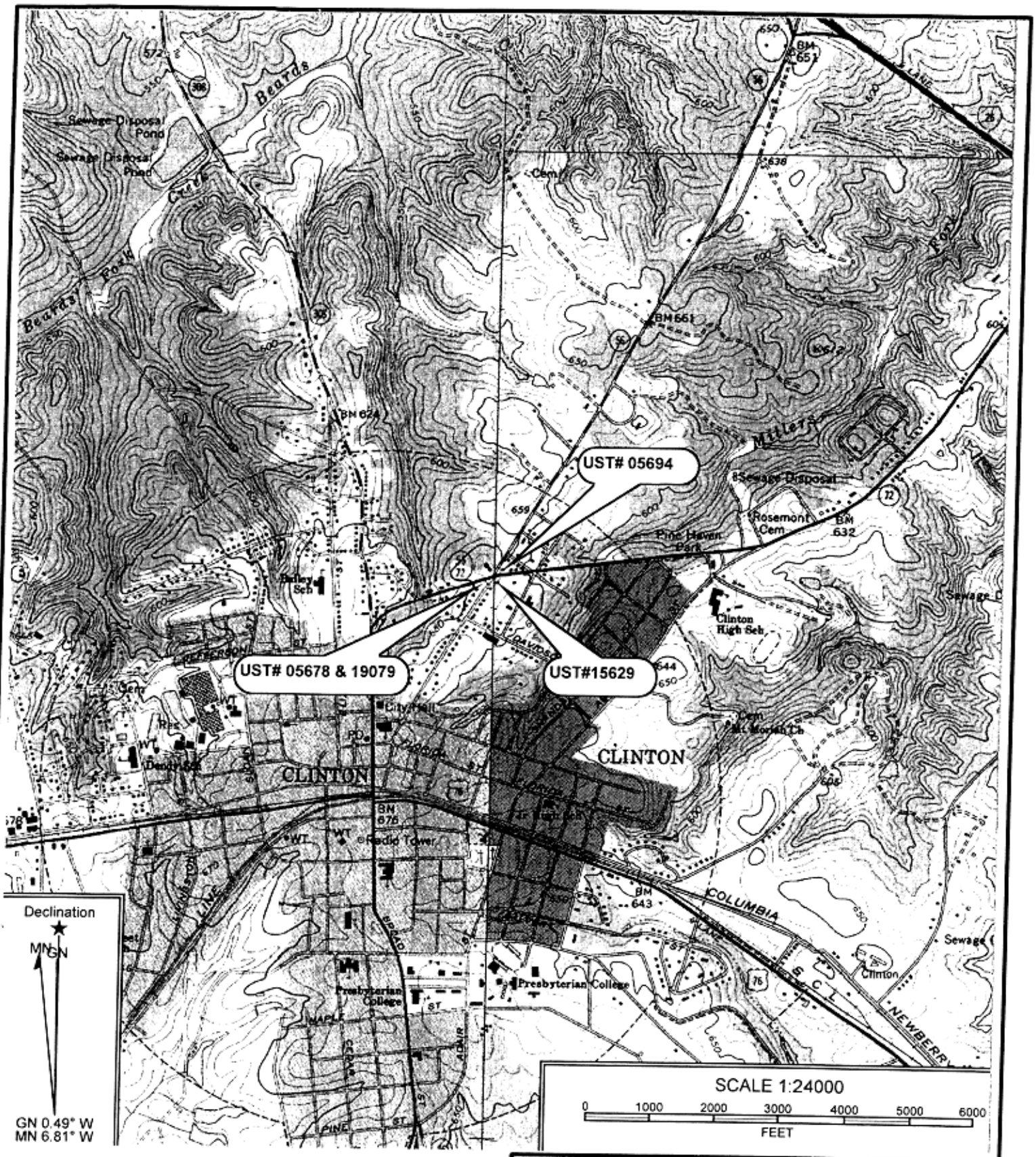
UST Permit #: 05694 **Cost Agreement #:** Proposal

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. **Plan Preparation**				
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
2. A1. **Receptor Survey ***		each	$551.00	$0.00
3. **Survey (500 ft x 500 ft)**				
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
4. **Mob/Demob**				
A1. Equipment		each	$1,020.00	$0.00
B1. Personnel	3	each	$423.00	$1,269.00
C1. Adverse Terrain Vehicle		each	$500.00	$0.00
5. A1. **Soil Borings (hand auger)***		foot	$5.00	$0.00
6. **Soil Borings (requiring equipment, push technology, etc)* or Field Screening (including water ssample, soil sample, soil gas sample, etc.)***				
AA. Standard		per foot	$15.00	$0.00
C1. Fractured Rock		per foot	$20.20	$0.00
7. A1. **Soil Leachability Model**		each	$60.00	$0.00
8. **Abandonment (per foot)***				
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
9. **Well Installation (per foot)***				
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. Rotosonic (2" diameter)		per foot	$44.00	$0.00
K. Re-develop Existing Well		per foot	$11.00	$0.00
10. **Groundwater Sample Collection / Gauge Depth to Water or Product ***				
A1. Groundwater Purge	29	per well/receptor	$60.00	$1,740.00
B1. Air or Vapors		per receptor	$12.00	$0.00
C1. Water Supply		per well/receptor	$22.00	$0.00
D1. Groundwater No Purge or Duplicate	2	per well/receptor	$28.00	$56.00
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	1	each	$24.60	$24.60

11. Laboratory Analyses-Groundwater				
A2. BTEXNM+Oxyg's+1,2 DCA+Eth(8260B)	33	per sample	$122.00	$4,026.00
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	32	per sample	$45.20	$1,446.40
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
11. Analyses-Soil				
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
11. Analyses-Air				
Y1. BTEX + Naphthalene		per sample	$216.00	$0.00
11. Analyses-Free Phase Product				
Z1. Hydrocarbon Fuel Identification		per sample	$357.00	$0.00
12. Aquifer Characterization				
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
13. A1. **Free Product Recovery Rate Test***		each	$38.00	$0.00
14. Fate/Transport Modeling				
A1. Mathematical Model		each	$100.00	$0.00
B1. Computer Model		each	$100.00	$0.00
15. Risk Evaluation				
A. Tier I Risk Evaluation		each	$300.00	$0.00
B1. Tier II Risk Evaluation		each	$100.00	$0.00
16. A1. **Subsequent Survey***		each	$260.00	$0.00
17. Disposal (gallons or tons)*				
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
18. Miscellaneous (attach receipts)				
		each	$0.00	$0.00
		each	$0.00	$0.00
		each	$0.00	$0.00
20. Tier I Assessment (Use DHEC 3665 form)		standard		$0.00
21. IGWA (Use DHEC 3666 form)		standard		$0.00
22. Corrective Action (Use DHEC 3667 form)		PFP Bid		$0.00

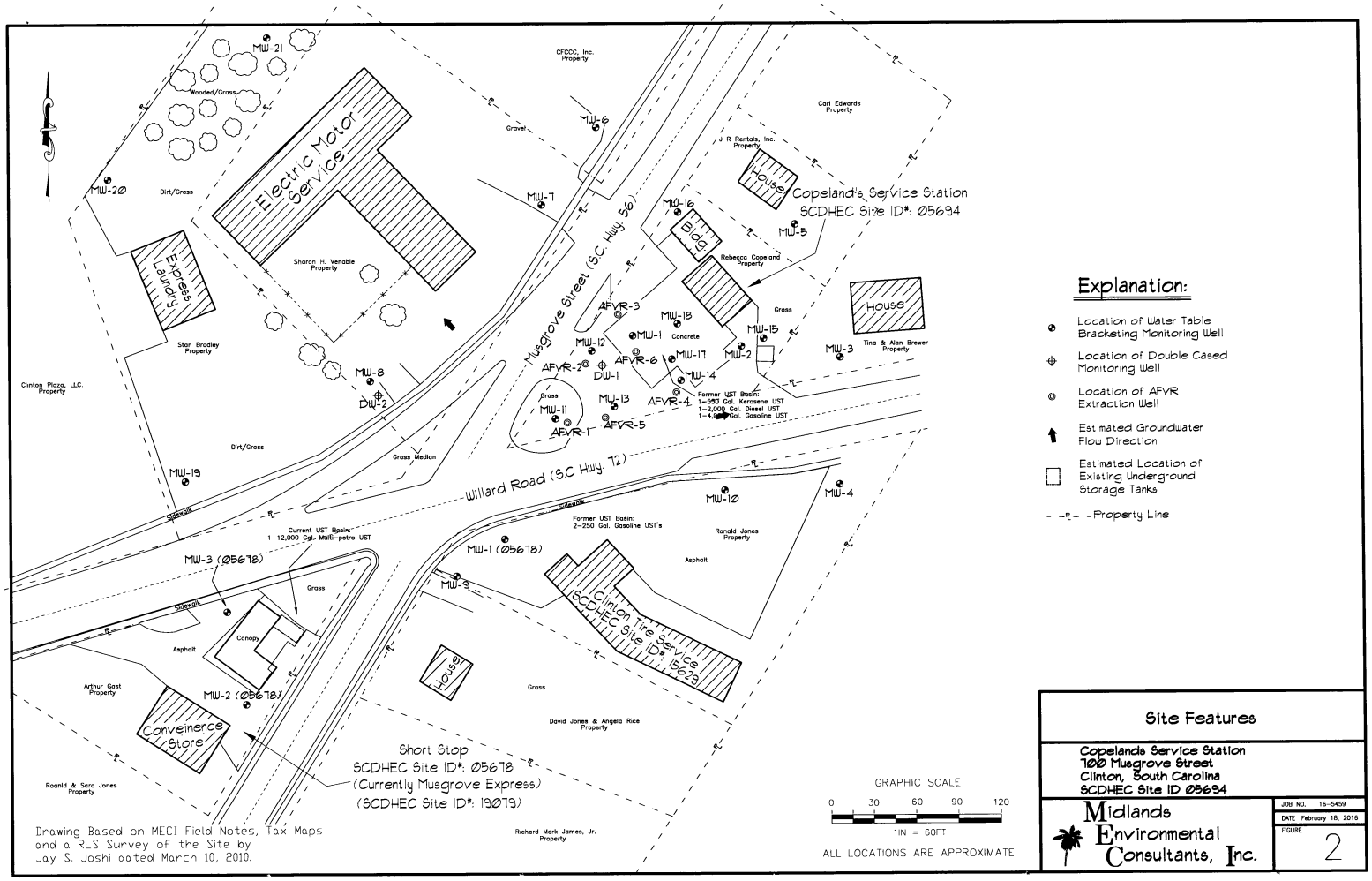
23. **Aggressive Fluid & Vapor Recovery (AFVR)**				
A1. 8-hour Event*		each	$1,375.00	$0.00
AA. 24-hour Event*		each	$3,825.00	$0.00
A3. 48-hour Event*		each	$6,265.00	$0.00
A4. 96-hour Event*		each	$12,567.50	$0.00
C1. Off-gas Treatment 8 hour		per event	$122.50	$0.00
C2. Off-gas Treatment 24 hour		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
24. **Granulated Activated Carbon (GAC) filter system installation & service:**				
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
25. **Well Repair**				
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
Report Prep & Project Management	12%	percent	$8,880.00	$1,065.60
TOTAL				$9,945.60

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



Reference: Clinton, South Carolina
Joanna, South Carolina
USGS 7.5 Min. Quad
Countour Interval – 10 Feet

Midlands Environmental Consultants, Inc.	Site Location
Copelands Service Station 700 Musgrove Street, Clinton, SC SCDHEC Site ID# 05694	
Figure 1	MECI 16-5459



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

Site Features

Copelands Service Station
100 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	16-5459
DATE	February 18, 2016
FIGURE	2

UST
FEB 1 9 2016
DIVISION

Midlands Environmental Consultants, Inc.

February 18, 2016

UST
DOCKETING

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

Subject: Site-Specific Work Plan
Lake Road Market
Manning, South Carolina
SCDHEC Site ID Number 02348
MECI Project Number 16-5463
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thrash,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On February 16, 2016, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

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

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Project Biologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Midlands Environmental Consultants, Inc.

DHEC
PROMOTE PROTECT PROSPER

Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division

To: Ms. Ashleigh Thrash (SCDHEC Project Manager)
From: Mr. Jeff Coleman (Contractor Project Manager)
Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Lake Road Market UST Permit #: 02348
Facility Address: 2985 Highway 260, Manning, SC 29102
Responsible Party: Nancy H. Hornsby Phone: 803-481-5651
RP Address: 166 Old Ford Road, Sumter, SC 29154
Property Owner (if different): Joe W. Beaver
Property Owner Address: 2985 Highway 260, Manning, SC 29102
Current Use of Property: Vacant Building

Scope of Work (Please check all that apply)

- ☐ IGWA
- ☐ Tier I
- ☐ Tier II
- ☐ Monitoring Well Installation
- ☑ Groundwater Sampling
- ☐ Other _____
- ☐ GAC

Analyses (Please check all that apply)

Groundwater/Surface Water:

- ☑ BTEXNMDCA (8260B)
- ☑ Oxygenates (8260B)
- ☐ EDB (8011)
- ☐ PAH (8270D)
- ☐ Lead
- ☐ 8 RCRA Metals
- ☐ TPH
- ☐ pH
- ☐ BOD
- ☐ Nitrate
- ☐ Sulfate
- ☐ Other _____
- ☐ Methane
- ☐ Ethanol
- ☐ Dissolved Iron

Soil:

- ☐ BTEXN
- ☐ PAH
- ☐ 8 RCRA Metals
- ☐ Oil & Grease (9071)
- ☐ TPH-DRO (3550B/8015B)
- ☐ TPH-GRO (5030B/8015B)
- ☐ Grain Size
- ☐ TOC

Air:

- ☐ BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)

____ Soil	11 Water Supply Wells	____ Air	1 Field Blank
22 Monitoring Wells	____ Surface Water	2 Duplicate	1 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 #: 02348 Facility Name: Lake Road Market

Implementation Schedule (Number of calendar days from approval)
Field Work Start-Up: 3/3/2016 Field Work Completion: 4/3/2016
Report Submittal: 5/3/2016 # of Copies Provided to Property Owners: _____

Aquifer Characterization
Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

Investigation Derived Waste Disposal
Soil: _____ Tons Purge Water: 200.0 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/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.

-During the initial site visit, all monitoring wells were located.
-Only monitoring wells with screens not bracketing the water table will be purged prior to sample collection.
-Water supply well WSW-10 was not located and has possibly been destroyed by recent DOT construction. If it is located during the sampling event, it will be sampled accordingly.
-All other water supply wells were located
-All samples will be analyzed for BTEX, Naphth, MTBE, DCA, and the Oxygenates.

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: _____

N/A Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

No 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
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

ASSESSMENT COMPONENT INVOICE

SOUTH CAROLINA

Department of Health and Environmental Control

Underground Storage Tank Management Division

State Underground Petroleum Environmental Response Bank Account

May 15, 2014

Facility Name: Lake Road Market

UST Permit #: 02348 **Cost Agreement #:** Proposal

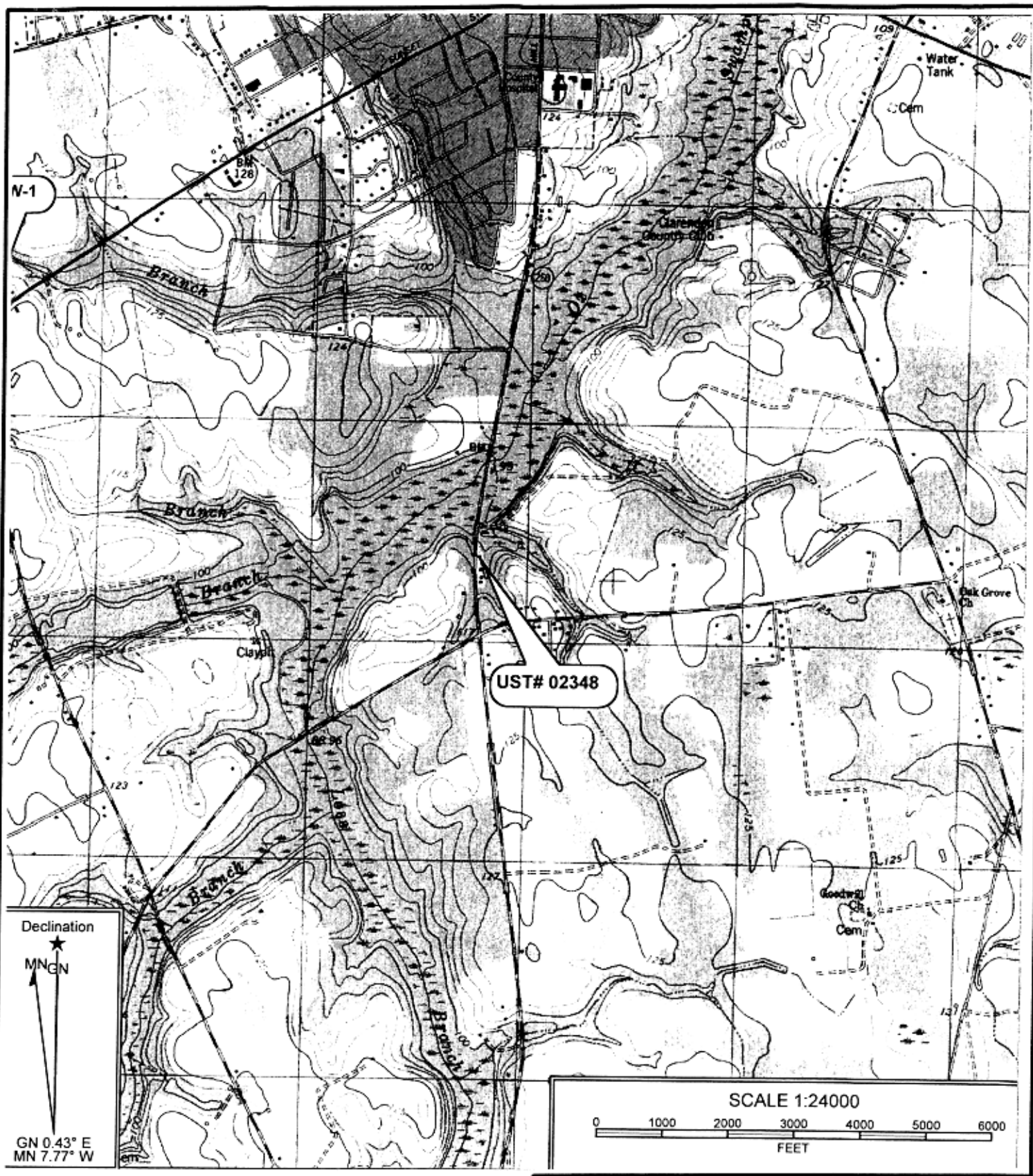
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. **Plan Preparation**				
A1. Site-specific Work Plan	1	each	$150.00	$150.00
B1. Tax Map		each	$70.00	$0.00
C1. Tier II or Comp. Plan /QAPP Appendix B		each	$250.00	$0.00
2. A1. **Receptor Survey ***		each	$551.00	$0.00
3. **Survey (500 ft x 500 ft)**				
A1. Comprehensive 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
4. **Mob/Demob**				
A1. Equipment		each	$1,020.00	$0.00
B1. Personnel	3	each	$423.00	$1,269.00
C1. Adverse Terrain Vehicle		each	$500.00	$0.00
5. A1. **Soil Borings (hand auger)***		foot	$5.00	$0.00
6. **Soil Borings (requiring equipment, push technology, etc)* or Field Screening (including water sample, soil sample, soil gas sample, etc.)***				
AA. Standard		per foot	$15.00	$0.00
C1. Fractured Rock		per foot	$20.20	$0.00
7. A1. **Soil Leachability Model**		each	$60.00	$0.00
8. **Abandonment (per foot)***				
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
9. **Well Installation (per foot)***				
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. Rotosonic (2" diameter)		per foot	$44.00	$0.00
K. Re-develop Existing Well		per foot	$11.00	$0.00
10. **Groundwater Sample Collection / Gauge Depth to Water or Product ***				
A1. Groundwater Purge	22	per well/receptor	$60.00	$1,320.00
B1. Air or Vapors		per receptor	$12.00	$0.00
C1. Water Supply	11	per well/receptor	$22.00	$242.00
D1. Groundwater (No Purge or Duplicate)	2	per well/receptor	$28.00	$56.00
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	1	each	$24.60	$24.60

11. Laboratory Analyses-Groundwater				
A2. BTEXNM+Oxyg's+1,2 DCA+Eth(8260B)	37	per sample	$122.00	$4,514.00
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		per sample	$45.20	$0.00
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
11. **Analyses-Soil**				
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
11. **Analyses-Air**				
Y1. BTEX + Naphthalene		per sample	$216.00	$0.00
11. **Analyses-Free Phase Product**				
Z1. Hydrocarbon Fuel Identification		per sample	$357.00	$0.00
12. **Aquifer Characterization**				
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
13. A1. **Free Product Recovery Rate Test***		each	$38.00	$0.00
14. **Fate/Transport Modeling**				
A1. Mathematical Model		each	$100.00	$0.00
B1. Computer Model		each	$100.00	$0.00
15. **Risk Evaluation**				
A. Tier I Risk Evaluation		each	$300.00	$0.00
B1. Tier II Risk Evaluation		each	$100.00	$0.00
16. A1. **Subsequent Survey***		each	$260.00	$0.00
17. **Disposal (gallons or tons)***				
AA. Wastewater	200	gallon	$0.56	$112.00
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
18. **Miscellaneous (attach receipts)**				
		each	$0.00	$0.00
		each	$0.00	$0.00
		each	$0.00	$0.00
20. **Tier I Assessment (Use DHEC 3665 form)**		standard		$0.00
21. **IGWA (Use DHEC 3666 form)**		standard		$0.00
22. **Corrective Action (Use DHEC 3667 form)**		PFP Bid		$0.00

23. **Aggressive Fluid & Vapor Recovery (AFVR)**				
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
24. **Granulated Activated Carbon (GAC) filter system installation & service:**				
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
25. **Well Repair**				
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
Report Prep & Project Coordination	12%	percent	$7,687.60	$922.51
TOTAL				$8,610.11

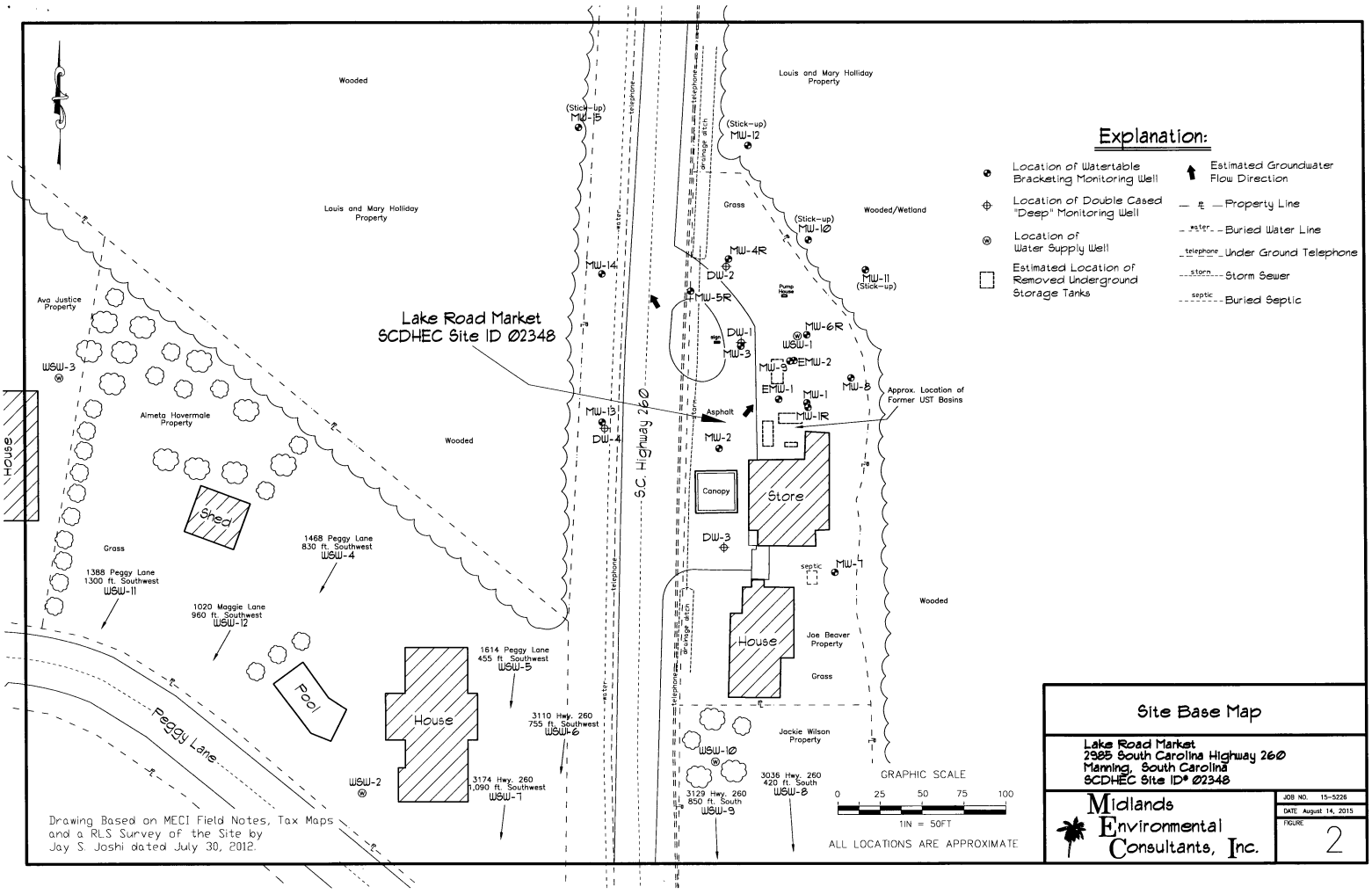
*The appropriate mobilization cost can be added to complete these tasks, as necessary.

DHEC



Reference: Manning, South Carolina
USGS 7.5 Min. Quad
Contour Interval–5 feet

Midlands Environmental Consultants, Inc.	Site Location
Lake Road Market 2985 Highway 260, Manning, SC SCDHEC Site ID# 02348	
Figure 1	MECI 16-5463



Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Location of Water Supply Well
- Estimated Location of Removed Underground Storage Tanks
- Estimated Groundwater Flow Direction
- Property Line
- Buried Water Line
- Under Ground Telephone
- Storm Sewer
- Buried Septic

Site Base Map

Lake Road Market
2985 South Carolina Highway 260
Manning, South Carolina
SCDHEC Site ID# 02348

Midlands Environmental Consultants, Inc.

JOB NO.	15-5226
DATE	August 14, 2015
FIGURE	2

D H E C
PROMOTE PROTECT PROSPER
Catherine E. Heigel, Director
Promoting and protecting the health of the public and the environment

UST DOCKETING
MAR 1 1 2016

WAYNE COPELAND
2961 HURRICANE CHURCH RD
CLINTON SC 29325

Re: **Groundwater Sampling Directive**
Copeland's Service Station, 700 Musgrove St., Clinton, SC
UST Permit #05694; CA #51948
Release reported June 24, 1993
SSWP received February 19, 2016
Laurens County

Dear Mr. Copeland:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced Site Specific Work Plan submitted on your behalf by Midlands Environmental Consultants, Inc. This scope of work will include comprehensive groundwater sampling to evaluate current site conditions. All work should be conducted in accordance with the UST Quality Assurance Program Plan (QAPP), Revision 3.0, and must be conducted in compliance with all applicable regulations. A copy of the Agency's QAPP Rev. 3.0, for the UST Management Division is available at http://www.scdhec.gov/Environment/docs/QAPPRevision3.0.pdf.

Activities at the site should begin immediately upon receipt of this letter. **Cost agreement #51948** has been approved for the amount shown on the enclosed cost agreement form for a comprehensive groundwater sampling event. Groundwater samples will be analyzed for BTEX, Naphthalene, MTBE, 1,2-DCA, 8 Oxygenates and EDB. All wells will need to be purged prior to sampling. Sampling and analyses should be conducted in accordance with Appendix F of the QAPP, Rev. 3.0, and to include duplicate samples, field and trip blanks.

The Monitoring Report and invoice are due within 60 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.

Midlands Environmental Consultants, 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 the services 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 Chemicals of Concern 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 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 #05694** and **CA #51948**. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0631 or by e-mail at Looperam@dhec.sc.gov.

Sincerely,

Adam Looper, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Approved Cost Agreement

cc: Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC 29071 (w/ enc)
Technical File (w/ enc)

Approved Cost Agreement 51948

Facility: 05694 COPELANDS SERVICE STATION INC
LOOPERAM
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
01 PLAN						
		A1	SITE SPECIFIC WORK PLAN	1.0000	$150.000	150.00
04 MOB/DEMOB						
		B1	PERSONNEL	3.0000	$423.000	1,269.00
10 SAMPLE COLLECTION						
		A1	GROUNDWATER (PURGE)	29.0000	$60.000	1,740.00
		D1	GROUNDWATER NO PURGE/DUPLICATE	2.0000	$28.000	56.00
		H1	FIELD BLANK	1.0000	$24.600	24.60
11 ANALYSES						
	GW GROUNDWATER	A2	BTEXNM+OXYGS+1,2-DCA+ETH-8260B	33.0000	$122.000	4,026.00
		F1	EDB BY 8011	32.0000	$45.200	1,446.40
17 DISPOSAL						
		AA	WASTEWATER	300.0000	$0.560	168.00
19 RPT/PROJECT MNGT & COORDINATIO						
		PRT	REPORT PREPARATION	0.1200	$8,880.000	1,065.60
				Total Amount		9,945.60

Document Receipt Information

[X] Hard Copy [X] CD [ ] Email

Date Received 4/14/2016

Permit Number 05694

Project Manager Adam Cooper

Name of Contractor MECI

UST Certification Number

Docket Number 42 tex

Scanned

Description Report of GW Sampling + Chemical Analysis

REPORT OF GROUNDWATER SAMPLING AND CHEMICAL ANALYSES

Copeland's Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC SITE ID 05694
CA # 51948

Prepared By:

Midlands
Environmental
Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

April 4, 2016

MECI Project No. 16-5459

Midlands Environmental Consultants, Inc.

April 4, 2016

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

Subject: Report of Groundwater Sampling and Chemical Analyses
Copeland's Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID# 05694, CA # 51948
MECI Project Number 16-5459
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Looper,

On behalf of Mr. Wayne Copeland, Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling and Chemical Analyses for the referenced site. This report describes assessment activities conducted at the site and results of those activities in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines, including adherence to the UST Division Programmatic Quality Assurance Program Plan.

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Jeff L. Coleman
Senior Scientist

Bryan T. Shane, P.G.
Principal Geologist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

TABLE OF CONTENTS

1.0 INTRODUCTION **1**

1.1 PROJECT INFORMATION 1

2.0 SURROUNDING PROPERTY USAGE **2**

3.0 AREA GEOLOGY AND HYDROGEOLOGY **2**

3.1 LOCAL SUBSURFACE CONDITIONS 2

4.0 FIELD EXPLORATION **3**

4.1 MONITORING WELL SAMPLING AND CHEMICAL ANALYSES 3

5.0 TEST RESULTS AND EVALUATION **4**

5.1 GROUNDWATER ANALYTICAL RESULTS 5

6.0 ASSESSMENT SUMMARY & RECOMMENDATIONS **5**

7.0 QUALIFICATIONS OF REPORT **6**

TABLE OF CONTENTS (cont.)

TABLES:

**Table 1 – SOIL ANALYTICAL RESULTS
Table 2 – POTENTIOMETRIC DATA
Table 3 – GROUNDWATER COC CONCENTRATION DATA
Table 3A – GROUNDWATER COC CONCENTRATION DATA (OXYGENATES)
**Table 4 – AQUIFER CHARACTERISTICS
**Table 5 – SITE CONCEPTUAL MODEL

FIGURES:

Figure 1 – TOPOGRAPHIC MAP
Figure 2 – SITE BASE MAP
**Figure 3 – SOIL COC SITE MAP
Figure 4 – GROUNDWATER COC SITE MAP (TOTAL BTEX ISOPLETH)
Figure 4A – GROUNDWATER COC SITE MAP (NAPHTHALENE ISOPLETH)
Figure 4B – GROUNDWATER COC SITE MAP (EDB ISOPLETH)
Figure 4C – GROUNDWATER COC SITE MAP (OXYGENATES)
Figure 5 – POTENTIOMETRIC DATA SITE MAP

**APPENDIX A – SITE SURVEY
APPENDIX B – SAMPLING LOGS, LABORATORY DATA SHEETS AND CHAIN OF CUSTODY FORMS
**APPENDIX C – TAX MAP DATA
**APPENDIX D – SOIL BORING/FIELD SCREENING LOGS & 1903 FORMS
**APPENDIX E – WELL LOGS & 1903 FORMS
**APPENDIX F – AQUIFER EVALUATION SUMMARY FORMS, DATA, GRAPHS, EQUATIONS
APPENDIX G – DISPOSAL MANIFESTS
**APPENDIX H – LOCAL ZONING REGULATIONS
**APPENDIX I – FATE & TRANSPORT MODELING
**APPENDIX J – ACCESS AGREEMENTS
APPENDIX K – DATA VERIFICATION CHECKLIST

NOTE: ITEMS LISTED WITH AN ** BESIDE IT WERE NOT NEEDED AS A PART OF THIS SCOPE OF WORK

1.0 INTRODUCTION

A. **Owner/Operator Information**

Facility Name:	Copeland's Service Station	UST Permit #:	05694
Facility Address:	700 Musgrove Street, Clinton, SC 29325		
Name:	Mr. Wayne Copeland		
Address:	2961 Hurricane Church Road, Clinton, SC 29325		
Telephone #:	(864) 923-3361 or (864) 923-2494		

B. **Property Owner Information**

Name	Rebecca P. Copeland
Tax Map #:	Laurens Co. Tax Map#: 901-07-12-001
Address	2961 Hurricane Church Road, Clinton, SC 29325
Telephone #	(864) 923-3361 or (864) 923-2494

C. **Contractor Information**

Name:	Midlands Environmental Consultants, Inc.
Certification #:	9
Address:	P. O. Box 854, Lexington, SC 29071
Telephone #:	(803) 808-2043

D. **SCDHEC Certified Well Driller**

Name:	N/A
Driller:	N/A
Certification #:	N/A
Address:	N/A
Telephone #:	N/A

E. **SCDHEC Certified Laboratory**

Name:	Shealy Environmental Services, Inc.
Certification #:	32010
Address:	106 Vantage Point Drive, West Columbia, SC 29172
Telephone #:	(803) 791-9700

1.1 PROJECT INFORMATION

The subject site (Copeland's Service Station) is located at 700 Musgrove Street in Clinton, Laurens County, South Carolina (see Figure 1). The site formerly maintained one 550 gallon kerosene UST, one 2,000 gallon diesel UST, and one 4,000 gallon gasoline UST. The South Carolina Department of Health and Environmental Control (SCDHEC) reported release of petroleum product from three single walled underground storage tanks (UST) at the subject site in June of 1993, which was confirmed in July of 1994. The site is currently ranked a 2BA, due to historical free phase product thickness exceeding 1.00 foot.

The above project information is based on MECI field notes and SCDHEC files.

2.0 SURROUNDING PROPERTY USAGE

The site is located inside the city limits of Clinton, Laurens County, South Carolina. The property is located in a mixed commercial/residential area. Willard Road (S.C. Highway 72) forms the southern border of the site, beyond which is a commercial property which houses Clinton Tire Service/UST Permit# 15629. Additionally to the southwest, at the southwest intersection of Musgrove Street and Willard Road is Short Stop/UST Permit# 05678 (Currently operating as Musgrove Express/UST Permit# 19079). Musgrove Street (S.C. Highway 56) forms the western property boundary, beyond which is a commercial property operating as Electric Motor Service. North and east of the subject site are residential properties.

3.0 AREA GEOLOGY AND HYDROGEOLOGY

The mean elevation of the property, as depicted on the local USGS quadrangle (Joanna, SC), appears to be approximately 660 feet above sea level. The site is located in the Piedmont Physiographic Province of South Carolina, an area underlain by ancient igneous and metamorphic rocks. The soils in this province are generally residual soils that are underlain by rock at highly varying depths.

The soils encountered in this area are the product of in-place weathering of rocks similar to the rocks underlying the site. In areas not altered by erosion or disturbed by the activities of man, the typical residual soil profile consists of near surface clayey soils and underlying sandy silt and sand. The boundary between soil and rock is gradational. A transitional zone termed "weathered rock" is normally found overlying the parent bedrock. This zone is typically the most transmissive zone for groundwater movement. Consequently, the topography of the bedrock surface is uneven, even over short horizontal distances. It is not unusual to find lenses and boulders of hard rock and zones of weathered rock within the soil mantle well above the general bedrock level.

Local precipitation is the source of practically all of the groundwater in Laurens County. A portion of the precipitation infiltrates into the ground and moves under the influence of gravity to the surficial aquifer. After the water has reached the surficial aquifer, the direction of movement is generally parallel to the hydraulic gradient. In the Piedmont Province, the slope of the surficial aquifer's surface under static conditions (no pumping interference) approximates the topography of an area. Thus, the movement of groundwater within the soil mantel is typically in the direction of the topographic slope. Local groundwater flow patterns may be affected by disturbed areas such as tank pits, utility trenches, building foundations, borings, wells, etc. Groundwater flow in fractured rock is often difficult to interpret due to the variability of fracture connectivity and orientation.

Locally, in the surficial aquifer, groundwater discharges into streams, lakes or springs where the groundwater table intersects lows occupied by these water bodies. The apparent direction (based on hydraulic gradient) of groundwater flow is semi-radial, flowing to the northwest toward drainage features associated with the Beards Fork Creek and to east toward drainage features associated with Millers Fork Creek.

3.1 LOCAL SUBSURFACE CONDITIONS

Piedmont soils were encountered during drilling activities conducted at the site during assessment related activities performed at the site on October of 2010. The soils encountered generally consisted of micaceous fine grained sandy silts near surface, which were underlain by layers of more coarse silty sands with depths to approximately 40.00' feet below ground surface (BGS).

On March 24, 2016, stabilized groundwater levels were measured in the surrounding monitoring wells. Depth to groundwater ranged from 18.75 to 27.59 feet below the top of casings in the wells measured. The groundwater measurements are summarized in tabular form in Table 2 and on Figure 5. A groundwater contour map illustrating the groundwater flow direction at the site is also depicted on Figure 5.

Groundwater levels may fluctuate several feet with seasonal and rainfall variations and with change in the water level of adjacent drainage features. Normally, the highest groundwater levels occur in late winter and spring. The lowest levels occur in late summer and fall.

4.0 FIELD EXPLORATION

Field exploration conducted at the site included:

- Sampling of twenty-seven (27) groundwater monitoring wells; and,
- chemical analyses of water samples.

4.1 MONITORING WELL SAMPLING AND CHEMICAL ANALYSES

On March 24, 2016, MECI personnel collected groundwater samples from twenty-seven (27) monitoring wells at the subject site. Two (2) monitoring wells were gauged during sampling activities. Monitoring well MW-2 was gauged and determined to be dry and monitoring well MW-13 was gauged and determined to contain measurable free phase product. As requested by SCDHEC, all monitoring wells were purged prior to sample collection. Twenty-seven (27) monitoring wells were purged prior to sample collection.

Prior to sampling, MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Purging was completed by bailing at least five well volumes of water from the well, until pH, conductivity, dissolved oxygen and turbidity stabilized, or all water was evacuated from the well, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, water temperature, and turbidity were obtained before well sampling process. MECI utilized YSI Pro20 meter for DO (mg/L) and temperature readings (°C), YSI Pro1030 meter for pH and conductivity (uS) readings and a MicroTPI turbidimeter for turbidity readings (NTU). The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's most recent revision of the Quality Assurance Program Plan for the Underground Storage Tank Management Division and MECI's most recent revision of Standard Operating Procedures.

Groundwater samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Gauge Well Only	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	1,2 DCA (EPA Method 8260-B)	Ethanol (EPA Method 8260-B)	EDB (EPA Method 8011)	Total Lead (EPA Method 6010)	Filtered Lead (EPA Method 6010)	8 RCRA Metals (EPA Method 6010)	TPH (EPA Method 9071)	PAH's (EPA Method 8270)
				Analyte Sampled									
MW-1	X			X	X	X		X					
MW-2			X										
MW-3	X			X	X	X		X					
MW-4	X			X	X	X		X					
MW-5	X			X	X	X		X					
MW-6	X			X	X	X		X					
MW-7	X			X	X	X		X					
MW-8	X			X	X	X		X					
MW-9	X			X	X	X		X					
MW-10	X			X	X	X		X					
MW-11	X			X	X	X		X					
MW-12	X			X	X	X		X					
MW-13			X										
MW-14	X			X	X	X		X					
MW-15	X			X	X	X		X					
MW-16	X			X	X	X		X					
MW-17	X			X	X	X		X					
MW-18	X			X	X	X		X					
MW-19	X			X	X	X		X					
MW-20	X			X	X	X		X					
MW-21	X			X	X	X		X					
DW-1	X			X	X	X		X					
DW-2	X			X	X	X		X					
AFVR-1	X			X	X	X		X					
AFVR-2	X			X	X	X		X					
AFVR-3	X			X	X	X		X					
AFVR-4	X			X	X	X		X					
AFVR-5	X			X	X	X		X					
AFVR-6	X			X	X	X		X					
MW-12 Dup.**				X	X	X		X					
AFVR-2 Dup.**				X	X	X		X					
Field Blank				X	X	X		X					
Trip Blank				X	X	X							

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane
PAH = polycyclic aromatic hydrocarbons

The results of the laboratory analyses are summarized in Table 3 & 3A and presented in Appendix B.

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 134.5 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is presented in Appendix G.

5.0 TEST RESULTS AND EVALUATION

The following sections discuss groundwater test results for the subject site.

5.1 GROUNDWATER ANALYTICAL RESULTS

As discussed in Section 4.1, groundwater samples obtained from the monitoring wells were analyzed for dissolved phase petroleum constituents. Free phase petroleum product was detected in monitoring well MW-13 during the subject sampling event and groundwater samples were not collected beneath the product layer. The analytical results indicated dissolved petroleum impact to the surficial aquifer, with the highest concentrations being detected in the area of MW-14. Of the twenty-seven monitoring wells sampled, sixteen wells (MW-1, MW-11, MW-12, MW-13, MW-14, MW-16, MW-17, MW-18, DW-1, DW-2, AFVR-1, AFVR-2, AFVR-3, AFVR-4, AFVR-5 and AFVR-6) either contained measurable free phase petroleum product or detected petroleum constituents above Risk-Based Screening Levels (RBSL's). Petroleum constituents detected above the established RBSL include:

Compound	***RBSL (ug/l)***	***Wells Above RBSL***
Product	0.01 (ft)	MW-13
Benzene	5	MW-1, MW-12, MW-14, MW-17, MW-18, DW-1, DW-2, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
Toluene	1,000	MW-1, MW-12, MW-14, MW-17, MW-18, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
Ethylbenzene	700	MW-1, MW-12, MW-14, MW-17, MW-18, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
Total Xylenes	10,000	MW-1, MW-12, MW-14, MW-17, MW-18, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
Naphthalene	25	MW-1, MW-11, MW-12, MW-14, MW-16, MW-17, MW-18, DW-1, DW-2, AFVR-1, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
MTBE	40	MW-17, MW-18 & AFVR-6
1,2 DCA	5	MW-14, MW-17, DW-2, AFVR-4, AFVR-5 & AFVR-6
EDB	0.05	MW-1, MW-12, MW-14, MW-17, MW-18, DW-2, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6

In addition, the analytical results also detected petroleum constituents above the laboratory method detection limit in monitoring wells MW-4, MW-6, MW-7, MW-10, MW-15 and MW-21; however the concentrations detected did not exceed the RBSL. The results of the analyses for each monitoring well and specific parameters are listed on Table 3, Table 3A, and provided in Appendix B.

6.0 ASSESSMENT SUMMARY & RECOMMENDATIONS

Based on the results of our assessment activities, it appears that impact to the surficial aquifer has occurred due to a release of petroleum hydrocarbons. Free phase petroleum product was detected MW-13 at a thickness of 0.80' feet. The analytical results indicate dissolved petroleum impact to the surficial aquifer, with the highest dissolved concentrations being detected in the area of MW-14. Groundwater appears to be moving semi-radial, flowing to the northwest toward drainage features associated with the Beards Fork Creek and to the east toward drainage features associated with Millers Fork Creek. Contaminant pathways appear to flow along the northwesterly flow direction than the easterly flow direction.

Of the twenty-seven monitoring wells sampled, sixteen wells (MW-1, MW-11, MW-12, MW-13, MW-14, MW-16, MW-17, MW-18, DW-1, DW-2, AFVR-1, AFVR-2, AFVR-3, AFVR-4, AFVR-5 and AFVR-6) either contained measurable free phase petroleum product or detected petroleum constituents above Risk-Based Screening Levels (RBSL's). Petroleum constituents detected above the established RBSL include:

Compound	***RBSL (ug/l)***	***Wells Above RBSL***
Product	0.01 (ft)	MW-13
Benzene	5	MW-1, MW-12, MW-14, MW-17, MW-18, DW-1, DW-2, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
Toluene	1,000	MW-1, MW-12, MW-14, MW-17, MW-18, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
Ethylbenzene	700	MW-1, MW-12, MW-14, MW-17, MW-18, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
Total Xylenes	10,000	MW-1, MW-12, MW-14, MW-17, MW-18, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
Naphthalene	25	MW-1, MW-11, MW-12, MW-14, MW-16, MW-17, MW-18, DW-1, DW-2, AFVR-1, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6
MTBE	40	MW-17, MW-18 & AFVR-6
1,2 DCA	5	MW-14, MW-17, DW-2, AFVR-4, AFVR-5 & AFVR-6
EDB	0.05	MW-1, MW-12, MW-14, MW-17, MW-18, DW-2, AFVR-2, AFVR-3, AFVR-4, AFVR-5 & AFVR-6

In addition, the analytical results also detected petroleum constituents above the laboratory method detection limit in monitoring wells MW-4, MW-6, MW-7, MW-10, MW-15 and MW-21; however the concentrations detected did not exceed the RBSL. The results of the analyses for each monitoring well and specific parameters are listed on Table 3, Table 3A, and provided in Appendix B.

Figure 4 depicts graphically the concentrations of Total BTEX in the monitoring wells which bracket the watertable at the site. Figure 4A presents the concentrations of Naphthalene in the monitoring wells which bracket the watertable at the site. Figure 4B presents the concentrations of EDB in the monitoring wells which bracket the watertable at the site. Figure 4C presents the 8 oxygenates analytical data from all monitoring wells installed in conjunction with the subject UST release.

Since the October of 2014 groundwater sampling event, free phase petroleum product levels have significantly decreased. This may be the result of successful Aggressive Fluid Vapor Recovery (AFVR) events historically conducted at the site and an approximate 5.00' foot increase in the overall groundwater table. Though advances have been made toward reducing levels of light-non aqueous phase liquids (LNAPL's), current analytical data suggests the dissolved petroleum plume emanating from the referenced site is not defined vertically. Since the November 2, 2010, groundwater sampling event, significant increases in CoC concentrations has occurred in monitoring wells DW-1 and DW-2.

MECI recommends conducting groundwater field screening to define the extent of CoC's vertically at the site. Following the proposed groundwater field screening activities, a series of additional monitoring wells should be installed to better define the plume(s). Once the proposed monitoring wells are installed, a comprehensive groundwater sampling event (to include monitoring wells installed in association with UST Permit# 05678) should be conducted to confirm that the plume(s) are defined and to approximate the edges of each plume. In addition, it may be advantageous to conduct a series of extended AFVR events on monitoring wells which exhibit free phase petroleum product to stem the spread of dissolved phase petroleum contaminants.

7.0 QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our

evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Contents of this report are intended for the sole use of H. Wayne Copeland, MECI, and SCDHEC under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

-oOo-

TABLES

TABLE 2
PAGE 1 OF 2
POTENTIOMETRIC DATA
MARCH 24, 2016 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 16-5459
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-1	2/3/2010**	TD=33.95	30.79	33.63	2.84	659.98	628.76
	11/2/2010**	-	31.35	32.80	1.45	659.98	628.41
	10/31/2014**	-	31.25	31.51	0.26	659.98	628.69
	3/24/2016	-	***	26.14	***	659.98	633.84
MW-2	2/3/2010	TD=12.05	DRY	DRY	DRY	659.57	DRY
	11/2/2010	-	DRY	DRY	DRY	659.57	DRY
	10/31/2014	-	DRY	DRY	DRY	659.57	DRY
	3/24/2016	-	DRY	DRY	DRY	659.57	DRY
MW-3	2/3/2010	25-35	***	26.50	***	658.21	631.71
	11/2/2010	-	***	31.06	***	658.21	627.15
	10/31/2014	-	***	31.71	***	658.21	626.50
	3/24/2016	-	***	23.91	***	658.21	634.30
MW-4	2/3/2010	25-35	***	30.53	***	658.41	627.88
	11/2/2010	-	***	31.83	***	658.41	626.58
	10/31/2014	-	***	30.61	***	658.41	627.80
	3/24/2016	-	***	25.78	***	658.41	632.63
MW-5	2/3/2010	25-35	***	15.14	***	653.79	638.65
	11/2/2010	-	***	25.60	***	653.79	628.19
	10/31/2014	-	***	29.04	***	653.79	624.75
	3/24/2016	-	***	18.75	***	653.79	635.04
MW-6	2/3/2010	25-35	***	28.03	***	656.32	628.29
	11/2/2010	-	***	28.39	***	656.32	627.93
	10/31/2014	-	***	28.46	***	656.32	627.86
	3/24/2016	-	***	24.03	***	656.32	632.29
MW-7	2/3/2010	25-35	***	30.76	***	658.96	628.20
	11/2/2010	-	***	30.95	***	658.96	628.01
	10/31/2014	-	***	31.00	***	658.96	627.96
	3/24/2016	-	***	26.21	***	658.96	632.75
MW-8	2/3/2010	25-35	***	32.81	***	659.94	627.13
	11/2/2010	-	***	31.87	***	659.94	628.07
	10/31/2014	-	***	31.89	***	659.94	628.05
	3/24/2016	-	***	23.98	***	659.94	635.96
MW-9	2/3/2010	25-35	***	33.03	***	660.49	627.46
	11/2/2010	-	***	32.50	***	660.49	627.99
	10/31/2014	-	***	30.43	***	660.49	630.06
	3/24/2016	-	***	25.63	***	660.49	634.86
MW-10	2/3/2010	25-35	***	31.34	***	659.53	628.19
	11/2/2010	-	***	32.31	***	659.53	627.22
	10/31/2014	-	***	31.43	***	659.53	628.10
	3/24/2016	-	***	26.16	***	659.53	633.37
MW-11	2/3/2010	25-35	***	33.05	***	661.23	628.18
	11/2/2010	-	***	33.25	***	661.23	627.98
	10/31/2014	-	***	33.22	***	661.23	628.01
	3/24/2016	-	***	26.78	***	661.23	634.45
MW-12	2/3/2010**	25-35	31.55	32.80	1.25	660.14	628.40
	11/2/2010**	-	32.00	32.08	0.08	660.14	628.13
	10/31/2014	-	***	31.98	***	660.14	628.16
	3/24/2016	-	***	26.30	***	660.14	633.84
MW-13	2/3/2010**	25-35	31.78	33.81	2.03	661.12	629.04
	11/2/2010**	-	31.93	34.68	2.75	661.12	628.78
	10/31/2014**	-	32.54	32.57	0.03	661.12	628.58
	3/24/2016	-	26.80	27.60	0.80	661.12	634.20
MW-14	2/3/2010**	25-35	30.60	31.46	0.86	660.25	629.52
	11/2/2010**	-	32.18	32.27	0.09	660.25	628.06
	10/31/2014	-	***	31.93	***	660.25	628.32
	3/24/2016	-	***	26.75	***	660.25	633.50

Notes:

1. Groundwater depths were measured from the top of the PVC riser.
2. Stabalized groundwater levels measured 3/24/2016.
3. Site datum based on USGS Elevation.
4. DRY =Monitorign Well Gauged Dry
5. ** = Groundwater elevation for corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85
6. TD = Total Depth

TABLE 2
PAGE 2 OF 2
POTENTIOMETRIC DATA
MARCH 24, 2016 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 16-5459
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-15	2/3/2010	25-35	***	25.35	***	659.54	634.19
	11/2/2010	-	***	31.27	***	659.54	628.27
	10/31/2014	-	***	30.83	***	659.54	628.71
	3/24/2016	-	***	24.45	***	659.54	635.09
MW-16	2/3/2010	25-35	***	29.41	***	658.22	628.81
	11/2/2010	-	***	30.04	***	658.22	628.18
	10/31/2014	-	***	31.02	***	658.22	627.20
	3/24/2016	-	***	25.34	***	658.22	632.88
MW-17	2/19/2010	30-40	***	30.14	***	660.19	630.05
	11/2/2010	-	***	31.76	***	660.19	628.43
	10/31/2014	-	***	32.61	***	660.19	627.58
	3/24/2016	-	***	27.59	***	660.19	632.60
MW-18	2/19/2010	30-40	***	28.74	***	659.50	630.76
	11/2/2010	-	***	30.56	***	659.50	628.94
	10/31/2014	-	***	31.14	***	659.50	628.36
	3/24/2016	-	***	25.74	***	659.50	633.76
MW-19	11/2/2010	23-33	***	26.43	***	654.46	628.03
	10/31/2014	-	***	27.19	***	654.46	627.27
	3/24/2016	-	***	21.30	***	654.46	633.16
MW-20	11/2/2010	23-33	***	27.80	***	654.26	626.46
	10/31/2014	-	***	27.78	***	654.26	626.48
	3/24/2016	-	***	25.03	***	654.26	629.23
MW-21	11/2/2010	23-33	***	27.19	***	653.53	626.34
	10/31/2014	-	***	27.12	***	653.53	626.41
	3/24/2016	-	***	24.09	***	653.53	629.44
DW-1	2/3/2010	75-85	***	32.02	***	660.41	628.39
	11/2/2010	-	***	32.41	***	660.41	628.00
	10/31/2014	-	***	32.37	***	660.41	628.04
	3/24/2016	-	***	27.08	***	660.41	633.33
DW-2	11/2/2010	56-61	***	31.59	***	659.59	628.00
	10/31/2014	-	***	31.17	***	659.59	628.42
	3/24/2016	-	***	25.03	***	659.59	634.56
AFVR-1	2/3/2010	TD=33.96	***	33.09	***	661.55	628.46
	11/2/2010	-	***	DRY	***	661.55	DRY
	10/31/2014	-	***	33.19	***	661.55	628.36
	3/24/2016	-	***	26.88	***	661.55	634.67
AFVR-2	2/3/2010	TD=34.45	***	32.13	***	660.51	628.38
	11/2/2010	-	***	32.35	***	660.51	628.16
	10/31/2014	-	***	32.28	***	660.51	628.23
	3/24/2016	-	***	26.55	***	660.51	633.96
AFVR-3	2/3/2010**	TD=34.10	30.85	30.97	0.12	659.34	628.47
	11/2/2010**	-	31.06	31.34	0.28	659.34	628.24
	10/31/2014**	-	31.06	31.07	0.01	659.34	628.28
	3/24/2016	-	***	25.69	***	659.34	633.65
AFVR-4	2/3/2010**	TD=34.45	30.88	30.92	0.04	660.14	629.25
	11/2/2010	-	***	32.15	***	660.14	627.99
	10/31/2014	-	***	31.90	***	660.14	628.24
	3/24/2016	-	***	26.80	***	660.14	633.34
AFVR-5	2/3/2010**	TD=34.35	31.55	34.65	3.10	661.21	629.20
	11/2/2010**	-	32.13	33.81	1.68	661.21	628.83
	10/31/2014**	-	32.71	32.75	0.04	661.21	628.49
	3/24/2016	-	***	27.20	***	661.21	634.01
AFVR-6	2/3/2010**	TD=34.36	31.93	34.00	2.07	659.95	627.71
	11/2/2010**	-	31.20	31.76	0.56	659.95	628.67
	10/31/2014**	-	31.39	31.44	0.05	659.95	628.55
	3/24/2016	-	***	26.20	***	659.95	633.75

Notes:

1. Groundwater depths were measured from the top of the PVC riser.
2. Stabalized groundwater levels measured 3/24/2016.
3. Site datum based on USGS Elevation.
4. DRY =Monitorign Well Gauged Dry
5. ** = Groundwater elevation for corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85
6. TD = Total Depth

TABLE 3
PAGE 1 OF 2
GROUNDWATER COC CONCENTRATION DATA
MARCH 24, 2016 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 16-5459
SCDHEC ID NUMBER 05694

Well Number	Sample Date	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	Total BTEX (µg/l)	Naphthalene (µg/l)	MTBE (µg/l)	1,2 DCA (µg/l)	EDB (µg/l)	Total Lead (µg/l)
MW-1	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	3,000	31,000	3,600	29,000	66,600	940J	<1,000	<1,000	26	NT
MW-2	2/3/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/31/2014	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/24/2016	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	2/3/2010	<5.0	105	61.2	388	554.2	44.8	<5.0	NT	0.22	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
MW-4	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.1J	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	4.0J	<5.0	<0.019	NT
MW-5	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	4.8J
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
MW-6	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	7.1
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	5.4
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	0.78J	0.78J	<5.0	<5.0	<5.0	<0.020	NT
MW-7	2/3/2010	12.5	27.8	94.4	323	457.7	38.3	<10.0	NT	0.078	<5.0
	11/2/2010	<5.0	<5.0	<5.0	14.1	14.1	<5.0	<5.0	NT	0.045	<5.0
	10/31/2014	<5.0	<5.0	1.8J	7.0J	8.8J	2.2J	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	1.8J	1.8J	0.39J	<5.0	<5.0	<0.019	NT
MW-8	2/3/2010	989	<25.0	40.7	24.6J	1,054.3J	619	<25.0	NT	<0.019	<5.0
	11/2/2010	113	203	140	284	740	287	20.7	NT	<0.020	<5.0
	10/31/2014	13.7	<5.0	6.2	<10.0	19.9	151	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
MW-9	2/3/2010	4,620	32,600	3,190	17,600	58,010	623	<5.0	NT	59.3	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	2.8J	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
MW-10	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	<5.0
	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	2.2J	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	5.0	<5.0	<0.019	NT
MW-11	2/3/2010	<250	101J	1,310	15,200	16,611J	1,280	<250	NT	<0.020	17.3
	11/2/2010	<250	251	1,640	16,300	18,191	1,350	<250	NT	<0.020	8.9
	10/31/2014	42.3	173	522	3,730	4,467	417	<25.0	<25.0	<0.020	NT
	3/24/2016	<5.0	0.87J	39	260	299.87J	30	<5.0	<5.0	<0.019	NT
MW-12	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	1,970	22,300	2,900	18,800	45,970	698	<50.0	<50.0	12.8	NT
	3/24/2016	380J	8,500	1,700	20,000	30,580J	650	<500	<500	0.48	NT
MW-13	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	17,500	39,300	3,650	20,800	81,250	562	<500	833	186	NT
	3/24/2016	20,000	56,000	4,400	28,000	108,400	650J	<2,500	1,400J	190	NT
MW-15	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.019	<5.0
	11/2/2010	<5.0	1.8J	<5.0	<10.0	1.8J	<5.0	<5.0	NT	<0.019	55.2
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	0.018J	NT

Notes:
1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. DRY = Well gauged dry
4. MTBE = Methyl-Tertiary-Butyl Ether
5. EDB = Ethylene Dibromide
6. 1,2 DCA = 1,2-Dichloroethane
7. NT = Not Tested
8. See Appendix for Laboratory Detection Limits
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free Phase Petroleum Product

TABLE 3
PAGE 2 OF 2
GROUNDWATER COC CONCENTRATION DATA
MARCH 24, 2016 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 16-5459
SCDHEC ID NUMBER 05694

Well Number	Sample Date	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	Total BTEX (µg/l)	Naphthalene (µg/l)	MTBE (µg/l)	1,2 DCA (µg/l)	EDB (µg/l)	Total Lead (µg/l)
MW-16	2/3/2010	<10.0	10.6	263	1,040	1,313.6	247	<10.0	NT	<0.020	<5.0
	11/2/2010	<5.0	3.9J	26.8	503	533.7J	155	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	<50	50	520	3,300	3,870	430	<50	<50	<0.019	NT
MW-17	2/19/2010	9,790	15,500	2,490	12,700	40,480	380J	87.3	NT	14.5	<5.0
	11/2/2010	10,900	19,500	3,000	19,000	52,400	432	15.0	NT	39.4	7.1
	10/31/2014	12,200	16,500	2,750	16,900	48,350	489J	766	754	23.7	NT
	3/24/2016	16,000	37,000	3,600	22,000	78,600	550J	420J	1,200	55	NT
MW-18	2/19/2010	8,250	32,900	3,440	19,000	63,590	<1,000	597J	NT	50.7	13.7
	11/2/2010	8,070	34,500	3,440	19,600	65,610	1,330	910	NT	64.2	12.4
	10/31/2014	4,540	26,800	3,350	18,700	53,390	540	120J	<250	19.6	NT
	3/24/2016	4,600	36,000	4,900	27,000	72,500	630J	56J	<1,000	16	NT
MW-19	11/2/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
MW-20	11/2/2010	<5.0	4.0J	<5.0	4.9J	8.9J	4.4J	<5.0	NT	<0.027	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
MW-21	11/2/2010	25.5	3.4J	<5.0	88.7	117.6J	9.1	<5.0	NT	0.24	<5.0
	10/31/2014	22.6	<5.0	<5.0	84.9	107.5	8.9	<5.0	<5.0	0.087	NT
	3/24/2016	2.2J	<5.0	<5.0	8.5	10.7J	0.92J	<5.0	<5.0	0.029	NT
DW-1	2/3/2010	653	<25.0	<25.0	24.0J	677.0J	32.6	<25.0	NT	<0.020	<5.0
	11/2/2010	6.0	1.9J	<5.0	3.0J	10.9J	<5.0	<5.0	NT	<0.020	<5.0
	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	3,900	<250	<250	<250	3,900	92J	<250	<250	<0.019	NT
DW-2	11/2/2010	100	<5.0	<5.0	11.5	111.5	2.9J	<5.0	NT	<0.021	<5.0
	10/31/2014	8,520	<500	<500	751J	9,271J	325J	<500	598	0.074	NT
	3/24/2016	1,100	<50	3.5J	1,200	2,303.5J	150	<50	120	0.078	NT
AFVR-1	2/3/2010	<100	106	1,220	8,730	10,056	636	<100	NT	0.075	4.8J
	11/2/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NT	DRY	DRY
	10/31/2014	<25.0	11.1J	149	1,740	1,900.1J	113	<25.0	<25.0	<0.022	NT
	3/24/2016	<5.0	1.5J	80	380	461.5J	29	<5.0	<5.0	<0.019	NT
AFVR-2	2/3/2010	2,930	18,400	872J	16,000	38,202J	606J	<1,000	NT	10.6	15.4
	11/2/2010	3,950	28,600	2,480	24,800	59,830	653	<250	NT	15.4	<5.0
	10/31/2014	1,420	19,300	2,790	25,200	48,710	879J	<1,000	<1,000	4.1	NT
	3/24/2016	780	11,000	2,100	18,000	31,880	790	<250	<250	1.5	NT
AFVR-3	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	2,600	38,000	4,400	31,000	76,000	740J	<1,000	<1,000	15	NT
AFVR-4	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	20,500	31,300	3,250	19,900	74,950	541	<125	NT	305	29.9
	10/31/2014	16,700	22,500	1,590	27,400	68,190	1,110J	<1,250	1,740	271	NT
	3/24/2016	13,000	20,000	810J	29,000	62,810J	770J	<2,500	1,900J	230	NT
AFVR-5	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	7,900	20,000	1,500	22,000	51,400	740	<500	590	430	NT
AFVR-6	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	11/2/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	16,000	39,000	4,000	27,000	86,000	900	440	1,500	610	NT
MW-1 Dup.	3/24/2016	3,000	30,000	3,400	28,000	64,400	780J	<1,000	<1,000	23	NT
MW-12 Dup.	10/31/2014	1,800	19,200	2,610	19,000	42,610	564J	<625	<625	12.8	NT
MW-14 Dup.	3/24/2016	19,000	52,000	3,600	27,000	101,600	590J	<2,500	1,400J	220	NT
AFVR-2 Dup.	10/31/2014	1,500	22,800	4,550	35,300	64,150	1,530	<1,000	<1,000	4.1	NT
Field Blank	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019	NT
Trip Blank	10/31/2014	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<5.0	<0.020	NT
	3/24/2016	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	NT	NT

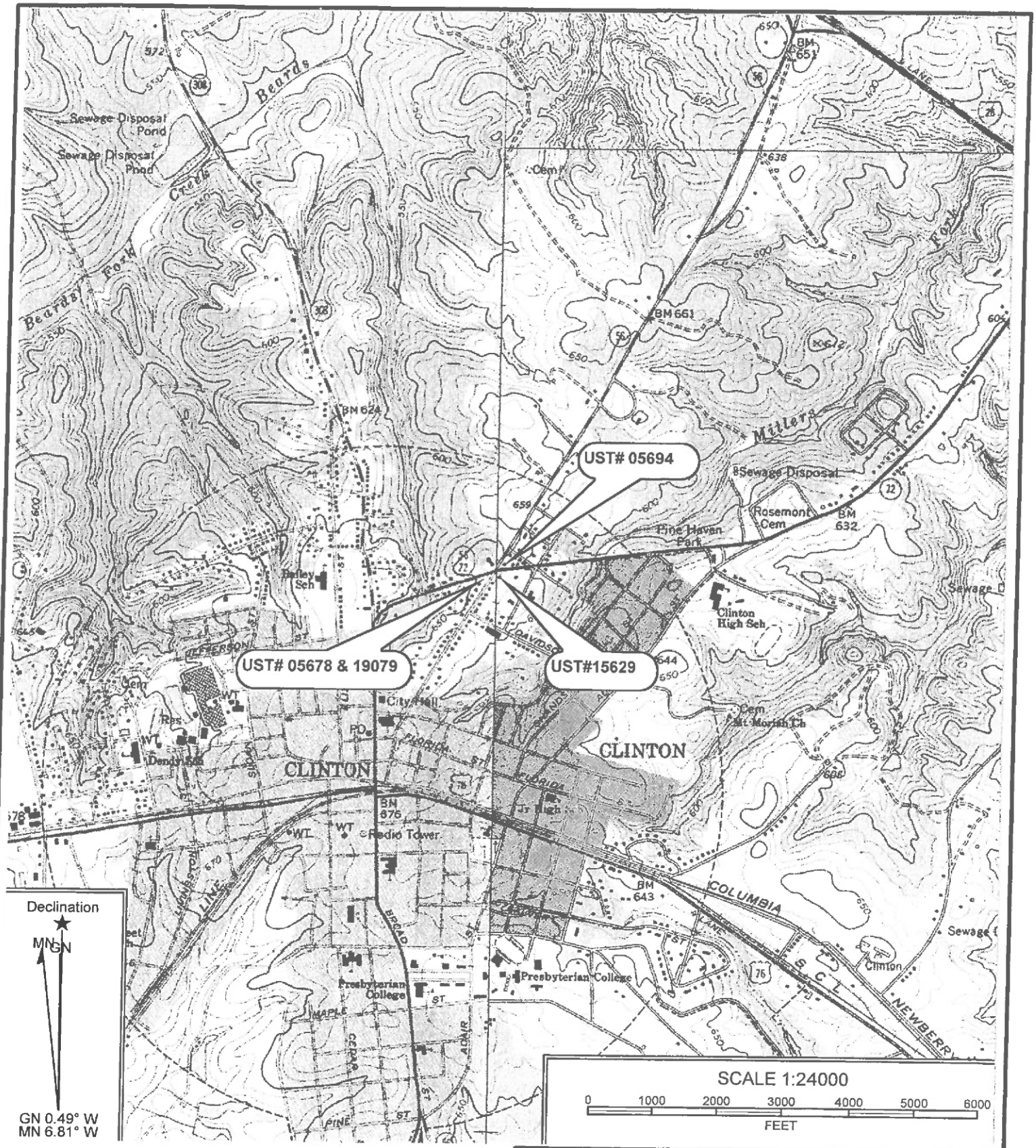
Notes:
1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. DRY = Well gauged dry
4. MTBE = Methyl-Tertiary-Butyl Ether
5. EDB = Ethylene Dibromide
6. 1,2 DCA = 1,2-Dichloroethane
7. NT = Not Tested
8. See Appendix for Laboratory Detection Limits
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free Phase Petroleum Product

TABLE 3A
GROUNDWATER COC CONCENTRATION DATA (OXYGENATES)
MARCH 24, 2016 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 16-5459
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	TAA (µg/l)	TAME (µg/l)	TBF (µg/l)	DIPE (µg/l)	3,3-Dimethyl-1-butanol (µg/l)	Ethanol (µg/l)	ETBE (µg/l)	TBA (µg/l)
MW-1	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	<20,000	<2,000	<20,000	120J	<20,000	<200,000	<20,000	<20,000
MW-2	10/31/2014	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	3/24/2016	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-4	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-5	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-6	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	5.1J
MW-7	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-8	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-9	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-10	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-11	10/31/2014	15,800	<50.0	<250	<25.0	<500	<1,000	<50.0	1,400
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	6.5J
MW-12	10/31/2014	3,600	<100	<500	53.2	<1,000	<2,000	<100	<1,000
	3/24/2016	<10,000	<1,000	<10,000	<1,000	<10,000	<100,000	<10,000	<10,000
MW-13	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	10/31/2014	58,400	<1,000	<5,000	1,420	<10,000	<20,000	<1,000	<10,000
	3/24/2016	62,000	<5,000	<50,000	1,500J	<50,000	<500,000	<50,000	3,300J
MW-15	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-16	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<1,000	<100	<1,000	<100	<1,000	<10,000	<1,000	160J
MW-17	10/31/2014	85,300	<1,250	<6,250	2,000	<12,500	<25,000	<1,250	11,500J
	3/24/2016	46,000	<2,000	<20,000	2,000	<20,000	<200,000	<20,000	6,600J
MW-18	10/31/2014	<5,000	<500	<2,500	462	<5,000	<10,000	<500	<5,000
	3/24/2016	390J	<2,000	<20,000	<2,000	<20,000	<200,000	<20,000	<20,000
MW-19	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-20	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-21	10/31/2014	<100	<10.0	<50.0	2.4J	<100	<200	<10.0	<100
	3/24/2016	10J	<10	<100	<10	<100	<1,000	<100	4.7J
DW-1	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	7,800	<500	<5,000	260J	<5,000	<50,000	<5,000	640J
DW-2	10/31/2014	16,900	<1,000	<5,000	913	<10,000	<20,000	<1,000	<10,000
	3/24/2016	3,700	<100	<1,000	150	<1,000	<10,000	<1,000	260J
AFVR-1	10/31/2014	<500	<50.0	<250	<25.0	<500	<1,000	<50.0	<500
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	7.9J
AFVR-2	10/31/2014	<20,000	<2,000	<10,000	<1,000	<20,000	<40,000	<2,000	<20,000
	3/24/2016	160J	<500	<5,000	38J	<5,000	<50,000	<5,000	<5,000
AFVR-3	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	<20,000	<2,000	<20,000	<2,000	<20,000	<200,000	<20,000	<20,000
AFVR-4	10/31/2014	76,500	<2,500	<12,500	2,600	<25,000	<50,000	<2,500	<25,000
	3/24/2016	81,000	<5,000	<50,000	2,100J	<50,000	<500,000	<50,000	3,200J
AFVR-5	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	4,700J	<1,000	<10,000	960J	<10,000	<100,000	<10,000	520J
AFVR-6	10/31/2014	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
	3/24/2016	21,000	<500	<5,000	2,900	<5,000	<50,000	<5,000	1,300J
MW-1 Dup.	3/24/2016	460J	<2,000	<20,000	94J	<20,000	<200,000	<20,000	<20,000
MW-12 Dup.	10/31/2014	<12,500	<1,250	<6,250	<625	<12,500	<25,000	<1,250	<12,500
MW-14 Dup.	3/24/2016	63,000	<5,000	<50,000	1,500J	<50,000	<500,000	<50,000	3,100J
AFVR-2 Dup.	10/31/2014	<20,000	<2,000	<10,000	340J	<20,000	<40,000	<2,000	<20,000
Field Blank	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100
Trip Blank	10/31/2014	<100	<10.0	<50.0	<5.0	<100	<200	<10.0	<100
	3/24/2016	<100	<10	<100	<10	<100	<1,000	<100	<100

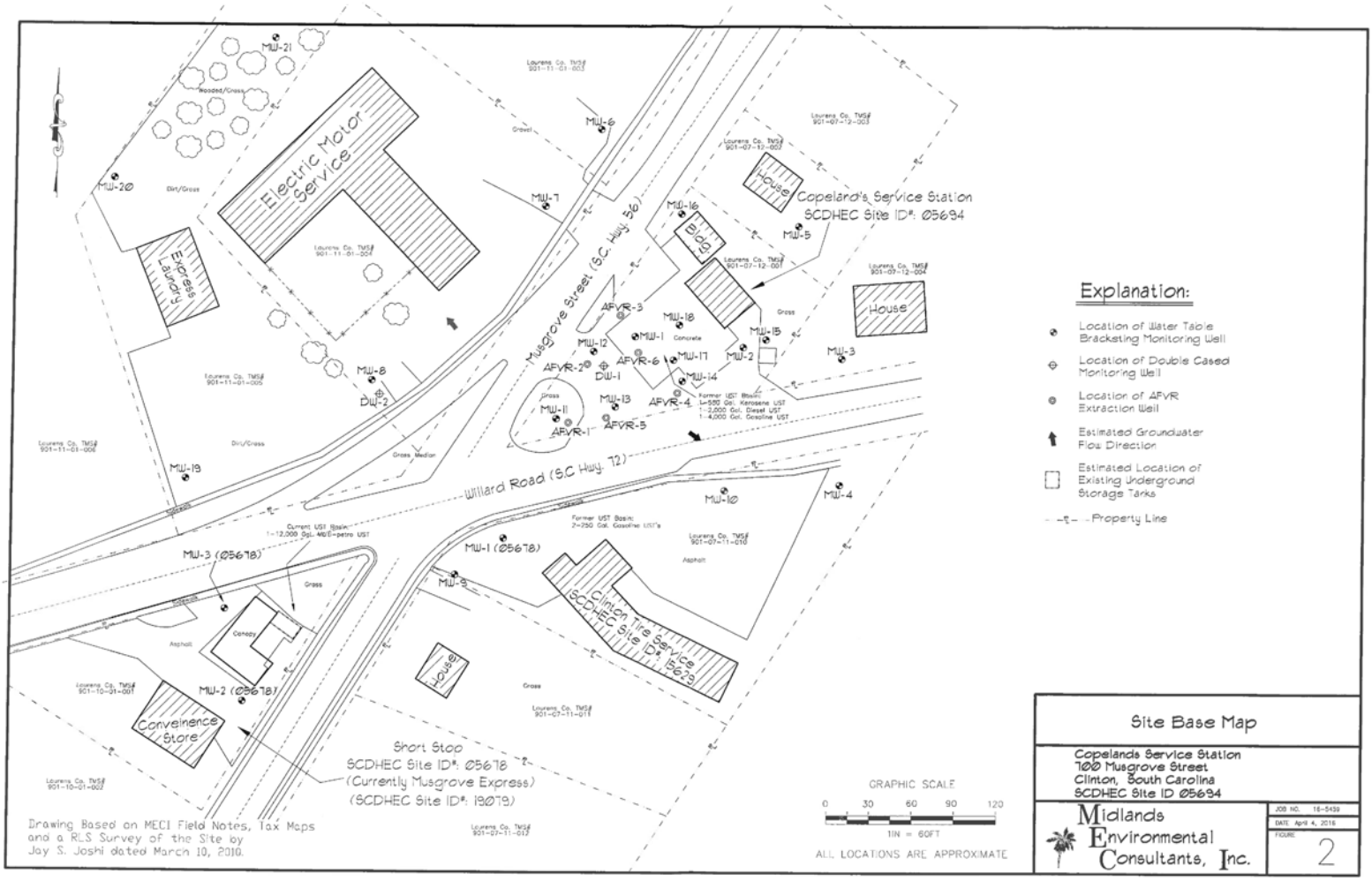
Notes:
1. µg/l = micrograms per liter
2. NL = Not Located
3. DIPE = Diisopropyl Ether
4. ETBE = Ethyl tert-butyl Ether
5. TAA = tert-Amyl Alcohol
6. TAME = tert-Amyl Methyl Ether
7. TBA = tert-Butyl Alcohol
8. TBF = tert-Butyl Formate
9. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
10. NS = Not Sampled (Well Gauged Dry)

FIGURES



Reference: Clinton, South Carolina
Joanna, South Carolina
USGS 7.5 Min. Quad
Countour Interval – 10 Feet

Midlands Environmental Consultants, Inc.	Site Location
Copelands Service Station 700 Musgrove Street, Clinton, SC SCDHEC Site ID# 05694	
Figure 1	MECI 16-5459

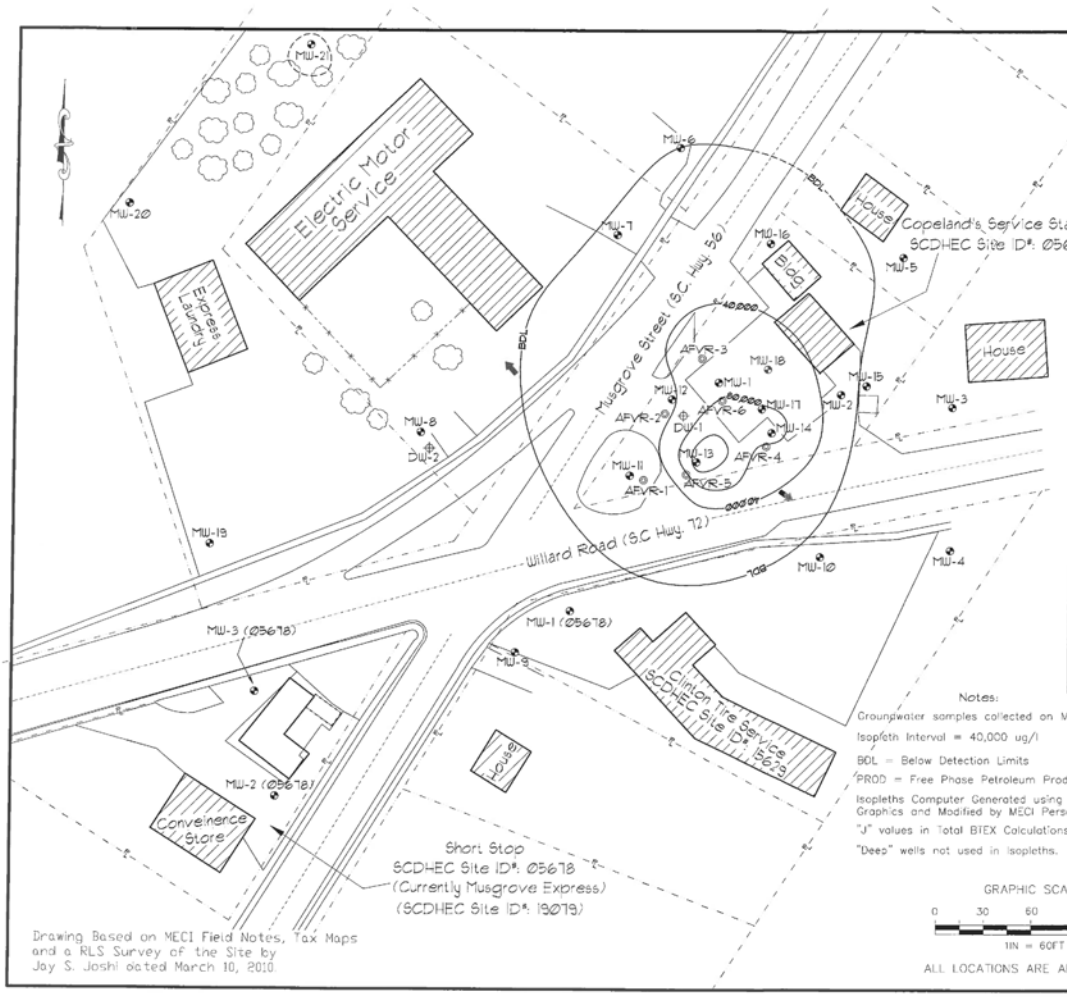


Site Base Map

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 16-5439
DATE April 4, 2016
FIGURE 2



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of AFVR Extraction Well
- Total BTEX Concentration Isopleth (ug/l)

Groundwater CoC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)	1,2 DCA (ug/l)	EDB (ug/l)
MW-1	3,000	31,000	3,600	29,000	66,600	940J	<1,000	<1,000	26
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-4	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	4.0J	<5.0	<0.019
MW-5	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-6	<5.0	<5.0	<5.0	0.78J	0.78J	<5.0	<5.0	<5.0	<0.020
MW-7	<5.0	<5.0	<5.0	1.8J	1.8J	0.39J	<5.0	<5.0	<0.019
MW-8	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-9	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-10	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	5.0	<5.0	<0.019
MW-11	<5.0	0.87J	39	260	299.87J	30	<5.0	<5.0	<0.019
MW-12	380J	8,500	1,700	20,000	30,580J	650	<500	<500	0.48
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	20,000	56,000	4,400	28,000	108,400	650J	<2,500	1,400J	790
MW-15	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	0.018J
MW-16	<50	50	520	3,300	3,870	430	<50	<50	<0.019
MW-17	16,000	37,000	3,600	22,200	78,800	550J	420J	1,200	55
MW-18	4,600	36,000	4,900	27,000	72,500	630J	56J	<1,000	16
MW-19	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-20	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-21	2.2J	<5.0	<5.0	8.5	10.7J	0.92J	<5.0	<5.0	0.029
DW-1	3,900	<250	<250	<250	3,900	92J	<250	<250	<0.019
DW-2	1,100	<50	3.5J	1,200	2,303.5J	150	<50	120	0.078
AFVR-1	<5.0	1.5J	80	380	461.5J	29	<5.0	<5.0	<0.019
AFVR-2	780	11,000	2,100	18,000	31,880	790	<250	<250	1.5
AFVR-3	2,600	38,000	4,400	31,000	76,000	740J	<1,000	<1,000	15
AFVR-4	13,000	20,000	810J	29,000	62,810J	770J	<2,500	1,900J	230
AFVR-5	7,900	20,000	1,500	22,000	51,400	740	<500	590	430
AGVR-6	16,000	39,000	4,000	27,000	86,000	900	440	1,500	610
MW-1 Dup.	3,000	30,000	3,400	28,000	64,400	780J	<1,000	<1,000	23
MW-14 Dup.	19,000	52,000	3,600	27,000	101,600	590J	<2,500	1,400J	220
Field Blank	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
Trip Blank	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	NT

Notes:

Groundwater samples collected on March 24, 2016.

Isopleth Interval = 40,000 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

"J" values in Total BTEX Calculations.

"Dees" wells not used in Isopleths.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

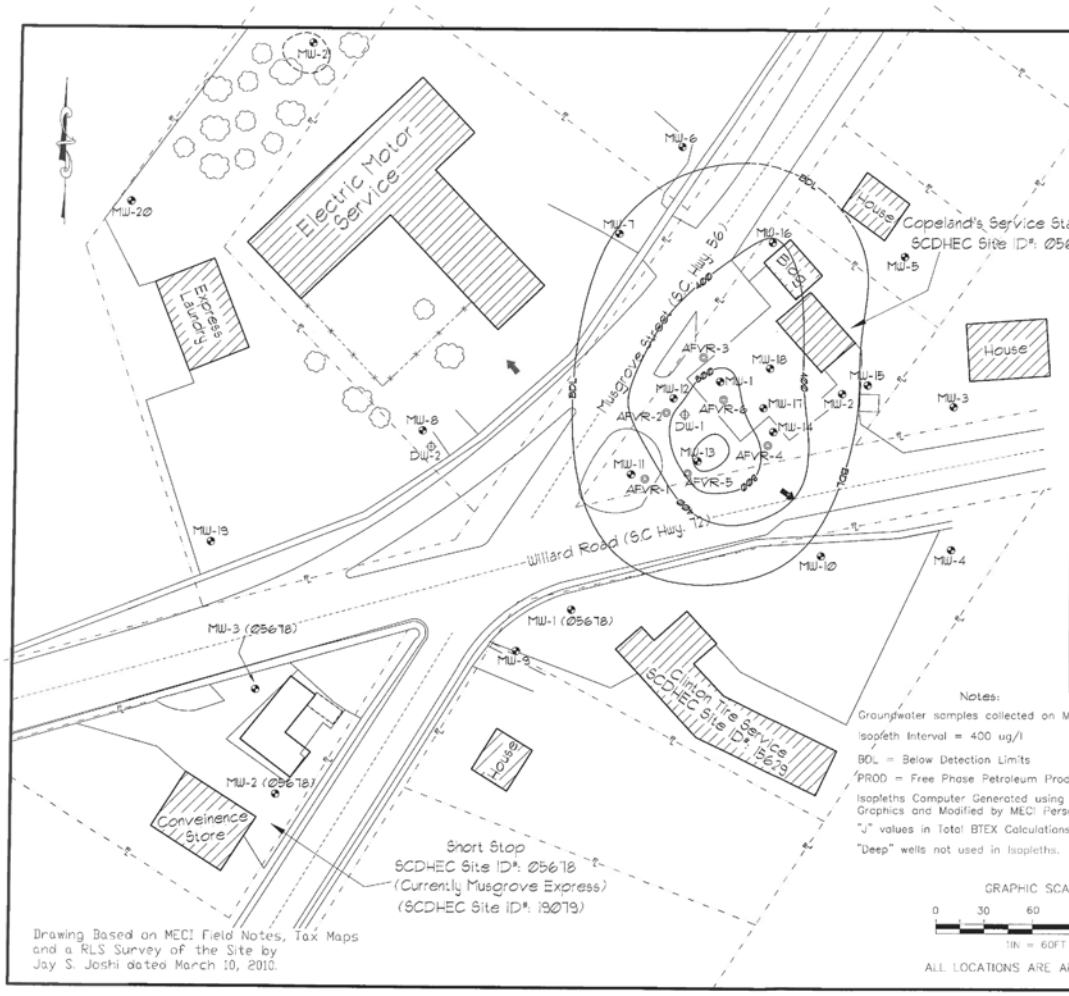
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Groundwater CoC Site Map
(Total BTEX Isopleth)

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 16-5459
DATE April 4, 2016
FIGURE 4



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Naphthalene Concentration Isopleth (ug/l)

Groundwater CoC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)	12 DCA (ug/l)	EDB (ug/l)
MW-1	3,000	31,000	3,500	29,000	66,600	940J	<1,000	<1,000	76
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-4	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	4.0J	<5.0	<0.019
MW-5	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-6	<5.0	<5.0	<5.0	0.78J	0.78J	<5.0	<5.0	<5.0	<0.020
MW-7	<5.0	<5.0	<5.0	1.8J	1.8J	0.39J	<5.0	<5.0	<0.019
MW-8	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-9	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-10	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	5.0	<5.0	<0.019
MW-11	<5.0	0.87J	39	260	299.87J	30	<5.0	<5.0	<0.019
MW-12	380J	8,500	1,700	20,000	30,580J	650	<500	<500	0.48
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	20,000	56,000	4,400	28,000	108,400	650J	<2,500	1,400J	190
MW-15	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	0.018J
MW-16	<50	50	520	3,300	3,870	430	<50	<50	<0.019
MW-17	16,000	37,000	3,600	22,200	78,800	550J	420J	1,200	55
MW-18	4,600	36,000	4,900	27,000	72,500	630J	56J	<1,000	16
MW-19	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-20	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-21	2.2J	<5.0	<5.0	8.5	10.7J	0.92J	<5.0	<5.0	0.029
DW-1	3,900	<250	<250	<250	3,900	92J	<250	<250	<0.019
DW-2	1,100	<50	3.5J	1,200	2,303.5J	150	<50	120	0.078
AFVR-1	<5.0	1.5J	80	380	461.5J	29	<5.0	<5.0	<0.019
AFVR-2	780	11,000	2,100	18,000	31,880	790	<250	<250	1.5
AFVR-3	2,600	38,000	4,400	31,000	76,000	740J	<1,000	<1,000	15
AFVR-4	13,000	20,000	810J	29,000	62,810J	775J	<2,500	1,900J	230
AFVR-5	7,900	20,000	1,500	22,000	51,400	740	<500	590	430
ACVR-6	16,000	39,000	4,000	27,000	86,000	900	440	1,500	610
MW-1 Dup.	3,000	30,000	3,400	28,000	64,400	780J	<1,000	<1,000	23
MW-14 Dup.	19,000	52,000	3,600	27,000	101,600	590J	<2,500	1,400J	220
Field Blank	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
Trip Blank	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	NT

Notes:

Groundwater samples collected on March 24, 2016.

Isopleth Interval = 400 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

"J" values in Total BTEX Calculations.

"Deep" wells not used in Isopleths.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

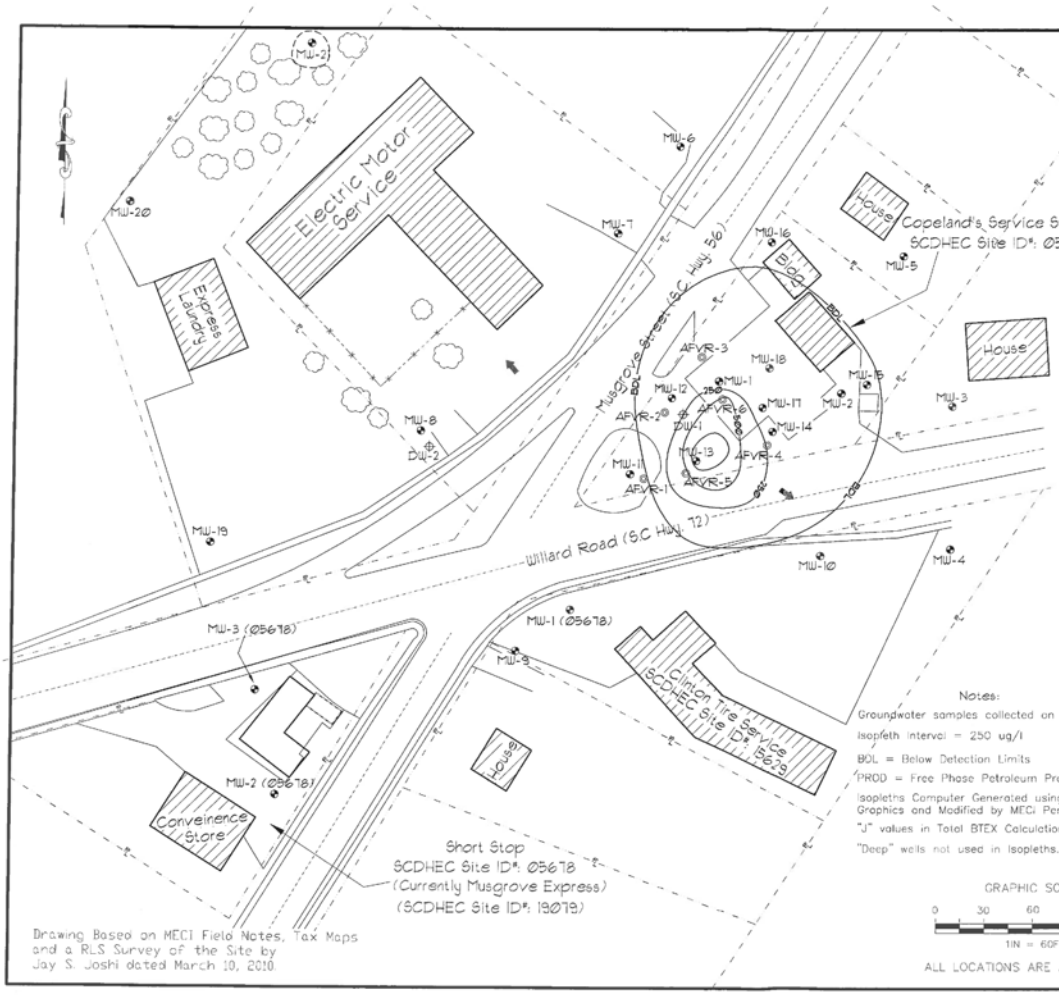
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Groundwater CoC Site Map
(Naphthalene Isopleth)

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 16-5459
DATE April 4, 2016
FIGURE 4A



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of AFVR Extraction Well
- EDB Concentration Isopleth (ug/l)

Groundwater CoC Concentration Data

Sample *	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	Naphthalene (ug/l)	MTBE (ug/l)	12 DCA (ug/l)	EDB (ug/l)
MW-1	3,000	31,000	3,600	29,000	66,600	940J	<1,000	<1,000	26
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-4	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	4.0J	<5.0	<0.019
MW-5	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-6	<5.0	<5.0	<5.0	0.78J	0.78J	<5.0	<5.0	<5.0	<0.020
MW-7	<5.0	<5.0	<5.0	1.8J	1.8J	0.39J	<5.0	<5.0	<0.019
MW-8	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.020
MW-9	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-10	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	5.0	<5.0	<0.019
MW-11	<5.0	0.67J	39	260	299.67J	30	<5.0	<5.0	<0.019
MW-12	380J	8,500	1,700	20,000	30,580J	650	<500	<500	0.48
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	20,000	56,000	4,400	28,000	108,400	630J	<2,500	1,400J	190
MW-15	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	0.018J
MW-16	<50	50	520	3,300	3,870	630	<50	<50	<0.019
MW-17	16,000	37,000	3,600	22,200	78,800	550J	420J	1,200	55
MW-18	4,600	36,000	4,900	27,000	72,500	630J	56J	<1,000	16
MW-19	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-20	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
MW-21	2.2J	<5.0	<5.0	8.5	10.7J	0.92J	<5.0	<5.0	0.029
DW-1	3,900	<250	<250	<250	3,900	92J	<250	<250	<0.019
DW-2	1,100	<50	3.5J	1,200	2,303.5J	150	<50	120	0.078
AFVR-1	<5.0	1.5J	80	380	461.5J	29	<5.0	<5.0	<0.019
AFVR-2	780	11,000	2,100	18,000	31,880	790	<250	<250	1.5
AFVR-3	2,600	38,000	4,400	31,000	76,000	740J	<1,000	<1,000	15
AFVR-4	13,000	20,000	810J	29,000	62,810J	770J	<2,500	1,900J	230
AFVR-5	7,900	20,000	1,500	22,000	51,500	740	<500	590	430
ADVR-6	16,000	39,000	4,000	27,000	86,000	900	440	1,500	610
MW-1 Dup.	3,000	30,000	3,400	28,000	64,400	780J	<1,000	<1,000	23
MW-14 Dup.	19,000	52,000	3,600	27,000	101,600	590J	<2,500	1,400J	220
Field Blank	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	<0.019
Trip Blank	<5.0	<5.0	<5.0	<5.0	BDL	<5.0	<5.0	<5.0	NT

Notes:

Groundwater samples collected on March 24, 2016.

Isopleth interval = 250 ug/l

BDL = Below Detection Limits

*PROD = Free Phase Petroleum Product

Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECi Personnel.

"J" values in Total BTEX Calculations.

"Deep" wells not used in Isopleths.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Groundwater CoC Site Map
(EDB Isopleth)

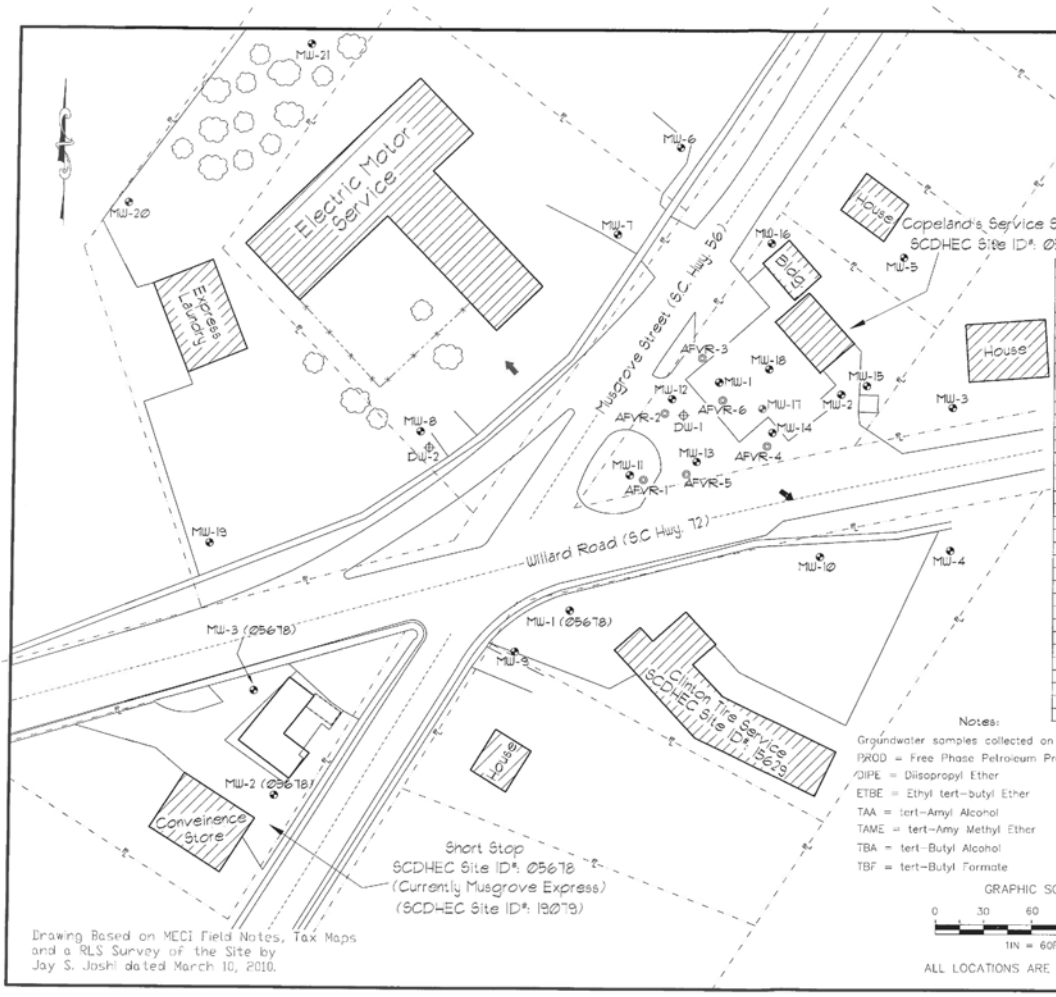
Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 15-5459

DATE April 4, 2016

FIGURE 4B



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks

Groundwater CoC Concentration Data - Oxygenates

Sample #	TAA (ug/l)	TAME (ug/l)	TBF (ug/l)	DIPE (ug/l)	33-Dimethyl-1-butanol (ug/l)	Ethanol (ug/l)	ETBE (ug/l)	TBA (ug/l)
MW-1	<20,000	<2,000	<20,000	120J	<20,000	<200,000	<20,000	<20,000
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-4	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-5	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-6	<100	<10	<100	<10	<100	<1,000	<100	5.1J
MW-7	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-8	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-9	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-10	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-11	<100	<10	<100	<10	<100	<1,000	<100	6.5J
MW-12	<10,000	<1,000	<10,000	<1,000	<10,000	<100,000	<10,000	<10,000
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	62,000	<5,000	<50,000	1,500J	<50,000	<500,000	<50,000	3,300J
MW-15	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-16	<1,000	<100	<1,000	<100	<1,000	<10,000	<1,000	160J
MW-17	46,000	<2,000	<20,000	2,000	<20,000	<200,000	<20,000	6,600J
MW-18	390J	<2,000	<20,000	<2,000	<20,000	<200,000	<20,000	<20,000
MW-19	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-20	<100	<10	<100	<10	<100	<1,000	<100	<100
MW-21	10J	<10	<100	<10	<100	<1,000	<100	4.7J
DW-1	7,800	<500	<5,000	260J	<5,000	<50,000	<5,000	640J
DW-2	3,700	<100	<1,000	150	<1,000	<10,000	<1,000	260J
AFVR-1	<100	<10	<100	<10	<100	<1,000	<100	7.9J
AFVR-2	160J	<500	<5,000	38J	<5,000	<50,000	<5,000	<5,000
AFVR-3	<20,000	<2,000	<20,000	<2,000	<20,000	<200,000	<20,000	<20,000
AFVR-4	81,000	<5,000	<50,000	2,100J	<50,000	<500,000	<50,000	3,200J
AFVR-5	4,700J	<1,000	<10,000	960J	<10,000	<100,000	<10,000	520J
AFVR-6	21,000	<500	<5,000	2,900	<5,000	<50,000	<5,000	1,300J
MW-1 Dup.	460J	<2,000	<20,000	94J	<20,000	<200,000	<20,000	<20,000
MW-14 Dup.	63,000	<5,000	<50,000	1,500J	<50,000	<500,000	<50,000	3,100J
Field Blank	<100	<10	<100	<10	<100	<1,000	<100	<100
Trip Blank	<100	<10	<100	<10	<100	<1,000	<100	<100

Notes:

Groundwater samples collected on March 24, 2016.
PROD = Free Phase Petroleum Product
DIPE = Diisopropyl Ether
ETBE = Ethyl tert-butyl Ether
TAA = tert-Amyl Alcohol
TAME = tert-Amy Methyl Ether
TBA = tert-Butyl Alcohol
TBF = tert-Butyl Formate

GRAPHIC SCALE
0 30 60 90 120
1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

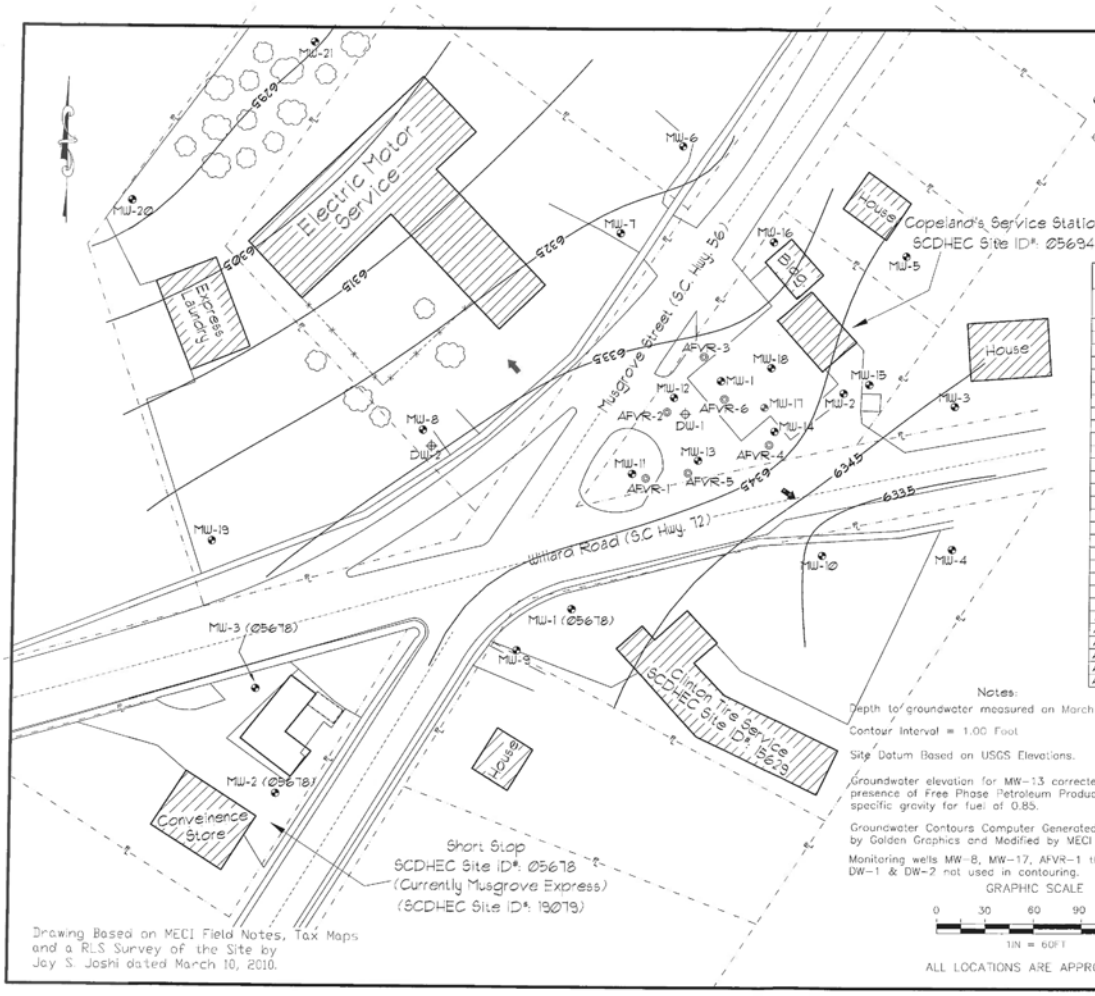
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Groundwater CoC Site Map
(Oxygenates)

Copelands Service Station
100 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 16-5459
DATE April 4, 2016
FIGURE 4C



Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Groundwater Elevation Contour (feet)

Potentiometric Data

Well #	Screened Interval (ft.)	Depth to Product (ft.)	Depth to Water (ft.)	Product Thickness (ft.)	Well Head Elevation	Groundwater Elevation
MW-1	TD:33.85	---	26.14	---	659.98	633.84
MW-2	TD:10.05	---	DRY	---	659.57	DRY
MW-3	25-35	---	23.91	---	658.21	634.30
MW-4	25-35	---	25.78	---	658.41	632.63
MW-5	25-35	---	18.75	---	653.79	635.04
MW-6	25-35	---	24.03	---	656.32	632.29
MW-7	25-35	---	26.21	---	658.96	632.75
MW-8	25-35	---	23.98	---	659.94	635.96
MW-9	25-35	---	25.63	---	660.49	634.86
MW-10	25-35	---	26.16	---	659.53	633.37
MW-11	25-35	---	26.78	---	661.23	634.45
MW-12	25-35	---	26.30	---	660.14	633.84
MW-13	25-35	26.80	27.60	0.80	661.12	634.20
MW-14	25-35	---	26.75	---	660.25	633.50
MW-15	25-35	---	24.45	---	659.54	635.09
MW-16	25-35	---	25.34	---	658.22	632.88
MW-17	30-40	---	27.59	---	660.73	632.60
MW-18	30-40	---	25.74	---	659.50	633.76
MW-19	23-33	---	21.30	---	654.46	633.16
MW-20	23-33	---	25.03	---	654.26	629.23
MW-21	23-33	---	24.09	---	653.53	629.44
DW-1	75-85	---	27.08	---	660.41	633.33
DW-2	56-61	---	25.03	---	659.59	634.56
AFVR-1	TD:33.96	---	26.88	---	661.55	634.67
AFVR-2	TD:34.45	---	26.55	---	660.51	633.96
AFVR-3	TD:34.10	---	25.69	---	659.34	633.65
AFVR-4	TD:34.45	---	26.80	---	660.14	633.34
AFVR-5	TD:34.35	---	27.20	---	661.21	634.01
AFVR-6	TD:34.36	---	26.20	---	659.95	633.75

Notes:

Depth to groundwater measured on March 34, 2016.

Contour Interval = 1.00 Foot

Site Datum Based on USGS Elevations.

Groundwater elevation for MW-13 corrected for the presence of Free Phase Petroleum Product using a specific gravity for fuel of 0.85.

Groundwater Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

Monitoring wells MW-8, MW-17, AFVR-1 thru AFVR -6, DW-1 & DW-2 not used in contouring.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Potentiometric Data Site Map
(Groundwater Contour)

Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 16-5459
DATE April 4, 2016
FIGURE 5

APPENDIX A:

SITE SURVEY

(Not Applicable)

APPENDIX B:

SAMPLING LOGS, LABORATORY DATA SHEETS, & CHAIN-OF-CUSTODY FORMS

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-1	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	UNK	Total Well Depth (TWD) (ft.):	33.95
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.14	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	7.81	1 casing volume (CV = LWC x C) (gals.):	1.27	5 casing volumes (5 x CV) (gals.):	6.37

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.27	2.55	3.82	5.09	6.37		
Time (military)	12:30	12:32						12:35
PH (s.u.)	SHEEN	SHEEN						SHEEN
Specific Conductivity (µS/cm)	SHEEN	SHEEN						SHEEN
Water Temperature (°C)	SHEEN	SHEEN						SHEEN
Dissolved Oxygen (mg/L)	SHEEN	SHEEN						SHEEN
Turbidity (NTU)	SHEEN	SHEEN						SHEEN

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	12:35	Duplicate: Y or N	Y	If yes, Duplicate Time:	12:35	Total Gallons Purged:	2.00

Notes: Strong Odor; SHEEN=Noticeable Petroleum Sheen on Samples, Field Readings Not Taken

Duplicated

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-2	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	UNK	Total Well Depth (TWD) (ft.):	12.05
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	DRY	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	NA	1 casing volume (CV = LWC x C) (gals.):	NA	5 casing volumes (5 x CV) (gals.):	NA

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	NA	NA	NA	NA	NA		
Time (military)	DRY							
PH (s.u.)	DRY							
Specific Conductivity (µS/cm)	DRY							
Water Temperature (°C)	DRY							
Dissolved Oxygen (mg/L)	DRY							
Turbidity (NTU)	DRY							

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	NS	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	0.00

Notes:

NS=Not Sampled, Well Gauged Dry

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-3	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	23.91	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	11.09	1 casing volume (CV = LWC x C) (gals.):	1.81	5 casing volumes (5 x CV) (gals.):	9.04

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.81	3.62	5.42	7.23	9.04		
Time (military)	11:20	11:22	11:24					11:25
PH (s.u.)	5.08	5.16	5.11					5.14
Specific Conductivity (µS/cm)	47.8	42.9	43.6					42.7
Water Temperature (°C)	19.0	18.5	18.4					18.7
Dissolved Oxygen (mg/L)	2.68	2.90	2.76					2.81
Turbidity (NTU)	8.7	160.4	237.1					174.8

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	11:25	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	4.00

Notes: No Odor; Dry at 4.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-4	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	25.78	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	9.22	1 casing volume (CV = LWC x C) (gals.):	1.50	5 casing volumes (5 x CV) (gals.):	7.51

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.50	3.01	4.51	6.01	7.51		
Time (military)	11:00	11:02	11:03					11:05
PH (s.u.)	5.10	5.07	5.12					5.16
Specific Conductivity (µS/cm)	35.1	32.8	33.7					33.3
Water Temperature (°C)	18.6	18	17.9					18.1
Dissolved Oxygen (mg/L)	3.71	3.54	3.62					3.59
Turbidity (NTU)	11.57	184.9	226.8					170.5

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	11:05	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: No Odor; Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-5	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	18.75	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.25	1 casing volume (CV = LWC x C) (gals.):	2.65	5 casing volumes (5 x CV) (gals.):	13.24

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.65	5.30	7.95	10.60	13.24		
Time (military)	10:25	10:27	10:30					10:31
PH (s.u.)	5.58	5.47	5.51					5.54
Specific Conductivity (µS/cm)	62.8	67.1	66.8					66.4
Water Temperature (°C)	17.7	17.2	17.2					17.1
Dissolved Oxygen (mg/L)	1.53	1.76	1.79					1.74
Turbidity (NTU)	6.11	217	169.9					133.6

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	10:31	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	6.00

Notes: No Odor; Dry at 6.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-6	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	24.03	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	10.97	1 casing volume (CV = LWC x C) (gals.):	1.79	5 casing volumes (5 x CV) (gals.):	8.94

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.79	3.58	5.36	7.15	8.94		
Time (military)	10:05	10:07						10:10
PH (s.u.)	5.72	5.86						5.82
Specific Conductivity (µS/cm)	86.3	91.7						92.8
Water Temperature (°C)	19.4	18.9						19
Dissolved Oxygen (mg/L)	0.91	1.06						1.02
Turbidity (NTU)	9.36	211.9						175.6

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	10:10	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: No Odor; Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-7	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.21	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	8.79	1 casing volume (CV = LWC x C) (gals.):	1.43	5 casing volumes (5 x CV) (gals.):	7.16

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.43	2.87	4.30	5.73	7.16		
Time (military)	10:15	10:17						10:20
PH (s.u.)	5.57	5.64						5.61
Specific Conductivity (µS/cm)	28.1	26.7						27.9
Water Temperature (°C)	20.9	20						20.2
Dissolved Oxygen (mg/L)	4.49	4.67						4.62
Turbidity (NTU)	7.07	168.2						101.9

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	10:20	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	2.50

Notes: No Odor; Dry at 2.50

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-8	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	23.98	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	11.02	1 casing volume (CV = LWC x C) (gals.):	1.80	5 casing volumes (5 x CV) (gals.):	8.98

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.80	3.59	5.39	7.19	8.98		
Time (military)	9:55	9:57	9:59					10:00
PH (s.u.)	6.60	6.49	6.46					6.51
Specific Conductivity (µS/cm)	77.4	74.5	73.8					75
Water Temperature (°C)	19.0	18.2	18.2					18.3
Dissolved Oxygen (mg/L)	1.92	1.70	1.81					1.76
Turbidity (NTU)	5.06	91.53	121.4					117.9

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	10:00	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	4.50

Notes: No Odor; Dry at 4.50

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-9	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	25.63	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	9.37	1 casing volume (CV = LWC x C) (gals.):	1.53	5 casing volumes (5 x CV) (gals.):	7.64

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.53	3.05	4.58	6.11	7.64		
Time (military)	10:50	10:52	10:53					10:55
PH (s.u.)	5.30	5.26	5.31					5.34
Specific Conductivity (µS/cm)	51.1	57.8	59.6					58.4
Water Temperature (°C)	21.1	20.6	20.7					20.6
Dissolved Oxygen (mg/L)	0.89	0.96	0.92					0.99
Turbidity (NTU)	10.76	159.8	140.6					122.9

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	10:55	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.50

Notes: No Odor; Dry at 3.50

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-10	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.16	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	8.84	1 casing volume (CV = LWC x C) (gals.):	1.44	5 casing volumes (5 x CV) (gals.):	7.20

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.44	2.88	4.32	5.76	7.20		
Time (military)	11:10	11:12	11:13					11:15
PH (s.u.)	5.51	5.67	5.62					5.65
Specific Conductivity (µS/cm)	68.9	71.2	70.9					71.8
Water Temperature (°C)	18.4	17.9	17.7					17.8
Dissolved Oxygen (mg/L)	2.79	30.60	2.98					2.96
Turbidity (NTU)	10.54	130.4	116.6					96.84

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	11:15	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: No Odor; Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-11	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.78	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	8.22	1 casing volume (CV = LWC x C) (gals.):	1.34	5 casing volumes (5 x CV) (gals.):	6.70

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.34	2.68	4.02	5.36	6.70		
Time (military)	14:10	14:12	14:13					14:15
PH (s.u.)	4.95	5.16	5.12					5.11
Specific Conductivity (µS/cm)	54.2	61.1	60.8					59.7
Water Temperature (°C)	21.7	20.9	20.8					21
Dissolved Oxygen (mg/L)	0.77	0.71	0.68					0.74
Turbidity (NTU)	8.44	143.3	226.1					194.4

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	14:15	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: No Odor; Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	06694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-12	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.30	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	8.7	1 casing volume (CV = LWC x C) (gals.):	1.42	5 casing volumes (5 x CV) (gals.):	7.09

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.42	2.84	4.25	5.67	7.09		
Time (military)	12:50	12:52	12:54					12:55
PH (s.u.)	5.13	5.26	5.21					5.18
Specific Conductivity (µS/cm)	58.8	67.7	64.5					66.1
Water Temperature (°C)	22.6	21.2	21.2					21.2
Dissolved Oxygen (mg/L)	1.16	1.21	1.11					1.15
Turbidity (NTU)	9.09	133.4	106.2					94.49

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	12:55	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: Odor; Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-13	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	26.8	Depth to Groundwater (DGW) (ft.):	27.60	Free Product Thickness (ft.):	0.8
Length of water column (LWC = TWD – DGW) (ft.):	7.4	1 casing volume (CV = LWC x C) (gals.):	1.21	5 casing volumes (5 x CV) (gals.):	6.03

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.21	2.41	3.62	4.82	6.03		
Time (military)	PROD							
PH (s.u.)	PROD							
Specific Conductivity (µS/cm)	PROD							
Water Temperature (°C)	PROD							
Dissolved Oxygen (mg/L)	PROD							
Turbidity (NTU)	PROD							

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	NS	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	0.00

Notes:

NS=Not Sampled; PROD=Free-Phase Petroleum Product Detected

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-14	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.75	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	8.25	1 casing volume (CV = LWC x C) (gals.):	1.34	5 casing volumes (5 x CV) (gals.):	6.72

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.34	2.69	4.03	5.38	6.72		
Time (military)	12:00	12:02	12:03					12:05
PH (s.u.)	SHEEN	SHEEN	SHEEN					SHEEN
Specific Conductivity (µS/cm)	SHEEN	SHEEN	SHEEN					SHEEN
Water Temperature (°C)	SHEEN	SHEEN	SHEEN					SHEEN
Dissolved Oxygen (mg/L)	SHEEN	SHEEN	SHEEN					SHEEN
Turbidity (NTU)	SHEEN	SHEEN	SHEEN					SHEEN

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	12:05	Duplicate: Y or N	Y	If yes, Duplicate Time:	12:05	Total Gallons Purged:	3.00

Notes: Strong Odor; Noticeable Petroleum Sheen on Samples, Field Readings Not Taken, Dry at 3.0

Duplicated

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-15	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	24.45	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	10.55	1 casing volume (CV = LWC x C) (gals.):	1.72	5 casing volumes (5 x CV) (gals.):	8.60

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.72	3.44	5.16	6.88	8.60		
Time (military)	11:30	11:32	11:34					11:35
PH (s.u.)	5.06	4.98	5.02					5.01
Specific Conductivity (µS/cm)	58.3	51.7	52.6					52.4
Water Temperature (°C)	19.6	18.9	18.8					19
Dissolved Oxygen (mg/L)	1.64	1.60	1.57					1.61
Turbidity (NTU)	12.34	235.6	345.7					210.9

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	11:35	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	4.00

Notes: No Odor, Dry at 4.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-16	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	25-35	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	25.34	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	9.66	1 casing volume (CV = LWC x C) (gals.):	1.57	5 casing volumes (5 x CV) (gals.):	7.87

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.57	3.15	4.72	6.30	7.87		
Time (military)	10:35	10:37	10:38					10:40
PH (s.u.)	5.45	5.38	5.47					5.42
Specific Conductivity (µS/cm)	164.1	172.8	174.6					173.9
Water Temperature (°C)	19.3	18.7	18.6					18.5
Dissolved Oxygen (mg/L)	0.71	0.67	0.74					0.76
Turbidity (NTU)	8.22	227.6	315.9					197

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	10:40	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.50

Notes: No Odor, Dry at 3.50

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	06694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-17	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	30-40	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	27.59	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	7.41	1 casing volume (CV = LWC x C) (gals.):	1.21	5 casing volumes (5 x CV) (gals.):	6.04

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.21	2.42	3.62	4.83	6.04		
Time (military)	11:50	11:52	11:54					11:55
PH (s.u.)	5.91	6.01	5.94					5.92
Specific Conductivity (µS/cm)	228.7	246.8	247.0					246.4
Water Temperature (°C)	21.9	21.2	21.1					21
Dissolved Oxygen (mg/L)	0.64	0.71	0.68					0.77
Turbidity (NTU)	9.06	200.8	179.3					130.8

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	11:55	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	5.00

Notes: Strong Odor, Dry at 5.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-18	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	30-40	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	25.74	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	9.26	1 casing volume (CV = LWC x C) (gals.):	1.51	5 casing volumes (5 x CV) (gals.):	7.55

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.51	3.02	4.53	6.04	7.55		
Time (military)	11:40	11:42	11:44					11:45
PH (s.u.)	5.33	5.4	5.38					5.36
Specific Conductivity (µS/cm)	157.9	201.8	196.7					195.1
Water Temperature (°C)	21.6	20.9	20.8					20.7
Dissolved Oxygen (mg/L)	0.54	0.47	0.49					0.46
Turbidity (NTU)	9.67	159	270.4					139.8

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	11:45	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	5.00

Notes: Strong Odor, Dry at 5.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-19	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	23-33	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	21.30	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	13.7	1 casing volume (CV = LWC x C) (gals.):	2.23	5 casing volumes (5 x CV) (gals.):	11.17

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.23	4.47	6.70	6.93	11.17		
Time (military)	9:20	9:22	9:24					9:25
PH (s.u.)	5.96	6.08	6.02					6.04
Specific Conductivity (µS/cm)	88.1	91.7	90.1					91.1
Water Temperature (°C)	20.7	19.9	19.8					20
Dissolved Oxygen (mg/L)	1.62	1.51	1.47					1.55
Turbidity (NTU)	12.76	159.5	261.8					197.8

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	9:25	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	4.00

Notes: No Odor, Dry at 4.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-20	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	23-33	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	25.03	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	9.97	1 casing volume (CV = LWC x C) (gals.):	1.63	5 casing volumes (5 x CV) (gals.):	8.13

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.63	3.25	4.88	6.50	8.13		
Time (military)	9:10	9:12	9:13					9:15
PH (s.u.)	6.54	6.7	6.67					6.64
Specific Conductivity (µS/cm)	216.7	231.9	229.6					230.8
Water Temperature (°C)	20.1	19.4	19.3					19.2
Dissolved Oxygen (mg/L)	5.51	5.76	5.7					5.67
Turbidity (NTU)	6.61	147.8	207.1					167.3

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	9:15	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: No Odor, Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-21	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	23-33	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	24.09	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	10.91	1 casing volume (CV = LWC x C) (gals.):	1.78	5 casing volumes (5 x CV) (gals.):	8.89

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.78	3.56	5.33	7.11	8.89		
Time (military)	9:00	9:02	9:03					9:05
PH (s.u.)	7.86	7.79	7.8					7.77
Specific Conductivity (µS/cm)	77.1	70.9	71.6					72.8
Water Temperature (°C)	17.8	17	16.9					17.1
Dissolved Oxygen (mg/L)	6.07	5.94	5.91					5.97
Turbidity (NTU)	7.51	126.8	151.9					106.7

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	9:05	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: No Odor, Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	DW-1	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	75-85	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	27.08	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	7.92	1 casing volume (CV = LWC x C) (gals.):	1.29	5 casing volumes (5 x CV) (gals.):	6.45

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.29	2.58	3.87	5.16	6.45		
Time (military)	13:10	13:19	13:28	13:37				13:40
PH (s.u.)	5.88	6.21	6.28	6.24				6.22
Specific Conductivity (µS/cm)	106.9	96.7	99.1	98.7				98.6
Water Temperature (°C)	22.7	20.9	20.8	20.7				21
Dissolved Oxygen (mg/L)	1.67	2.34	2.27	2.31				2.38
Turbidity (NTU)	3.21	6.84	9.27	10.04				7.61

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	13:40	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	30.00

Notes: No Odor, Dry at 30.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	DW-2	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	56-61	Total Well Depth (TWD) (ft.):	35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	25.03	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	9.97	1 casing volume (CV = LWC x C) (gals.):	1.63	5 casing volumes (5 x CV) (gals.):	8.13

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.63	3.25	4.88	6.50	8.13		
Time (military)	9:30	9:35	9:41	9:47				9:50
PH (s.u.)	5.71	5.61	5.66	5.64				5.69
Specific Conductivity (µS/cm)	220.9	206.1	211.9	210.6				209.1
Water Temperature (°C)	17.1	16.4	16.3	16.2				16.4
Dissolved Oxygen (mg/L)	4.12	3.91	3.79	3.84				3.81
Turbidity (NTU)	5.36	13.88	20.94	15.66				12.91

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	9:50	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	20.00

Notes: Slight Odor, Dry at 20.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	AFVR-1	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	UNK	Total Well Depth (TWD) (ft.):	33.96
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.88	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	7.08	1 casing volume (CV = LWC x C) (gals.):	1.15	5 casing volumes (5 x CV) (gals.):	5.77

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.15	2.31	3.46	4.62	5.77		
Time (military)	14:00	14:01	14:02					14:05
PH (s.u.)	5.49	5.41	5.37					5.42
Specific Conductivity (µS/cm)	64.2	61.8	62.1					62.7
Water Temperature (°C)	21.8	21	20.9					21.1
Dissolved Oxygen (mg/L)	1.02	0.96	1.09					1.11
Turbidity (NTU)	8.57	119	256.1					174.7

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	14:05	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	2.50

Notes: No Odor, Dry at 2.50

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	AFVR-2	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	UNK	Total Well Depth (TWD) (ft.):	34.45
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.55	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	7.9	1 casing volume (CV = LWC x C) (gals.):	1.29	5 casing volumes (5 x CV) (gals.):	6.44

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.29	2.58	3.86	5.15	6.44		
Time (military)	13:00	13:01	13:03					13:05
PH (s.u.)	5.11	SHEEN	SHEEN					SHEEN
Specific Conductivity (µS/cm)	69.7	SHEEN	SHEEN					SHEEN
Water Temperature (°C)	22.3	SHEEN	SHEEN					SHEEN
Dissolved Oxygen (mg/L)	0.88	SHEEN	SHEEN					SHEEN
Turbidity (NTU)	7.78	SHEEN	SHEEN					SHEEN

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	13:05	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: Strong Odor; SHEEN=Noticeable Petroleum Sheen on Samples, Field Readings Not Taken, Dry at 2.50

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	AFVR-3	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	UNK	Total Well Depth (TWD) (ft.):	34.1
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	25.69	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	8.41	1 casing volume (CV = LWC x C) (gals.):	1.37	5 casing volumes (5 x CV) (gals.):	6.85

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.37	2.74	4.11	5.48	6.85		
Time (military)	12:40	12:42	12:44					12:45
PH (s.u.)	5.22	SHEEN	SHEEN					SHEEN
Specific Conductivity (µS/cm)	69.3	SHEEN	SHEEN					SHEEN
Water Temperature (°C)	22.4	SHEEN	SHEEN					SHEEN
Dissolved Oxygen (mg/L)	0.94	SHEEN	SHEEN					SHEEN
Turbidity (NTU)	5.06	SHEEN	SHEEN					SHEEN

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	12:45	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: Strong Odor; SHEEN=Noticeable Petroleum Sheen on Samples, Field Readings Not Taken, Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05694	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	AFVR-4	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	UNK	Total Well Depth (TWD) (ft.):	34.45
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.80	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	7.65	1 casing volume (CV = LWC x C) (gals.):	1.25	5 casing volumes (5 x CV) (gals.):	6.23

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.25	2.49	3.74	4.99	6.23		
Time (military)	12:10	12:11	12:13					12:15
PH (s.u.)	5.61	5.7	5.67					5.64
Specific Conductivity (µS/cm)	105.3	117.1	116.9					115.5
Water Temperature (°C)	22.0	21.1	20.9					21
Dissolved Oxygen (mg/L)	0.41	0.49	0.4					0.37
Turbidity (NTU)	8.54	171.4	189.6					159.9

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	12:15	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: Strong Odor; SHEEN=Noticeable Petroleum Sheen on Samples, Field Readings Not Taken, Dry at 3.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05894	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	AFVR-5	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	UNK	Total Well Depth (TWD) (ft.):	34.35
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	27.20	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	7.15	1 casing volume (CV = LWC x C) (gals.):	1.17	5 casing volumes (5 x CV) (gals.):	5.83

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.17	2.33	3.50	4.66	5.83		
Time (military)	13:50	13:52						13:55
PH (s.u.)	SHEEN	SHEEN						SHEEN
Specific Conductivity (µS/cm)	SHEEN	SHEEN						SHEEN
Water Temperature (°C)	SHEEN	SHEEN						SHEEN
Dissolved Oxygen (mg/L)	SHEEN	SHEEN						SHEEN
Turbidity (NTU)	SHEEN	SHEEN						SHEEN

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	13:55	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	2.00

Notes: Strong Odor; SHEEN=Noticeable Petroleum Sheen on Samples, Field Readings Not Taken, Dry at 2.0

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	3/24/2016	Site ID #:	05894	Site Name:	Copeland's Service Station	Field Personnel:	F.M., P.W.
County:	Laurens	Project Manager:	Adam Looper	General Weather Conditions:	Rain	Ambient Air Temp (°F):	77

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	AFVR-6	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	UNK	Total Well Depth (TWD) (ft.):	34.36
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	26.20	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	8.16	1 casing volume (CV = LWC x C) (gals.):	1.33	5 casing volumes (5 x CV) (gals.):	6.65

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.33	2.66	3.99	5.32	6.65		
Time (military)	12:20	12:22	12:23					12:25
PH (s.u.)	SHEEN	SHEEN	SHEEN					SHEEN
Specific Conductivity (µS/cm)	SHEEN	SHEEN	SHEEN					SHEEN
Water Temperature (°C)	SHEEN	SHEEN	SHEEN					SHEEN
Dissolved Oxygen (mg/L)	SHEEN	SHEEN	SHEEN					SHEEN
Turbidity (NTU)	SHEEN	SHEEN	SHEEN					SHEEN

Sampling Data

Sampled By:	F.M., P.W.	Sampling Time:	12:25	Duplicate: Y or N	N	If yes, Duplicate Time:	NA	Total Gallons Purged:	3.00

Notes: Strong Odor; SHEEN=Noticeable Petroleum Sheen on Samples, Field Readings Not Taken, Dry at 3.0

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Midlands Environmental Consultants, Inc.
235 Dooley Rd
Lexington, SC 29073
Attention: Bryan Shane

Project Name: **Copeland's Service Station**

Project Number: **16-5459**

Lot Number: **RC24101**

Date Completed: **03/31/2016**

Kelly M. Nance
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.

Case Narrative
Midlands Environmental Consultants, Inc.
Lot Number: RC24101

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 MS/MSD associated with sample -029 had compounds recovered outside of the acceptance limits. The LCS was recovered within the required acceptance limits; therefore, this demonstrates a matrix effect and data quality is not impacted.

EDB

Due to high detections for target compounds, samples -001, -0104, -0017, -018, -026, -027, -028, -029, -030 and -031 were diluted 50x, 500x, 100x, 20x, 20x, 500x, 500x, 1000x, 500x and 50x, respectively. As a result, the associated surrogates were recovered outside of the acceptance limits. No corrective action was required, as dilutions of 5x and greater may impact surrogate recoveries.

SHEALY ENVIRONMENTAL SERVICES, INC.

Sample Summary
Midlands Environmental Consultants, Inc.
Lot Number: RC24101

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW1	Aqueous	03/24/2016 1235	03/24/2016
003	MW3	Aqueous	03/24/2016 1125	03/24/2016
004	MW4	Aqueous	03/24/2016 1105	03/24/2016
005	MW5	Aqueous	03/24/2016 1031	03/24/2016
006	MW6	Aqueous	03/24/2016 1010	03/24/2016
007	MW7	Aqueous	03/24/2016 1020	03/24/2016
008	MW8	Aqueous	03/24/2016 1000	03/24/2016
009	MW9	Aqueous	03/24/2016 1055	03/24/2016
010	MW10	Aqueous	03/24/2016 1115	03/24/2016
011	MW11	Aqueous	03/24/2016 1415	03/24/2016
012	MW12	Aqueous	03/24/2016 1255	03/24/2016
014	MW14	Aqueous	03/24/2016 1205	03/24/2016
015	MW15	Aqueous	03/24/2016 1135	03/24/2016
016	MW16	Aqueous	03/24/2016 1040	03/24/2016
017	MW17	Aqueous	03/24/2016 1155	03/24/2016
018	MW18	Aqueous	03/24/2016 1145	03/24/2016
019	MW19	Aqueous	03/24/2016 0925	03/24/2016
020	MW20	Aqueous	03/24/2016 0915	03/24/2016
021	MW21	Aqueous	03/24/2016 0905	03/24/2016
022	DW1	Aqueous	03/24/2016 1340	03/24/2016
023	DW2	Aqueous	03/24/2016 0950	03/24/2016
024	AFVR1	Aqueous	03/24/2016 1405	03/24/2016
025	AFVR2	Aqueous	03/24/2016 1305	03/24/2016
026	AFVR3	Aqueous	03/24/2016 1245	03/24/2016
027	AFVR4	Aqueous	03/24/2016 1215	03/24/2016
028	AFVR5	Aqueous	03/24/2016 1355	03/24/2016
029	AFVR6	Aqueous	03/24/2016 1225	03/24/2016
030	MW14 Duplicate	Aqueous	03/24/2016 1205	03/24/2016
031	MW1 Duplicate	Aqueous	03/24/2016 1235	03/24/2016
032	Field Blank	Aqueous	03/24/2016 1420	03/24/2016
033	Trip Blank	Aqueous	03/24/2016 1420	03/24/2016

(31 samples)

Executive Summary
Midlands Environmental Consultants, Inc.
Lot Number: RC24101

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW1	Aqueous	Benzene	8260B	3000		ug/L	8
001	MW1	Aqueous	Diisopropyl ether (IPE)	8260B	120	J	ug/L	8
001	MW1	Aqueous	Ethylbenzene	8260B	3600		ug/L	8
001	MW1	Aqueous	Naphthalene	8260B	940	J	ug/L	8
001	MW1	Aqueous	Toluene	8260B	31000		ug/L	8
001	MW1	Aqueous	Xylenes (total)	8260B	29000		ug/L	8
001	MW1	Aqueous	1,2-Dibromoethane (EDB)	8011	26		ug/L	8
004	MW4	Aqueous	Methyl tertiary butyl ether	8260B	4.0	J	ug/L	10
006	MW6	Aqueous	tert-butyl alcohol (TBA)	8260B	5.1	J	ug/L	12
006	MW6	Aqueous	Xylenes (total)	8260B	0.78	J	ug/L	12
007	MW7	Aqueous	Naphthalene	8260B	0.39	J	ug/L	13
007	MW7	Aqueous	Xylenes (total)	8260B	1.8	J	ug/L	13
010	MW10	Aqueous	Methyl tertiary butyl ether	8260B	5.0		ug/L	16
011	MW11	Aqueous	Ethylbenzene	8260B	39		ug/L	17
011	MW11	Aqueous	Naphthalene	8260B	30		ug/L	17
011	MW11	Aqueous	tert-butyl alcohol (TBA)	8260B	6.5	J	ug/L	17
011	MW11	Aqueous	Toluene	8260B	0.87	J	ug/L	17
011	MW11	Aqueous	Xylenes (total)	8260B	260		ug/L	17
012	MW12	Aqueous	Benzene	8260B	380	J	ug/L	18
012	MW12	Aqueous	Ethylbenzene	8260B	1700		ug/L	18
012	MW12	Aqueous	Naphthalene	8260B	650		ug/L	18
012	MW12	Aqueous	Toluene	8260B	8500		ug/L	18
012	MW12	Aqueous	Xylenes (total)	8260B	20000		ug/L	18
012	MW12	Aqueous	1,2-Dibromoethane (EDB)	8011	0.48		ug/L	18
014	MW14	Aqueous	tert-Amyl alcohol (TAA)	8260B	62000		ug/L	19
014	MW14	Aqueous	Benzene	8260B	20000		ug/L	19
014	MW14	Aqueous	1,2-Dichloroethane	8260B	1400	J	ug/L	19
014	MW14	Aqueous	Diisopropyl ether (IPE)	8260B	1500	J	ug/L	19
014	MW14	Aqueous	Ethylbenzene	8260B	4400		ug/L	19
014	MW14	Aqueous	Naphthalene	8260B	650	J	ug/L	19
014	MW14	Aqueous	tert-butyl alcohol (TBA)	8260B	3300	J	ug/L	19
014	MW14	Aqueous	Toluene	8260B	56000		ug/L	19
014	MW14	Aqueous	Xylenes (total)	8260B	28000		ug/L	19
014	MW14	Aqueous	1,2-Dibromoethane (EDB)	8011	190		ug/L	19
015	MW15	Aqueous	1,2-Dibromoethane (EDB)	8011	0.018	J	ug/L	20
016	MW16	Aqueous	Ethylbenzene	8260B	520		ug/L	21
016	MW16	Aqueous	Naphthalene	8260B	430		ug/L	21
016	MW16	Aqueous	tert-butyl alcohol (TBA)	8260B	160	J	ug/L	21
016	MW16	Aqueous	Toluene	8260B	50		ug/L	21
016	MW16	Aqueous	Xylenes (total)	8260B	3300		ug/L	21
017	MW17	Aqueous	tert-Amyl alcohol (TAA)	8260B	46000		ug/L	22
017	MW17	Aqueous	Benzene	8260B	16000		ug/L	22
017	MW17	Aqueous	1,2-Dichloroethane	8260B	1200		ug/L	22
017	MW17	Aqueous	Diisopropyl ether (IPE)	8260B	2000		ug/L	22
017	MW17	Aqueous	Ethylbenzene	8260B	3600		ug/L	22

Executive Summary (Continued)

Lot Number: RC24101

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
017	MW17	Aqueous	Methyl tertiary butyl ether	8260B	420	J	ug/L	22
017	MW17	Aqueous	Naphthalene	8260B	550	J	ug/L	22
017	MW17	Aqueous	tert-butyl alcohol (TBA)	8260B	6600	J	ug/L	22
017	MW17	Aqueous	Toluene	8260B	37000		ug/L	22
017	MW17	Aqueous	Xylenes (total)	8260B	22000		ug/L	22
017	MW17	Aqueous	1,2-Dibromoethane (EDB)	8011	55		ug/L	22
018	MW18	Aqueous	tert-Amyl alcohol (TAA)	8260B	390	J	ug/L	23
018	MW18	Aqueous	Benzene	8260B	4600		ug/L	23
018	MW18	Aqueous	Ethylbenzene	8260B	4900		ug/L	23
018	MW18	Aqueous	Methyl tertiary butyl ether	8260B	56	J	ug/L	23
018	MW18	Aqueous	Naphthalene	8260B	630	J	ug/L	23
018	MW18	Aqueous	Toluene	8260B	36000		ug/L	23
018	MW18	Aqueous	Xylenes (total)	8260B	27000		ug/L	23
018	MW18	Aqueous	1,2-Dibromoethane (EDB)	8011	16		ug/L	23
021	MW21	Aqueous	tert-Amyl alcohol (TAA)	8260B	10	J	ug/L	26
021	MW21	Aqueous	Benzene	8260B	2.2	J	ug/L	26
021	MW21	Aqueous	Naphthalene	8260B	0.92	J	ug/L	26
021	MW21	Aqueous	tert-butyl alcohol (TBA)	8260B	4.7	J	ug/L	26
021	MW21	Aqueous	Xylenes (total)	8260B	8.5		ug/L	26
021	MW21	Aqueous	1,2-Dibromoethane (EDB)	8011	0.029		ug/L	26
022	DW1	Aqueous	tert-Amyl alcohol (TAA)	8260B	7800		ug/L	27
022	DW1	Aqueous	Benzene	8260B	3900		ug/L	27
022	DW1	Aqueous	Diisopropyl ether (IPE)	8260B	260	J	ug/L	27
022	DW1	Aqueous	Naphthalene	8260B	92	J	ug/L	27
022	DW1	Aqueous	tert-butyl alcohol (TBA)	8260B	640	J	ug/L	27
023	DW2	Aqueous	tert-Amyl alcohol (TAA)	8260B	3700		ug/L	28
023	DW2	Aqueous	Benzene	8260B	1100		ug/L	28
023	DW2	Aqueous	1,2-Dichloroethane	8260B	120		ug/L	28
023	DW2	Aqueous	Diisopropyl ether (IPE)	8260B	150		ug/L	28
023	DW2	Aqueous	Ethylbenzene	8260B	3.5	J	ug/L	28
023	DW2	Aqueous	Naphthalene	8260B	150		ug/L	28
023	DW2	Aqueous	tert-butyl alcohol (TBA)	8260B	260	J	ug/L	28
023	DW2	Aqueous	Xylenes (total)	8260B	1200		ug/L	28
023	DW2	Aqueous	1,2-Dibromoethane (EDB)	8011	0.078		ug/L	28
024	AFVR1	Aqueous	Ethylbenzene	8260B	80		ug/L	29
024	AFVR1	Aqueous	Naphthalene	8260B	29		ug/L	29
024	AFVR1	Aqueous	tert-butyl alcohol (TBA)	8260B	7.9	J	ug/L	29
024	AFVR1	Aqueous	Toluene	8260B	1.5	J	ug/L	29
024	AFVR1	Aqueous	Xylenes (total)	8260B	380		ug/L	29
025	AFVR2	Aqueous	tert-Amyl alcohol (TAA)	8260B	160	J	ug/L	30
025	AFVR2	Aqueous	Benzene	8260B	780		ug/L	30
025	AFVR2	Aqueous	Diisopropyl ether (IPE)	8260B	38	J	ug/L	30
025	AFVR2	Aqueous	Ethylbenzene	8260B	2100		ug/L	30
025	AFVR2	Aqueous	Naphthalene	8260B	790		ug/L	30
025	AFVR2	Aqueous	Toluene	8260B	11000		ug/L	30
025	AFVR2	Aqueous	Xylenes (total)	8260B	18000		ug/L	30
025	AFVR2	Aqueous	1,2-Dibromoethane (EDB)	8011	1.5		ug/L	30
026	AFVR3	Aqueous	Benzene	8260B	2600		ug/L	31

Executive Summary (Continued)

Lot Number: RC24101

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
026	AFVR3	Aqueous	Ethylbenzene	8260B	4400		ug/L	31
026	AFVR3	Aqueous	Naphthalene	8260B	740	J	ug/L	31
026	AFVR3	Aqueous	Toluene	8260B	38000		ug/L	31
026	AFVR3	Aqueous	Xylenes (total)	8260B	31000		ug/L	31
026	AFVR3	Aqueous	1,2-Dibromoethane (EDB)	8011	15		ug/L	31
027	AFVR4	Aqueous	tert-Amyl alcohol (TAA)	8260B	81000		ug/L	32
027	AFVR4	Aqueous	Benzene	8260B	13000		ug/L	32
027	AFVR4	Aqueous	1,2-Dichloroethane	8260B	1900	J	ug/L	32
027	AFVR4	Aqueous	Diisopropyl ether (IPE)	8260B	2100	J	ug/L	32
027	AFVR4	Aqueous	Ethylbenzene	8260B	810	J	ug/L	32
027	AFVR4	Aqueous	Naphthalene	8260B	770	J	ug/L	32
027	AFVR4	Aqueous	tert-butyl alcohol (TBA)	8260B	3200	J	ug/L	32
027	AFVR4	Aqueous	Toluene	8260B	20000		ug/L	32
027	AFVR4	Aqueous	Xylenes (total)	8260B	29000		ug/L	32
027	AFVR4	Aqueous	1,2-Dibromoethane (EDB)	8011	230		ug/L	32
028	AFVR5	Aqueous	tert-Amyl alcohol (TAA)	8260B	4700	J	ug/L	33
028	AFVR5	Aqueous	Benzene	8260B	7900		ug/L	33
028	AFVR5	Aqueous	1,2-Dichloroethane	8260B	590		ug/L	33
028	AFVR5	Aqueous	Diisopropyl ether (IPE)	8260B	960	J	ug/L	33
028	AFVR5	Aqueous	Ethylbenzene	8260B	1500		ug/L	33
028	AFVR5	Aqueous	Naphthalene	8260B	740		ug/L	33
028	AFVR5	Aqueous	tert-butyl alcohol (TBA)	8260B	520	J	ug/L	33
028	AFVR5	Aqueous	Toluene	8260B	20000		ug/L	33
028	AFVR5	Aqueous	Xylenes (total)	8260B	22000		ug/L	33
028	AFVR5	Aqueous	1,2-Dibromoethane (EDB)	8011	430		ug/L	33
029	AFVR6	Aqueous	tert-Amyl alcohol (TAA)	8260B	21000		ug/L	34
029	AFVR6	Aqueous	Benzene	8260B	16000		ug/L	34
029	AFVR6	Aqueous	1,2-Dichloroethane	8260B	1500		ug/L	34
029	AFVR6	Aqueous	Diisopropyl ether (IPE)	8260B	2900		ug/L	34
029	AFVR6	Aqueous	Ethylbenzene	8260B	4000		ug/L	34
029	AFVR6	Aqueous	Methyl tertiary butyl ether	8260B	440		ug/L	34
029	AFVR6	Aqueous	Naphthalene	8260B	900		ug/L	34
029	AFVR6	Aqueous	tert-butyl alcohol (TBA)	8260B	1300	J	ug/L	34
029	AFVR6	Aqueous	Toluene	8260B	39000		ug/L	34
029	AFVR6	Aqueous	Xylenes (total)	8260B	27000		ug/L	34
029	AFVR6	Aqueous	1,2-Dibromoethane (EDB)	8011	610		ug/L	34
030	MW14 Duplicate	Aqueous	tert-Amyl alcohol (TAA)	8260B	63000		ug/L	35
030	MW14 Duplicate	Aqueous	Benzene	8260B	19000		ug/L	35
030	MW14 Duplicate	Aqueous	1,2-Dichloroethane	8260B	1400	J	ug/L	35
030	MW14 Duplicate	Aqueous	Diisopropyl ether (IPE)	8260B	1500	J	ug/L	35
030	MW14 Duplicate	Aqueous	Ethylbenzene	8260B	3600		ug/L	35
030	MW14 Duplicate	Aqueous	Naphthalene	8260B	590	J	ug/L	35
030	MW14 Duplicate	Aqueous	tert-butyl alcohol (TBA)	8260B	3100	J	ug/L	35
030	MW14 Duplicate	Aqueous	Toluene	8260B	52000		ug/L	35
030	MW14 Duplicate	Aqueous	Xylenes (total)	8260B	27000		ug/L	35
030	MW14 Duplicate	Aqueous	1,2-Dibromoethane (EDB)	8011	220		ug/L	35
031	MW1 Duplicate	Aqueous	tert-Amyl alcohol (TAA)	8260B	460	J	ug/L	36
031	MW1 Duplicate	Aqueous	Benzene	8260B	3000		ug/L	36

Executive Summary (Continued)

Lot Number: RC24101

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
031	MW1 Duplicate	Aqueous	Diisopropyl ether (IPE)	8260B	94	J	ug/L	36
031	MW1 Duplicate	Aqueous	Ethylbenzene	8260B	3400		ug/L	36
031	MW1 Duplicate	Aqueous	Naphthalene	8260B	780	J	ug/L	36
031	MW1 Duplicate	Aqueous	Toluene	8260B	30000		ug/L	36
031	MW1 Duplicate	Aqueous	Xylenes (total)	8260B	28000		ug/L	36
031	MW1 Duplicate	Aqueous	1,2-Dibromoethane (EDB)	8011	23		ug/L	36

(147 detections)

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW1**
Date Sampled: **03/24/2016 1235**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-001**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	03/28/2016 1304	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		20000	290	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		2000	50	ug/L	1
Benzene	**71-43-2**	**8260B**	**3000**		**1000**	**42**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		20000	130	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1000	46	ug/L	1
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**120**	**J**	**2000**	**52**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		20000	300	ug/L	1
Ethanol	64-17-5	8260B	ND		200000	3900	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**3600**		**1000**	**42**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		20000	26	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1000	46	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**940**	**J**	**1000**	**28**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		20000	460	ug/L	1
Toluene	**108-88-3**	**8260B**	**31000**		**1000**	**48**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**29000**		**1000**	**64**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		112	70-130
Toluene-d8		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	50	03/30/2016 1456	MEM	03/29/2016 1045	99547

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**26**		**0.98**	**0.25**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW3**
Date Sampled: **03/24/2016 1125**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-003**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/26/2016 0339	ECP		99415

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		117	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1507	MEM	03/29/2016 1045	99547

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0048	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW4**
Date Sampled: **03/24/2016 1105**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-004**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/26/2016 0403	ECP		99415

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**4.0**	**J**	**5.0**	**0.23**	**ug/L**	**1**
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		106	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		116	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1517	MEM	03/29/2016 1045	99547

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0048	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW5**
Date Sampled: **03/24/2016 1031**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-005**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/26/2016 0428	ECP		99415

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		117	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1527	MEM	03/29/2016 1045	99547

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0049	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		87	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW6**
Date Sampled: **03/24/2016 1010**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-006**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/26/2016 0452	ECP		99415

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**5.1**	**J**	**100**	**2.3**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**0.78**	**J**	**5.0**	**0.32**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		119	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1648	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.0049	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		101	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW7**
Date Sampled: **03/24/2016 1020**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-007**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/26/2016 0516	ECP		99415

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**0.39**	**J**	**5.0**	**0.14**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**1.8**	**J**	**5.0**	**0.32**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		105	70-130
Bromofluorobenzene		112	70-130
Toluene-d8		119	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1719	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0049	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		125	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW8**
Date Sampled: **03/24/2016 1000**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-008**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/28/2016 1039	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		117	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1729	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.0049	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		110	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW9**
Date Sampled: **03/24/2016 1055**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-009**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/28/2016 1103	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		109	70-130
Toluene-d8		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1739	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0048	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		123	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW10**
Date Sampled: **03/24/2016 1115**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-010**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/29/2016 0315	ECP		99536

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**5.0**		**5.0**	**0.23**	**ug/L**	**1**
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		116	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1750	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0049	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		114	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW11**
Date Sampled: **03/24/2016 1415**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-011**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/28/2016 1755	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**39**		**5.0**	**0.21**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**30**		**5.0**	**0.14**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**6.5**	**J**	**100**	**2.3**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**0.87**	**J**	**5.0**	**0.24**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**260**		**5.0**	**0.32**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		118	70-130
Toluene-d8		118	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1800	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0049	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		115	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW12**
Date Sampled: **03/24/2016 1255**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-012**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	100	03/28/2016 1328	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		10000	150	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		1000	25	ug/L	1
Benzene	**71-43-2**	**8260B**	**380**	**J**	**500**	**21**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		10000	66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		500	23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		1000	26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		10000	150	ug/L	1
Ethanol	64-17-5	8260B	ND		100000	1900	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**1700**		**500**	**21**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		10000	13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		500	23	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**650**		**500**	**14**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		10000	230	ug/L	1
Toluene	**108-88-3**	**8260B**	**8500**		**500**	**24**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**20000**		**500**	**32**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		117	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1810	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.48**		**0.019**	**0.0049**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		73	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW14**
Date Sampled: **03/24/2016 1205**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-014**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	500	03/28/2016 1352	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**62000**		**50000**	**730**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		5000	130	ug/L	1
Benzene	**71-43-2**	**8260B**	**20000**		**2500**	**110**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		50000	330	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**1400**	**J**	**2500**	**120**	**ug/L**	**1**
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**1500**	**J**	**5000**	**130**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		50000	750	ug/L	1
Ethanol	64-17-5	8260B	ND		500000	9600	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**4400**		**2500**	**110**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		50000	65	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		2500	120	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**650**	**J**	**2500**	**70**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**3300**	**J**	**50000**	**1100**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**56000**		**2500**	**120**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**28000**		**2500**	**160**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	500	03/30/2016 1820	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**190**		**9.6**	**2.4**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW15**
Date Sampled: **03/24/2016 1135**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-015**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/28/2016 1127	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1831	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.018**	**J**	**0.019**	**0.0048**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		93	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW16**
Date Sampled: **03/24/2016 1040**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-016**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/28/2016 1417	JM1		99470
2	5030B	8260B	20	03/30/2016 0449	ECP		99622

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		1000	15	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		100	2.5	ug/L	1
Benzene	71-43-2	8260B	ND		50	2.1	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		1000	6.6	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		50	2.3	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		100	2.6	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		1000	15	ug/L	1
Ethanol	64-17-5	8260B	ND		10000	190	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**520**		**50**	**2.1**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		1000	1.3	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		50	2.3	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**430**		**50**	**1.4**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**160**	**J**	**1000**	**23**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**50**		**50**	**2.4**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**3300**		**100**	**6.4**	**ug/L**	**2**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130		112	70-130
Bromofluorobenzene		114	70-130		113	70-130
Toluene-d8		116	70-130		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1841	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0048	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		120	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW17**
Date Sampled: **03/24/2016 1155**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-017**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	03/28/2016 1441	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**46000**		**20000**	**290**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		2000	50	ug/L	1
Benzene	**71-43-2**	**8260B**	**16000**		**1000**	**42**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		20000	130	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**1200**		**1000**	**46**	**ug/L**	**1**
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**2000**		**2000**	**52**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		20000	300	ug/L	1
Ethanol	64-17-5	8260B	ND		200000	3900	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**3600**		**1000**	**42**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		20000	26	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**420**	**J**	**1000**	**46**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**550**	**J**	**1000**	**28**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**6600**	**J**	**20000**	**460**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**37000**		**1000**	**48**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**22000**		**1000**	**64**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	100	03/30/2016 1851	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**55**		**1.9**	**0.48**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	262	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW18**
Date Sampled: **03/24/2016 1145**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-018**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	03/28/2016 1505	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**390**	**J**	**20000**	**290**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		2000	50	ug/L	1
Benzene	**71-43-2**	**8260B**	**4600**		**1000**	**42**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		20000	130	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1000	46	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		2000	52	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		20000	300	ug/L	1
Ethanol	64-17-5	8260B	ND		200000	3900	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**4900**		**1000**	**42**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		20000	26	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**56**	**J**	**1000**	**46**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**630**	**J**	**1000**	**28**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		20000	460	ug/L	1
Toluene	**108-88-3**	**8260B**	**36000**		**1000**	**48**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**27000**		**1000**	**64**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		118	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	20	03/30/2016 1902	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**16**		**0.39**	**0.097**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW19**
Date Sampled: **03/24/2016 0925**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-019**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/28/2016 1152	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		116	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1912	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0048	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		104	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW20**
Date Sampled: **03/24/2016 0915**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-020**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/28/2016 1216	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		116	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1922	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0048	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW21**
Date Sampled: **03/24/2016 0905**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-021**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/28/2016 1240	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**10**	**J**	**100**	**1.5**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	**71-43-2**	**8260B**	**2.2**	**J**	**5.0**	**0.21**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**0.92**	**J**	**5.0**	**0.14**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**4.7**	**J**	**100**	**2.3**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**8.5**		**5.0**	**0.32**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		116	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1932	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.029**		**0.019**	**0.0048**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		97	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **DW1**
Date Sampled: **03/24/2016 1340**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-022**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	50	03/28/2016 1530	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**7800**		**5000**	**73**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		500	13	ug/L	1
Benzene	**71-43-2**	**8260B**	**3900**		**250**	**11**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		5000	33	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		250	12	ug/L	1
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**260**	**J**	**500**	**13**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		5000	75	ug/L	1
Ethanol	64-17-5	8260B	ND		50000	960	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		250	11	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		5000	6.5	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		250	12	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**92**	**J**	**250**	**7.0**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**640**	**J**	**5000**	**110**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		250	12	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		250	16	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		112	70-130
Toluene-d8		119	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1943	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0048	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	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"

Client: **Midlands Environmental Consultants, Inc.**
Description: **DW2**
Date Sampled: **03/24/2016 0950**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-023**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	03/28/2016 1554	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**3700**		**1000**	**15**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		100	2.5	ug/L	1
Benzene	**71-43-2**	**8260B**	**1100**		**50**	**2.1**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		1000	6.6	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**120**		**50**	**2.3**	**ug/L**	**1**
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**150**		**100**	**2.6**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		1000	15	ug/L	1
Ethanol	64-17-5	8260B	ND		10000	190	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**3.5**	**J**	**50**	**2.1**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		1000	1.3	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		50	2.3	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**150**		**50**	**1.4**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**260**	**J**	**1000**	**23**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		50	2.4	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**1200**		**50**	**3.2**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		117	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 1953	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.078**		**0.019**	**0.0047**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	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"

Client: **Midlands Environmental Consultants, Inc.**
Description: **AFVR1**
Date Sampled: **03/24/2016 1405**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-024**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/28/2016 1820	JM1		99470
2	5030B	8260B	5	03/30/2016 0513	ECP		99622

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**80**		**5.0**	**0.21**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**29**		**5.0**	**0.14**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**7.9**	**J**	**100**	**2.3**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**1.5**	**J**	**5.0**	**0.24**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**380**		**25**	**1.6**	**ug/L**	**2**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130		112	70-130
Bromofluorobenzene		117	70-130		113	70-130
Toluene-d8		117	70-130		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	03/30/2016 2004	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0049	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		133	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **AFVR2**
Date Sampled: **03/24/2016 1305**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-025**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	50	03/28/2016 1618	JM1		99470
2	5030B	8260B	200	03/30/2016 0537	ECP		99622

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**160**	**J**	**5000**	**73**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		500	13	ug/L	1
Benzene	**71-43-2**	**8260B**	**780**		**250**	**11**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		5000	33	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		250	12	ug/L	1
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**38**	**J**	**500**	**13**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		5000	75	ug/L	1
Ethanol	64-17-5	8260B	ND		50000	960	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**2100**		**250**	**11**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		5000	6.5	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		250	12	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**790**		**250**	**7.0**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		5000	110	ug/L	1
Toluene	**108-88-3**	**8260B**	**11000**		**1000**	**48**	**ug/L**	**2**
Xylenes (total)	**1330-20-7**	**8260B**	**18000**		**1000**	**64**	**ug/L**	**2**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130		110	70-130
Bromofluorobenzene		115	70-130		111	70-130
Toluene-d8		115	70-130		114	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	2	03/31/2016 0847	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**1.5**		**0.038**	**0.0096**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		96	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **AFVR3**
Date Sampled: **03/24/2016 1245**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-026**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	03/28/2016 1642	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		20000	290	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		2000	50	ug/L	1
Benzene	**71-43-2**	**8260B**	**2600**		**1000**	**42**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		20000	130	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1000	46	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		2000	52	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		20000	300	ug/L	1
Ethanol	64-17-5	8260B	ND		200000	3900	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**4400**		**1000**	**42**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		20000	26	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1000	46	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**740**	**J**	**1000**	**28**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		20000	460	ug/L	1
Toluene	**108-88-3**	**8260B**	**38000**		**1000**	**48**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**31000**		**1000**	**64**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		102	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	20	03/30/2016 2024	MEM	03/29/2016 1045	99549

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**15**		**0.39**	**0.097**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **AFVR4**
Date Sampled: **03/24/2016 1215**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-027**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	500	03/29/2016 0718	ECP		99536

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**81000**		**50000**	**730**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		5000	130	ug/L	1
Benzene	**71-43-2**	**8260B**	**13000**		**2500**	**110**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		50000	330	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**1900**	**J**	**2500**	**120**	**ug/L**	**1**
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**2100**	**J**	**5000**	**130**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		50000	750	ug/L	1
Ethanol	64-17-5	8260B	ND		500000	9600	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**810**	**J**	**2500**	**110**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		50000	65	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		2500	120	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**770**	**J**	**2500**	**70**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**3200**	**J**	**50000**	**1100**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**20000**		**2500**	**120**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**29000**		**2500**	**160**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		116	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	500	03/31/2016 1339	MEM	03/31/2016 0926	99734

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**230**		**9.7**	**2.4**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **AFVR5**
Date Sampled: **03/24/2016 1355**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-028**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	100	03/29/2016 0742	ECP		99536

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**4700**	**J**	**10000**	**150**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		1000	25	ug/L	1
Benzene	**71-43-2**	**8260B**	**7900**		**500**	**21**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		10000	66	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**590**		**500**	**23**	**ug/L**	**1**
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**960**	**J**	**1000**	**26**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		10000	150	ug/L	1
Ethanol	64-17-5	8260B	ND		100000	1900	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**1500**		**500**	**21**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		10000	13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		500	23	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**740**		**500**	**14**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**520**	**J**	**10000**	**230**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**20000**		**500**	**24**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**22000**		**500**	**32**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	500	03/31/2016 1349	MEM	03/31/2016 0926	99734

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**430**		**9.6**	**2.4**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **AFVR6**
Date Sampled: **03/24/2016 1225**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-029**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	50	03/29/2016 0807	ECP		99536
2	5030B	8260B	500	03/30/2016 0601	ECP		99622

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**21000**		**5000**	**73**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		500	13	ug/L	1
Benzene	**71-43-2**	**8260B**	**16000**		**2500**	**110**	**ug/L**	**2**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		5000	33	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**1500**		**250**	**12**	**ug/L**	**1**
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**2900**		**500**	**13**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		5000	75	ug/L	1
Ethanol	64-17-5	8260B	ND		50000	960	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**4000**		**250**	**11**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		5000	6.5	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**440**		**250**	**12**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**900**		**250**	**7.0**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**1300**	**J**	**5000**	**110**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**39000**		**2500**	**120**	**ug/L**	**2**
Xylenes (total)	**1330-20-7**	**8260B**	**27000**		**2500**	**160**	**ug/L**	**2**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130		110	70-130
Bromofluorobenzene		111	70-130		112	70-130
Toluene-d8		112	70-130		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1000	03/31/2016 1359	MEM	03/31/2016 0926	99734

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**610**		**19**	**4.8**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW14 Duplicate**
Date Sampled: **03/24/2016 1205**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-030**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	500	03/28/2016 1707	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**63000**		**50000**	**730**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		5000	130	ug/L	1
Benzene	**71-43-2**	**8260B**	**19000**		**2500**	**110**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		50000	330	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**1400**	**J**	**2500**	**120**	**ug/L**	**1**
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**1500**	**J**	**5000**	**130**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		50000	750	ug/L	1
Ethanol	64-17-5	8260B	ND		500000	9600	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**3600**		**2500**	**110**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		50000	65	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		2500	120	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**590**	**J**	**2500**	**70**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**3100**	**J**	**50000**	**1100**	**ug/L**	**1**
Toluene	**108-88-3**	**8260B**	**52000**		**2500**	**120**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**27000**		**2500**	**160**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		113	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	500	03/31/2016 1410	MEM	03/31/2016 0926	99734

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**220**		**9.6**	**2.4**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW1 Duplicate**
Date Sampled: **03/24/2016 1235**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-031**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	200	03/28/2016 1731	JM1		99470

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**460**	**J**	**20000**	**290**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		2000	50	ug/L	1
Benzene	**71-43-2**	**8260B**	**3000**		**1000**	**42**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		20000	130	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1000	46	ug/L	1
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**94**	**J**	**2000**	**52**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		20000	300	ug/L	1
Ethanol	64-17-5	8260B	ND		200000	3900	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**3400**		**1000**	**42**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		20000	26	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1000	46	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**780**	**J**	**1000**	**28**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		20000	460	ug/L	1
Toluene	**108-88-3**	**8260B**	**30000**		**1000**	**48**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**28000**		**1000**	**64**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		101	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		115	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	50	03/31/2016 1420	MEM	03/31/2016 0926	99734

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**23**		**0.96**	**0.24**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane	N	0.00	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **Field Blank**
Date Sampled: **03/24/2016 1420**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-032**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/29/2016 0027	ECP		99536

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		117	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	03/31/2016 1430	MEM	03/31/2016 0926	99734

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.0048	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		104	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **Trip Blank**
Date Sampled: **03/24/2016 1420**
Date Received: **03/24/2016**

Laboratory ID: **RC24101-033**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	03/29/2016 0052	ECP		99536

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	1.5	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.25	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.21	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	0.66	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.23	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.26	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.5	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	19	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	0.21	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.13	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.23	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	0.14	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	2.3	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	0.24	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	0.32	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		108	70-130
Toluene-d8		116	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ99415-001
Batch: 99415
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	1.5	ug/L	03/25/2016 2230
tert-Amyl methyl ether (TAME)	ND		1	10	0.25	ug/L	03/25/2016 2230
Benzene	ND		1	5.0	0.21	ug/L	03/25/2016 2230
tert-Butyl formate (TBF)	ND		1	100	0.66	ug/L	03/25/2016 2230
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	03/25/2016 2230
Diisopropyl ether (IPE)	ND		1	10	0.26	ug/L	03/25/2016 2230
3,3-Dimethyl-1-butanol	ND		1	100	1.5	ug/L	03/25/2016 2230
Ethanol	ND		1	1000	19	ug/L	03/25/2016 2230
Ethylbenzene	ND		1	5.0	0.21	ug/L	03/25/2016 2230
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.13	ug/L	03/25/2016 2230
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	03/25/2016 2230
Naphthalene	ND		1	5.0	0.14	ug/L	03/25/2016 2230
tert-butyl alcohol (TBA)	ND		1	100	2.3	ug/L	03/25/2016 2230
Toluene	ND		1	5.0	0.24	ug/L	03/25/2016 2230
Xylenes (total)	ND		1	5.0	0.32	ug/L	03/25/2016 2230

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		109	70-130
1,2-Dichloroethane-d4		100	70-130
Toluene-d8		116	70-130

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ99415-002
Batch: 99415
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	920		1	92	70-130	03/25/2016 2125
tert-Amyl methyl ether (TAME)	50	47		1	94	70-130	03/25/2016 2125
Benzene	50	47		1	94	70-130	03/25/2016 2125
tert-Butyl formate (TBF)	250	220		1	88	70-130	03/25/2016 2125
1,2-Dichloroethane	50	43		1	87	70-130	03/25/2016 2125
Diisopropyl ether (IPE)	50	45		1	90	70-130	03/25/2016 2125
3,3-Dimethyl-1-butanol	1000	850		1	85	70-130	03/25/2016 2125
Ethanol	5000	4400		1	87	60-140	03/25/2016 2125
Ethylbenzene	50	51		1	103	70-130	03/25/2016 2125
Ethyl-tert-butyl ether (ETBE)	50	47		1	94	70-130	03/25/2016 2125
Methyl tertiary butyl ether (MTBE)	50	44		1	87	70-130	03/25/2016 2125

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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: RQ99415-002
Batch: 99415
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Naphthalene	50	55		1	110	70-130	03/25/2016 2125
tert-butyl alcohol (TBA)	1000	950		1	95	70-130	03/25/2016 2125
Toluene	50	53		1	107	70-130	03/25/2016 2125
Xylenes (total)	100	100		1	103	70-130	03/25/2016 2125

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		110	70-130
1,2-Dichloroethane-d4		98	70-130
Toluene-d8		111	70-130

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ99470-001
Batch: 99470
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	1.5	ug/L	03/28/2016 1001
tert-Amyl methyl ether (TAME)	ND		1	10	0.25	ug/L	03/28/2016 1001
Benzene	ND		1	5.0	0.21	ug/L	03/28/2016 1001
tert-Butyl formate (TBF)	ND		1	100	0.66	ug/L	03/28/2016 1001
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	03/28/2016 1001
Diisopropyl ether (IPE)	ND		1	10	0.26	ug/L	03/28/2016 1001
3,3-Dimethyl-1-butanol	ND		1	100	1.5	ug/L	03/28/2016 1001
Ethanol	ND		1	1000	19	ug/L	03/28/2016 1001
Ethylbenzene	ND		1	5.0	0.21	ug/L	03/28/2016 1001
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.13	ug/L	03/28/2016 1001
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	03/28/2016 1001
Naphthalene	ND		1	5.0	0.14	ug/L	03/28/2016 1001
tert-butyl alcohol (TBA)	ND		1	100	2.3	ug/L	03/28/2016 1001
Toluene	ND		1	5.0	0.24	ug/L	03/28/2016 1001
Xylenes (total)	ND		1	5.0	0.32	ug/L	03/28/2016 1001

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		110	70-130
1,2-Dichloroethane-d4		102	70-130
Toluene-d8		117	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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: RQ99470-002
Batch: 99470
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	103	70-130	03/28/2016 0900
tert-Amyl methyl ether (TAME)	50	51		1	102	70-130	03/28/2016 0900
Benzene	50	50		1	100	70-130	03/28/2016 0900
tert-Butyl formate (TBF)	250	260		1	102	70-130	03/28/2016 0900
1,2-Dichloroethane	50	46		1	93	70-130	03/28/2016 0900
Diisopropyl ether (IPE)	50	49		1	98	70-130	03/28/2016 0900
3,3-Dimethyl-1-butanol	1000	950		1	95	70-130	03/28/2016 0900
Ethanol	5000	5300		1	106	60-140	03/28/2016 0900
Ethylbenzene	50	56		1	112	70-130	03/28/2016 0900
Ethyl-tert-butyl ether (ETBE)	50	51		1	102	70-130	03/28/2016 0900
Methyl tertiary butyl ether (MTBE)	50	49		1	97	70-130	03/28/2016 0900
Naphthalene	50	60		1	119	70-130	03/28/2016 0900
tert-butyl alcohol (TBA)	1000	1100		1	107	70-130	03/28/2016 0900
Toluene	50	59		1	118	70-130	03/28/2016 0900
Xylenes (total)	100	110		1	113	70-130	03/28/2016 0900

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		112	70-130
1,2-Dichloroethane-d4		99	70-130
Toluene-d8		115	70-130

Volatile Organic Compounds by GC/MS - MS

Sample ID: RC24101-014MS
Batch: 99470
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	62000	500000	550000		500	97	70-130	03/28/2016 1843
tert-Amyl methyl ether (TAME)	ND	25000	24000		500	96	70-130	03/28/2016 1843
Benzene	20000	25000	43000		500	90	70-130	03/28/2016 1843
tert-Butyl formate (TBF)	ND	130000	120000		500	94	70-130	03/28/2016 1843
1,2-Dichloroethane	1400	25000	23000		500	87	70-130	03/28/2016 1843
Diisopropyl ether (IPE)	1500	25000	25000		500	94	70-130	03/28/2016 1843
3,3-Dimethyl-1-butanol	ND	500000	420000		500	84	70-130	03/28/2016 1843
Ethanol	ND	2500000	2200000		500	89	70-130	03/28/2016 1843
Ethylbenzene	4400	25000	30000		500	102	70-130	03/28/2016 1843
Ethyl-tert-butyl ether (ETBE)	ND	25000	24000		500	98	70-130	03/28/2016 1843
Methyl tertiary butyl ether (MTBE)	ND	25000	24000		500	95	70-130	03/28/2016 1843

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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 - MS

Sample ID: RC24101-014MS
Batch: 99470
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Naphthalene	650	25000	28000		500	108	70-130	03/28/2016 1843
tert-butyl alcohol (TBA)	3300	500000	510000		500	101	70-130	03/28/2016 1843
Toluene	56000	25000	79000		500	92	70-130	03/28/2016 1843
Xylenes (total)	28000	50000	79000		500	102	70-130	03/28/2016 1843

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		110	70-130
Toluene-d8		111	70-130

Volatile Organic Compounds by GC/MS - MSD

Sample ID: RC24101-014MD
Batch: 99470
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	62000	500000	560000		500	99	2.3	70-130	20	03/28/2016 1908
tert-Amyl methyl ether (TAME)	ND	25000	24000		500	96	0.032	70-130	20	03/28/2016 1908
Benzene	20000	25000	44000		500	95	2.6	70-130	20	03/28/2016 1908
tert-Butyl formate (TBF)	ND	130000	120000		500	96	1.4	70-130	20	03/28/2016 1908
1,2-Dichloroethane	1400	25000	24000		500	90	3.1	70-130	20	03/28/2016 1908
Diisopropyl ether (IPE)	1500	25000	25000		500	93	0.27	70-130	20	03/28/2016 1908
3,3-Dimethyl-1-butanol	ND	500000	420000		500	84	0.74	70-130	20	03/28/2016 1908
Ethanol	ND	2500000	2100000		500	83	7.9	70-130	20	03/28/2016 1908
Ethylbenzene	4400	25000	30000		500	102	0.32	70-130	20	03/28/2016 1908
Ethyl-tert-butyl ether (ETBE)	ND	25000	24000		500	96	1.5	70-130	20	03/28/2016 1908
Methyl tertiary butyl ether (MTBE)	ND	25000	23000		500	91	4.6	70-130	20	03/28/2016 1908
Naphthalene	650	25000	27000		500	106	2.2	70-130	20	03/28/2016 1908
tert-butyl alcohol (TBA)	3300	500000	500000		500	100	1.4	70-130	20	03/28/2016 1908
Toluene	56000	25000	80000		500	94	0.84	70-130	20	03/28/2016 1908
Xylenes (total)	28000	50000	79000		500	103	0.52	70-130	20	03/28/2016 1908

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		113	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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: RQ99536-001
Batch: 99536
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	1.5	ug/L	03/28/2016 2341
tert-Amyl methyl ether (TAME)	ND		1	10	0.25	ug/L	03/28/2016 2341
Benzene	ND		1	5.0	0.21	ug/L	03/28/2016 2341
tert-Butyl formate (TBF)	ND		1	100	0.66	ug/L	03/28/2016 2341
1,2-Dichloroethane	ND		1	5.0	0.23	ug/L	03/28/2016 2341
Diisopropyl ether (IPE)	ND		1	10	0.26	ug/L	03/28/2016 2341
3,3-Dimethyl-1-butanol	ND		1	100	1.5	ug/L	03/28/2016 2341
Ethanol	ND		1	1000	19	ug/L	03/28/2016 2341
Ethylbenzene	ND		1	5.0	0.21	ug/L	03/28/2016 2341
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.13	ug/L	03/28/2016 2341
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.23	ug/L	03/28/2016 2341
Naphthalene	ND		1	5.0	0.14	ug/L	03/28/2016 2341
tert-butyl alcohol (TBA)	ND		1	100	2.3	ug/L	03/28/2016 2341
Toluene	ND		1	5.0	0.24	ug/L	03/28/2016 2341
Xylenes (total)	ND		1	5.0	0.32	ug/L	03/28/2016 2341

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		110	70-130
1,2-Dichloroethane-d4		105	70-130
Toluene-d8		118	70-130

Volatile Organic Compounds by GC/MS - LCS

Sample ID: RQ99536-002
Batch: 99536
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	104	70-130	03/28/2016 2229
tert-Amyl methyl ether (TAME)	50	48		1	96	70-130	03/28/2016 2229
Benzene	50	48		1	95	70-130	03/28/2016 2229
tert-Butyl formate (TBF)	250	250		1	99	70-130	03/28/2016 2229
1,2-Dichloroethane	50	45		1	91	70-130	03/28/2016 2229
Diisopropyl ether (IPE)	50	45		1	91	70-130	03/28/2016 2229
3,3-Dimethyl-1-butanol	1000	880		1	88	70-130	03/28/2016 2229
Ethanol	5000	4400		1	89	60-140	03/28/2016 2229
Ethylbenzene	50	52		1	103	70-130	03/28/2016 2229
Ethyl-tert-butyl ether (ETBE)	50	48		1	96	70-130	03/28/2016 2229
Methyl tertiary butyl ether (MTBE)	50	45		1	90	70-130	03/28/2016 2229

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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: RQ99536-002
Batch: 99536
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Naphthalene	50	54		1	108	70-130	03/28/2016 2229
tert-butyl alcohol (TBA)	1000	1000		1	104	70-130	03/28/2016 2229
Toluene	50	52		1	104	70-130	03/28/2016 2229
Xylenes (total)	100	100		1	104	70-130	03/28/2016 2229

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		112	70-130
1,2-Dichloroethane-d4		99	70-130
Toluene-d8		110	70-130

Volatile Organic Compounds by GC/MS - MS

Sample ID: RC24101-029MS
Batch: 99536
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	21000	50000	70000		50	100	70-130	03/29/2016 0831
tert-Amyl methyl ether (TAME)	ND	2500	2500		50	101	70-130	03/29/2016 0831
Benzene	16000	2500	17000	N	50	66	70-130	03/29/2016 0831
tert-Butyl formate (TBF)	ND	13000	9700		50	78	70-130	03/29/2016 0831
1,2-Dichloroethane	1500	2500	3800		50	91	70-130	03/29/2016 0831
Diisopropyl ether (IPE)	2900	2500	5300		50	96	70-130	03/29/2016 0831
3,3-Dimethyl-1-butanol	ND	50000	40000		50	80	70-130	03/29/2016 0831
Ethanol	ND	250000	220000		50	88	70-130	03/29/2016 0831
Ethylbenzene	4000	2500	6500		50	101	70-130	03/29/2016 0831
Ethyl-tert-butyl ether (ETBE)	ND	2500	2600		50	105	70-130	03/29/2016 0831
Methyl tertiary butyl ether (MTBE)	440	2500	2900		50	99	70-130	03/29/2016 0831
Naphthalene	900	2500	3600		50	108	70-130	03/29/2016 0831
tert-butyl alcohol (TBA)	1300	50000	53000		50	103	70-130	03/29/2016 0831
Toluene	39000	2500	42000	N	50	35	70-130	03/29/2016 0831
Xylenes (total)	27000	5000	33000	E	50	94	70-130	03/29/2016 0831

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		111	70-130
Toluene-d8		113	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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 - MSD

Sample ID: RC24101-029MD
Batch: 99536
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	21000	50000	70000		50	100	0.066	70-130	20	03/29/2016 0855
tert-Amyl methyl ether (TAME)	ND	2500	2500		50	99	1.8	70-130	20	03/29/2016 0855
Benzene	16000	2500	16000	N	50	48	2.7	70-130	20	03/29/2016 0855
tert-Butyl formate (TBF)	ND	13000	9500		50	76	2.6	70-130	20	03/29/2016 0855
1,2-Dichloroethane	1500	2500	3800		50	88	1.5	70-130	20	03/29/2016 0855
Diisopropyl ether (IPE)	2900	2500	5200		50	92	2.0	70-130	20	03/29/2016 0855
3,3-Dimethyl-1-butanol	ND	50000	41000		50	81	2.1	70-130	20	03/29/2016 0855
Ethanol	ND	250000	230000		50	91	3.8	70-130	20	03/29/2016 0855
Ethylbenzene	4000	2500	6400		50	97	1.3	70-130	20	03/29/2016 0855
Ethyl-tert-butyl ether (ETBE)	ND	2500	2600		50	103	2.2	70-130	20	03/29/2016 0855
Methyl tertiary butyl ether (MTBE)	440	2500	2900		50	98	0.63	70-130	20	03/29/2016 0855
Naphthalene	900	2500	3600		50	110	1.0	70-130	20	03/29/2016 0855
tert-butyl alcohol (TBA)	1300	50000	54000		50	105	1.2	70-130	20	03/29/2016 0855
Toluene	39000	2500	41000	N	50	-9.3	2.7	70-130	20	03/29/2016 0855
Xylenes (total)	27000	5000	32000	E	50	79	2.3	70-130	20	03/29/2016 0855

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		113	70-130
Toluene-d8		114	70-130

Volatile Organic Compounds by GC/MS - MB

Sample ID: RQ99622-001
Batch: 99622
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Benzene	ND		1	5.0	0.21	ug/L	03/29/2016 2305
Toluene	ND		1	5.0	0.24	ug/L	03/29/2016 2305
Xylenes (total)	ND		1	5.0	0.32	ug/L	03/29/2016 2305

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		109	70-130
1,2-Dichloroethane-d4		104	70-130
Toluene-d8		114	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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: RQ99622-002
Batch: 99622
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	49		1	97	70-130	03/29/2016 2200
Toluene	50	54		1	109	70-130	03/29/2016 2200
Xylenes (total)	100	110		1	106	70-130	03/29/2016 2200

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		112	70-130
1,2-Dichloroethane-d4		103	70-130
Toluene-d8		113	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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: RQ99547-001
Batch: 99547
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 03/29/2016 1045

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.0050	ug/L	03/30/2016 1120

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		98	57-137

EDB & DBCP by Microextraction - LCS

Sample ID: RQ99547-002
Batch: 99547
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 03/29/2016 1045

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.23		1	90	60-140	03/30/2016 1131

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		104	57-137

EDB & DBCP by Microextraction - MB

Sample ID: RQ99549-001
Batch: 99549
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 03/29/2016 1045

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.0050	ug/L	03/30/2016 1627

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		109	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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 - LCS

Sample ID: RQ99549-002 **Matrix:** Aqueous
Batch: 99549 **Prep Method:** 8011
Analytical Method: 8011 **Prep Date:** 03/29/2016 1045

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.25		1	101	60-140	03/30/2016 1638

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		105	57-137

EDB & DBCP by Microextraction - MS

Sample ID: RC24101-006MS **Matrix:** Aqueous
Batch: 99549 **Prep Method:** 8011
Analytical Method: 8011 **Prep Date:** 03/29/2016 1045

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.25		1	104	60-140	03/30/2016 1658

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		103	57-137

EDB & DBCP by Microextraction - MSD

Sample ID: RC24101-006MD **Matrix:** Aqueous
Batch: 99549 **Prep Method:** 8011
Analytical Method: 8011 **Prep Date:** 03/29/2016 1045

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	0.25		1	104	0.72	60-140	20	03/30/2016 1708

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		108	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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: RQ99734-001
Batch: 99734
Analytical Method: 8011

Matrix: Aqueous
Prep Method: 8011
Prep Date: 03/31/2016 926

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.0050	ug/L	03/31/2016 1318

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		103	57-137

EDB & DBCP by Microextraction - LCS

Sample ID: RQ99734-002
Batch: 99734
Analytical Method: 8011

Matrix: Aqueous
Prep Method: 8011
Prep Date: 03/31/2016 926

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.26		1	103	60-140	03/31/2016 1328

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		106	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = 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
and
Miscellaneous Documents

Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 56728

Client: MECI
Address: 231 Dooley Rd
City: Lexington | State: SC | Zip Code: 29073
Project Name: Copeland's Service Station
Project No.: MECI# 16-5459
P.O. No.:
Report to Contact: B. Shene
Sampler's Signature: x
Printed Name: Frank Miller
Telephone No. / E-mail: 803-808-2043 / SLC@meci.net
Analysis (Attach list if more space is needed): BTEX, N, M; 1,2-DCA; 8-OXY; EDB
Page 1 of 4
RC24101

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	# of Containers	Aqueous	Solid	Non-Aqueous	HCl	BTEX, N, M	1,2-DCA	8-OXY	EDB	Remarks / Cooler I.D.
MW 1	3/24/16	12:35	6	X			6	X	X	X	X	
MW 2												Strong Odor
MW 3	3/24/16	11:25	6	X			6					Not Sampled
MW 4		11:05						X	X	X	X	
MW 5		10:31										No Odor
MW 6		10:10										No Odor
MW 7		10:20										
MW 8		10:00										
MW 9		10:55										
MW 10	3/24/16	11:15	6	X			6	X	X	X	X	
												No Odor

Turn Around Time Required (Prior lab approval required for expedited TAT.): ☒ Standard ☐ Rush (Specify)

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

QC Requirements (Specify):

	Date	Time
1. Relinquished by	3/24/16	15:00
2. Relinquished by		
3. Relinquished by		
4. Relinquished by		

	Date	Time
1. Received by		
2. Received by		
3. Received by		
4. Laboratory received by	3/24/16	1500

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack
Receipt Temp. 4.2 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s). PINK-Field/Client Copy

Document Number: F-AC-133 Effective Date: 09-01-2014

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

SHEALY ENVIRONMENTAL SERVICES, INC.

Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 56724

Client: MECI
Address: 231 Dooley Rd
City: Lexington | State: SC | Zip Code: 29073
Project Name: Copeland's Service Station
Project No.: MECI # 16-5459
P.O. No.:
Report to Contact: B. Shane
Sampler's Signature: X
Printed Name: Frank Mitlin
Telephone No. / E-mail: 803-858-2043 / JLCo@meci.net
Quote No.:
Page 2 of 4
RC24101

Analysis (Attach list if more space is needed): BTEX, N, M | 1,2-DCA | 8-Oxy | EDB

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	# of Containers	Matrix: Aqueous	Solid	Other	Type of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	NaS2O3	BTEX, N, M	1,2-DCA	8-Oxy	EDB	Remarks / Cooler I.D.
MW 11	3/24/16	14:15	6	X						6			X	X	X	X	
MW 12	3/24/16	12:55	6	X						6			X	X	X	X	No Odor
MW 13																	Odor
MW 14	3/24/16	12:05	6	X						6			X	X	X	X	Not Sampled
MW 15		11:35															Strong Odor
MW 16		10:40															No Odor
MW 17		11:55															No Odor
MW 18		11:45															Strong Odor
MW 19		9:25															Strong Odor
MW 20	3/24/16	9:15	6	X						6			X	X	X	X	No Odor
																	No Odor

Turn Around Time Required (Prior lab approval required for expedited TAT.): ☒ Standard ☐ Rush (Specify)
Sample Disposal: ☐ Return to Client ☒ Disposal by Lab
Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown
QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished by	3/24/16	15:00	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by			4. Laboratory received by	3/24/16	1500

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY: Received on Ice (Circle) (Yes) No Ice Pack | Receipt Temp. 4.2 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-132 Effective Date: 08-01-2014

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 56725

Client: MECI
Address: 231 Dooley Rd
City: Lexington | State: SC | Zip Code: 29073
Project Name: Copeland's Service Station
Project No.: MECI # 16-5459
P.O. No.:
Report to Contact: B. Shane
Sampler's Signature: x
Printed Name: Frank Miller
Telephone No. / E-mail: 803-808-2043 / JLC@meci.net
Quote No.:
Analysis (Attach list if more space is needed): BTEX, N, M | 1,2-DCA | 8-Oxy | EDB
Page 3 of 4
RC24101

Sample ID / Description (Combine for each sample may be combined on one line.)	Date	Time	# of Containers	Matrix: Aqueous	Soil	Other	Preservative: Unpres.	HCl	HNO3	NaOH	H2SO4	NaHSO4	Other	BTEX, N, M	1,2-DCA	8-Oxy	EDB	Remarks / Cooler I.D.
MW 21	3/24/16	9:05	6	X						6				X	X	X	X	No Odor
DW 1		13:40																No Odor
DW 2		9:50																Slight Odor
AFVR 1		14:05																No Odor
AFVR 2		13:05																Strong Odor
AFVR 3		12:45																Strong Odor
AFVR 4		12:15																Strong Odor
AFVR 5		13:55																Strong Odor
AFVR 6		12:25																Strong Odor
MW 14 Duplicate	3/24/16	12:05	6	X						6				X	X	X	X	Duplicate

Turn Around Time Required (Prior lab approval required for expedited TAT.): X Standard ☐ Rush (Specify)
Sample Disposal: ☐ Return to Client ☒ Disposal by Lab
Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown
QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished by	3/24/16	15:00	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by			4. Laboratory received by	3/24/16	15:00

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Circle): Yes No Ice Pack
Receipt Temp. 4.2 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 56726

Client: MECI
Address: 231 Dooley Rd
City: Lexington State: SC Zip Code: 29073
Project Name: Copeland's Service Station
Project No.: MECI #16-5459
P.O. No.:
Report to Contact: B. Shane
Sampler's Signature: x
Printed Name: Frank Mitlin
Telephone No. / E-mail: 803-808-2013 / bjc@meci.net
Analysis (Attach list if more space is needed)
Quote No.:
Page 4 of 4
RC24101

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	# of Containers	Matrix: Potable	Matrix: Stand.	Matrix: Non-Potable	No. of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	NaS2O3	BTEX, N, M	1,2-DCA	8-Oxy	EDB					Remarks / Cooler I.D.
MW 1 Duplicate	3/24/16	12:35	6	X						6			X	X	X	X					Duplicate
Field Blank	↓	14:20	↓	↓						6			X	X	X	X					F.B.
Trip Blank	3/24/16	14:20	6	X						2			X	X	X						T.B.

Turn Around Time Required (Prior lab approval required for expedited TAT): X Standard ☐ Rush (Specify)
Sample Disposal: ☐ Return to Client X Dispose by Lab
Possible Hazard Identification: X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown
QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by	3/24/16	15:00	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by			4. Laboratory received by	3/24/16	1500

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on ice (Circle) Yes No Ice Pack Receipt Temp. 4.2 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-153 Effective Date: 03-01-2014

SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc
Document Number: MED015C-04

Page 1 of 1
Effective Date: 02/05/2016
Expiry Date: 02/05/2021

Sample Receipt Checklist (SRC)

Client: MEC1 Cooler Inspected by/date: [illegible] Lot #: [illegible]

Means of receipt: ☐ SESI ☑ Client ☐ UPS ☐ FedEx ☐ Other

Yes ☐	No ☑		1. Were custody seals present on the cooler?
Yes ☐	No ☐	NA ☑	2. If custody seals were present, were they intact and unbroken?

pH strip ID: _____ Cl strip ID: _____

Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt:

[illegible] °C ___ / ___ / ___ °C ___ / ___ / ___ °C ___ / ___ / ___ °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: [illegible] IR Gun Correction Factor: [illegible] °C

Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Yes ☐	No ☐	NA ☑	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM was notified by: phone / email / face-to-face (circle one).
Yes ☐	No ☐	NA ☑	4. Is the commercial courier's packing slip attached to this form?
Yes ☑	No ☐		5. Were proper custody procedures (relinquished/received) followed?
Yes ☑	No ☐		6. Were sample IDs listed on the COC?
Yes ☑	No ☐		7. Were sample IDs listed on all sample containers?
Yes ☑	No ☐		8. Was collection date & time listed on the COC?
Yes ☐	No ☑		9. Was collection date & time listed on all sample containers?
Yes ☑	No ☐		10. Did all container label information (ID, date, time) agree with the COC?
Yes ☑	No ☐		11. Were tests to be performed listed on the COC?
Yes ☑	No ☐		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes ☑	No ☐		13. Was adequate sample volume available?
Yes ☑	No ☐		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes ☐	No ☑		15. Were any samples containers missing/excess (circle one) samples not listed on COC?
Yes ☐	No ☑	NA ☐	16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials?
Yes ☐	No ☐	NA ☑	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes ☐	No ☐	NA ☑	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes ☐	No ☐	NA ☑	19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes ☐	No ☐	NA ☑	20. Were collection temperatures documented on the COC for NC samples?
Yes ☐	No ☐	NA ☑	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
Yes ☐	No ☑		22. Was the quote number used taken from the container label?

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_2SO_4, HNO_3, HCl, NaOH) using SR # _____.

Sample(s) _____ were received with bubbles >6 mm in diameter.

Samples(s) _____ were received with TRC >0.2 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: _____.

SC Drinking Water Project Sample(s) pH verified to be >12 by _____ Date: _____

Sample(s) _____ were not received at a pH of <2 and were adjusted accordingly using SR# _____

Sample labels applied by: [illegible] Verified by: _____ Date: 3/24/16

Comments: _____

APPENDIX C:

TAX MAP

(Not Applicable)

APPENDIX D:

SOIL BORING/FIELD SCREENING LOGS & 1903 FORMS

(Not Applicable)

APPENDIX E:

WELL COMPLETION LOGS & 1903 FORMS

(Not Applicable)

APPENDIX F:

AQUIFER EVALUATION SUMMARY FORMS, DATA, GRAPHS, EQUATIONS

(Not Applicable)

APPENDIX G:

DISPOSAL MANIFEST

Midlands
Environmental
Consultants, Inc.

April 4, 2016

Re: Treatment of Purge Water
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID Number 05964
MECI Project Number 16-5459

To Whom it May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.

2. No free-product was detected in any of the purge water drums.

3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.

4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.

5. Record of usage is maintained by Contractor.

6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.

7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 80 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

134.5 gallons of purge water was treated on March 24, 2016 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Jeff E. Coleman
Senior Scientist

APPENDIX H:
LOCAL ZONING REGULATIONS
(Not Applicable)

APPENDIX I:

FATE AND TRANSPORT MODELING

(Not Applicable)

APPENDIX J:
ACCESS AGREEMENTS
(Not Applicable)

APPENDIX K:

DATA VERIFICATION CHECKLIST

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Are 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? (Table 2 & Figure 5)	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? (Appendix B)	X		
24	If free-product is present, has the thickness been provided?	X		
25	Does the report include a brief discussion of the assessment done and the results?	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? (Tables 3 & 3A)	X		
35	Have the aquifer characteristics been provided and summarized on the appropriate form? (Appendix F)			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? (Figures 4, 4A, 4B, 4C)	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 E)			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? (Appendix K)	X		

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

H WAYNE COPELAND
2961 HURRICANE CHRUCH RD
CLINTON SC 29325

DEC 15 2009

Re: Monitoring Report Review letter
Copelands Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694
Release Reported June 24, 1993
Monitoring report received December 11, 2009
Laurens County

Dear Mr. Copeland:

The Underground Storage Tank Management Division has reviewed the referenced report and noted the findings (see enclosures). The next scope of work deemed necessary is to install two monitoring wells to define the free product plume and a groundwater sampling to collect current data.

The SCDHEC will procure the services of an environmental contractor for the release reported on June 24, 1993. Your continued cooperation is appreciated.

On all correspondence regarding this site, please reference the UST Permit # 05694. If you have questions concerning this correspondence or would like to submit additional information, please contact me by phone at (803) 896-6323, by fax at (803) 896-6245, or by email at brineysm@dhec.sc.gov.

Sincerely,

Stephanie Briney

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Monitoring report

cc: Technical File (w/out enc)

5tech
UST
DOCKET

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

DEC 21 2009

6 tech
UST
DOCKET

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS INC
P O BOX 854
LEXINGTON SC 29071

Re: Bid # IFB-34007-6/3/08-EMW; PO# 732429
Notice to Proceed

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct assessments at several facilities. The packets contain the necessary approval for work to begin. The facilities have been assigned Cost Agreement (CA) numbers as listed below. Please reference the CA numbers and Purchase Order # 732429 on the appropriate invoices submitted for payment against the facilities. As specified in the referenced bid, **the completed invoice forms and associated reports (include contract certification number) are expected on or before the designated due date (see below).**

UST Permit#	Facility	County	Release #	Work Scope	Due Date*	CA #	Approved Amt
05694	Copeland's Service Station	Laurens	1	Monitoring Well Installation	60 Days	37897	$5,245.00

*From receipt of letter

Midland's Environmental Consultants, Inc. will perform services at the sites on behalf of the site's UST owners; however, payments will be made from the SUPERB Account. The site's UST owners have no obligation for payment for this scope of work. **Please note, if there are any changes in the established cost agreement amounts (e.g., additional water supply wells sampled, additional well footage, etc.) contact the site's project manager for technical and/or financial approval. Failure to do so prior to submittal of invoice may result in delay of payment.**

The Bureau grants pre-approval for transportation of drums of virgin petroleum contaminated soil and drums of groundwater from the referenced site to a permitted treatment facility. The contaminated soil and/or groundwater must be properly stored in labeled 55-gallon drums or equivalent containers.

The contaminated soil and/or groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included as an appendix to the final report. Please note, transportation of waste oil contaminated soil must receive pre-approval from the Division of Waste Assessment & Emergency Response.

Please provide this office with a schedule of drilling dates and coordinate all work with me before commencing work at the facility. If you have any questions or need further assistance, please contact me at (803) 896-6633.

Sincerely,

Cathleen Ridgley

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

enc.: Monitoring Well Approvals (MWA)
Approved Cost Agreements (ACA)
Information Packets

cc: Cathleen Ridgley, UST Program (w/out enc)
Technical Files (w/ copy of MWA, ACA, & Site Map)

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

UNDERGROUND STORAGE TANK DIVISION
BUREAU OF LAND AND WASTE MANAGEMENT
2600 Bull Street, Columbia, South Carolina 29201
Telephone: 803-896-6240

MEMORANDUM

TO: Bryan Shane, Midlands Environmental Consultants, Inc.

FROM: Stephanie Briney

RE: **NOTICE TO PROCEED**

Facility Name: Coplands Service Station

Permit Number: 05694

County: Laurens

Work To Be Completed: Install two monitoring wells in the areas located on the enclosed map. Please conduct a comphrensive survey for the site. Collecte groundwater samples from all monitoring wells that do not have free product and analyze for BTEXNM, EDB, and lead. There are some drums on site left from previous contractors can you dispose of them when you get ready to dispose of you drums?

CA#: 37897

Approved Cost Agreement 37897

Facility: 05694 COPELANDS SERVICE STATION INC
BRINEYSM
PO Number:

Task / Description	Categories	Item Description	Qty / Pct	Unit Price	Amount
03 COMPREHENSIVE SURVEY					
		COMPREHENSIVE SURVEY	1.0000	700.00	700.00
04 MOB/DEMOB					
		A EQUIPMENT	1.0000	100.00	100.00
		B PERSONNEL	3.0000	100.00	300.00
09 WELL INSTALLATION					
		B WATER TABLE (DRILLED)	80.0000	20.00	1,600.00
10 SAMPLE COLLECTION					
		A GROUND WATER	3.0000	25.00	75.00
		D GROUNDWATER NO-PURGE	12.0000	25.00	300.00
		E GAUGE WELL ONLY	8.0000	25.00	200.00
11 ANALYSES					
	GW GROUNDWATER	A BTEX+NAPTH+MTBE	15.0000	30.00	450.00
		E LEAD	15.0000	10.00	150.00
		F EDB	15.0000	28.00	420.00
17 DISPOSAL					
		A1 WASTEWATER - PURGING/SAMPLING	2.0000	50.00	100.00
		C SOIL (TREATMENT/DISPOSAL)	15.0000	50.00	750.00
23 EFR					
		D SITE RECONNAISSANCE	1.0000	100.00	100.00
			Total Amount		5,245.00

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

Monitoring Well Approval

Approval is hereby granted to: **Midlands Environmental Consultants, Inc.**

On behalf of: **H Wayne Copeland**

Facility: **Coplands Service Station**
700 Musgrove St., Clinton, SC

UST Permit #: **5694**

County: **Laurens**

This approval is for the installation of two (2) 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 Stephanie Briney (tel:803-896-6323 or e-mail: brineysm@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.

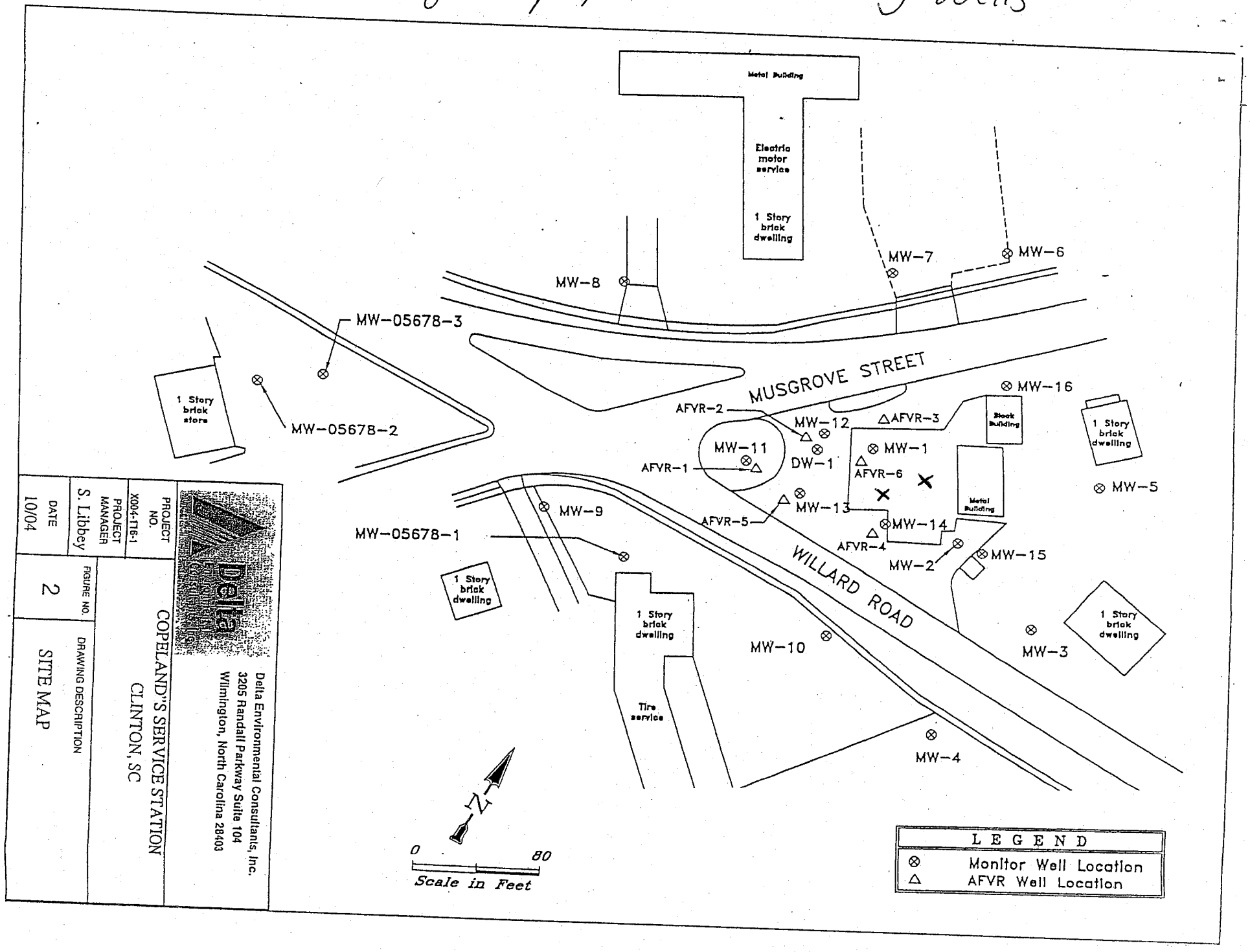
Date of Issuance: 12/14/2009

Approval: UMW-23364

Stephanie Briney

Stephanie Briney, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

X= locations of the proposed monitoring wells



Midlands
Environmental
Consultants, Inc.

April 1, 2010

UST
APR 0 6 2010
PROGRAM

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

Subject: Report of Monitoring Well Installation, Groundwater Sampling, and Chemical Analyses of Groundwater Samples
Copelands Service Station
700 Musgrove Street
Clinton, South Carolina
SCDHEC Site ID# 05694, CA # 37897
MECI Project Number 10-2676
Certified Site Rehabilitation Contractor UCC-0009

UST
DOCKET

Dear Ms. Briney,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Well Installation, Groundwater Sampling, and Chemical Analyses of Groundwater Samples for the referenced site. This report describes assessment activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

PROJECT INFORMATION

The subject site (Copelands Service Station) is located at 700 Musgrove Street in Clinton, Laurens County, South Carolina (see Figure 1). The site consists of an approximately 5.07 acre parcel of land (see Figure 2), and currently occupied by an active gas station. The site formerly maintained one 550 gallon kerosene UST, one 2,000 gallon diesel UST, and one 4,000 gallon gasoline UST. The South Carolina Department of Health and Environmental Control (SCDHEC) reported release of petroleum product from three single walled underground storage tanks (UST) at the subject site in June of 1993, which was confirmed in July of 1994.

The above project information is based on SCDHEC files.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

FIELD EXPLORATION

Field exploration conducted at the site included:

- construction of two groundwater monitoring wells;
- groundwater sampling; chemical analysis of groundwater samples: and,
- comprehensive survey of the subject site.

The monitoring well locations were selected based on SCDHEC project manager instructions, existing site conditions, and drilling accessibility.

MONITORING WELL INSTALLATION

On February 9, 2010, two single cased monitoring wells were installed at the subject site. These wells were installed by Geologic Exploration, of Statesville, North Carolina (S.C. Driller Certification: Mark Gettys #A 01086). These single cased monitoring wells were installed using a truck-mounted drilling rig employing 8.0-inch outer diameter hollow-stem augers to construct the borehole. These wells were installed to better define the free phase petroleum product plume. The following table presents new well installation details

Representative portions of soil samples were screened with an Photo Ionization Detector (PID) and classified by MECI personnel. Test boring records showing soil descriptions and screening result are attached.

Well Number	Screened Interval (ft)	Total Depth (ft)
MW-17	30.0-40.0	40.0
MW-18	30.0-40.0	40.0

Based on PID readings and lack on access to spread soils onsite, soil cuttings were transported to Waste Management/Richland Landfill, Elgin, SC by MECI. A total of 1.39 tons was disposed of in this manner. A disposal manifest for these soils is attached at the end of this report.

Following completion of the monitoring wells, the wells were developed by bailing until they were determined to be functioning properly and turbidity was reduced. Test Boring Records showing soil descriptions and monitoring well installation details are attached. The drummed purge water was treated by MECI personnel using a granular activated carbon drum. A total of one (1) drum of purge/development water was disposed of in this manner. A disposal manifest for the drummed purge water is attached at the end of this report.

The soils encountered during drilling activities consisted of fine to medium grained sands, silts, and clays of the Piedmont Physiographic Province.

SITE SURVEY

Following monitoring well installation, a comprehensive survey was conducted by Construction Support Services of Columbia, SC (Jay S. Joshi PLS# 14811) dated March 10, 2010 to locate the vertical and horizontal positions of the monitoring wells and relevant structures.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSES

On February 3 and 19, 2010, MECI personnel collected groundwater samples from sixteen (16) monitoring wells at the subject site. Monitoring wells MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-4, AFVR-5, and AFVR-6 were gauged and contained measurable free phase petroleum product and were not sampled. Monitoring well MW-2 was gauged and determined to have insufficient water for sampling. Based on a request by SCDHEC personnel, not all of the wells were purged prior to sampling. Purging was completed by bailing at least three well volumes of water from the well or until pH, conductivity, dissolved oxygen stabilized to within 10%, whichever occurred first. Where applicable, field measurements of pH, conductivity, dissolved oxygen, dissolved carbon dioxide, and water temperature were obtained before well sampling process. Table 1 presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC guidelines.

Groundwater samples obtained were sent to Pace Analytical Services, Inc. of Huntersville, NC (SCDHEC Laboratory Certification #99006) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Monitoring Well	Purge	No Purge	Gauge Only	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
				Analyte Sampled									
MW-1			X										
MW-2			X										
MW-3		X		X	X			X					
MW-4		X		X	X			X					
MW-5	X			X	X			X					
MW-6		X		X	X			X					
MW-7		X		X	X			X					
MW-8		X		X	X			X					
MW-9		X		X	X			X					
MW-10		X		X	X			X					
MW-11		X		X	X			X					
MW-12			X										
MW-13			X										
MW-14			X										
MW-15		X		X	X			X					
MW-16		X		X	X			X					
MW-17	X			X	X			X					

MW-18	X			X	X			X					
DW-1	X			X	X			X					
AFVR-1		X		X	X			X					
AFVR-2		X		X	X			X					
AFVR-3			X										
AFVR-4			X										
AFVR-5			X										
AFVR-6			X										

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

The results of the laboratory analyses are summarized in Table 2, and presented in the attached Analytical data.

GROUNDWATER ANALYTICAL RESULTS

As discussed above, groundwater samples obtained from the monitoring wells were analyzed for dissolved phase petroleum constituents. The analytical results indicate petroleum impact to the local groundwater with the highest dissolved concentrations detected in the area of monitoring well AFVR-5. Monitoring well AFVR-5 contained 3.10 feet of free phase petroleum product at time of sampling. Additionally, monitoring wells MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-4, and AFVR-6 contained measurable free phase petroleum product at time of sampling. The analytical results indicate dissolved total BTEX concentrations ranging from levels below detection limits (BDL) to 63,580 micrograms per liter in MW-18. The analytical results indicate dissolved MTBE concentrations ranging from levels below detection limits (BDL) to 597J micrograms per liter in monitoring well MW-18. The results of the analyses for each monitoring well and specific parameters are listed on Table 2. The detection limit for each parameter is provided in the attached laboratory reports.

ASSESSMENT SUMMARY

Groundwater elevation data for the February 3 and 19, 2010, gauging events was plotted, and points of equal elevation were interpolated between the monitoring wells. A groundwater contour map of the surficial aquifer was thus prepared and is presented on Figure 4.

At time of sampling, free phase petroleum product was detected in MW-1 at a thickness of 2.84 feet, in MW-12 at a thickness of 1.25 feet, in MW-13 at a thickness of 2.03 feet, in MW-14 at a thickness of 0.86 feet, in AFVR-3 at a thickness of 0.12 feet, in AFVR-4 at a thickness of 0.04 feet, in AFVR-5 at a thickness of 3.10 feet , and in AFVR-6 at a thickness of 2.07 feet. The concentrations of dissolved total BTEX (indicator of the dissolved phase plume) in the groundwater on and surrounding the site range from levels below detection limits (BDL) to 63,580 micrograms per liter in MW-18. The concentrations of MTBE in the groundwater on and surrounding the site range from levels below detection limits (BDL) to 597J micrograms per liter in MW-18. Figure 5 depicts graphically the concentrations of Total BTEX (indicator for plume migration) dissolved in the groundwater at the site. Figure 6 depicts graphically the concentrations of MTBE dissolved in the groundwater at the site.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Contents of this report is intended for the sole use by the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Jeff L. Coleman (FOI)
Project Scientist

Bryan T. Shane, P.G.
Principal Geologist

Attachments

TABLES

TABLE 1
FIELD PARAMETERS
FEBRUARY 2010 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2676
SCDHEC SITE ID NUMBER 05694

Well Number	Sample Date	Dissolved CO_2 (mg/l)	Dissolved Oxygen (mg/l)	Temperature (^{o} Celsius)	pH (Initial)	pH (Final)	Conductivity (Initial)	Conductivity (Final)	Screened Interval (ft BGS)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well-head Elevation (ft)	Groundwater Elevation (ft)
MW-1	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=33.95	30.79	33.63	2.84	659.98	628.76
MW-2	2/3/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	TD=12.05	DRY	DRY	DRY	659.57	DRY
MW-3	2/3/2010	105	3.07	18.7	5.51	NT	42.7	NT	25-35	***	26.50	***	658.21	631.71
MW-4	2/3/2010	65	4.21	18.4	5.99	NT	55.1	NT	25-35	***	30.53	***	658.41	627.88
MW-5	2/3/2010	25	6.90	14.5	6.08	6.77	46.5	43.9	25-35	***	15.14	***	653.79	638.65
MW-6	2/3/2010	60	3.01	18.5	6.20	NT	44.9	NT	25-35	***	28.03	***	656.32	628.29
MW-7	2/3/2010	130	1.56	18.9	6.07	NT	45.9	NT	25-35	***	30.76	***	658.96	628.20
MW-8	2/3/2010	INS	INS	INS	INS	INS	INS	INS	25-35	***	32.81	***	659.94	627.13
MW-9	2/3/2010	200+	0.58	20.2	6.25	NT	217.1	NT	25-35	***	33.03	***	660.49	627.46
MW-10	2/3/2010	150	2.30	17.9	5.95	NT	67.0	NT	25-35	***	31.34	***	659.53	628.19
MW-11	2/3/2010	INS	INS	INS	INS	INS	INS	INS	25-35	***	33.05	***	661.23	628.18
MW-12	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	31.55	32.80	1.25	660.14	628.40
MW-13	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	31.78	33.81	2.03	661.12	629.04
MW-14	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	25-35	30.60	31.46	0.86	660.25	629.52
MW-15	2/3/2010	45	2.44	19.2	5.92	NT	70.4	NT	25-35	***	25.35	***	659.54	634.19
MW-16	2/3/2010	155	2.43	18.6	6.24	NT	184.1	NT	25-35	***	29.41	***	658.22	628.81
MW-17	2/19/2010	110	3.78	20.7	6.60	6.54	164.4	194.5	30-40	***	30.14	***	660.19	630.05
MW-18	2/19/2010	140	2.28	20.8	6.46	6.42	139.9	177.1	30-40	***	28.74	***	659.50	630.76
DW-1	2/3/2010	40	1.21	19.1	6.78	6.75	91.8	101.4	75-85	***	32.02	***	660.41	628.39
AFVR-1	2/3/2010	INS	INS	INS	INS	INS	INS	INS	TD=33.96	***	33.09	***	661.55	628.46
AFVR-2	2/3/2010	INS	INS	INS	INS	INS	INS	INS	TD=34.45	***	32.13	***	660.51	628.38
AFVR-3	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.10	30.85	30.97	0.12	659.34	628.47
AFVR-4	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.45	30.88	30.92	0.04	660.14	629.25
AFVR-5	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.35	31.55	34.65	3.10	661.21	629.20
AFVR-6	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	TD=34.36	31.93	34.00	2.07	659.95	627.71

Notes:

1. mg/l = milligrams per liter.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Stabalized groundwater levels measured 2/3/10 & 2/19/10.
4. NT = Not Tested.
5. INS = Insufficient Water for Field Measurements
6. Dissolved oxygen, dissolved carbon dioxide, initial pH, initial conductivity, and temperature measurements obtained on 2/3/10 & 2/19/10.
7. PROD= Free Phase Petroleum Product.
8. Groundwater elevation for MW-1, MW-12, MW-13, MW-14, AFVR-3, AFVR-4, AFVR-5, and AFV-6 corrected for the presence of free phase petroleum product using a specific gravity for fuel of 0.85

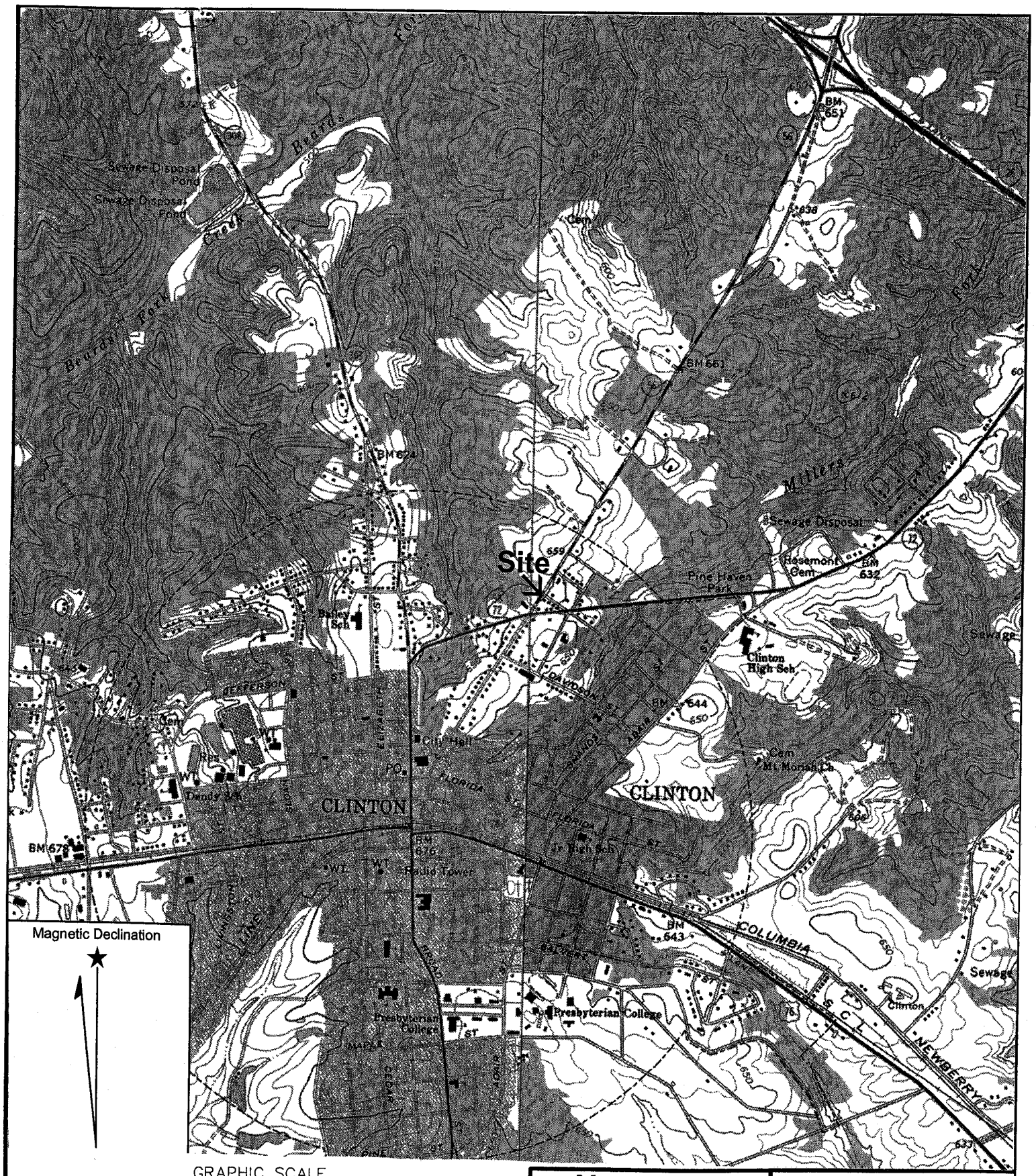
TABLE 2
GROUNDWATER ANALYTICAL RESULTS
FEBRUARY 2010 SAMPLING EVENT
COPELANDS SERVICE STATION
CLINTON, SOUTH CAROLINA
MECI PROJECT NUMBER 10-2676
SCDHEC ID NUMBER 05694

Well Number	Sample Date	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	Total BTEX (µg/l)	MTBE (µg/l)	Naphthalene (µg/l)	EDB (µg/l)	Total Lead (µg/l)
MW-1	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	2/3/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	2/3/2010	<5.0	105	61.2	388	554.2	<5.0	44.8	0.22	<5.0
MW-4	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	<5.0
MW-5	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020	4.8J
MW-6	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	7.1
MW-7	2/3/2010	12.5	27.8	94.4	323	457.7	<10.0	38.3	0.078	<5.0
MW-8	2/3/2010	989	<25.0	40.7	24.6J	1,054.3J	<25.0	619	<0.019	<5.0
MW-9	2/3/2010	4,620	32,600	3,190	17,600	58,010	<5.0	623	59.3	<5.0
MW-10	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	<5.0
MW-11	2/3/2010	<250	101J	1,310	15,200	16,611J	<250	1,280	<0.020	17.3
MW-12	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-13	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-15	2/3/2010	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019	<5.0
MW-16	2/3/2010	<10.0	10.6	263	1,040	1,313.6	<10.0	247	<0.020	<5.0
MW-17	2/19/2010	9,790	15,500	2,490	12,700	40,480	87.3	380J	14.5	<5.0
MW-18	2/19/2010	8,250	32,900	3,440	19,000	63,590	597J	<1,000	50.7	13.7
DW-1	2/3/2010	653	<25.0	<25.0	24.0J	677.0J	<25.0	32.6	<0.020	<5.0
AFVR-1	2/3/2010	<100	106	1,220	8,730	10,056	<100	636	0.075	4.8J
AFVR-2	2/3/2010	2,930	18,400	872J	16,000	38,202J	<1,000	606J	10.6	15.4
AFVR-3	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-5	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-6	2/3/2010	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. mg/l = milligrams per liter
4. MTBE = Methyl-Tertiary-Butyl Ether
5. EDB = Ethylene Dibromide
6. 1,2 DCA = 1,2-Dichloroethane
7. NT = Not Tested
8. See Appendix for Laboratory Detection Limits
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free Phase Petroleum Product

FIGURES



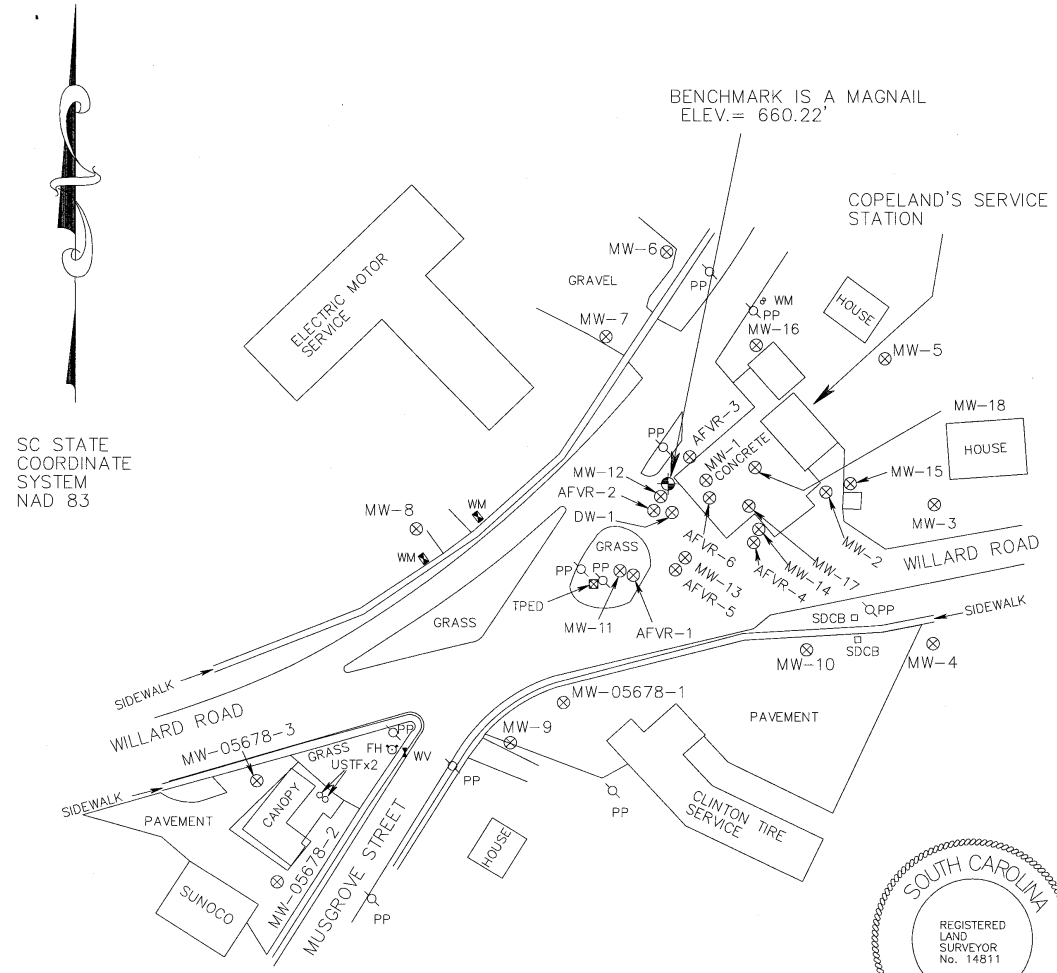
GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Joanna and Clinton, South Carolina
Philson Crossroads and Ora, South Carolina
USGS 7.5 Min. Quad
Contour Interval – 1.5 Meters

Midlands Environmental Consultants, Inc.	Site Location
Copeland's Service Station 700 Musgrove Street, Clinton, SC SCDHEC Site ID# 05694	
Figure 1	MECI 10-2676



MONITOR WELLS		
WELL	TOL ELEV.	TOC ELEV.
AFVR-1	661.87	661.55
AFVR-2	660.66	660.51
AFVR-3	659.77	659.34
AFVR-4	660.41	660.14
AFVR-5	661.42	661.21
AFVR-6	660.46	659.95
MW-05678-1	661.62	*
MW-05678-2	657.61	657.24
MW-05678-3	657.60	657.20
DW-1	660.71	660.41
MW-1	660.21	659.98
MW-2	659.95	659.57
MW-3	658.49	658.21
MW-4	659.00	658.41
MW-5	654.06	653.79
MW-6	656.48	656.32
MW-7	659.18	658.96
MW-8	660.29	659.94
MW-9	660.86	660.49
MW-10	659.92	659.53

* CSS FIELD CREW COULD NOT OPEN MW-05678-1

MONITOR WELLS		
WELL	TOL ELEV.	TOC ELEV.
MW-11	661.74	661.23
MW-12	660.57	660.14
MW-13	661.35	661.12
MW-14	660.53	660.25
MW-15	659.92	659.54
MW-16	658.43	658.22
MW-17	660.62	660.19
MW-18	659.84	659.50

LEGEND AND ABBREVIATIONS:

- MW = MONITORING WELL
- BM = BENCHMARK
- TPED = TELEPHONE PEDESTAL
- WM = WATER METER
- WV = WATER VALVE
- FH = FIRE HYDRANT
- PP = POWER POLE
- USTF = UNDERGROUND STORAGE TANK FILL
- SDCB = STORM DRAIN CATCH BASIN
- SIGN = SIGN

SOUTH CAROLINA
REGISTERED LAND SURVEYOR No. 14811
JAY S. JOSHI

SOUTH CAROLINA
CONSTRUCTION SUPPORT SERVICES No. C02425
CERTIFICATE OF AUTHORIZATION

COMPREHENSIVE SITE SKETCH OF

COPELAND SERVICE STATION

700 MUSGROVE STREET
CLINTON, LAURENS COUNTY, SC
SCDHEC SITE ID #05694

PREPARED FOR

MEC

GRAPHIC SCALE 1"=80'

0 80 160 240

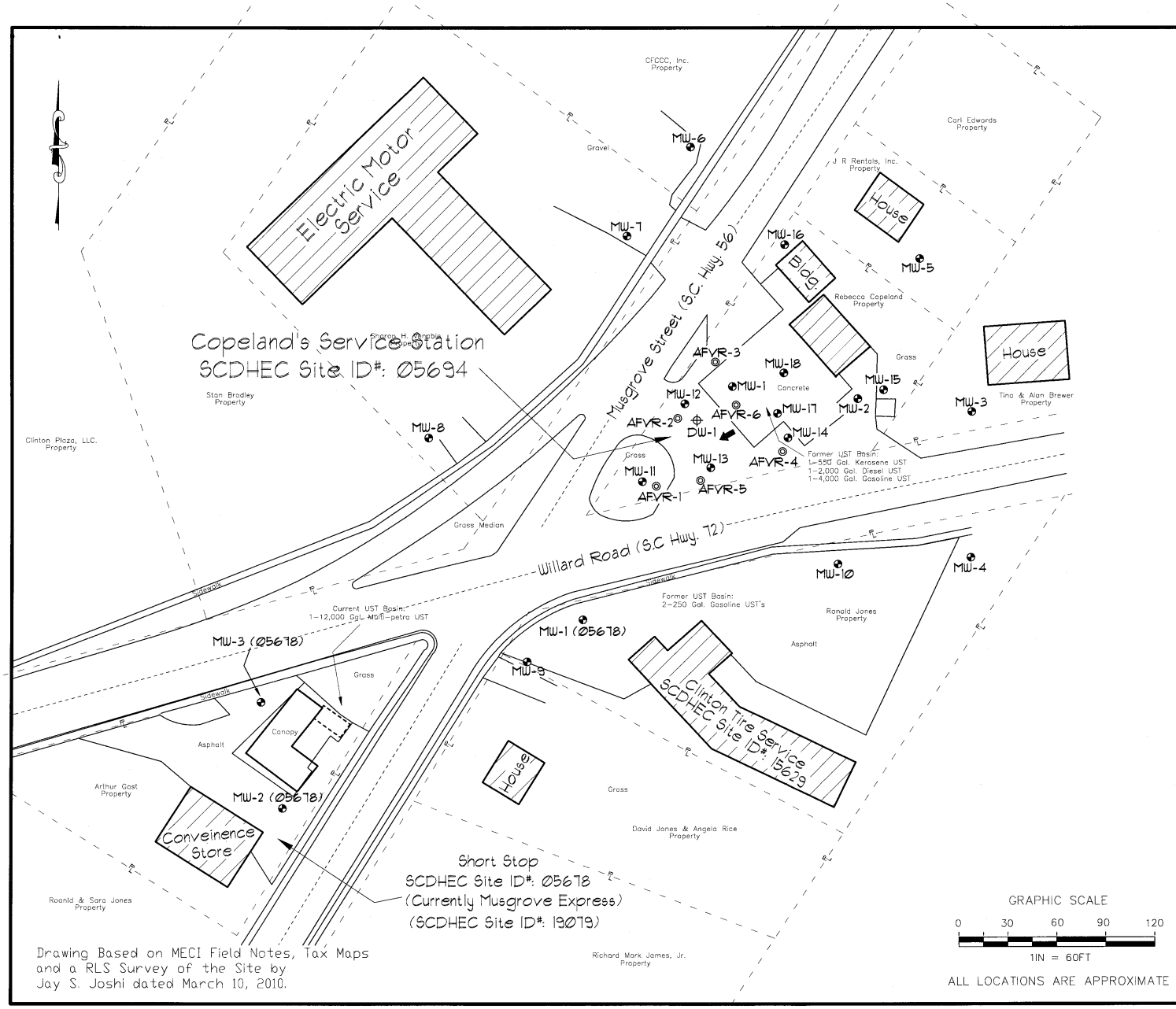
NOTE:
NOT FOR THE PURPOSE OF RECORDATION AT COUNTY, COURTHOUSE OR THE CONVEYANCE OF PROPERTY.

NOTE:
I HEREBY CERTIFY THAT THE FIELD WORK, CALCULATIONS, AND DRAFTING WERE DONE UNDER MY DIRECT SUPERVISION.

Figure 2

JAY S. JOSHI PLS # 14811
P.O. BOX 90408, COLUMBIA, SC, 29290 803-776-9909

DATE: MARCH 10, 2010 JOB #030410B



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Property Line

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

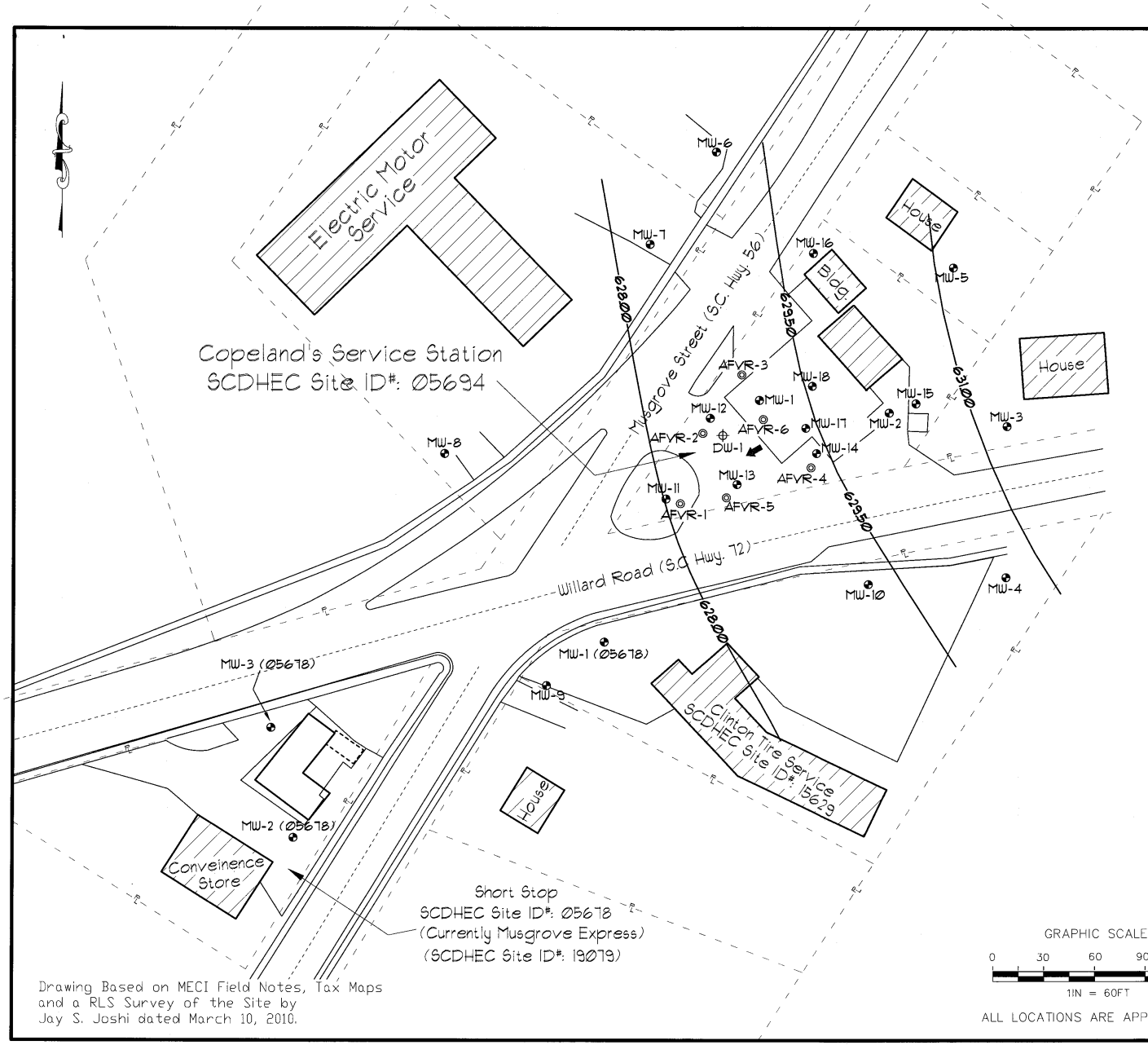
ALL LOCATIONS ARE APPROXIMATE

Site Features

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO.	10-2676
DATE	April 1, 2010
FIGURE	3



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Explanation:

- Location of Water Table Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Ground-Water Elevation Isopleth (feet)

Groundwater Elevation Data

Well #	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well Head Elevation	Groundwater Elevation
MW-1	30.79	33.63	2.84	659.98	628.76
MW-2	---	DRY	---	659.57	DRY
MW-3	---	26.50	---	658.21	631.71
MW-4	---	30.53	---	658.41	627.88
MW-5	---	15.14	---	653.79	638.65
MW-6	---	28.03	---	656.32	628.29
MW-7	---	30.76	---	658.96	628.20
MW-8	---	32.81	---	659.94	627.13
MW-9	---	33.03	---	660.49	627.46
MW-10	---	31.34	---	659.53	628.19
MW-11	---	33.05	---	661.23	628.18
MW-12	31.55	32.80	1.25	660.14	628.40
MW-13	31.78	33.81	2.03	661.12	629.04
MW-14	30.60	31.46	0.86	660.25	629.52
MW-15	---	25.35	---	659.54	634.19
MW-16	---	29.41	---	658.22	628.81
MW-17	---	30.14	---	660.19	630.05
MW-18	---	28.74	---	659.50	630.76
DW-1	---	32.02	---	660.41	628.39
AFVR-1	---	33.09	---	661.55	628.46
AFVR-2	---	32.13	---	660.51	628.38
AFVR-3	30.85	30.97	0.12	659.34	628.47
AFVR-4	30.88	30.92	0.04	660.14	629.25
AFVR-5	31.55	34.65	3.10	661.21	629.20
AFVR-6	31.93	34.00	2.07	659.95	627.71

Notes: Depth to groundwater measured on February 3 and 19, 2010.

Contour Interval = 1.50 Feet

Site Datum Based on Assumed Spot Elevation.

MW-4, MW-5, MW-13, MW-15, AFVR-5 and AFVR-6 not used in contouring.

Groundwater elevation for MW-1, MW-12, MW-13, MW-14, AFVE-3, AFVR-4, AFVR-5, and AFVR-6 corrected for the presence of Free Phase Petroleum Product using a specific gravity for fuel of 0.85.

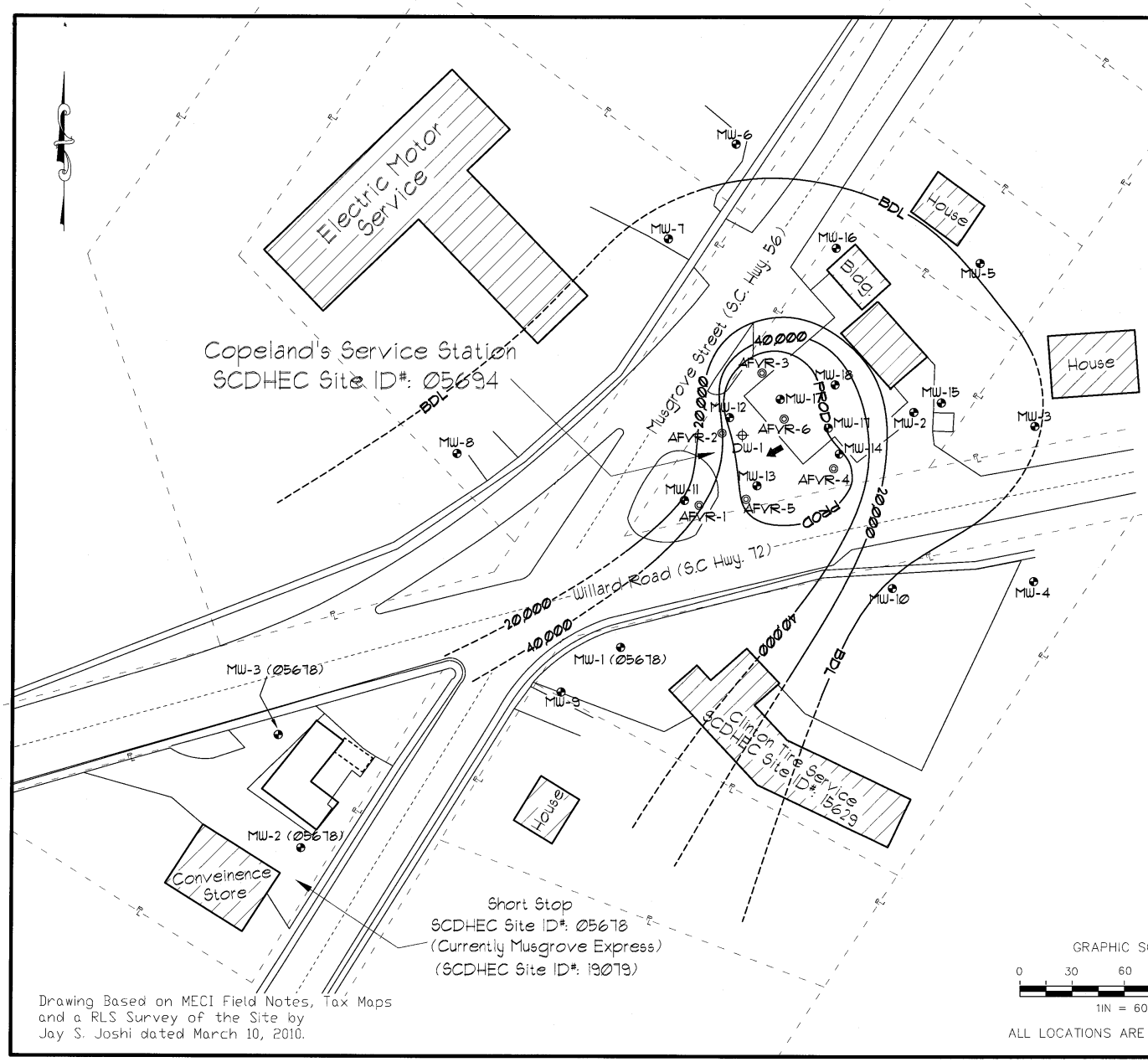
Ground Water Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

Groundwater Contour Map

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 10-2676
DATE April 1, 2010
FIGURE 4



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Total BTEX Concentration Isopleth (ug/l)

COC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	MTBE (ug/l)	Naphthalene (ug/l)	EDB (ug/l)
MW-1	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	105	61.2	388	554.2	<5.0	44.8	0.22
MW-4	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-5	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-6	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-7	12.5	27.8	94.4	323	457.7	<10.0	38.3	0.078
MW-8	989	<25.0	40.7	24.6J	1,054.3J	<25.0	619	<0.019
MW-9	4,620	32,600	3,190	17,600	58,010	<5.0	623	59.3
MW-10	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-11	<250	101J	1,310	15,200	16,611J	<250	1,280	<0.020
MW-12	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-15	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-16	<10.0	10.6	263	1,040	1,313.6	<10.0	247	<0.020
MW-17	9,790	15,500	2,490	12,700	40,480	87.3	380J	14.5
MW-18	8,250	32,900	3,440	19,000	63,590	597J	<1,000	50.7
DW-1	653	<25.0	<25.0	24.0J	677.0J	<25.0	32.6	<0.020
AFVR-1	<100	106	1,220	8,730	10,056	<100	636	0.075
AFVR-2	2,930	18,400	872J	16,000	38,202J	<1,000	606J	10.6
AFVR-3	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-5	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-6	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD

Notes: Groundwater samples collected on February 3 and 19, 2010.

Contour Interval = 20,000 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

"J" values used in total BTEX calculation.

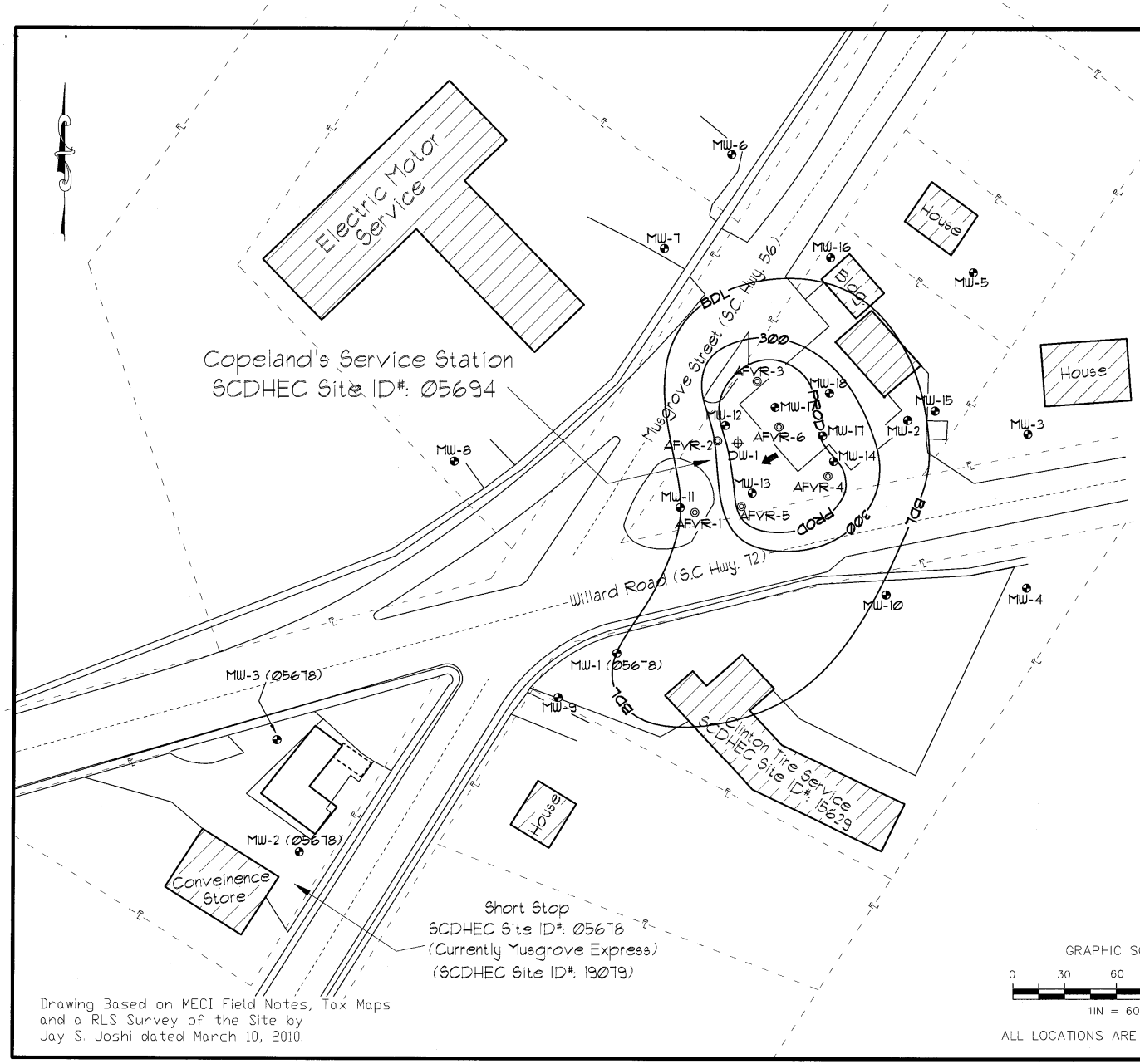
Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

Total BTEX Isopleth Map

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 10-2676
DATE April 1, 2010
FIGURE 5



Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 10, 2010.

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of AFVR Extraction Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- MTBE Concentration Isopleth (ug/l)

COC Concentration Data

Sample #	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)	Total BTEX (ug/l)	MTBE (ug/l)	Naphthalene (ug/l)	EDB (ug/l)
MW-1	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-3	<5.0	105	61.2	388	554.2	<5.0	44.8	0.22
MW-4	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-5	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.020
MW-6	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-7	12.5	27.8	94.4	323	457.7	<10.0	38.3	0.078
MW-8	989	<25.0	40.7	24.6J	1,054.3J	<25.0	619	<0.019
MW-9	4,620	32,600	3,190	17,600	58,010	<5.0	623	59.3
MW-10	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-11	<250	101J	1,310	15,200	16,611J	<250	1,280	<0.020
MW-12	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-13	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-14	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
MW-15	<5.0	<5.0	<5.0	<10.0	BDL	<5.0	<5.0	<0.019
MW-16	<10.0	10.6	263	1,040	1,313.6	<10.0	247	<0.020
MW-17	9,790	15,500	2,490	12,700	40,480	87.3	380J	14.5
MW-18	8,250	32,900	3,440	19,000	63,590	597J	<1,000	50.7
DW-1	653	<25.0	<25.0	24.0J	677.0J	<25.0	32.6	<0.020
AFVR-1	<100	106	1,220	8,730	10,056	<100	636	0.075
AFVR-2	2,930	18,400	872J	16,000	38,202J	<1,000	606J	10.6
AFVR-3	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-4	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-5	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD
AFVR-6	PROD	PROD	PROD	PROD	PROD	PROD	PROD	PROD

Notes: Groundwater samples collected on February 3 and 19, 2010.

Contour Interval = 300 ug/l

BDL = Below Detection Limits

PROD = Free Phase Petroleum Product

"J" values used in total BTEX calculation.

Contours Computer Generated using Surfer by Golden Graphics and Modified by MECi Personnel.

MTBE Isopleth Map

Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID 05694

Midlands Environmental Consultants, Inc.

JOB NO. 10-2676

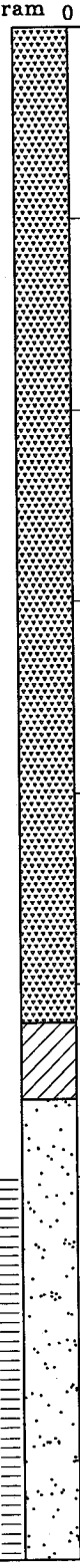
DATE April 1, 2010

FIGURE 6

TEST BORING AND MONITORING WELL INSTALLATION RECORDS

Depth (Feet)	Description	PID PPM
	Concrete with Stone Base	
	Piedmont Residuum: Red, Micaceous Fine to Medium Sandy CLAY	
5	Red, Micaceous Fine to Medium Sandy SILT	10.7
10	Orange, Micaceous SILT	33.5
15	Red, Micaceous SILT	174.3
20	Orange and Tan, Micaceous SILT	323.4
25	Tan, Micaceous SILT	758.7
30		1,425
35		925.9
	Boring Terminated at 40.0 Feet Below Ground Surface (BGS). Monitoring Well Installed to 40.0 Feet BGS. Groundwater Measured at 30.14 Feet Below Top of Casing on 2/19/10.	362.9

Well Diagram



Penetration Blows Per Foot

0 5 10 20 40 60 80 100

NO BLOWCOUNTS RECORDED

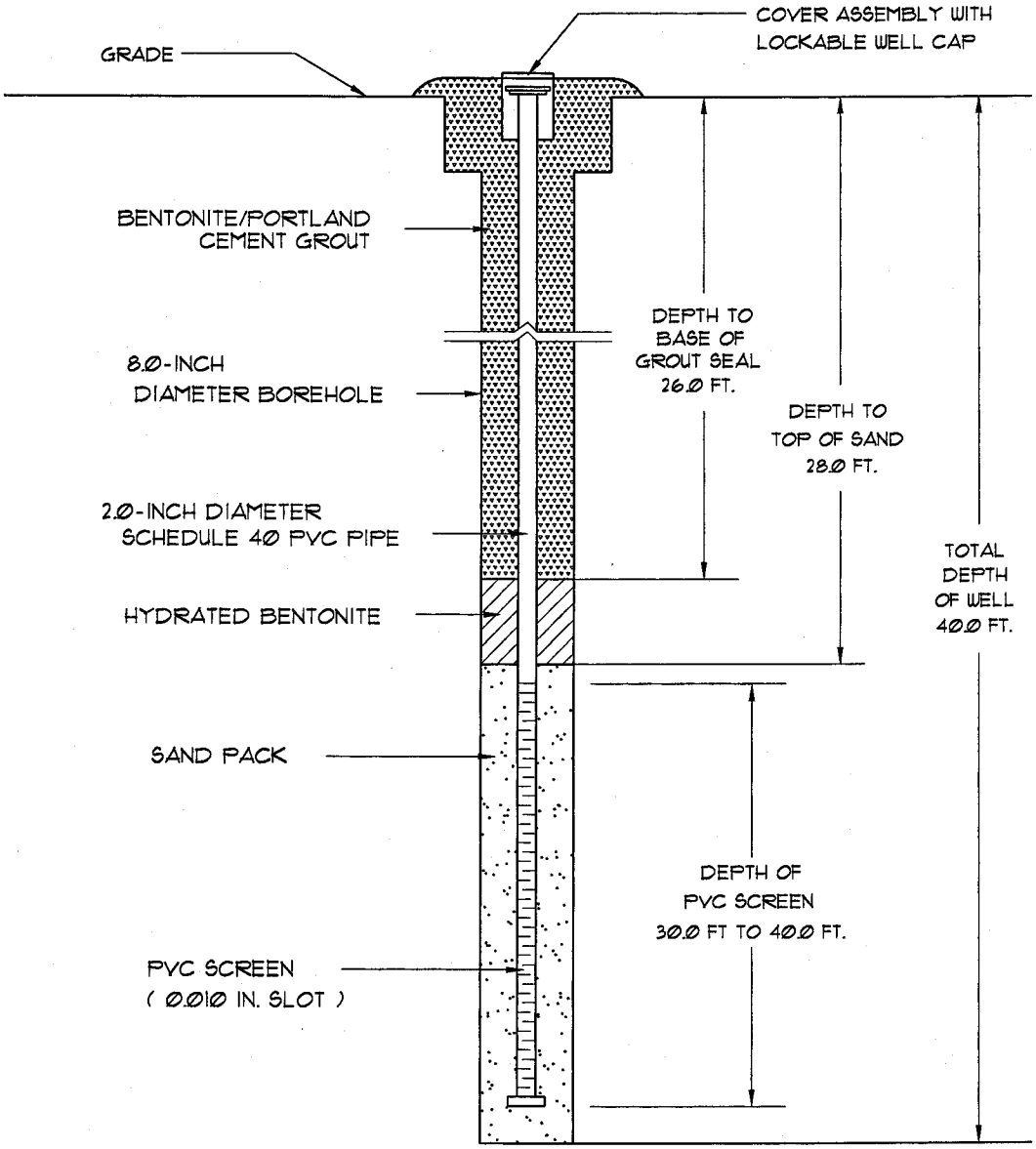
TEST BORING RECORD
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-2676

Boring Number:	MW-17
Date Drilled:	2/9/10
Drilled By:	Geologic Exploration Inc.
Logged By:	B. Kelly

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Copelands Service Station
Clinton., South Carolina
SCDHEC Site ID# 05964
MECI Project Number 10-2676

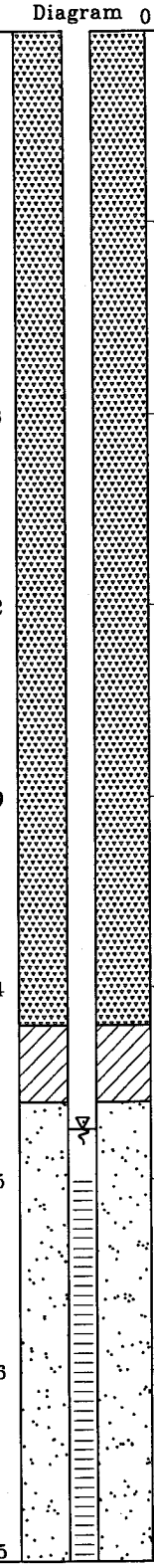


Well Number:	MW-17
Date Drilled:	2/9/10
Drilled By:	Geologic Exploration Inc.
Driller: M. Gettys	S.C. I.D. #: A 01086
Logged By:	B. Kelly

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

Depth (Feet)	Description	PID PPM
	Concrete with Stone Base	
	Piedmont Residuum: Grey, Micaceous Silty Fine to Medium SAND	
5	Brown and Grey, Micaceous Fine to Medium Sandy Silty CLAY	514.1
10	Red, Micaceous Fine to Medium Sandy Silty CLAY	269.8
15	Orange, Micaceous SILT	967.2
20	Tan, Micaeous Fine to Medium Sandy SILT	737.9
25		2,394
30		1,045
35		564.6
	Boring Terminated at 40.0 Feet Below Ground Surface (BGS). Monitoring Well Installed to 40.0 Feet BGS. Groundwater Measured at 28.74 Feet Below Top of Casing on 2/19/10.	591.5

Well Diagram



Penetration Blows Per Foot

0 5 10 20 40 60 80 100

NO BLOWCOUNTS RECORDED

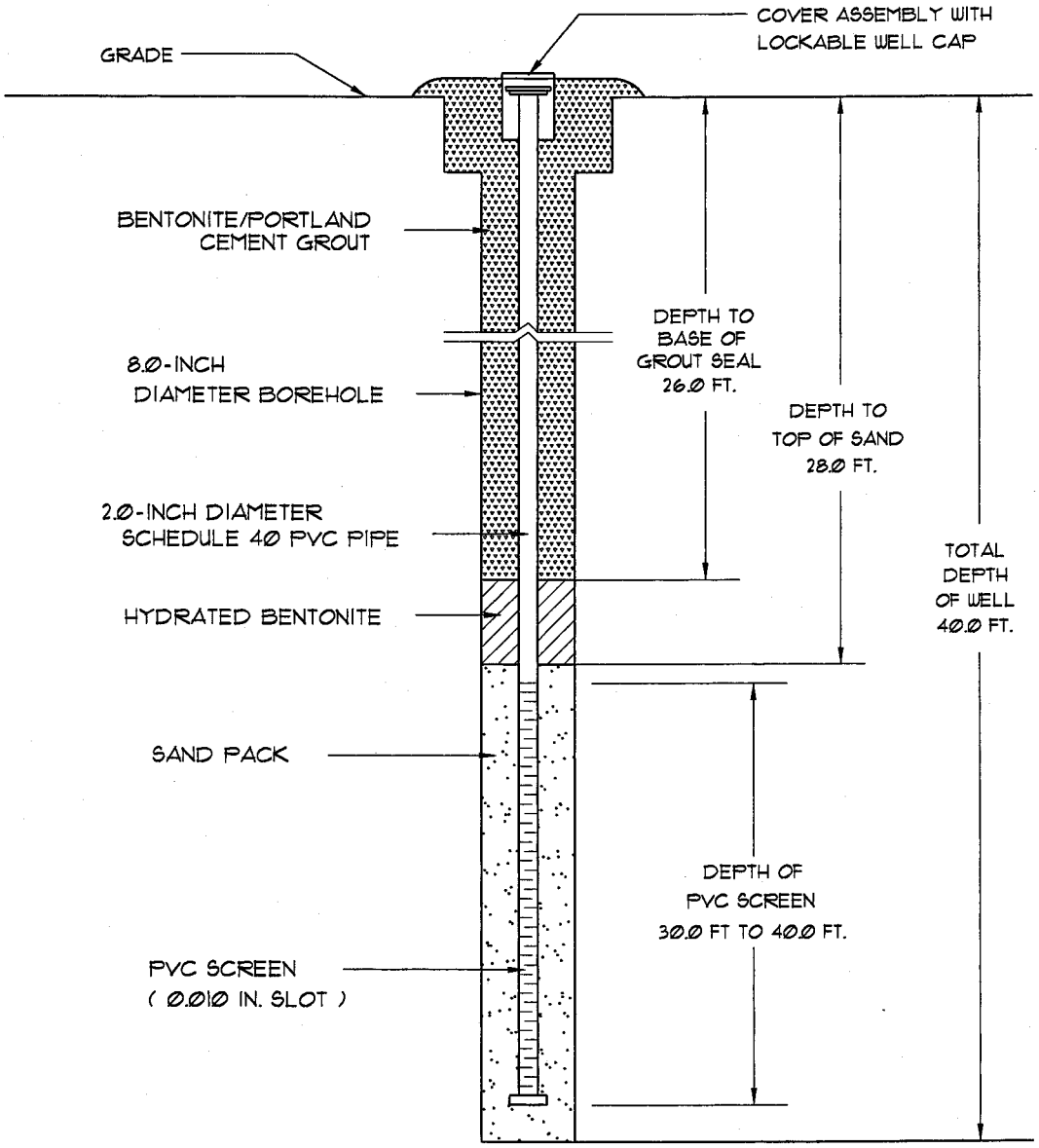
TEST BORING RECORD
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID# 05694
MECI Project Number 10-2676

Boring Number:	MW-18
Date Drilled:	2/9/10
Drilled By:	Geologic Exploration Inc.
Logged By:	B. Kelly

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Copelands Service Station
Clinton., South Carolina
SCDHEC Site ID# 05964
MECI Project Number 10-2676



Well Number:	MW-18
Date Drilled:	2/9/10
Drilled By:	Geologic Exploration Inc.
Driller: M. Gettys	S.C. I.D. #: A 01086
Logged By:	B. Kelly

Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: COPELAND, HAROLD (last) (first)
Address: 2961 HURRICANE CHRUCH ROAD
City: CLINTON State: SC Zip: 29325
Telephone: Work: Home:

2. LOCATION OF WELL: SC **COUNTY:** LAURENS
Name: COPELAND SERVICE STATION
Street Address: 700 MUSGROVE STREET
City: CLINTON Zip: 29325
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
ORANGE/TAN SILTY SAND	3.0	3.0
ORANGE SILTY CLAY	22.0	25.0
TAN SILTY CLAY	15.0	40.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-17 BENTONITE SEAL FROM 26.0 TO 28.0 FT.

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

7. PERMIT NUMBER:

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) Date Started: 02/09/10
40.0 ft. Date Completed: 02/09/10

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 30.0 ft. depth
_____ in. to _____ 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: 10.0 FEET
Set Between: 30.0 ft. and 40.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL 33.0 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 28.0 ft. to 40.0 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 26.0 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: MARK GETTYS **CERT. NO.:** 01086
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A B C D (circle one) ☑ ☐ ☐ ☐
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: _____ Date: 02/17/10
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: COPELAND, HAROLD (last) (first)
Address: 2961 HURRICANE CHRUCH ROAD
City: CLINTON State: SC Zip: 29325
Telephone: Work: Home:

2. LOCATION OF WELL: SC **COUNTY:** LAURENS
Name: COPELAND SERVICE STATION
Street Address: 700 MUSGROVE STREET
City: CLINTON Zip: 29325
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:**

4. ABANDONMENT: ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
DARK GRAY SANDY CLAY	3.0	3.0
ORANGE SILTY CLAY	22.0	25.0
TAN SILTY CLAY	15.0	40.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
MW-18 BENTONITE SEAL FROM 26.0 TO 28.0 FT.

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

7. PERMIT NUMBER:

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) Date Started: 02/09/10
40.0 ft. Date Completed: 02/09/10

10. CASING: ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 30.0 ft. depth
_____ in. to _____ 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: 10.0 FEET
Set Between: 30.0 ft. and 40.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL 33.0 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 28.0 ft. to 40.0 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 26.0 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: MARK GETTYS **CERT. NO.:** 01086
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A ☑ B ☐ C ☐ D ☐ (circle one)
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: _____ Date: 02/17/10
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

ANALYTICAL RESULTS

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

February 12, 2010

Mr. Bryan Shane
Midlands Environmental
PO Box 854
Lexington, SC 29071

RE: Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Dear Mr. Shane:
Enclosed are the analytical results for sample(s) received by the laboratory on February 05, 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,

Renee Spencer

Renee Spencer

renee.spencer@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..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

CERTIFICATIONS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Charlotte Certification IDs

9800 Kincey 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 #: 990060001
South Carolina Drinking Water Cert. #: 990060003
Tennessee Certification #: 04010
Virginia Certification #: 00213

Asheville Certification IDs

Florida/NELAP Certification #: E87648
Louisiana/LELAP Certification #: 03095
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 #: 99030002
South Carolina Certification #: 99030001
Tennessee Certification #: 2980
Virginia Certification #: 00072
West Virginia Certification #: 356
2225 Riverside Dr. Asheville, NC 28804
Connecticut Certification #: PH-0106
Massachusetts Certification #: M-NC030

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE SUMMARY

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9262736001	**MW-3**	Water	02/03/10 14:42	02/05/10 16:20
9262736002	**MW-4**	Water	02/03/10 12:16	02/05/10 16:20
9262736003	**MW-5**	Water	02/03/10 15:15	02/05/10 16:20
9262736004	**MW-6**	Water	02/03/10 12:45	02/05/10 16:20
9262736005	**MW-7**	Water	02/03/10 12:48	02/05/10 16:20
9262736006	**MW-8**	Water	02/03/10 12:58	02/05/10 16:20
9262736007	**MW-9**	Water	02/03/10 12:26	02/05/10 16:20
9262736008	**MW-10**	Water	02/03/10 12:07	02/05/10 16:20
9262736009	**MW-11**	Water	02/03/10 13:10	02/05/10 16:20
9262736010	**MW-15**	Water	02/03/10 14:26	02/05/10 16:20
9262736011	**MW-16**	Water	02/03/10 15:11	02/05/10 16:20
9262736012	**DW-1**	Water	02/03/10 14:25	02/05/10 16:20
9262736013	**AFVR-1**	Water	02/03/10 13:15	02/05/10 16:20
9262736014	**AFVR-2**	Water	02/03/10 13:27	02/05/10 16:20

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE ANALYTE COUNT

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Lab ID	Sample ID	Method	Analysts	Analytes Reported
9262736001	MW-3	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736002	MW-4	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736003	MW-5	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736004	MW-6	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736005	MW-7	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736006	MW-8	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736007	MW-9	EPA 8011	CAH	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736008	MW-10	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736009	MW-11	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736010	MW-15	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736011	MW-16	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	DLK, MCK	12
9262736012	DW-1	EPA 8011	RES	2
		EPA 6010	SAJ	1
		EPA 8260	MCK	12
9262736013	AFVR-1	EPA 8011	CAH	2

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE ANALYTE COUNT

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 8260	MCK	12
9262736014	**AFVR-2**	EPA 8011	CAH	2
		EPA 6010	SAJ	1
		EPA 8260	DLK	12

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Sample: MW-3 **Lab ID: 9262736001** Collected: 02/03/10 14:42 Received: 02/05/10 16:20 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)	**0.22**	ug/L	0.020	0.020	1	02/08/10 13:27	02/08/10 22:04	106-93-4	
1-Chloro-2-bromopropane (S)	98	%	60-140		1	02/08/10 13:27	02/08/10 22:04	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/09/10 23:50	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		02/06/10 19:53	71-43-2	
Ethylbenzene	**61.2**	ug/L	5.0	1.1	1		02/06/10 19:53	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		02/06/10 19:53	1634-04-4	
Naphthalene	**44.8**	ug/L	5.0	2.9	1		02/06/10 19:53	91-20-3	
Toluene	**105**	ug/L	5.0	1.8	1		02/06/10 19:53	108-88-3	
Xylene (Total)	**388**	ug/L	10.0	2.7	1		02/06/10 19:53	1330-20-7	
m&p-Xylene	**265**	ug/L	10.0	2.7	1		02/06/10 19:53	1330-20-7	
o-Xylene	**123**	ug/L	5.0	1.7	1		02/06/10 19:53	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		02/06/10 19:53	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		02/06/10 19:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		02/06/10 19:53	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		02/06/10 19:53	2037-26-5	

Sample: MW-4 **Lab ID: 9262736002** Collected: 02/03/10 12:16 Received: 02/05/10 16:20 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	02/08/10 13:27	02/08/10 22:22	106-93-4	
1-Chloro-2-bromopropane (S)	98	%	60-140		1	02/08/10 13:27	02/08/10 22:22	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/09/10 23:54	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		02/06/10 20:12	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		02/06/10 20:12	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		02/06/10 20:12	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		02/06/10 20:12	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		02/06/10 20:12	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/06/10 20:12	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		02/06/10 20:12	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		02/06/10 20:12	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		02/06/10 20:12	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		02/06/10 20:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		02/06/10 20:12	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/06/10 20:12	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Sample: MW-5 **Lab ID: 9262736003** Collected: 02/03/10 15:15 Received: 02/05/10 16:20 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	02/08/10 13:27	02/08/10 22:40	106-93-4	
1-Chloro-2-bromopropane (S)	95	%	60-140		1	02/08/10 13:27	02/08/10 22:40	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**4.8J**	ug/L	5.0	4.0	1	02/09/10 10:18	02/09/10 23:57	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		02/06/10 20:30	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		02/06/10 20:30	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		02/06/10 20:30	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		02/06/10 20:30	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		02/06/10 20:30	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/06/10 20:30	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		02/06/10 20:30	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		02/06/10 20:30	95-47-6	
4-Bromofluorobenzene (S)	102	%	70-130		1		02/06/10 20:30	460-00-4	
Dibromofluoromethane (S)	110	%	70-130		1		02/06/10 20:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		02/06/10 20:30	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/06/10 20:30	2037-26-5	

Sample: MW-6 **Lab ID: 9262736004** Collected: 02/03/10 12:45 Received: 02/05/10 16:20 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	02/08/10 13:27	02/08/10 22:58	106-93-4	
1-Chloro-2-bromopropane (S)	95	%	60-140		1	02/08/10 13:27	02/08/10 22:58	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**7.1**	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:01	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		02/06/10 20:49	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		02/06/10 20:49	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		02/06/10 20:49	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		02/06/10 20:49	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		02/06/10 20:49	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/06/10 20:49	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		02/06/10 20:49	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		02/06/10 20:49	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		02/06/10 20:49	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		02/06/10 20:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		02/06/10 20:49	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/06/10 20:49	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Sample: MW-7 **Lab ID: 9262736005** Collected: 02/03/10 12:48 Received: 02/05/10 16:20 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)	**0.078**	ug/L	0.019	0.019	1	02/08/10 13:27	02/08/10 23:16	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	02/08/10 13:27	02/08/10 23:16	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:05	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**12.5**	ug/L	10.0	2.4	2		02/08/10 10:15	71-43-2	
Ethylbenzene	**94.4**	ug/L	10.0	2.2	2		02/08/10 10:15	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	10.0	4.0	2		02/08/10 10:15	1634-04-4	
Naphthalene	**38.3**	ug/L	10.0	5.8	2		02/08/10 10:15	91-20-3	
Toluene	**27.8**	ug/L	10.0	3.6	2		02/08/10 10:15	108-88-3	
Xylene (Total)	**323**	ug/L	20.0	5.4	2		02/08/10 10:15	1330-20-7	
m&p-Xylene	**164**	ug/L	20.0	5.4	2		02/08/10 10:15	1330-20-7	
o-Xylene	**159**	ug/L	10.0	3.4	2		02/08/10 10:15	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		2		02/08/10 10:15	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		2		02/08/10 10:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		2		02/08/10 10:15	17060-07-0	
Toluene-d8 (S)	101	%	70-130		2		02/08/10 10:15	2037-26-5	

Sample: MW-8 **Lab ID: 9262736006** Collected: 02/03/10 12:58 Received: 02/05/10 16:20 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	02/08/10 13:28	02/08/10 23:35	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	02/08/10 13:28	02/08/10 23:35	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:09	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**989**	ug/L	25.0	6.0	5		02/09/10 08:39	71-43-2	
Ethylbenzene	**40.7**	ug/L	25.0	5.5	5		02/09/10 08:39	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	25.0	10.0	5		02/09/10 08:39	1634-04-4	
Naphthalene	**619**	ug/L	25.0	14.5	5		02/09/10 08:39	91-20-3	
Toluene	ND	ug/L	25.0	9.0	5		02/09/10 08:39	108-88-3	
Xylene (Total)	**24.6J**	ug/L	50.0	13.5	5		02/09/10 08:39	1330-20-7	
m&p-Xylene	**22.1J**	ug/L	50.0	13.5	5		02/09/10 08:39	1330-20-7	
o-Xylene	ND	ug/L	25.0	8.5	5		02/09/10 08:39	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130		5		02/09/10 08:39	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		5		02/09/10 08:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		5		02/09/10 08:39	17060-07-0	
Toluene-d8 (S)	102	%	70-130		5		02/09/10 08:39	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Sample: MW-9 **Lab ID: 9262736007** Collected: 02/03/10 12:26 Received: 02/05/10 16:20 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)	**59.3**	ug/L	1.9	1.9	100	02/08/10 13:28	02/10/10 13:54	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		100	02/08/10 13:28	02/10/10 13:54	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:13	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**4620**	ug/L	1250	300	250		02/08/10 03:09	71-43-2	
Ethylbenzene	**3190**	ug/L	1250	275	250		02/08/10 03:09	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		02/06/10 21:07	1634-04-4	
Naphthalene	**623**	ug/L	5.0	2.9	1		02/06/10 21:07	91-20-3	E
Toluene	**32600**	ug/L	1250	450	250		02/08/10 03:09	108-88-3	
Xylene (Total)	**17600**	ug/L	2500	675	250		02/08/10 03:09	1330-20-7	
m&p-Xylene	**11700**	ug/L	2500	675	250		02/08/10 03:09	1330-20-7	
o-Xylene	**5840**	ug/L	1250	425	250		02/08/10 03:09	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		02/06/10 21:07	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		02/06/10 21:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/06/10 21:07	17060-07-0	
Toluene-d8 (S)	88	%	70-130		1		02/06/10 21:07	2037-26-5	

Sample: MW-10 **Lab ID: 9262736008** Collected: 02/03/10 12:07 Received: 02/05/10 16:20 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	02/08/10 13:28	02/09/10 00:11	106-93-4	
1-Chloro-2-bromopropane (S)	94	%	60-140		1	02/08/10 13:28	02/09/10 00:11	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:18	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		02/08/10 02:15	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		02/08/10 02:15	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		02/08/10 02:15	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		02/08/10 02:15	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		02/08/10 02:15	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/10 02:15	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		02/08/10 02:15	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		02/08/10 02:15	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		1		02/08/10 02:15	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/08/10 02:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		02/08/10 02:15	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/08/10 02:15	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Sample: MW-11 **Lab ID: 9262736009** Collected: 02/03/10 13:10 Received: 02/05/10 16:20 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	02/08/10 15:39	02/09/10 01:41	106-93-4	
1-Chloro-2-bromopropane (S)	100	%	60-140		1	02/08/10 15:39	02/09/10 01:41	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**17.3**	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:32	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	250	60.0	50		02/09/10 07:36	71-43-2	
Ethylbenzene	**1310**	ug/L	250	55.0	50		02/09/10 07:36	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	250	100	50		02/09/10 07:36	1634-04-4	
Naphthalene	**1280**	ug/L	250	145	50		02/09/10 07:36	91-20-3	
Toluene	**101J**	ug/L	250	90.0	50		02/09/10 07:36	108-88-3	
Xylene (Total)	**15200**	ug/L	500	135	50		02/09/10 07:36	1330-20-7	
m&p-Xylene	**11300**	ug/L	500	135	50		02/09/10 07:36	1330-20-7	
o-Xylene	**3940**	ug/L	250	85.0	50		02/09/10 07:36	95-47-6	
4-Bromofluorobenzene (S)	97	%	70-130		50		02/09/10 07:36	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		50		02/09/10 07:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		50		02/09/10 07:36	17060-07-0	
Toluene-d8 (S)	100	%	70-130		50		02/09/10 07:36	2037-26-5	

Sample: MW-15 **Lab ID: 9262736010** Collected: 02/03/10 14:26 Received: 02/05/10 16:20 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	02/08/10 15:39	02/09/10 02:35	106-93-4	
1-Chloro-2-bromopropane (S)	90	%	60-140		1	02/08/10 15:39	02/09/10 02:35	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:37	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		02/08/10 02:33	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		02/08/10 02:33	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		02/08/10 02:33	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		02/08/10 02:33	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		02/08/10 02:33	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		02/08/10 02:33	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		02/08/10 02:33	1330-20-7	
o-Xylene	ND	ug/L	5.0	1.7	1		02/08/10 02:33	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130		1		02/08/10 02:33	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		02/08/10 02:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		02/08/10 02:33	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/08/10 02:33	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Sample: MW-16 **Lab ID: 9262736011** Collected: 02/03/10 15:11 Received: 02/05/10 16:20 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	02/08/10 15:39	02/09/10 02:54	106-93-4	
1-Chloro-2-bromopropane (S)	100	%	60-140		1	02/08/10 15:39	02/09/10 02:54	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:41	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	10.0	2.4	2		02/09/10 09:00	71-43-2	
Ethylbenzene	**263**	ug/L	10.0	2.2	2		02/09/10 09:00	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	10.0	4.0	2		02/09/10 09:00	1634-04-4	
Naphthalene	**247**	ug/L	50.0	29.0	10		02/10/10 23:06	91-20-3	
Toluene	**10.6**	ug/L	10.0	3.6	2		02/09/10 09:00	108-88-3	
Xylene (Total)	**1040**	ug/L	100	27.0	10		02/10/10 23:06	1330-20-7	
m&p-Xylene	**783**	ug/L	100	27.0	10		02/10/10 23:06	1330-20-7	
o-Xylene	**262**	ug/L	50.0	17.0	10		02/10/10 23:06	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		2		02/09/10 09:00	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		2		02/09/10 09:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		2		02/09/10 09:00	17060-07-0	
Toluene-d8 (S)	102	%	70-130		2		02/09/10 09:00	2037-26-5	

Sample: DW-1 **Lab ID: 9262736012** Collected: 02/03/10 14:25 Received: 02/05/10 16:20 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	02/08/10 15:39	02/09/10 03:30	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	02/08/10 15:39	02/09/10 03:30	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/09/10 10:18	02/10/10 00:45	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**653**	ug/L	25.0	6.0	5		02/09/10 08:18	71-43-2	
Ethylbenzene	ND	ug/L	25.0	5.5	5		02/09/10 08:18	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	25.0	10.0	5		02/09/10 08:18	1634-04-4	
Naphthalene	**32.6**	ug/L	25.0	14.5	5		02/09/10 08:18	91-20-3	
Toluene	ND	ug/L	25.0	9.0	5		02/09/10 08:18	108-88-3	
Xylene (Total)	**24.0J**	ug/L	50.0	13.5	5		02/09/10 08:18	1330-20-7	
m&p-Xylene	**14.5J**	ug/L	50.0	13.5	5		02/09/10 08:18	1330-20-7	
o-Xylene	**9.5J**	ug/L	25.0	8.5	5		02/09/10 08:18	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		5		02/09/10 08:18	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		5		02/09/10 08:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	70-130		5		02/09/10 08:18	17060-07-0	
Toluene-d8 (S)	102	%	70-130		5		02/09/10 08:18	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

Sample: AFVR-1 **Lab ID: 9262736013** Collected: 02/03/10 13:15 Received: 02/05/10 16:20 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)	**0.075**	ug/L	0.022	0.022	1	02/10/10 11:58	02/10/10 18:09	106-93-4	
1-Chloro-2-bromopropane (S)	125	%	60-140		1	02/10/10 11:58	02/10/10 18:09	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	100	24.0	20		02/09/10 07:15	71-43-2	
Ethylbenzene	**1220**	ug/L	100	22.0	20		02/09/10 07:15	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	100	40.0	20		02/09/10 07:15	1634-04-4	
Naphthalene	**636**	ug/L	100	58.0	20		02/09/10 07:15	91-20-3	
Toluene	**106**	ug/L	100	36.0	20		02/09/10 07:15	108-88-3	
Xylene (Total)	**8730**	ug/L	200	54.0	20		02/09/10 07:15	1330-20-7	
m&p-Xylene	**6470**	ug/L	200	54.0	20		02/09/10 07:15	1330-20-7	
o-Xylene	**2260**	ug/L	100	34.0	20		02/09/10 07:15	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		20		02/09/10 07:15	460-00-4	
Dibromofluoromethane (S)	110	%	70-130		20		02/09/10 07:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		20		02/09/10 07:15	17060-07-0	
Toluene-d8 (S)	101	%	70-130		20		02/09/10 07:15	2037-26-5	

Sample: AFVR-2 **Lab ID: 9262736014** Collected: 02/03/10 13:27 Received: 02/05/10 16:20 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)	**10.6**	ug/L	0.39	0.39	20	02/10/10 11:58	02/11/10 14:16	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		20	02/10/10 11:58	02/11/10 14:16	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**15.4**	ug/L	5.0	4.0	1	02/09/10 15:29	02/10/10 18:10	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**2930**	ug/L	1000	240	200		02/10/10 21:56	71-43-2	
Ethylbenzene	**872J**	ug/L	1000	220	200		02/10/10 21:56	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1000	400	200		02/10/10 21:56	1634-04-4	
Naphthalene	**606J**	ug/L	1000	580	200		02/10/10 21:56	91-20-3	
Toluene	**18400**	ug/L	1000	360	200		02/10/10 21:56	108-88-3	
Xylene (Total)	**16000**	ug/L	2000	540	200		02/10/10 21:56	1330-20-7	
m&p-Xylene	**8200**	ug/L	2000	540	200		02/10/10 21:56	1330-20-7	
o-Xylene	**7810**	ug/L	1000	340	200		02/10/10 21:56	95-47-6	
4-Bromofluorobenzene (S)	97	%	70-130		200		02/10/10 21:56	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		200		02/10/10 21:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		200		02/10/10 21:56	17060-07-0	
Toluene-d8 (S)	101	%	70-130		200		02/10/10 21:56	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

QC Batch: OEXT/9215 — Analysis Method: EPA 8011
QC Batch Method: EPA 8011 — Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9262736001, 9262736002, 9262736003, 9262736004, 9262736005, 9262736006, 9262736007, 9262736008

METHOD BLANK: 399659 — Matrix: Water
Associated Lab Samples: 9262736001, 9262736002, 9262736003, 9262736004, 9262736005, 9262736006, 9262736007, 9262736008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.019	02/08/10 16:35	
1-Chloro-2-bromopropane (S)	%	98	60-140	02/08/10 16:35	

LABORATORY CONTROL SAMPLE & LCSD: 399660 399661

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	0.28	92	104	60-140	10	20	
1-Chloro-2-bromopropane (S)	%				96	107	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 399662 399663

Parameter	Units	9262720005 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	0.26	0.27	94	96	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						92	94	60-140			

SAMPLE DUPLICATE: 399664

Parameter	Units	9262720008 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	101	103	1		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

QC Batch: OEXT/9216 — Analysis Method: EPA 8011
QC Batch Method: EPA 8011 — Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9262736009, 9262736010, 9262736011, 9262736012

METHOD BLANK: 399665 — Matrix: Water
Associated Lab Samples: 9262736009, 9262736010, 9262736011, 9262736012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	02/09/10 00:47	
1-Chloro-2-bromopropane (S)	%	38	60-140	02/09/10 00:47	S0

LABORATORY CONTROL SAMPLE & LCSD: 399666 399667

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.27	0.26	0.25	94	90	60-140	2	20	
1-Chloro-2-bromopropane (S)	%				98	94	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 399668 399669

Parameter	Units	9262736009 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	0.24	88	86	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						96	95	60-140			

SAMPLE DUPLICATE: 399670

Parameter	Units	9262736011 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	100	91	11		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

QC Batch: OEXT/9226 — Analysis Method: EPA 8011
QC Batch Method: EPA 8011 — Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9262736013, 9262736014

METHOD BLANK: 400540 — Matrix: Water
Associated Lab Samples: 9262736013, 9262736014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.019	02/10/10 15:57	
1-Chloro-2-bromopropane (S)	%	96	60-140	02/10/10 15:57	

LABORATORY CONTROL SAMPLE & LCSD: 400541 400542

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	0.27	0.27	98	98	60-140	1	20	
1-Chloro-2-bromopropane (S)	%				101	100	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 400543 400544

Parameter	Units	9262869001 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)	%						101	102	60-140			

SAMPLE DUPLICATE: 400545

Parameter	Units	9262855001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	22.9	23.9	4	20	
1-Chloro-2-bromopropane (S)	%	0	0	0		S4

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

QC Batch: MPRP/5792 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET
Associated Lab Samples: 9262736001, 9262736002, 9262736003, 9262736004, 9262736005, 9262736006, 9262736007, 9262736008, 9262736009, 9262736010, 9262736011, 9262736012

METHOD BLANK: 399760 — Matrix: Water
Associated Lab Samples: 9262736001, 9262736002, 9262736003, 9262736004, 9262736005, 9262736006, 9262736007, 9262736008, 9262736009, 9262736010, 9262736011, 9262736012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	02/09/10 22:51	

LABORATORY CONTROL SAMPLE: 399761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	515	103	80-120	

MATRIX SPIKE SAMPLE: 399762

Parameter	Units	9262645001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	481	96	75-125	

SAMPLE DUPLICATE: 399763

Parameter	Units	9262645002 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

QC Batch: MPRP/5796
QC Batch Method: EPA 3010
Associated Lab Samples: 9262736014

Analysis Method: EPA 6010
Analysis Description: 6010 MET

METHOD BLANK: 399935
Matrix: Water
Associated Lab Samples: 9262736014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	02/10/10 18:02	

LABORATORY CONTROL SAMPLE: 399936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	509	102	80-120	

MATRIX SPIKE SAMPLE: 399937

Parameter	Units	9262736014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	15.4	500	494	96	75-125	

SAMPLE DUPLICATE: 399938

Parameter	Units	9262554001 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

QC Batch: MSV/9870 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV SC
Associated Lab Samples: 9262736001, 9262736002, 9262736003, 9262736004, 9262736007, 9262736008, 9262736010

METHOD BLANK: 399470 — Matrix: Water
Associated Lab Samples: 9262736001, 9262736002, 9262736003, 9262736004, 9262736007, 9262736008, 9262736010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	02/06/10 12:49	
Ethylbenzene	ug/L	ND	5.0	02/06/10 12:49	
m&p-Xylene	ug/L	ND	10.0	02/06/10 12:49	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/06/10 12:49	
Naphthalene	ug/L	ND	5.0	02/06/10 12:49	
o-Xylene	ug/L	ND	5.0	02/06/10 12:49	
Toluene	ug/L	ND	5.0	02/06/10 12:49	
Xylene (Total)	ug/L	ND	10.0	02/06/10 12:49	
1,2-Dichloroethane-d4 (S)	%	105	70-130	02/06/10 12:49	
4-Bromofluorobenzene (S)	%	100	70-130	02/06/10 12:49	
Dibromofluoromethane (S)	%	105	70-130	02/06/10 12:49	
Toluene-d8 (S)	%	101	70-130	02/06/10 12:49	

LABORATORY CONTROL SAMPLE: 399471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	52.2	104	70-130	
Ethylbenzene	ug/L	50	52.0	104	70-130	
m&p-Xylene	ug/L	100	105	105	70-130	
Methyl-tert-butyl ether	ug/L	50	54.6	109	70-130	
Naphthalene	ug/L	50	55.5	111	70-130	
o-Xylene	ug/L	50	52.2	104	70-130	
Toluene	ug/L	50	53.6	107	70-130	
Xylene (Total)	ug/L	150	158	105	70-130	
1,2-Dichloroethane-d4 (S)	%			106	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			104	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 399472 399473

Parameter	Units	9262736010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	57.1	55.0	114	110	70-130	4		
Ethylbenzene	ug/L	ND	50	50	56.4	53.8	113	108	70-130	5		
m&p-Xylene	ug/L	ND	100	100	114	109	114	109	70-130	4		
Methyl-tert-butyl ether	ug/L	ND	50	50	60.1	60.0	120	120	70-130	0		
Naphthalene	ug/L	ND	50	50	53.9	57.9	108	116	70-130	7		
o-Xylene	ug/L	ND	50	50	56.3	54.4	113	109	70-130	3		
Toluene	ug/L	ND	50	50	60.4	58.2	121	116	70-130	4		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 399472 399473

Parameter	Units	9262736010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane-d4 (S)	%						107	105	70-130			
4-Bromofluorobenzene (S)	%						101	102	70-130			
Dibromofluoromethane (S)	%						108	105	70-130			
Toluene-d8 (S)	%						101	100	70-130			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

QC Batch: MSV/9883 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV SC
Associated Lab Samples: 9262736005

METHOD BLANK: 399582 — Matrix: Water
Associated Lab Samples: 9262736005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	02/08/10 01:38	
Ethylbenzene	ug/L	ND	5.0	02/08/10 01:38	
m&p-Xylene	ug/L	ND	10.0	02/08/10 01:38	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/08/10 01:38	
Naphthalene	ug/L	ND	5.0	02/08/10 01:38	
o-Xylene	ug/L	ND	5.0	02/08/10 01:38	
Toluene	ug/L	ND	5.0	02/08/10 01:38	
Xylene (Total)	ug/L	ND	10.0	02/08/10 01:38	
1,2-Dichloroethane-d4 (S)	%	109	70-130	02/08/10 01:38	
4-Bromofluorobenzene (S)	%	102	70-130	02/08/10 01:38	
Dibromofluoromethane (S)	%	109	70-130	02/08/10 01:38	
Toluene-d8 (S)	%	101	70-130	02/08/10 01:38	

LABORATORY CONTROL SAMPLE: 399583

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	51.1	102	70-130	
Ethylbenzene	ug/L	50	50.0	100	70-130	
m&p-Xylene	ug/L	100	99.6	100	70-130	
Methyl-tert-butyl ether	ug/L	50	56.5	113	70-130	
Naphthalene	ug/L	50	50.9	102	70-130	
o-Xylene	ug/L	50	49.7	99	70-130	
Toluene	ug/L	50	52.9	106	70-130	
Xylene (Total)	ug/L	150	149	100	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			108	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 399584 399585

Parameter	Units	9262531028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	58.4	55.8	117	112	70-130	4		
Ethylbenzene	ug/L	ND	50	50	56.6	53.6	113	107	70-130	5		
m&p-Xylene	ug/L	ND	100	100	113	107	113	107	70-130	6		
Methyl-tert-butyl ether	ug/L	ND	50	50	60.1	59.5	120	119	70-130	1		
Naphthalene	ug/L	ND	50	50	54.0	53.4	108	107	70-130	1		
o-Xylene	ug/L	ND	50	50	56.1	53.6	112	107	70-130	5		
Toluene	ug/L	ND	50	50	60.0	57.9	120	116	70-130	4		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 399584 399585

Parameter	Units	9262531028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane-d4 (S)	%						105	104	70-130			
4-Bromofluorobenzene (S)	%						101	100	70-130			
Dibromofluoromethane (S)	%						108	107	70-130			
Toluene-d8 (S)	%						101	101	70-130			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

QC Batch: MSV/9892 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 9262736006, 9262736009, 9262736011, 9262736012, 9262736013, 9262736014

METHOD BLANK: 399773 Matrix: Water
Associated Lab Samples: 9262736006, 9262736009, 9262736011, 9262736012, 9262736013, 9262736014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	02/09/10 02:56	
Ethylbenzene	ug/L	ND	5.0	02/09/10 02:56	
m&p-Xylene	ug/L	ND	10.0	02/09/10 02:56	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/09/10 02:56	
Naphthalene	ug/L	ND	5.0	02/09/10 02:56	
o-Xylene	ug/L	ND	5.0	02/09/10 02:56	
Toluene	ug/L	ND	5.0	02/09/10 02:56	
Xylene (Total)	ug/L	ND	10.0	02/09/10 02:56	
1,2-Dichloroethane-d4 (S)	%	107	70-130	02/09/10 02:56	
4-Bromofluorobenzene (S)	%	102	70-130	02/09/10 02:56	
Dibromofluoromethane (S)	%	107	70-130	02/09/10 02:56	
Toluene-d8 (S)	%	101	70-130	02/09/10 02:56	

LABORATORY CONTROL SAMPLE: 399774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	53.0	106	70-130	
Ethylbenzene	ug/L	50	50.5	101	70-130	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl-tert-butyl ether	ug/L	50	60.7	121	70-130	
Naphthalene	ug/L	50	52.3	105	70-130	
o-Xylene	ug/L	50	51.1	102	70-130	
Toluene	ug/L	50	54.5	109	70-130	
Xylene (Total)	ug/L	150	153	102	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			110	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 399775 399776

Parameter	Units	9262727002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	59.1	57.6	117	114	70-130	2		
Ethylbenzene	ug/L	ND	50	50	55.7	54.1	110	107	70-130	3		
m&p-Xylene	ug/L	ND	100	100	113	109	111	107	70-130	4		
Methyl-tert-butyl ether	ug/L	9.8	50	50	76.5	72.4	133	125	70-130	5		M0
Naphthalene	ug/L	ND	50	50	53.6	56.0	105	109	70-130	4		
o-Xylene	ug/L	ND	50	50	59.2	57.0	112	107	70-130	4		
Toluene	ug/L	ND	50	50	59.9	58.2	120	116	70-130	3		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 399775 399776

Parameter	Units	9262727002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane-d4 (S)	%						107	107	70-130			
4-Bromofluorobenzene (S)	%						99	100	70-130			
Dibromofluoromethane (S)	%						110	108	70-130			
Toluene-d8 (S)	%						102	101	70-130			

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALIFIERS

Project: Copelands Svc Stat 10-2676
Pace Project No.: 9262736

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.

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

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

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

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

1356678

Section A Required Client Information:

Company: MECI
Address: 2350 Dodge Rd
Lexington, SC 29073
Email To:
Phone: 808-2043 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: B Shane
Copy To:
Purchase Order No.:
Project Name: Copelands Sur Stat
Project Number: 10-2676

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: R Spencer
Pace Profile #: 836-1

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test	Y/N	Chek, Meth, mthe	Total Lead	GDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92627736
1	MW-3	WT	G			2/3	1442		7			1	6							X	X	X		001
2	MW-4						1216																	002
3	MW-5						1515																	003
4	MW-6						1245																	004
5	MW-7						1248																	005
6	MW-8						1258																	006
7	MW-9						1226																	007
8	MW-10						1207																	008
9	MW-11						1310																	009
10	MW-15						1426																	010
11	MW-16						1511																	011
12	DW-1	WT	G			2/3	1425		7			1	6							X	X	X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Report J values	John Womack MECI	2/5/10	1115	[illegible] Pace	2/15/10	1115	
	[illegible] Pace	2/5/10	1620	[illegible] Pace	2/5/10	16:20	3.9 yes no yes

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: John Womack
SIGNATURE of SAMPLER: John Womack
DATE Signed (MM/DD/YY): 2/5/10

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

1356679

Section A Required Client Information:

Company: MECI
Address: 235B Dooly Rd
Lexington, SC 29073
Email To:
Phone: 808 2043 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: B Shane
Copy To:
Purchase Order No.:
Project Name: Copelands Svc Stat
Project Number: 10-2676

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: R Spencer
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): Hex, nitrate, nitrite	EDB 504	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92627316
1	AFVR-1	WT	G			2/3	1315		6				6					XX				no lead 013
2	AFVR-2	WT	G			2/3	1327		7			1	6					XXX				014
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Report J values	John Wornack MECI	2/5/10	1115	[illegible] / Pace	2/5/10	1115	
	[illegible] Pace	2/5/10	1620	[illegible] / Pace	2/5/10	1620	3.9

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: John Wornack
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/5/10

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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.

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

March 02, 2010

Mr. Bryan Shane
Midlands Environmental
PO Box 854
Lexington, SC 29071

RE: Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

Dear Mr. Shane:
Enclosed are the analytical results for sample(s) received by the laboratory on February 20, 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,

Renee Spencer

Renee Spencer

renee.spencer@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..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

CERTIFICATIONS

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

Charlotte Certification IDs
9800 Kincey 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 #: 990060001
South Carolina Drinking Water Cert. #: 990060003
Tennessee Certification #: 04010
Virginia Certification #: 00213

Asheville Certification IDs
Florida/NELAP Certification #: E87648
Louisiana/LELAP Certification #: 03095
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 #: 99030002
South Carolina Certification #: 99030001
Tennessee Certification #: 2980
Virginia Certification #: 00072
West Virginia Certification #: 356
2225 Riverside Dr. Asheville, NC 28804
Connecticut Certification #: PH-0106
Massachusetts Certification #: M-NC030

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE SUMMARY

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9263719012	MW-17	Water	02/19/10 17:05	02/20/10 08:30
9263719013	MW-18	Water	02/19/10 14:20	02/20/10 08:30
9263719014	AFVR-1	Water	02/19/10 14:00	02/20/10 08:30

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE ANALYTE COUNT

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

Lab ID	Sample ID	Method	Analysts	Analytes Reported
9263719012	**MW-17**	EPA 8011	CAH	2
		EPA 6010	EWS	1
		EPA 8260	KJM	12
9263719013	**MW-18**	EPA 8011	CAH	2
		EPA 6010	EWS	1
		EPA 8260	KJM	12
9263719014	**AFVR-1**	EPA 6010	EWS	1

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

Sample: MW-17 **Lab ID: 9263719012** Collected: 02/19/10 17:05 Received: 02/20/10 08:30 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)	**14.5**	ug/L	0.39	0.39	20	02/22/10 10:02	02/23/10 13:02	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		20	02/22/10 10:02	02/23/10 13:02	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	02/24/10 13:25	02/25/10 15:56	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**9790**	ug/L	500	120	100		02/24/10 15:15	71-43-2	
Ethylbenzene	**2490**	ug/L	500	110	100		02/24/10 15:15	100-41-4	
Methyl-tert-butyl ether	**87.3**	ug/L	5.0	2.0	1		02/24/10 06:36	1634-04-4	
Naphthalene	**380J**	ug/L	500	290	100		02/24/10 15:15	91-20-3	
Toluene	**15500**	ug/L	500	180	100		02/24/10 15:15	108-88-3	
Xylene (Total)	**12700**	ug/L	1000	270	100		02/24/10 15:15	1330-20-7	
m&p-Xylene	**8530**	ug/L	1000	270	100		02/24/10 15:15	1330-20-7	
o-Xylene	**4140**	ug/L	500	170	100		02/24/10 15:15	95-47-6	
4-Bromofluorobenzene (S)	101	%	70-130		1		02/24/10 06:36	460-00-4	
Dibromofluoromethane (S)	96	%	70-130		1		02/24/10 06:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		02/24/10 06:36	17060-07-0	
Toluene-d8 (S)	92	%	70-130		1		02/24/10 06:36	2037-26-5	

Sample: MW-18 **Lab ID: 9263719013** Collected: 02/19/10 14:20 Received: 02/20/10 08:30 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)	**50.7**	ug/L	1.9	1.9	100	02/22/10 10:03	02/23/10 13:22	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		100	02/22/10 10:03	02/23/10 13:22	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**13.7**	ug/L	5.0	4.0	1	02/24/10 13:25	02/25/10 16:10	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**8250**	ug/L	1000	240	200		02/25/10 14:10	71-43-2	
Ethylbenzene	**3440**	ug/L	1000	220	200		02/25/10 14:10	100-41-4	
Methyl-tert-butyl ether	**597J**	ug/L	1000	400	200		02/25/10 14:10	1634-04-4	
Naphthalene	ND	ug/L	1000	580	200		02/25/10 14:10	91-20-3	
Toluene	**32900**	ug/L	1000	360	200		02/25/10 14:10	108-88-3	
Xylene (Total)	**19000**	ug/L	2000	540	200		02/25/10 14:10	1330-20-7	
m&p-Xylene	**12800**	ug/L	2000	540	200		02/25/10 14:10	1330-20-7	
o-Xylene	**6150**	ug/L	1000	340	200		02/25/10 14:10	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		2		02/24/10 10:05	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		2		02/24/10 10:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		2		02/24/10 10:05	17060-07-0	
Toluene-d8 (S)	89	%	70-130		2		02/24/10 10:05	2037-26-5	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

ANALYTICAL RESULTS

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

Sample: AFVR-1 **Lab ID: 9263719014** Collected: 02/19/10 14:00 Received: 02/20/10 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**4.8J**	ug/L	5.0	4.0	1	02/24/10 13:25	02/25/10 16:14	7439-92-1	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

QC Batch: OEXT/9314
QC Batch Method: EPA 8011
Analysis Method: EPA 8011
Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9263719012, 9263719013

METHOD BLANK: 405446
Matrix: Water
Associated Lab Samples: 9263719012, 9263719013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.019	02/22/10 22:50	
1-Chloro-2-bromopropane (S)	%	105	60-140	02/22/10 22:50	

LABORATORY CONTROL SAMPLE & LCSD: 405447 405448

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	0.32	0.30	116	108	60-140	7	20	
1-Chloro-2-bromopropane (S)	%				112	104	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 405449 405450

Parameter	Units	9263626009 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	0.11	.29	.29	0.42	0.43	106	108	60-140	1	20	
1-Chloro-2-bromopropane (S)	%						111	110	60-140			

SAMPLE DUPLICATE: 405451

Parameter	Units	9263659007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	94	91	4		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

QC Batch: MPRP/5865 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET
Associated Lab Samples: 9263719012, 9263719013, 9263719014

METHOD BLANK: 406055 — Matrix: Water
Associated Lab Samples: 9263719012, 9263719013, 9263719014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	02/25/10 15:06	

LABORATORY CONTROL SAMPLE: 406056

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	465	93	80-120	

MATRIX SPIKE SAMPLE: 406057

Parameter	Units	9263596015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	440	88	75-125	

SAMPLE DUPLICATE: 406058

Parameter	Units	9263596016 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

QC Batch: MSV/10057
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV SC
Associated Lab Samples: 9263719012, 9263719013

METHOD BLANK: 406089
Matrix: Water
Associated Lab Samples: 9263719012, 9263719013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	02/24/10 01:28	
Ethylbenzene	ug/L	ND	5.0	02/24/10 01:28	
m&p-Xylene	ug/L	ND	10.0	02/24/10 01:28	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/24/10 01:28	
Naphthalene	ug/L	ND	5.0	02/24/10 01:28	
o-Xylene	ug/L	ND	5.0	02/24/10 01:28	
Toluene	ug/L	ND	5.0	02/24/10 01:28	
Xylene (Total)	ug/L	ND	10.0	02/24/10 01:28	
1,2-Dichloroethane-d4 (S)	%	117	70-130	02/24/10 01:28	
4-Bromofluorobenzene (S)	%	97	70-130	02/24/10 01:28	
Dibromofluoromethane (S)	%	114	70-130	02/24/10 01:28	
Toluene-d8 (S)	%	102	70-130	02/24/10 01:28	

LABORATORY CONTROL SAMPLE: 406090

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	51.7	103	70-130	
Ethylbenzene	ug/L	50	51.4	103	70-130	
m&p-Xylene	ug/L	100	105	105	70-130	
Methyl-tert-butyl ether	ug/L	50	56.2	112	70-130	
Naphthalene	ug/L	50	55.2	110	70-130	
o-Xylene	ug/L	50	53.0	106	70-130	
Toluene	ug/L	50	52.6	105	70-130	
Xylene (Total)	ug/L	150	158	105	70-130	
1,2-Dichloroethane-d4 (S)	%			108	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			104	70-130	
Toluene-d8 (S)	%			101	70-130	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALIFIERS

Project: COPELAND SERVICE STAT 10-2676
Pace Project No.: 9264392

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.
Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.
U - Indicates the compound was analyzed for, but not detected.

ANALYTE QUALIFIERS

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

Date: 03/02/2010 05:04 PM

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ACCREDITED IN ACCORDANCE WITH nelac

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1353011

Section A Required Client Information:
Company: MECI
Address: 235-B Pooler Rd, Lexington, SC 29073
Email To: wcm@meci.net
Phone: 803-808-2043 Fax: 803-896-6245
Requested Due Date/TAT:

Section B Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: [illegible] Cayland Service Station
Project Number: 10-2676

Section C Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

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

Section D Required Client Information

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

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	MEI, Mgh, MTBE (8260B)	EDB (8011)	Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-17	G	WT			2-19-10	1405		6				6						X	X	X		Odor 012
2	MW-18	↓	↓			↓	1420		6				6						X	X	X		Odor 013
3	AFVR-1						1400		3			3									X		No Odor 014
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

9264392
~~9263719~~ RLS 3/2/10

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Request "J" Value	Alex Wolfson			Brandon Heller - PACE	2-20-10	08:30	5.1	Y	n	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Alex Wolfson
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 2-19-10

*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.

WASTE DISPOSAL MANIFESTS

Midlands
Environmental
Consultants, Inc.

April 1, 2010

Re: Treatment of Purge Water
Copelands Service Station
Clinton, South Carolina
SCDHEC Site ID Number 05964
MECI Project Number 10-2676

To Whom it May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

One 55-gallon drum was treated on February 3 and 19, 2010 at the referenced site.

A total of one (1) 55-gallon drum was treated at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Jeff L. Coleman
Project Scientist (for)

WASTE MANAGEMENT

Richland County LF
1047 Highway Church Road
Elgin, SC, 29045
Ph: (803) 788-3054

Original
Ticket# 1009935

Customer Name MIDLANDSENVIRON MIDLANDS ENVI
Ticket Date 02/09/2010
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0
Destination
PO
Profile VA2718 (SOIL FROM UST ASSESSMENT)
Generator 126-MIDLANDSENVIRONMENTAL MIDLANDS ENVIRONMENTAL

Carrier MIDLANDSENVIRON MIDLANDS ENVIRONMENT
Vehicle# 2
Container
Driver
Check#
Billing # 0000469
Gen EPA ID

Volume

	Time	Scale	ScaleMaster
In	02/09/2010 13:35:51	Scale1	Dwayne
Out	02/09/2010 14:02:21	Scale2	Dwayne

Gross	13140 lb
Tare	9440 lb
Net	3700 lb
Tons	1.85

Comments

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	SOIL-Cont. Soil -	100	1.85	Tons				32-LEXINGT
2	FUEL-Fuel Surcharg	100		%				32-LEXINGT
3	P6ENV-Environmenta	100		%				32-LEXINGT

Copelands 3/4

[redacted] 1/4

Vacant Lot

Total Fees
Total Ticket

SIGNATURE

403WM

SPECIAL WASTE MANIFEST

WASTE ID NUMBER VA2718	*Richland Landfill* 1047 Highway Church Road Elgin, SC 29045
EXPIRATION DATE December 7, 2010	Special Waste Phone: 803-744-3346 Fax: 866-904-7194

Prepared by: Karen Truett/Carol Weldon

GENERATOR OF WASTE: Midlands Env. Consultants, Inc. - Various

CUSTOMER Midlands Env. Consultants

ACCOUNT NUMBER: 820-469

LOCATION OF WASTE: Site Address:

CITY: COUNTY:

PHONE NUM 803-808-2043

CONTACT: Bryan Shane

FAX NUMBER: 803-808-2043

GENERATOR'S SIGNATURE

DATE: 2/9/10

TRANSPORTER OF WASTE: Brandon Kelly

DATE: 2/9/10

TRUCK NUMBER: 2

DRIVER'S SIGNATURE

**** TO BE COMPLETED BY RICHLAND LANDFILL******

DISPOSAL SITE: RICHLAND LANDFILL ELGIN, SC

Waste Class: Soil

DESCRIPTION OF WASTE: Soil from UST Assessment

TICKET NUMBER: 1009935 1.85

RECEIVED BY: am

Copelands 3/4

~~[illegible]~~ 1/4

Vacant Lot

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

H WAYNE COPELAND
2961 HURRICANE CHRUCH RD
CLINTON SC 29325

APR 14 2010

UST DOCKET Stech

Re: Assessment Report Review letter
Copelands Service Station, 700 Musgrove St., Clinton, SC
UST Permit # 05694
Release Reported June 24, 1993
Assessment report received April 6, 2010
Laurens County

Dear Mr. Copeland:

The Underground Storage Tank Management Division has reviewed the referenced report and noted the findings (see enclosures). The next scope of work deemed necessary is to conduct four Aggressive Fluid Vapor Recovery (AFVR) events to remove free product from the monitoring wells located on the site.

The SCDHEC will procure the services of an environmental contractor for the release reported on June 24, 1993. Your continued cooperation is appreciated.

On all correspondence regarding this site, please reference the UST Permit # 05694. If you have questions concerning this correspondence or would like to submit additional information, please contact me by phone at (803) 896-6323, by fax at (803) 896-6245, or by email at brineysm@dhec.sc.gov.

Sincerely,

Stephanie Briney

Stephanie Briney, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Assessment report

cc: Technical File (w/out enc)

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

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

MAY 0 5 2010

UST DOCKET

BRIAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS INC
P O BOX 854
LEXINGTON SC 29071-0854

Re: Bid # IBF-36815-8/27/09-EMW; PO # 782295
Notice to Proceed

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct Free Product (FP) recovery using Aggressive Fluid Vapor Recovery (AFVR) or passive skimmers at several facilities. The packets contain the necessary approval for work to begin. You may commence with a site reconnaissance before the AFVR and/or passive skimmers installation. If monitoring wells do not contain measurable free phase product, contact the UST project manager for further instructions. The facilities have been assigned Cost Agreement (CA) numbers as listed below. Please reference the CA numbers and Purchase Order # 782295 on the appropriate invoices submitted for payment against the facilities. As specified in the referenced bid, the completed invoice forms and associated reports (include contract certification number) are expected on or before the designated due date (see below).

UST Permit #	Facility	County	Releas	Work Scope	Due Date*	CA #	Approved Amt.
00877	Shelton Food Stores 5	Barnwell	1	4 AFVR	60 days	38760	4,425.00
03198	Summers Store	Fairfield	1	5 AFVR	60 days	38853	5,870.00
15586	Former Rogers Used Cars	Oconee	1	4 AFVR	60 days	38938	4,675.00
07176	Zee Mart	Pickens	1	4 AFVR	60 days	38948	4,675.00
12194	Null's Exxon	Richland	1	2 AFVR	60 days	38629	2,265.00
07871	Constan	Richland	1	2 AFVR	60 days	38831	2,235.00
05694	Copeland Service Station	Laurens	1	4 AFVR	60 days	38833	4,750.00
00858	Whittle Brothers Texaco	Barnwell	1	2 AFVR	60 days	38847	2,315.00

*From receipt of letter

Midland's Environmental Consultants, Inc. will perform services at the sites on behalf of the site's UST owners; however, payments will be made from the SUPERB Account. The site's UST owners have no obligation for payment for this scope of work. Please note that Sections 44-2-110(4) and 44-2-130(B) of the SUPERB Statute state that no costs will be allowed (considered for payment) unless prior approval from the Department is obtained.

If for any reason there are changes in these cost agreements, any associated changes to this cost agreement must be pre-approved by this Department in order for Midlands Environmental Consultants to seek future cost compensation. Please contact the site's project manager for technical and/or financial approval. Any item(s) not clearly or completely addressed in the report (disposal manifest for generated ground water, etc.) WILL NOT be compensated by the SUPERB Account.

The Department grants pre-approval for transportation of free phase product and petroleum contaminated groundwater from the referenced site to a permitted treatment facility. The free product and contaminated groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included as an appendix to the report.

If you have any questions concerning this correspondence or need further assistance, please contact me by phone at (803) 896-6664, by fax at (803) 896-6245 or by email at milenkmp@dhec.sc.gov.

Sincerely,

Maia Milenkova

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

enc.: Approved Cost Agreements (ACA)
Information Packets
cc: Technical File (w/copy of ACA)

SCDHEC/UST/04/30/10/MPM

Approved Cost Agreement 38833

Facility: 05694 COPELANDS SERVICE STATION INC
BRINEYSM
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		A	EQUIPMENT	4.0000	350.00	1,400.00
17 DISPOSAL						
		A2	WASTEWATER - PUMPING TEST	4,000.0000	0.10	400.00
23 EFR						
		A	8 HOUR EVENT	4.0000	600.00	2,400.00
		C	OFF GAS TREATMENT	32.0000	15.00	480.00
		D	SITE RECONNAISSANCE	1.0000	75.00	75.00
				Total Amount		4,755.00