Resolve Environmental Services, PLLC

410 East Franklin Street
Monroe, NC 28112
(704) 289-5881 phone
(704) 292-2910 fax
www.resolvepllc.com

September 25, 2012

Mr. Ervin Lane
Compliance Hydrogeologist
NCDENR
Division of Waste Management
Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Re: ***Second Semi-Annual 2012 Ground Water Monitoring Event***
Warren County Closed Sanitary Landfill
Warrenton, North Carolina
Facility Permit# 93-01
Resolve Project No 765.17

Dear Mr. Lane:

Please find the attached Second Semi-Annual 2012 Ground Water Monitoring Report conducted at the Warren County Closed Sanitary Landfill in August 2012. Also included in this package is a copy of the *"Water Supply Well Sampling Results"* letter based on the August 2012 sampling of the water supply well located at 539 Baltimore Road. Please note that the original Environmental Monitoring Reporting Form associated with the August 2012 sampling event will be mailed to you separately. You should receive it in the following week. Please call if you have any questions or require any additional information at (704) 289-5881.

Sincerely,
Resolve Environmental Services, PLLC

Laura Minor
Project Manager

Enclosures

Resolve Environmental Services, PLLC
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September 25, 2012

Ms. Jacqueline Smith
539 Baltimore Road
Warrenton, NC 27589

Re: Water Supply Well Sampling Results
539 Baltimore Road, Warrenton, NC

Dear Ms. Smith:

This letter is to inform you of the recent water supply well (WSW-1) sampling results conducted on August 27, 2012. Resolve Environmental Services, PLLC (Resolve) has been contracted by the Warren County Solid Waste Department to conduct semi-annual ground water sampling activities at their facility. The water supply well connected to your residence was included in the sampling schedule.

No detectable concentrations of requested method constituents were reported in the ground water sample. A copy of the applicable analytical laboratory results has been included as an attachment. This information has been submitted to the NCDENR Solid Waste Section and will be maintained in their files.

As part of the ongoing sampling schedule at Warren County Landfill, WSW-1 is scheduled to be sampled again in February 2013. The analytical results will be forwarded to you following the receipt of the analytical report. If you have any questions, please call me at (704) 289-5881.

Sincerely,
Resolve Environmental Services, PLLC

Laura Minor

cc: Mr. Ervin Lane, NCDENR-Division of Waste Management/Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646
Mr. Marshall Brothers, Warren County Solid Waste Department, 559 Baltimore Road, Warrenton, North Carolina 27589

attachment

Resolve Environmental Services, PLLC

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DENR RECEIVED
SEP 27 2012
SOLID WASTE SECTION

September 25, 2012

Mr. Marshall Brothers
Warren County Solid Waste Department
559 Baltimore Road
Warrenton, North Carolina 27589

Re: Second Semi-Annual 2012 Ground Water Monitoring Event
Warren County Closed Sanitary Landfill
Warrenton, North Carolina
Resolve Project No 765.17

Dear Mr. Brothers:

Resolve Environmental Services, PLLC (Resolve) respectfully presents results of the second semi-annual 2012 ground water monitoring event conducted at the Warren County Closed Sanitary Landfill (CSL) located in Warrenton, North Carolina (**Figure 1**). The ground water monitoring activities were conducted in general accordance with North Carolina Department of Environment and Natural Resources' (NCDENR), Division of Solid Waste Management guidelines.

Gauging and Sampling

On August 27, 2012, Resolve personnel collected ground water samples from on-site monitoring wells MW-1A, MW-2, MW-3, and MW-4. In addition, three surface water samples (SW-1 through SW-3) were collected along the tributary of Possumquarter Creek during the August 2012 site visit. A water quality sample was also collected from the nearby water supply well (WSW-1) located on the adjacent residential property to the northwest (539 Baltimore Avenue). A Site Map is provided as **Figure 2**.

Prior to collecting ground water samples from the monitoring wells, water levels were measured in each well from the top of the well casing. Based on the depth to water gauging data, Resolve personnel calculated the volume of standing water in each monitoring well. For quality control purposes, one equipment blank was collected prior to the initiation of ground water sampling activities by passing distilled water provided by the laboratory through a clean, Teflon™ bailer. Each well was purged of at least three well volumes or until bailed dry using a new, disposable Teflon™ bailer. As generated, the purge water was discharged to the ground surface at the respective wellheads. Prior to sample collection, field parameters for temperature, pH, and specific conductance were measured using calibrated field instrumentation. Well gauging data and measured field parameters are summarized in **Table 1**. The surface water samples were collected using grab sample techniques. All collected samples were placed directly into laboratory supplied glassware and placed on ice for transport to a North Carolina certified laboratory for analyses.

The collected ground water samples and equipment blank were analyzed for the presence of Appendix I volatile organic compounds (VOCs) including tetrahydrofuran by EPA Method 8260B and Appendix I metals by EPA Methods 6010, as required by the NCDENR. The samples were analyzed by Accutest Laboratories, LLC (Accutest) of Orlando, Florida. Accutest is a North Carolina certified laboratory. A trip blank was also submitted to the laboratory for analysis of Appendix I VOCs by Method 8260B.

Results

Based upon the laboratory analytical report, detectable concentrations of Appendix I VOCs and/or metals were reported in each of the collected samples as summarized below.

MW-1A:

Detectable concentrations of benzene, p-dichlorobenzene, cis-1,2-dichloroethylene, trichloroethylene, barium, beryllium, chromium, lead and zinc were reported in the ground water sample collected from MW-1A. **The concentrations of benzene, chromium and lead exceed the North Carolina ground water quality standards (NCGWQS) established in T15A NCAC 2L.0202.** None of the remaining detectable concentrations exceeded the NCGWQS, if established.

MW-2:

Detectable concentrations of benzene, chlorobenzene, chloroethane, 1,1-dichloroethane, p-dichlorobenzene, cis-1,2-dichloroethylene, barium, lead and zinc were reported in the ground water sample collected from MW-2. None of the concentrations of detectable concentrations exceeded the NCGWQS, if established. Currently, there is no NCGWQS for chloroethane, therefore the concentration is reportable.

MW-3:

Detectable concentrations of benzene, chlorobenzene, 1,1-dichloroethane, p-dichlorobenzene, cis-1,2-dichloroethylene and tetrahydrofuran were reported in the ground water sample collected from MW-3. None of the reported concentrations exceeded the established NCGWQS. There are no NCGWQS for chloroethane or tetrahydrofuran, therefore the concentrations are reportable.

MW-4:

Detectable concentrations of benzene, 1,1-dichloroethane, cis-1,2-dichloroethylene, chromium and zinc were reported in the ground water sample from MW-4. **The concentration of chromium exceeds the NCGWQS.** None of the remaining detectable concentrations exceeded the NCGWQS.

WSW-1:

No detectable concentrations of requested method constituents were reported in the ground water sample collected from WSW-1.

SW-1:

Detectable concentration of barium, lead and zinc were reported in the surface water sample collected from SW-1. **The concentration of lead exceeds the NCGWQS.** The concentrations of barium and zinc did not exceed the NCGWQS.

SW-2:

No detectable concentrations of requested method constituents were reported in the surface water sample collected from SW-2.

SW-3:
Detectable concentrations of cis-1,2-dichloroethylene, toluene and zinc were reported in the surface water sample collected from SW-3. None of the reported concentrations exceeded the established NCGWQS.

Equipment Blank:
No detectable concentrations of requested method constituents were reported in the equipment blank.

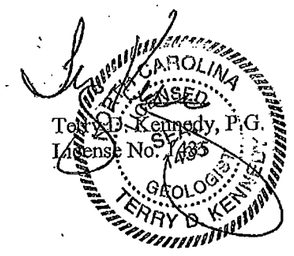
The current laboratory analytical results are summarized in **Table 2**. Historical laboratory data is summarized in **Table 3**. A water quality map based upon results of the August 27, 2012 sampling event presented as **Figure 3**. A copy of the laboratory analytical report is attached as **Appendix A**.

Based upon the current sampling data, a ground water quality violation (benzene, chromium and lead) exists at the site. Continued monitoring is recommended.

The next semi-annual sampling event will be conducted in February 2013. Please call if you have any questions or require any additional information at (704) 289-5881.

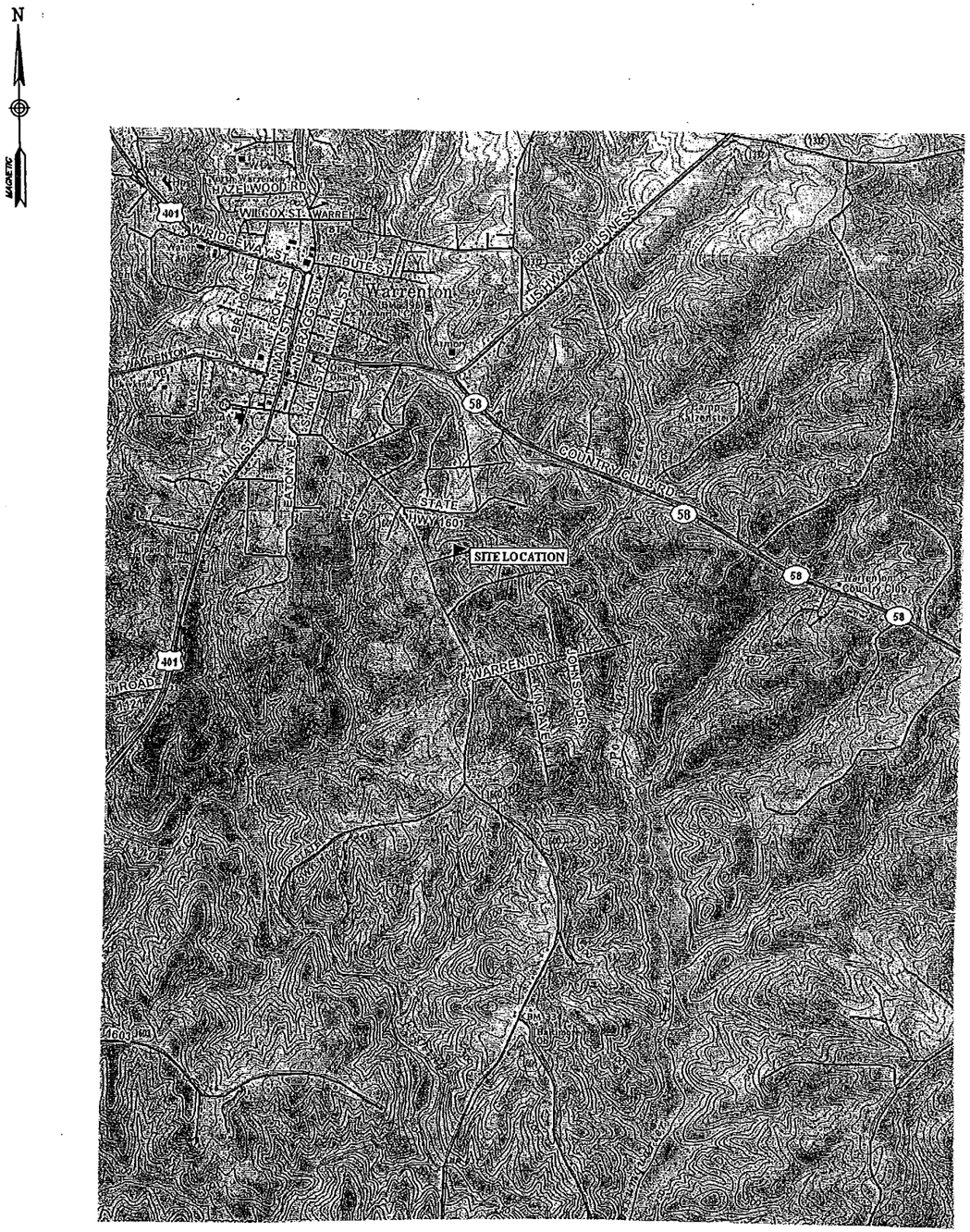
Sincerely,
Resolve Environmental Services, PLLC

Laura Minor
Project Manager



Terry D. Kennedy, P.G.
License No. 1435

FIGURES



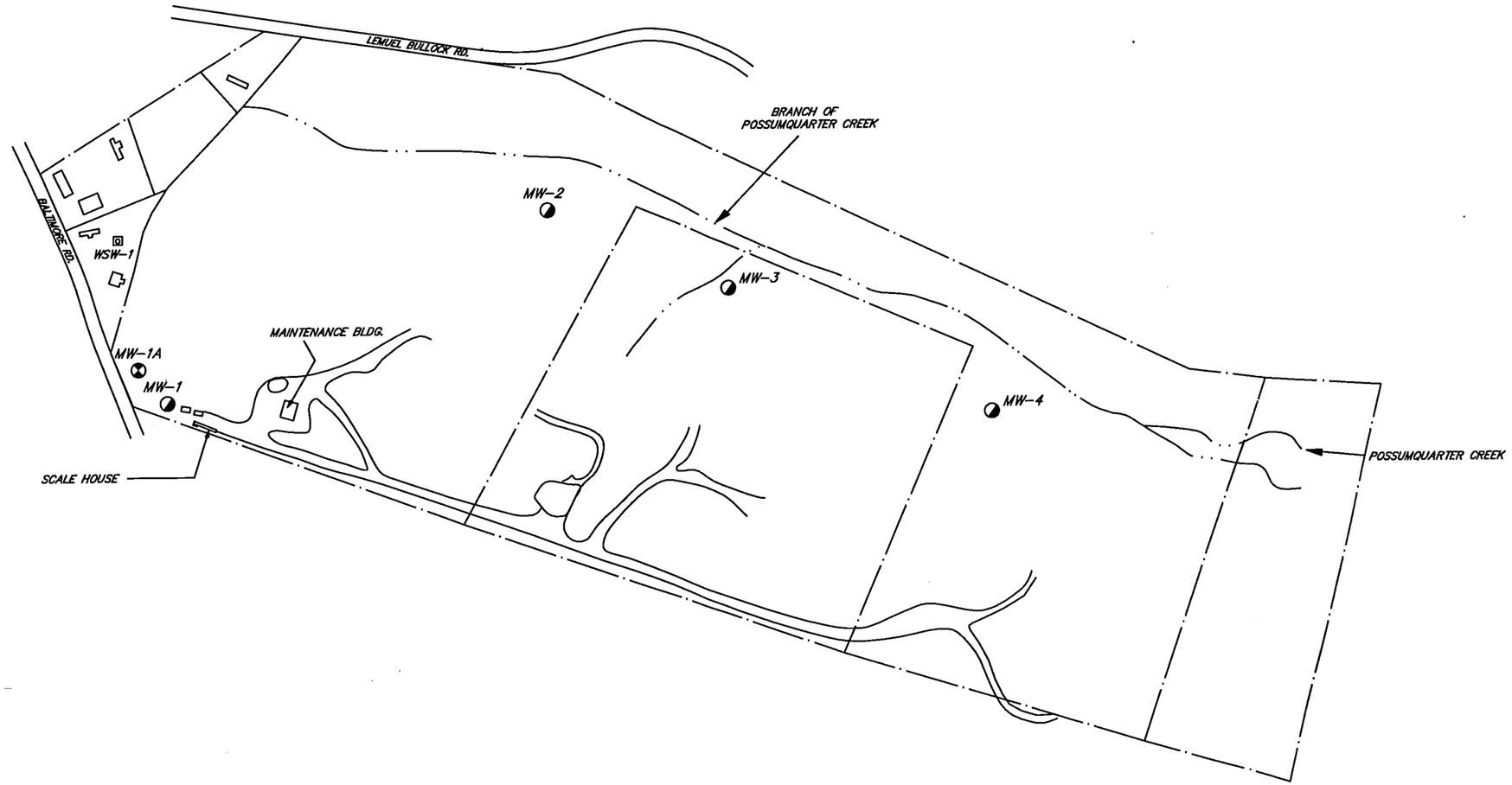
Warren County Landfill (Closed) **559 Baltimore Road** **Warrenton, North Carolina**	**Figure 1** **Site Location Map**	**RESOLVE ENVIRONMENTAL SERVICES, PLLC** **410 East Franklin Street** **Monroe, North Carolina 28112**

LEGEND

- NC TYPE II MONITORING WELL
- NC TYPE III MONITORING WELL
- APPROXIMATE PROPERTY BOUNDARY LINE
- CREEK
- WATER SUPPLY WELL

N

MAGNETIC



NOTE: Site Map based on Resolve Environmental Services, P.A. "Sampling Location Map" (date unknown).

0 150 300

(IN FEET)
1 Inch = 300 ft.

SITE MAP

WARREN COUNTY LANDFILL
559 BALTIMORE ROAD, WARRENTON, WARREN COUNTY, NC
PERMIT # 93-01

Date: 09/13/11	Drawn by: LJM	Figure: 2

RESOLVE ENVIRONMENTAL SERVICES, PLLC

TABLES

TABLE 1
MONITORING WELL GAUGING AND FIELD PARAMETER DATA
WARREN COUNTY CLOSED SANITARY LANDFILL

Date: 8/27/2012

Sample Location	Total Well Depth (feet)	Depth to Water (feet)	Temperature (in C)	pH	Specific Conductance (µmhos)	Volume Purged (gals)
MW-1A	41.93	36.33	17.3	5.85	0.10	2.00
MW-2	15.75	8.27	16.4	5.43	0.21	2.75
MW-3	28.83	5.82	15.2	5.57	0.16	10.00
MW-4	23.07	4.14	15.9	5.85	0.29	8.00

Notes:
- Gauging and field parameters collected on August 27, 2012 by Resolve personnel.
- All measurements relative to the top of well casing.

Date : 03/13/2012

Analytical Method →		**0**			
Contaminant of Concern →		**Lead**	**Nickel**	**Vanadium**	**Zinc**
Well ID	**Date Collecte (mm/dd/yy)**				
NCGWQS (ug/L)		**15**	**100**	**NS**	**2,100**
MW-1A	08/27/12	**17.8**	<40	<50	80.5
MW-2	08/27/12	6.1	<40	<50	80.1
MW-3	08/27/12	<5.0	<40	<50	<20
MW-4	08/27/12	<5.0	<40	<50	38.2
WSW-1	08/27/12	<5.0	<40	<50	<20
SW-1	08/27/12	**18.1**	<40	<50	122
SW-2	08/27/12	<5.0	<40	<50	<20
SW-3	08/27/12	<5.0	<40	<50	39.2
Equipment Blank	08/27/12	<5.0	<40	<50	<20
Trip Blank	08/27/12	NR	NR	NR	NR

Notes:

- Results reported in µg/L (microg
- NCGWQS: North Carolina Grou
- < : Less than the method detectio
- NS: Not specified.
- Concentrations in bold face type
- J: Estimated concentration.
- NR: Analysis not requested.
- A concentration of toluene (0.22

TABLE 3
HISTORICAL SUMMARY OF LABORATORY ANALYSES-GROUND WATER SAMPLES
WARREN COUNTY CLOSED SANITARY LANDFILL

Date : 8/27/2012

Analytical Method →		**Appendix I - 8260**							**Appendix I - 6010/200.7**		**7470**
Contaminant of Concern →		**Benzene**	**Chlorobenzene**	**Chloroethane**	**1,4-Dichlorobenzene/ p-Dichlorobenzene**	**1,1-Dichloroethane**	**cis-1,2-Dichloroethene**	**Tetrahydrofuran**	**Chromium**	**Lead**	**Mercury**
Well ID	**Date Collected (mm/dd/yy)**										
NCGWQS (ug/L)		**1**	**50**	**NS**	**6**	**6**	**70**	**NS**	**10**	**15**	**1**
MW-1A	8/10/2006	**1.3**	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<10	15	NR
	2/22/2007	**1.4**	<1.0	<1.0	<1.0	<1.0	2.5	NR	**33**	**61**	NR
	8/27/2007	**1.3**	<1.0	<1.0	1.4	<1.0	2.6	<10.0	<5.0	<5.0	<0.20
	2/27/2008	**1.7**	<1.0	<1.0	1.9	<1.0	3.0	<10.0	<5.0	<5.0	<0.20
	8/26/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	**15.2**	**25.5**	<0.20
	2/25/2009	**1.2**	<1.0	<1.0	2.2	<1.0	2.5	<10.0	8.1	14.8	**0.21**
	8/19/2009	**1.52**	<1.00	<1.00	1.91	<1.00	2.27	<20.0	<5.00	<5.00	<0.200
	2/8/2010	**1.41**	<0.210	<0.270	2.22	<0.240	2.77	NR	3.72	4.66	0.101
	8/12/2010	**1.29**	<0.210	<0.270	2.23	<0.240	2.56	<1.00	5.10	10.5	<0.0800
	2/16/2011	0.839 J	<0.210	<0.270	1.45	<0.240	1.62	<1.00	31.3	57.1	0.383
	8/23/2011	0.88 J	<0.20	<0.50	1.1	<0.25	2.1	<2.0	<10	5.3	NR
	2/17/2012	**1.2**	<0.20	<0.50	1.9	<0.25	2.3	<2.0	**20.3**	**38.6**	NR
	8/27/2012	**1.4**	<0.20	<0.50	2.4	<0.25	2.6	<2.0	**10.3**	**17.8**	NR
MW-2	8/10/2006	**1.5**	<1.0	**9.2**	4.3	<1.0	10	NR	<10	<10	NR
	2/22/2007	**1.3**	1.1	**7.8**	3.8	<1.0	8.1	NR	<5.0	<5.0	NR
	8/27/2007	**1.1**	1.6	**6.9**	2.9	<1.0	8.2	<10.0	<5.0	<5.0	<0.20
	2/27/2008	**1.6**	1.9	**7.3**	4.7	<1.0	9.9	<10.0	<5.0	<5.0	<0.20
	8/26/2008	<1.0	<1.0	**4.6**	2.8	<1.0	5.5	**19.1**	<5.0	<5.0	<0.20
	2/25/2009	**1.5**	1.7	**9.7**	5.4	<1.0	10.2	<10.0	<5.0	<5.0	<0.20
	8/19/2009	**1.21**	1.48	**7.50**	3.15	<1.00	6.27	<20.0	<5.00	<5.00	<0.200
	2/8/2010	0.837	1.07	**5.62**	2.70	0.372	5.76	NR	<2.00	<3.00	<0.0800
	8/12/2010	**1.49**	2.01	**8.34**	4.22	0.797	9.49	<1.00	<2.00	1.92	<0.0800
	2/16/2011	**1.25**	2.00	**6.22**	3.72	0.670 J	7.14	<1.00	<2.00	<1.50	<0.0800
	8/23/2011	0.65 J	1.3	3.9	2.1	0.33 J	4.5	<2.0	<10	8.7	NR
	2/17/2012	**1.6**	2.0	7.2	4.3	0.97 J	9.5	<2.0	<10	<5.0	NR
	8/27/2012	0.66 J	1.0	1.8 J	2.0	0.33 J	3.3	<2.0	<10	6.1	NR

TABLE 3
HISTORICAL SUMMARY OF LABORATORY ANALYSES-GROUND WATER SAMPLES
WARREN COUNTY CLOSED SANITARY LANDFILL

Date : 8/27/2012

Analytical Method →		**Appendix I - 8260**							**Appendix I - 6010/200.7**		**7470**
Contaminant of Concern →		**Benzene**	**Chlorobenzene**	**Chloroethane**	**1,4-Dichlorobenzene/ p-Dichlorobenzene**	**1,1-Dichloroethane**	**cis-1,2-Dichloroethene**	**Tetrahydrofuran**	**Chromium**	**Lead**	**Mercury**
Well ID	**Date Collected (mm/dd/yy)**										
NCGWQS (ug/L)		**1**	**50**	**NS**	**6**	**6**	**70**	**NS**	**10**	**15**	**1**
MW-3	8/10/2006	<1.0	<1.0	<1.0	<1.0	2.4	2.8	NR	<10	<10	NR
	2/22/2007	<1.0	<1.0	<1.0	<1.0	2.6	3.9	NR	<5.0	<5.0	NR
	8/27/2007	<1.0	<1.0	**2.3**	<1.0	2.3	4.4	**17.2**	<5.0	<5.0	0.23
	2/27/2008	<1.0	<1.0	**1.20**	1.10	2.4	5.5	**27.0**	<5.0	<5.0	<0.20
	8/26/2008	<1.0	<1.0	<1.0	<1.0	1.7	2.6	**19.1**	<5.0	<5.0	<0.20
	2/25/2009	<1.0	<1.0	<1.0	<1.0	1.9	3.8	**20.9**	<5.0	<5.0	<0.20
	8/19/2009	<1.00	<1.00	**1.29**	<1.00	1.67	3.46	**26.3**	<5.00	<5.00	<0.200
	2/8/2010	0.514	0.817	**1.05**	0.996	1.61	3.96	NR	3.12	<1.50	<0.0800
	8/12/2010	0.413	0.544	<0.270	0.853	1.65	3.08	**15.2**	2.83	2.08	<0.0800
	2/16/2011	0.369 J	0.642 J	0.764 J	0.800 J	1.30	2.87	**15.6**	2.26 J	<1.50	<0.0800
	8/23/2011	0.30 J	0.64 J	<0.50	0.63 J	0.92	2.4	**15.4**	<10	<5.0	NR
	2/17/2012	0.35 J	0.62 J	0.68 J	0.71 J	0.80 J	2.5	**14.0**	<10	<5.0	NR
	8/27/2012	0.32 J	0.66 J	<0.50	0.66 J	0.67 J	2.0	**10.2**	<10	<5.0	NR
MW-4	8/10/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<10	<10	NR
	2/22/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<5.0	<5.0	NR
	8/27/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	13.0	<5.0	<0.20
	2/27/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	**22.5**	<5.0	<0.20
	8/26/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	**63.3**	**15.6**	<0.20
	2/25/2009	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	7.9	<5.0	<0.20
	8/19/2009	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<20.0	**12.2**	<5.00	<0.200
	2/8/2010	0.250	<0.210	<0.270	<0.250	0.401	0.599	NR	**14.4**	<1.50	<0.0800
	8/12/2010	0.295	<0.210	<0.270	<0.250	<0.240	0.715	<1.00	**10.4**	3.27	<0.0800
	2/16/2011	0.250 J	<0.210	<0.270	<0.250	0.346 J	0.607 J	<1.00	**6.65 J**	<1.50	<0.0800
	8/23/2011	0.22 J	<0.20	<0.50	<0.23	0.25 J	0.47 J	<2.0	**180**	**30.3**	NR
	2/17/2012	0.27 J	<0.20	<0.50	<0.23	0.28 J	0.81 J	<2.0	**109**	**15.1**	NR
	8/27/2012	0.33 J	<0.20	<0.50	<0.23	0.32 J	0.96 J	<2.0	**23.5**	<5.0	NR

TABLE 3
HISTORICAL SUMMARY OF LABORATORY ANALYSES-GROUND WATER SAMPLES
WARREN COUNTY CLOSED SANITARY LANDFILL

Date : 8/27/2012

Analytical Method →		**Appendix I - 8260**							**Appendix I - 6010/200.7**		**7470**
Contaminant of Concern →		**Benzene**	**Chlorobenzene**	**Chloroethane**	**1,4-Dichlorobenzene/ p-Dichlorobenzene**	**1,1-Dichloroethane**	**cis-1,2-Dichloroethene**	**Tetrahydrofuran**	**Chromium**	**Lead**	**Mercury**
Well ID	**Date Collected (mm/dd/yy)**										
NCGWQS (ug/L)		**1**	**50**	**NS**	**6**	**6**	**70**	**NS**	**10**	**15**	**1**
SW-1	8/10/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<10	**94**	NR
	2/22/2007	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	NR	<5.0	<5.0	NR
	8/27/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	2/27/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	8/26/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	**248**	**106**	<0.20
	2/25/2009	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	8/19/2009	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2/8/2010	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	NR	<2.00	<1.50	<0.0800
	8/12/2010	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	<1.00	<2.00	<1.50	<0.0800
	2/16/2011	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	<1.00	6.91 J	3.79	<0.0800
	8/23/2011	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/17/2012	<0.20	<0.20	<0.50	<0.23	<0.25	<0.26	<2.0	<10	<5.0	NR
	8/27/2012	<0.20	<0.20	<0.50	<0.23	<0.25	<0.26	<2.0	<10	**18.1**	NR
SW-2	8/10/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<10	<10	NR
	2/22/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<5.0	<5.0	NR
	8/27/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	2/27/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	8/26/2008	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2/25/2009	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	8/19/2009	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<20.0	**49.4**	**79.4**	0.314
	2/8/2010	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	NR	3.04	1.87	<0.0800
	8/12/2010	0.143	0.240	<0.270	0.393	<0.240	1.14	**7.77**	<2.00	1.67	<0.0800
	2/16/2011	<0.140	<0.210	<0.270	<0.250	<0.240	0.646 J	**3.06**	<2.00	<1.50	<0.0800
	8/23/2011	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/17/2012	<0.20	<0.20	<0.50	<0.23	<0.25	<0.26	<2.0	<10	5.1	NR
	8/27/2012	<0.20	<0.20	<0.50	<0.23	<0.25	<0.26	<2.0	<10	<5.0	NR

TABLE 3
HISTORICAL SUMMARY OF LABORATORY ANALYSES-GROUND WATER SAMPLES
WARREN COUNTY CLOSED SANITARY LANDFILL

Date : 8/27/2012

Analytical Method →		**Appendix I - 8260**							**Appendix I - 6010/200.7**		**7470**
Contaminant of Concern →		**Benzene**	**Chlorobenzene**	**Chloroethane**	**1,4-Dichlorobenzene/ p-Dichlorobenzene**	**1,1-Dichloroethane**	**cis-1,2-Dichloroethene**	**Tetrahydrofuran**	**Chromium**	**Lead**	**Mercury**
Well ID	**Date Collected (mm/dd/yy)**										
NCGWQS (ug/L)		**1**	**50**	**NS**	**6**	**6**	**70**	**NS**	**10**	**15**	**1**
SW-3	8/10/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<10	<10	NR
	2/22/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<5.0	<5.0	NR
	8/27/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	2/27/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	8/26/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	2/25/2009	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<5.0	<0.20
	8/19/2009	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<20.0	<5.00	<5.00	<0.200
	2/8/2010	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	NR	<2.00	<1.50	<0.0800
	8/12/2010	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/16/2011	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	<1.00	<2.00	<1.50	<0.0800
	8/23/2011	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/17/2012	<0.20	<0.20	<0.50	<0.23	<0.25	<0.26	<2.0	<10	<5.0	NR
	8/27/2012	<0.20	<0.20	<0.50	<0.23	<0.25	0.35 J	<2.0	<10	<5.0	NR

TABLE 3
HISTORICAL SUMMARY OF LABORATORY ANALYSES-GROUND WATER SAMPLES
WARREN COUNTY CLOSED SANITARY LANDFILL

Date : 8/27/2012

Analytical Method →		**Appendix I - 8260**							**Appendix I - 6010/200.7**		**7470**
Contaminant of Concern →		**Benzene**	**Chlorobenzene**	**Chloroethane**	**1,4-Dichlorobenzene/ p-Dichlorobenzene**	**1,1-Dichloroethane**	**cis-1,2-Dichloroethene**	**Tetrahydrofuran**	**Chromium**	**Lead**	**Mercury**
Well ID	**Date Collected (mm/dd/yy)**										
NCGWQS (ug/L)		**1**	**50**	**NS**	**6**	**6**	**70**	**NS**	**10**	**15**	**1**
WSW-1/WS/WSW	8/10/2006	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2/22/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NR	<5.0	<5.0	NR
	8/27/2007	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2/27/2008	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	8/26/2008	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2/25/2009	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	8/19/2009	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2/8/2010	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	NR	<2.00	4.29	0.272
	2/25/2010	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	NR	<2.00	<1.50	0.338
	8/12/2010	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	<1.00 ·	<2.00	2.19	0.225
	2/16/2011	<0.140	<0.210	<0.270	<0.250	<0.240	<0.450	0.186	<2.00	<1.50	0.242
	8/23/2011	<0.20	<0.20	<0.50	<0.25	<0.25	<0.26	<2.0	<10	<5.0	NR
	2/17/2012	<0.20	<0.20	<0.50	<0.23	<0.25	<0.26	<2.0	<10	<5.0	NR
	8/27/2012	<0.20	<0.20	<0.50	<0.23	<0.25	<0.26	<2.0	<10	<5.0	NR

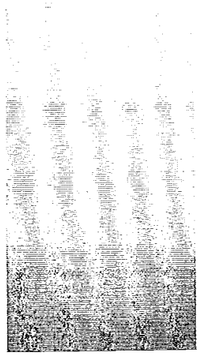
Notes:

- Results reported in µg/L (micrograms per Liter) .
- NCGWQS: North Carolina Ground Water Quality Standard as specified in T15A NCAC 2L. 0202.
- < : Less than the method detection limit specified in the laboratory report.
- NR: Analysis not requested or sample was not collected.
- NS: Not specified.
- Concentrations in bold face type exceeded the 2L standard.
- Concentrations of tetrachloroethene (0.254 µg/L and 0.357 µg/L, respectively) were reported in MW-3 and WSW-1 on 2/8/2010; a concentration of tetrachloroethene (0.189 J ug/L) was reported in MW-3 on 2/16/11; concentrations of trichloroethylene (0.37 J ug/L and 0.40 J ug/L, respectively) were reported in MW-1A and MW-2 on 2/17/12; a concentration of beryllium (6.5 ug/L) was reported in MW-1A on 2/17/12; a conentration of toluene (0.22 J µg/L) was reported in surface water sample SW-3 on 8/27/12.
- J: Estimated concentration.

APPENDIX A
Laboratory Analytical Report

Southeast ACCUTEST LABORATORIES

09/10/12



Technical Report for

Resolve Environmental

Warren County; Warrenton, NC

Accutest Job Number: F96444

Sampling Date: 08/28/12

Report to:

Resolve Environmental
410 E Franklin St
Monroe, NC 28112
resolve@carolina.rr.com

ATTN: Laura Minor

Total number of pages in report: 73

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Muna Mohammed 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001)
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Sample Summary

Resolve Environmental

Warren County; Warrenton, NC

Job No: F96444

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
F96444-1	08/28/12	09:05 LM	08/30/12	AQ	Ground Water	MW-1A
F96444-2	08/28/12	08:50 LM	08/30/12	AQ	Ground Water	MW-2
F96444-3	08/28/12	08:20 LM	08/30/12	AQ	Ground Water	MW-3
F96444-4	08/28/12	07:40 LM	08/30/12	AQ	Ground Water	MW-4
F96444-5	08/28/12	08:48 LM	08/30/12	AQ	Surface Water	SW-1
F96444-6	08/28/12	07:58 LM	08/30/12	AQ	Surface Water	SW-2
F96444-7	08/28/12	07:47 LM	08/30/12	AQ	Surface Water	SW-3
F96444-8	08/28/12	09:20 LM	08/30/12	AQ	Ground Water	WSW-1
F96444-9	08/28/12	07:20 LM	08/30/12	AQ	Equipment Blank	EQUIPMENT BLANK
F96444-10	08/28/12	00:00 LM	08/30/12	AQ	Trip Blank Water	TRIP BLANK

2

Summary of Hits

Job Number: F96444
Account: Resolve Environmental
Project: Warren County; Warrenton, NC
Collected: 08/28/12

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
F96444-1	**MW-1A**					
Benzene		1.4	1.0	0.20	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		2.6	1.0	0.26	ug/l	SW846 8260B
p-Dichlorobenzene		2.4	1.0	0.23	ug/l	SW846 8260B
Trichloroethylene		0.37 J	1.0	0.26	ug/l	SW846 8260B
Chromium		10.3	10		ug/l	SW846 6010C
Lead		17.8	5.0		ug/l	SW846 6010C
Zinc		80.5	20		ug/l	SW846 6010C
F96444-2	**MW-2**					
Benzene		0.66 J	1.0	0.20	ug/l	SW846 8260B
Chlorobenzene		1.0	1.0	0.20	ug/l	SW846 8260B
Chloroethane		1.8 J	2.0	0.50	ug/l	SW846 8260B
1,1-Dichloroethane		0.33 J	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		3.3	1.0	0.26	ug/l	SW846 8260B
p-Dichlorobenzene		2.0	1.0	0.23	ug/l	SW846 8260B
Barium		212	200		ug/l	SW846 6010C
Lead		6.1	5.0		ug/l	SW846 6010C
Zinc		80.1	20		ug/l	SW846 6010C
F96444-3	**MW-3**					
Benzene		0.32 J	1.0	0.20	ug/l	SW846 8260B
Chlorobenzene		0.66 J	1.0	0.20	ug/l	SW846 8260B
1,1-Dichloroethane		0.67 J	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		2.0	1.0	0.26	ug/l	SW846 8260B
p-Dichlorobenzene		0.66 J	1.0	0.23	ug/l	SW846 8260B
Tetrahydrofuran		10.2	5.0	2.0	ug/l	SW846 8260B
F96444-4	**MW-4**					
Benzene		0.33 J	1.0	0.20	ug/l	SW846 8260B
1,1-Dichloroethane		0.32 J	1.0	0.25	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		0.96 J	1.0	0.26	ug/l	SW846 8260B
Chromium		23.5	10		ug/l	SW846 6010C
Zinc		38.2	20		ug/l	SW846 6010C
F96444-5	**SW-1**					
Barium		203	200		ug/l	SW846 6010C
Lead		18.1	5.0		ug/l	SW846 6010C
Zinc		122	20		ug/l	SW846 6010C

2

Summary of Hits

Job Number: F96444
Account: Resolve Environmental
Project: Warren County; Warrenton, NC
Collected: 08/28/12

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
F96444-6	**SW-2**					
No hits reported in this sample.						
F96444-7	**SW-3**					
cis-1,2-Dichloroethylene		0.35 J	1.0	0.26	ug/l	SW846 8260B
Toluene		0.22 J	1.0	0.20	ug/l	SW846 8260B
Zinc		39.2	20		ug/l	SW846 6010C
F96444-8	**WSW-1**					
No hits reported in this sample.						
F96444-9	**EQUIPMENT BLANK**					
No hits reported in this sample.						
F96444-10	**TRIP BLANK**					
No hits reported in this sample.						

Southeast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-1A		
Lab Sample ID:	F96444-1	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078225.D	1	09/04/12	MM	n/a	n/a	VJ4090
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	1.4	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2.6	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	2.4	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

3.1

Client Sample ID:	MW-1A		
Lab Sample ID:	F96444-1	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	0.37	1.0	0.26	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	94%		86-112%
460-00-4	4-Bromofluorobenzene	95%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.1

Client Sample ID:	MW-1A		
Lab Sample ID:	F96444-1	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	10.3	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	17.8	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	80.5	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.2

Client Sample ID:	MW-2		
Lab Sample ID:	F96444-2	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078226.D	1	09/04/12	MM	n/a	n/a	VJ4090
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

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CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	0.66	1.0	0.20	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	1.0	1.0	0.20	ug/l	
75-00-3	Chloroethane	1.8	2.0	0.50	ug/l	J
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	0.33	1.0	0.25	ug/l	J
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3.3	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	2.0	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

3.2

Client Sample ID:	MW-2		
Lab Sample ID:	F96444-2	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

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CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	95%		86-112%
460-00-4	4-Bromofluorobenzene	94%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.2
35

Client Sample ID:	MW-2		
Lab Sample ID:	F96444-2	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	212	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	6.1	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	80.1	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.3
35

Client Sample ID:	MW-3		
Lab Sample ID:	F96444-3	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078227.D	1	09/04/12	MM	n/a	n/a	VJ4090
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

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CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	0.32	1.0	0.20	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	0.66	1.0	0.20	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	0.67	1.0	0.25	ug/l	J
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2.0	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	0.66	1.0	0.23	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	F96444-3	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

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CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	10.2	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	96%		86-112%
460-00-4	4-Bromofluorobenzene	96%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	F96444-3	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	F96444-4	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078244.D	1	09/04/12	MM	n/a	n/a	VJ4090
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	0.33	1.0	0.20	ug/l	J
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	0.32	1.0	0.25	ug/l	J
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.96	1.0	0.26	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

3.4
C3

Client Sample ID:	MW-4		
Lab Sample ID:	F96444-4	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	95%		76-127%
2037-26-5	Toluene-D8	94%		86-112%
460-00-4	4-Bromofluorobenzene	91%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.4

Client Sample ID:	MW-4		
Lab Sample ID:	F96444-4	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	23.5	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	38.2	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.5

Client Sample ID:	SW-1		
Lab Sample ID:	F96444-5	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078282.D	1	09/06/12	MM	n/a	n/a	VJ4093
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

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CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene [a]	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	F96444-5	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

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CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	96%		76-127%
2037-26-5	Toluene-D8	94%		86-112%
460-00-4	4-Bromofluorobenzene	92%		84-120%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.3
3

Client Sample ID:	SW-1		
Lab Sample ID:	F96444-5	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	203	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	18.1	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	122	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.6

Client Sample ID:	SW-2		
Lab Sample ID:	F96444-6	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078232.D	1	09/04/12	MM	n/a	n/a	VJ4090
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

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CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

3.6

Client Sample ID:	SW-2		
Lab Sample ID:	F96444-6	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	96%		76-127%
2037-26-5	Toluene-D8	94%		86-112%
460-00-4	4-Bromofluorobenzene	91%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	F96444-6	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.7

Client Sample ID:	SW-3		
Lab Sample ID:	F96444-7	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078233.D	1	09/04/12	MM	n/a	n/a	VJ4090
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.35	1.0	0.26	ug/l	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	F96444-7	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	0.22	1.0	0.20	ug/l	J
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	95%		76-127%
2037-26-5	Toluene-D8	93%		86-112%
460-00-4	4-Bromofluorobenzene	93%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.7
B

Client Sample ID:	SW-3		
Lab Sample ID:	F96444-7	**Date Sampled:**	08/28/12
Matrix:	AQ - Surface Water	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	39.2	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.3

Client Sample ID:	WSW-1		
Lab Sample ID:	F96444-8	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078234.D	1	09/04/12	MM	n/a	n/a	VJ4090
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

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CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WSW-1		
Lab Sample ID:	F96444-8	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

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CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		87-116%
17060-07-0	1,2-Dichloroethane-D4	96%		76-127%
2037-26-5	Toluene-D8	93%		86-112%
460-00-4	4-Bromofluorobenzene	93%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	WSW-1		
Lab Sample ID:	F96444-8	**Date Sampled:**	08/28/12
Matrix:	AQ - Ground Water	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.9

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	F96444-9	**Date Sampled:**	08/28/12
Matrix:	AQ - Equipment Blank	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J078243.D	1	09/04/12	MM	n/a	n/a	VJ4090
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

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CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.9

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	F96444-9	**Date Sampled:**	08/28/12
Matrix:	AQ - Equipment Blank	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	93%		76-127%
2037-26-5	Toluene-D8	95%		86-112%
460-00-4	4-Bromofluorobenzene	90%		84-120%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.9
B

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	F96444-9	**Date Sampled:**	08/28/12
Matrix:	AQ - Equipment Blank	**Date Received:**	08/30/12
		Percent Solids:	n/a
Project:	Warren County; Warrenton, NC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Arsenic	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Beryllium	< 4.0	4.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cadmium	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Cobalt	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Copper	< 25	25	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Lead	< 5.0	5.0	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Nickel	< 40	40	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Thallium [a]	< 1.0	1.0	ug/l	2	09/06/12	09/06/12	ANJ	SW846 6020A [2]	SW846 3010A [4]
Vanadium	< 50	50	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]
Zinc	< 20	20	ug/l	1	09/04/12	09/04/12	LM	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA10112
(2) Instrument QC Batch: N:MA29340
(3) Prep QC Batch: MP23596
(4) Prep QC Batch: N:MP66493

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.10 3

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F96444-10	**Date Sampled:**	08/28/12
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	J078273.D	1	09/05/12	MM	n/a	n/a	VJ4092
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

3.10
B

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F96444-10	**Date Sampled:**	08/28/12
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/30/12
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Warren County; Warrenton, NC		

VOA Appendix I 40 CFR Part 258

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	98%		76-127%
2037-26-5	Toluene-D8	95%		86-112%
460-00-4	4-Bromofluorobenzene	93%		84-120%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Southeast ACCUTEST LABORATORIES

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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (NC)
- Chain of Custody

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 · Orlando, Fl 32811
TEL. 407-425-6700 · FAX: 407-425-0707
www.accutest.com

Accutest JOB # F96444 | PAGE 1 OF 1

Accutest Quote # Resolve rate (special) | SKIFF#

Client / Reporting Information

Company Name: Resolve
Address: 410 E Franklin St
City: Monroe State: NC Zip: 28112
Project Contact: Laura Minor E-mail: lminor@resolvecarolina.com
Phone #: 704 289 5881
Sampler(s) Name(s) (Printed): Laura Minor

Project Information

Project Name: Warren County Landfill
Street:
City: Warrenton State: NC
Project #:
Fax #:
Client Purchase Order #:

Analytical Information

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	Total # of Bottles	Container Information	Appendix I VOCs + Tetrahydrofuran	Appendix I & II Metals	Lab Use Only
1	MW-1A	8/28/12	0905	LM	GW	4		X	X	
2	MW-2	"	0850	"	GW	1		X	X	
3	MW-3	"	0820	"	GW	1		X	X	
4	MW-4	"	0740	"	GW	1		X	X	
5	SW-1	"	0848	"	SW	1		X	X	
6	SW-2	"	0758	"	SW	1		X	X	
7	SW-3	"	0747	"	SW	1		X	X	
8	WSW-1	"	0920	"	GW	1		X	X	
9	Equipment Blank	↓	0720	↓	WW	↓		X	X	
10	Trip Blank							X		

TURNAROUND TIME (Business Days) — Approved By: / Rush Code

- [X] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS+QC)
- [ ] RED1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

ACCUTEST 2828-C QUEEN CITY DR CLT NC 28203

Comments / Remarks

EDD required

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	8/29/12 1015	2	3	8/29 16:15	4 FX
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5 FX 08.30.12	0930	6 8.30.12 930 MCS6	7		8

Lab Use Only: Custody Seal In Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: 3.0

F96444: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F96444 CLIENT: Resolve PROJECT: Warren County Landfill

DATE/TIME RECEIVED: 08-30-12 0930 (MM/DD/YY 24:00) NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 8994 8489 4176

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET
- [ ] WET ICE PRESENT

TRIP BLANK INFORMATION

- [✓] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [✓] TRIP BLANK NOT ON COC
- [✓] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [✓] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 3 CORR. FACTOR +0.0
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 3.0

SAMPLE INFORMATION

- [ ] SAMPLE LABELS PRESENT ON ALL BOTTLES
- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] 5035 FIELD KIT FROZEN WITHIN 48 HOUR'S
- [ ] RESIDUAL CHLORINE PRESENT

(APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE: R Will 08-30-12 REVIEWER SIGNATURE/DATE: [signature] 08/30/12

NF 12/10 receipt confirmation 122910.xls

4.1 4

F96444: Chain of Custody
Page 2 of 2

Southeast ACCUTEST LABORATORIES

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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4090-MB	J078222.D	1	09/04/12	MM	n/a	n/a	VJ4090

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-1, F96444-2, F96444-3, F96444-4, F96444-6, F96444-7, F96444-8, F96444-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4090-MB	J078222.D	1	09/04/12	MM	n/a	n/a	VJ4090

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-1, F96444-2, F96444-3, F96444-4, F96444-6, F96444-7, F96444-8, F96444-9

CAS No.	Compound	Result	RL	MDL	Units	Q
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	87-116%
17060-07-0	1,2-Dichloroethane-D4	95%	76-127%
2037-26-5	Toluene-D8	95%	86-112%
460-00-4	4-Bromofluorobenzene	95%	84-120%

Method Blank Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4092-MB	J078253.D	1	09/05/12	MM	n/a	n/a	VJ4092

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4092-MB	J078253.D	1	09/05/12	MM	n/a	n/a	VJ4092

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-10

CAS No.	Compound	Result	RL	MDL	Units	Q
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	87-116%
17060-07-0	1,2-Dichloroethane-D4	96%	76-127%
2037-26-5	Toluene-D8	94%	86-112%
460-00-4	4-Bromofluorobenzene	92%	84-120%

Method Blank Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4093-MB	J078281.D	1	09/06/12	MM	n/a	n/a	VJ4093

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
107-13-1	Acrylonitrile	ND	10	3.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.22	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.20	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.50	ug/l	
67-66-3	Chloroform	ND	1.0	0.22	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.25	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.50	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.26	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.23	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.35	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.50	ug/l	
74-88-4	Methyl iodide	ND	1.0	0.20	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.25	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4093-MB	J078281.D	1	09/06/12	MM	n/a	n/a	VJ4093

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-5

CAS No.	Compound	Result	RL	MDL	Units	Q
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.23	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
109-99-9	Tetrahydrofuran	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.26	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	2.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.22	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.52	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	87-116%
17060-07-0	1,2-Dichloroethane-D4	98%	76-127%
2037-26-5	Toluene-D8	95%	86-112%
460-00-4	4-Bromofluorobenzene	92%	84-120%

Blank Spike Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4090-BS	J078221.D	1	09/04/12	MM	n/a	n/a	VJ4090

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-1, F96444-2, F96444-3, F96444-4, F96444-6, F96444-7, F96444-8, F96444-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	122	98	59-134
107-13-1	Acrylonitrile	125	123	98	62-124
71-43-2	Benzene	25	27.7	111	83-124
74-97-5	Bromochloromethane	25	25.8	103	78-112
75-27-4	Bromodichloromethane	25	27.5	110	76-116
75-25-2	Bromoform	25	23.9	96	68-128
108-90-7	Chlorobenzene	25	28.1	112	87-115
75-00-3	Chloroethane	25	26.6	106	54-166
67-66-3	Chloroform	25	26.9	108	85-123
75-15-0	Carbon disulfide	25	25.9	104	67-147
56-23-5	Carbon tetrachloride	25	25.8	103	74-139
75-34-3	1,1-Dichloroethane	25	26.8	107	82-127
75-35-4	1,1-Dichloroethylene	25	29.2	117	75-133
96-12-8	1,2-Dibromo-3-chloropropane	25	25.6	102	61-118
106-93-4	1,2-Dibromoethane	25	26.2	105	80-115
107-06-2	1,2-Dichloroethane	25	26.5	106	76-122
78-87-5	1,2-Dichloropropane	25	27.1	108	81-120
124-48-1	Dibromochloromethane	25	24.3	97	74-116
156-59-2	cis-1,2-Dichloroethylene	25	27.3	109	81-114
10061-01-5	cis-1,3-Dichloropropene	25	25.7	103	83-119
95-50-1	o-Dichlorobenzene	25	28.4	114	85-115
106-46-7	p-Dichlorobenzene	25	26.7	107	87-113
156-60-5	trans-1,2-Dichloroethylene	25	27.5	110	82-126
10061-02-6	trans-1,3-Dichloropropene	25	26.4	106	87-123
100-41-4	Ethylbenzene	25	27.6	110	87-118
591-78-6	2-Hexanone	125	124	99	58-125
108-10-1	4-Methyl-2-pentanone	125	128	102	62-125
74-83-9	Methyl bromide	25	27.2	109	55-151
74-87-3	Methyl chloride	25	26.8	107	55-173
74-88-4	Methyl iodide	25	26.8	107	72-125
74-95-3	Methylene bromide	25	26.6	106	81-116
75-09-2	Methylene chloride	25	23.0	92	69-125
78-93-3	Methyl ethyl ketone	125	129	103	61-127
100-42-5	Styrene	25	28.1	112	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	27.5	110	81-119
71-55-6	1,1,1-Trichloroethane	25	27.5	110	79-133

* = Outside of Control Limits.

Blank Spike Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4090-BS	J078221.D	1	09/04/12	MM	n/a	n/a	VJ4090

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-1, F96444-2, F96444-3, F96444-4, F96444-6, F96444-7, F96444-8, F96444-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-34-5	1,1,2,2-Tetrachloroethane	25	26.0	104	71-120
79-00-5	1,1,2-Trichloroethane	25	26.9	108	80-114
96-18-4	1,2,3-Trichloropropane	25	25.9	104	77-115
127-18-4	Tetrachloroethylene	25	27.1	108	80-131
109-99-9	Tetrahydrofuran	25	23.1	92	60-125
108-88-3	Toluene	25	27.2	109	86-116
79-01-6	Trichloroethylene	25	28.3	113	85-124
75-69-4	Trichlorofluoromethane	25	31.2	125	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	23.0	92	51-137
75-01-4	Vinyl chloride	25	31.6	126	57-153
108-05-4	Vinyl Acetate	125	145	116	38-159
1330-20-7	Xylene (total)	75	86.7	116	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	87-116%
17060-07-0	1,2-Dichloroethane-D4	93%	76-127%
2037-26-5	Toluene-D8	97%	86-112%
460-00-4	4-Bromofluorobenzene	93%	84-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4092-BS	J078251.D	1	09/05/12	MM	n/a	n/a	VJ4092

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	117	94	59-134
107-13-1	Acrylonitrile	125	113	90	62-124
71-43-2	Benzene	25	26.4	106	83-124
74-97-5	Bromochloromethane	25	25.3	101	78-112
75-27-4	Bromodichloromethane	25	26.5	106	76-116
75-25-2	Bromoform	25	25.1	100	68-128
108-90-7	Chlorobenzene	25	26.4	106	87-115
75-00-3	Chloroethane	25	22.2	89	54-166
67-66-3	Chloroform	25	24.9	100	85-123
75-15-0	Carbon disulfide	25	24.5	98	67-147
56-23-5	Carbon tetrachloride	25	27.8	111	74-139
75-34-3	1,1-Dichloroethane	25	25.1	100	82-127
75-35-4	1,1-Dichloroethylene	25	26.8	107	75-133
96-12-8	1,2-Dibromo-3-chloropropane	25	22.7	91	61-118
106-93-4	1,2-Dibromoethane	25	25.8	103	80-115
107-06-2	1,2-Dichloroethane	25	24.3	97	76-122
78-87-5	1,2-Dichloropropane	25	25.5	102	81-120
124-48-1	Dibromochloromethane	25	23.8	95	74-116
156-59-2	cis-1,2-Dichloroethylene	25	25.8	103	81-114
10061-01-5	cis-1,3-Dichloropropene	25	24.2	97	83-119
95-50-1	o-Dichlorobenzene	25	26.7	107	85-115
106-46-7	p-Dichlorobenzene	25	25.2	101	87-113
156-60-5	trans-1,2-Dichloroethylene	25	25.2	101	82-126
10061-02-6	trans-1,3-Dichloropropene	25	24.7	99	87-123
100-41-4	Ethylbenzene	25	25.7	103	87-118
591-78-6	2-Hexanone	125	114	91	58-125
108-10-1	4-Methyl-2-pentanone	125	116	93	62-125
74-83-9	Methyl bromide	25	24.5	98	55-151
74-87-3	Methyl chloride	25	25.0	100	55-173
74-88-4	Methyl iodide	25	26.1	104	72-125
74-95-3	Methylene bromide	25	24.7	99	81-116
75-09-2	Methylene chloride	25	21.1	84	69-125
78-93-3	Methyl ethyl ketone	125	119	95	61-127
100-42-5	Styrene	25	26.9	108	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	26.8	107	81-119
71-55-6	1,1,1-Trichloroethane	25	25.6	102	79-133

* = Outside of Control Limits.

Blank Spike Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4092-BS	J078251.D	1	09/05/12	MM	n/a	n/a	VJ4092

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-34-5	1,1,2,2-Tetrachloroethane	25	22.8	91	71-120
79-00-5	1,1,2-Trichloroethane	25	24.8	99	80-114
96-18-4	1,2,3-Trichloropropane	25	23.4	94	77-115
127-18-4	Tetrachloroethylene	25	26.5	106	80-131
109-99-9	Tetrahydrofuran	25	22.0	88	60-125
108-88-3	Toluene	25	25.8	103	86-116
79-01-6	Trichloroethylene	25	27.0	108	85-124
75-69-4	Trichlorofluoromethane	25	26.0	104	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	21.3	85	51-137
75-01-4	Vinyl chloride	25	25.4	102	57-153
108-05-4	Vinyl Acetate	125	132	106	38-159
1330-20-7	Xylene (total)	75	81.5	109	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	87-116%
17060-07-0	1,2-Dichloroethane-D4	91%	76-127%
2037-26-5	Toluene-D8	94%	86-112%
460-00-4	4-Bromofluorobenzene	90%	84-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4093-BS	J078279.D	1	09/06/12	MM	n/a	n/a	VJ4093

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	126	101	59-134
107-13-1	Acrylonitrile	125	121	97	62-124
71-43-2	Benzene	25	28.3	113	83-124
74-97-5	Bromochloromethane	25	27.3	109	78-112
75-27-4	Bromodichloromethane	25	28.1	112	76-116
75-25-2	Bromoform	25	25.3	101	68-128
108-90-7	Chlorobenzene	25	28.5	114	87-115
75-00-3	Chloroethane	25	25.3	101	54-166
67-66-3	Chloroform	25	26.8	107	85-123
75-15-0	Carbon disulfide	25	26.7	107	67-147
56-23-5	Carbon tetrachloride	25	26.2	105	74-139
75-34-3	1,1-Dichloroethane	25	27.4	110	82-127
75-35-4	1,1-Dichloroethylene	25	29.3	117	75-133
96-12-8	1,2-Dibromo-3-chloropropane	25	25.0	100	61-118
106-93-4	1,2-Dibromoethane	25	26.8	107	80-115
107-06-2	1,2-Dichloroethane	25	26.7	107	76-122
78-87-5	1,2-Dichloropropane	25	27.4	110	81-120
124-48-1	Dibromochloromethane	25	25.6	102	74-116
156-59-2	cis-1,2-Dichloroethylene	25	27.8	111	81-114
10061-01-5	cis-1,3-Dichloropropene	25	26.2	105	83-119
95-50-1	o-Dichlorobenzene	25	29.4	118*	85-115
106-46-7	p-Dichlorobenzene	25	27.6	110	87-113
156-60-5	trans-1,2-Dichloroethylene	25	27.7	111	82-126
10061-02-6	trans-1,3-Dichloropropene	25	26.8	107	87-123
100-41-4	Ethylbenzene	25	27.8	111	87-118
591-78-6	2-Hexanone	125	125	100	58-125
108-10-1	4-Methyl-2-pentanone	125	125	100	62-125
74-83-9	Methyl bromide	25	26.8	107	55-151
74-87-3	Methyl chloride	25	26.8	107	55-173
74-88-4	Methyl iodide	25	28.0	112	72-125
74-95-3	Methylene bromide	25	26.8	107	81-116
75-09-2	Methylene chloride	25	23.9	96	69-125
78-93-3	Methyl ethyl ketone	125	129	103	61-127
100-42-5	Styrene	25	28.5	114	78-118
630-20-6	1,1,1,2-Tetrachloroethane	25	28.5	114	81-119
71-55-6	1,1,1-Trichloroethane	25	28.3	113	79-133

* = Outside of Control Limits.

Blank Spike Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ4093-BS	J078279.D	1	09/06/12	MM	n/a	n/a	VJ4093

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
79-34-5	1,1,2,2-Tetrachloroethane	25	26.1	104	71-120
79-00-5	1,1,2-Trichloroethane	25	27.1	108	80-114
96-18-4	1,2,3-Trichloropropane	25	26.6	106	77-115
127-18-4	Tetrachloroethylene	25	28.6	114	80-131
109-99-9	Tetrahydrofuran	25	23.7	95	60-125
108-88-3	Toluene	25	27.8	111	86-116
79-01-6	Trichloroethylene	25	28.9	116	85-124
75-69-4	Trichlorofluoromethane	25	28.0	112	66-156
110-57-6	Trans-1,4-Dichloro-2-Butene	25	23.9	96	51-137
75-01-4	Vinyl chloride	25	26.8	107	57-153
108-05-4	Vinyl Acetate	125	140	112	38-159
1330-20-7	Xylene (total)	75	88.1	117	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	87-116%
17060-07-0	1,2-Dichloroethane-D4	92%	76-127%
2037-26-5	Toluene-D8	95%	86-112%
460-00-4	4-Bromofluorobenzene	94%	84-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F96444-1MS	J078235.D	1	09/04/12	MM	n/a	n/a	VJ4090
F96444-1MSD	J078236.D	1	09/04/12	MM	n/a	n/a	VJ4090
F96444-1	J078225.D	1	09/04/12	MM	n/a	n/a	VJ4090

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-1, F96444-2, F96444-3, F96444-4, F96444-6, F96444-7, F96444-8, F96444-9

CAS No.	Compound	F96444-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	111	89	123	98	10	59-134/14
107-13-1	Acrylonitrile	ND		125	101	81	110	88	9	62-124/13
71-43-2	Benzene	1.4		25	26.1	99	25.4	96	3	83-124/11
74-97-5	Bromochloromethane	ND		25	24.2	97	23.8	95	2	78-112/10
75-27-4	Bromodichloromethane	ND		25	23.3	93	22.5	90	3	76-116/10
75-25-2	Bromoform	ND		25	18.0	72	20.1	80	11	68-128/11
108-90-7	Chlorobenzene	ND		25	25.4	102	25.1	100	1	87-115/9
75-00-3	Chloroethane	ND		25	23.3	93	23.4	94	0	54-166/20
67-66-3	Chloroform	ND		25	23.8	95	23.7	95	0	85-123/10
75-15-0	Carbon disulfide	ND		25	19.2	77	17.8	71	8	67-147/12
56-23-5	Carbon tetrachloride	ND		25	22.6	90	23.6	94	4	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	23.8	95	24.0	96	1	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	25.2	101	25.4	102	1	75-133/13
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	23.5	94	24.6	98	5	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	24.7	99	24.9	100	1	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	23.4	94	23.5	94	0	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	24.1	96	23.6	94	2	81-120/11
124-48-1	Dibromochloromethane	ND		25	19.9	80	19.9	80	0	74-116/11
156-59-2	cis-1,2-Dichloroethylene	2.6		25	27.1	98	26.5	96	2	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	21.7	87	20.0	80*	8	83-119/10
95-50-1	o-Dichlorobenzene	ND		25	25.6	102	25.4	102	1	85-115/9
106-46-7	p-Dichlorobenzene	2.4		25	25.7	93	25.2	91	2	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	23.9	96	23.5	94	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	22.1	88	20.5	82*	8	87-123/10
100-41-4	Ethylbenzene	ND		25	24.4	98	24.2	97	1	87-118/10
591-78-6	2-Hexanone	ND		125	113	90	125	100	10	58-125/14
108-10-1	4-Methyl-2-pentanone	ND		125	117	94	126	101	7	62-125/13
74-83-9	Methyl bromide	ND		25	23.5	94	23.0	92	2	55-151/21
74-87-3	Methyl chloride	ND		25	22.5	90	21.4	86	5	55-173/22
74-88-4	Methyl iodide	ND		25	25.0	100	23.6	94	6	72-125/11
74-95-3	Methylene bromide	ND		25	24.3	97	24.4	98	0	81-116/10
75-09-2	Methylene chloride	ND		25	20.4	82	20.6	82	1	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	109	87	120	96	10	61-127/13
100-42-5	Styrene	ND		25	23.9	96	21.8	87	9	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	25.1	100	23.7	95	6	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	24.6	98	23.9	96	3	79-133/11

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F96444-1MS	J078235.D	1	09/04/12	MM	n/a	n/a	VJ4090
F96444-1MSD	J078236.D	1	09/04/12	MM	n/a	n/a	VJ4090
F96444-1	J078225.D	1	09/04/12	MM	n/a	n/a	VJ4090

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-1, F96444-2, F96444-3, F96444-4, F96444-6, F96444-7, F96444-8, F96444-9

CAS No.	Compound	F96444-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	23.1	92	23.6	94	2	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	24.3	97	24.5	98	1	80-114/11
96-18-4	1,2,3-Trichloropropane	ND		25	23.5	94	24.2	97	3	77-115/12
127-18-4	Tetrachloroethylene	ND		25	25.3	101	24.9	100	2	80-131/12
109-99-9	Tetrahydrofuran	ND		25	22.1	88	24.3	97	9	60-125/16
108-88-3	Toluene	ND		25	24.6	98	24.1	96	2	86-116/10
79-01-6	Trichloroethylene	0.37	J	25	26.1	103	26.6	105	2	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	26.7	107	26.2	105	2	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	16.1	64	15.2	61	6	51-137/24
75-01-4	Vinyl chloride	ND		25	27.0	108	25.4	102	6	57-153/22
108-05-4	Vinyl Acetate	ND		125	124	99	129	103	4	38-159/11
1330-20-7	Xylene (total)	ND		75	77.1	103	74.6	99	3	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F96444-1	Limits
1868-53-7	Dibromofluoromethane	95%	96%	97%	87-116%
17060-07-0	1,2-Dichloroethane-D4	90%	93%	98%	76-127%
2037-26-5	Toluene-D8	95%	95%	94%	86-112%
460-00-4	4-Bromofluorobenzene	93%	92%	95%	84-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F96398-7MS	J078266.D	1	09/05/12	MM	n/a	n/a	VJ4092
F96398-7MSD	J078267.D	1	09/05/12	MM	n/a	n/a	VJ4092
F96398-7	J078254.D	1	09/05/12	MM	n/a	n/a	VJ4092

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-10

CAS No.	Compound	F96398-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	122	98	135	108	10	59-134/14
107-13-1	Acrylonitrile	ND		125	116	93	120	96	3	62-124/13
71-43-2	Benzene	ND		25	26.8	107	26.7	107	0	83-124/11
74-97-5	Bromochloromethane	ND		25	25.6	102	26.0	104	2	78-112/10
75-27-4	Bromodichloromethane	ND		25	25.6	102	23.8	95	7	76-116/10
75-25-2	Bromoform	ND		25	20.7	83	20.5	82	1	68-128/11
108-90-7	Chlorobenzene	ND		25	27.1	108	26.6	106	2	87-115/9
75-00-3	Chloroethane	ND		25	22.5	90	22.9	92	2	54-166/20
67-66-3	Chloroform	ND		25	26.0	104	25.7	103	1	85-123/10
75-15-0	Carbon disulfide	ND		25	19.3	77	18.6	74	4	67-147/12
56-23-5	Carbon tetrachloride	ND		25	24.5	98	22.8	91	7	74-139/13
75-34-3	1,1-Dichloroethane	ND		25	25.8	103	25.9	104	0	82-127/10
75-35-4	1,1-Dichloroethylene	ND		25	27.9	112	28.0	112	0	75-133/13
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	25.6	102	24.2	97	6	61-118/15
106-93-4	1,2-Dibromoethane	ND		25	26.6	106	25.7	103	3	80-115/10
107-06-2	1,2-Dichloroethane	ND		25	25.9	104	25.5	102	2	76-122/11
78-87-5	1,2-Dichloropropane	ND		25	26.4	106	25.2	101	5	81-120/11
124-48-1	Dibromochloromethane	ND		25	21.6	86	20.4	82	6	74-116/11
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.3	105	26.0	104	1	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		25	23.8	95	21.9	88	8	83-119/10
95-50-1	o-Dichlorobenzene	ND		25	27.5	110	27.0	108	2	85-115/9
106-46-7	p-Dichlorobenzene	ND		25	26.2	105	25.2	101	4	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	26.1	104	25.7	103	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		25	24.3	97	22.2	89	9	87-123/10
100-41-4	Ethylbenzene	ND		25	26.8	107	26.1	104	3	87-118/10
591-78-6	2-Hexanone	ND		125	123	98	130	104	6	58-125/14
108-10-1	4-Methyl-2-pentanone	ND		125	126	101	131	105	4	62-125/13
74-83-9	Methyl bromide	ND		25	24.5	98	23.5	94	4	55-151/21
74-87-3	Methyl chloride	ND		25	25.0	100	24.2	97	3	55-173/22
74-88-4	Methyl iodide	ND		25	26.4	106	25.4	102	4	72-125/11
74-95-3	Methylene bromide	ND		25	26.3	105	25.5	102	3	81-116/10
75-09-2	Methylene chloride	ND		25	21.9	88	21.8	87	0	69-125/11
78-93-3	Methyl ethyl ketone	ND		125	121	97	130	104	7	61-127/13
100-42-5	Styrene	ND		25	26.8	107	25.0	100	7	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	26.2	105	24.7	99	6	81-119/10
71-55-6	1,1,1-Trichloroethane	ND		25	26.6	106	26.4	106	1	79-133/11

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F96398-7MS	J078266.D	1	09/05/12	MM	n/a	n/a	VJ4092
F96398-7MSD	J078267.D	1	09/05/12	MM	n/a	n/a	VJ4092
F96398-7	J078254.D	1	09/05/12	MM	n/a	n/a	VJ4092

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-10

CAS No.	Compound	F96398-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	25.5	102	25.4	102	0	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		25	25.7	103	25.0	100	3	80-114/11
96-18-4	1,2,3-Trichloropropane	ND		25	26.0	104	26.0	104	0	77-115/12
127-18-4	Tetrachloroethylene	ND		25	26.9	108	25.8	103	4	80-131/12
109-99-9	Tetrahydrofuran	ND		25	25.6	102	25.5	102	0	60-125/16
108-88-3	Toluene	ND		25	26.4	106	25.6	102	3	86-116/10
79-01-6	Trichloroethylene	ND		25	27.8	111	28.6	114	3	85-124/10
75-69-4	Trichlorofluoromethane	ND		25	26.4	106	26.0	104	2	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		25	20.0	80	19.0	76	5	51-137/24
75-01-4	Vinyl chloride	ND		25	24.3	97	23.2	93	5	57-153/22
108-05-4	Vinyl Acetate	ND		125	136	109	137	110	1	38-159/11
1330-20-7	Xylene (total)	ND		75	83.0	111	81.4	109	2	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F96398-7	Limits
1868-53-7	Dibromofluoromethane	94%	98%	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	93%	94%	95%	76-127%
2037-26-5	Toluene-D8	94%	94%	94%	86-112%
460-00-4	4-Bromofluorobenzene	92%	91%	92%	84-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F96498-6MS	J078290.D	250	09/06/12	MM	n/a	n/a	VJ4093
F96498-6MSD	J078291.D	250	09/06/12	MM	n/a	n/a	VJ4093
F96498-6	J078289.D	250	09/06/12	MM	n/a	n/a	VJ4093
F96498-6 [a]	J078293.D	1000	09/06/12	MM	n/a	n/a	VJ4093

The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-5

CAS No.	Compound	F96498-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	6300 U		31300	30600	98	30100	96	2	59-134/14
107-13-1	Acrylonitrile	2500 U		31300	31200	100	32000	102	3	62-124/13
71-43-2	Benzene	250 U		6250	6910	111	6800	109	2	83-124/11
74-97-5	Bromochloromethane	250 U		6250	6290	101	6210	99	1	78-112/10
75-27-4	Bromodichloromethane	250 U		6250	6970	112	6710	107	4	76-116/10
75-25-2	Bromoform	250 U		6250	6230	100	6130	98	2	68-128/11
108-90-7	Chlorobenzene	250 U		6250	6910	111	6770	108	2	87-115/9
75-00-3	Chloroethane	500 U		6250	5730	92	5600	90	2	54-166/20
67-66-3	Chloroform	250 U		6250	6580	105	6400	102	3	85-123/10
75-15-0	Carbon disulfide	500 U		6250	6400	102	6080	97	5	67-147/12
56-23-5	Carbon tetrachloride	250 U		6250	6370	102	6180	99	3	74-139/13
75-34-3	1,1-Dichloroethane	250 U		6250	6570	105	6460	103	2	82-127/10
75-35-4	1,1-Dichloroethylene	128	I	6250	7200	113	7000	110	3	75-133/13
96-12-8	1,2-Dibromo-3-chloropropane	500 U		6250	6460	103	6300	101	3	61-118/15
106-93-4	1,2-Dibromoethane	250 U		6250	6660	107	6580	105	1	80-115/10
107-06-2	1,2-Dichloroethane	250 U		6250	6530	104	6490	104	1	76-122/11
78-87-5	1,2-Dichloropropane	250 U		6250	6610	106	6460	103	2	81-120/11
124-48-1	Dibromochloromethane	250 U		6250	6050	97	5970	96	1	74-116/11
156-59-2	cis-1,2-Dichloroethylene	65900 [c]		6250	65600	-5* [b]	64700	-19* [b]	1	81-114/10
10061-01-5	cis-1,3-Dichloropropene	250 U		6250	6450	103	6170	99	4	83-119/10
95-50-1	o-Dichlorobenzene	250 U		6250	6960	111	6790	109	2	85-115/9
106-46-7	p-Dichlorobenzene	250 U		6250	6550	105	6430	103	2	87-113/10
156-60-5	trans-1,2-Dichloroethylene	582		6250	7290	107	7020	103	4	82-126/10
10061-02-6	trans-1,3-Dichloropropene	250 U		6250	6500	104	6270	100	4	87-123/10
100-41-4	Ethylbenzene	250 U		6250	6770	108	6660	107	2	87-118/10
591-78-6	2-Hexanone	2500 U		31300	31100	100	31800	102	2	58-125/14
108-10-1	4-Methyl-2-pentanone	1300 U		31300	31900	102	32300	103	1	62-125/13
74-83-9	Methyl bromide	500 U		6250	6000	96	5930	95	1	55-151/21
74-87-3	Methyl chloride	500 U		6250	6090	97	5930	95	3	55-173/22
74-88-4	Methyl iodide	250 U		6250	6440	103	6310	101	2	72-125/11
74-95-3	Methylene bromide	500 U		6250	6660	107	6450	103	3	81-116/10
75-09-2	Methylene chloride	1300 U		6250	6020	96	5820	93	3	69-125/11
78-93-3	Methyl ethyl ketone	1300 U		31300	30000	96	31400	100	5	61-127/13
100-42-5	Styrene	250 U		6250	6920	111	6790	109	2	78-118/11
630-20-6	1,1,1,2-Tetrachloroethane	250 U		6250	6770	108	6680	107	1	81-119/10
71-55-6	1,1,1-Trichloroethane	250 U		6250	6790	109	6560	105	3	79-133/11

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F96444
Account: RENCM Resolve Environmental
Project: Warren County; Warrenton, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F96498-6MS	J078290.D	250	09/06/12	MM	n/a	n/a	VJ4093
F96498-6MSD	J078291.D	250	09/06/12	MM	n/a	n/a	VJ4093
F96498-6	J078289.D	250	09/06/12	MM	n/a	n/a	VJ4093
F96498-6 [a]	J078293.D	1000	09/06/12	MM	n/a	n/a	VJ4093

5.3.3

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The QC reported here applies to the following samples: **Method:** SW846 8260B

F96444-5

CAS No.	Compound	F96498-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
79-34-5	1,1,2,2-Tetrachloroethane	250	U	6250	6410	103	6280	100	2	71-120/11
79-00-5	1,1,2-Trichloroethane	250	U	6250	6610	106	6620	106	0	80-114/11
96-18-4	1,2,3-Trichloropropane	500	U	6250	6470	104	6460	103	0	77-115/12
127-18-4	Tetrachloroethylene	250	U	6250	6690	107	6580	105	2	80-131/12
109-99-9	Tetrahydrofuran	1300	U	6250	5910	95	6380	102	8	60-125/16
108-88-3	Toluene	250	U	6250	6790	109	6590	105	3	86-116/10
79-01-6	Trichloroethylene	250	U	6250	6980	112	6740	108	3	85-124/10
75-69-4	Trichlorofluoromethane	500	U	6250	6560	105	6590	105	0	66-156/15
110-57-6	Trans-1,4-Dichloro-2-Butene	2500	U	6250	5550	89	5460	87	2	51-137/24
75-01-4	Vinyl chloride	66500 [c]		6250	60000	-104* [b]	58600	-126* [b]	2	57-153/22
108-05-4	Vinyl Acetate	2500	U	31300	35900	115	35800	115	0	38-159/11
1330-20-7	Xylene (total)	750	U	18800	21500	115	20900	111	3	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F96498-6	F96498-6	Limits
1868-53-7	Dibromofluoromethane	95%	95%	98%	97%	87-116%
17060-07-0	1,2-Dichloroethane-D4	94%	93%	98%	99%	76-127%
2037-26-5	Toluene-D8	96%	96%	94%	93%	86-112%
460-00-4	4-Bromofluorobenzene	91%	92%	91%	91%	84-120%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

* = Outside of Control Limits.

Southeast ACCUTEST LABORATORIES

Metals Analysis

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F96444
Account: RENCM - Resolve Environmental
Project: Warren County; Warrenton, NC

QC Batch ID: MP23596
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:				09/04/12		09/04/12	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	20	25				
Antimony	6.0	1	2	2.8	<6.0	-0.50	<6.0
Arsenic	10	1	2	0.50	<10	0.60	<10
Barium	200	1	5	0.0	<200	0.0	<200
Beryllium	4.0	.1	1	0.0	<4.0	0.0	<4.0
Cadmium	5.0	.1	1	-0.10	<5.0	-0.10	<5.0
Calcium	1000	50	100				
Chromium	10	1	1	0.10	<10	0.0	<10
Cobalt	50	1	1	0.10	<50	-0.10	<50
Copper	25	1	2	-3.0	<25	-3.3	<25
Iron	300	34	35				
Lead	5.0	1	1	-0.60	<5.0	0.10	<5.0
Magnesium	5000	50	100				
Manganese	15	1	1				
Molybdenum	50	1	2				
Nickel	40	1	2	-0.20	<40	0.0	<40
Potassium	10000	50	500				
Selenium	10	2	2	-0.20	<10	-0.10	<10
Silver	10	1	1	-0.40	<10	0.0	<10
Sodium	10000	750	1900				
Strontium	10	1	1				
Thallium	10	1	1.9				
Tin	50	1	1				
Titanium	10	1.1	2				
Vanadium	50	1	1	0.0	<50	-0.10	<50
Zinc	20	1	5	0.70	<20	22.9	* (a)

Associated samples MP23596: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All sample results >10x method blank concentration.

6.1.1

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F96444
Account: RENCM - Resolve Environmental
Project: Warren County; Warrenton, NC

QC Batch ID: MP23596
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:		09/04/12				09/04/12			
Metal	F96444-1 Original	DUP	RPD	QC Limits	F96444-1 Original	MS	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum									
Antimony	0.0	0.0	NC	0-20	0.0	418	500	83.6	80-120
Arsenic	1.8	2.5	32.6 (a)	0-20	1.8	1880	2000	93.9	80-120
Barium	133	131	1.5	0-20	133	2070	2000	96.9	80-120
Beryllium	3.6	3.6	0.0	0-20	3.6	53.0	50	98.8	80-120
Cadmium	0.0	0.0	NC	0-20	0.0	47.1	50	94.2	80-120
Calcium									
Chromium	10.3	10.4	1.0	0-20	10.3	204	200	96.9	80-120
Cobalt	10.3	10.4	1.0	0-20	10.3	499	500	97.7	80-120
Copper	15.9	15.6	1.9	0-20	15.9	259	250	97.2	80-120
Iron	anr								
Lead	17.8	18.3	2.8	0-20	17.8	513	500	99.0	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	7.4	7.5	1.3	0-20	7.4	502	500	98.9	80-120
Potassium									
Selenium	0.0	0.0	NC	0-20	0.0	1880	2000	94.0	80-120
Silver	0.0	0.0	NC	0-20	0.0	45.0	50	90.0	80-120
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	31.4	31.0	1.3	0-20	31.4	529	500	99.5	80-120
Zinc	80.5	80.2	0.4	0-20	80.5	560	500	95.9	80-120

Associated samples MP23596: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

6.1.2

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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F96444
Account: RENCM - Resolve Environmental
Project: Warren County; Warrenton, NC

QC Batch ID: MP23596
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/04/12

Metal	F96444-1 Original	MSD	Spikelot MPFLICP1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	415	500	83.0	0.7	20
Arsenic	1.8	1880	2000	93.9	0.0	20
Barium	133	2090	2000	97.9	1.0	20
Beryllium	3.6	53.1	50	99.0	0.2	20
Cadmium	0.0	47.1	50	94.2	0.0	20
Calcium						
Chromium	10.3	205	200	97.4	0.5	20
Cobalt	10.3	501	500	98.1	0.4	20
Copper	15.9	261	250	98.0	0.8	20
Iron	anr					
Lead	17.8	517	500	99.8	0.8	20
Magnesium						
Manganese						
Molybdenum						
Nickel	7.4	504	500	99.3	0.4	20
Potassium						
Selenium	0.0	1880	2000	94.0	0.0	20
Silver	0.0	45.3	50	90.6	0.7	20
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	31.4	531	500	99.9	0.4	20
Zinc	80.5	563	500	96.5	0.5	20

Associated samples MP23596: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F96444
Account: RENCM - Resolve Environmental
Project: Warren County; Warrenton, NC

QC Batch ID: MP23596
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/04/12

Metal	BSP Result	Spikelot MPFLICP1	% Rec	QC Limits
Aluminum				
Antimony	515	500	103.0	80-120
Arsenic	2030	2000	101.5	80-120
Barium	2080	2000	104.0	80-120
Beryllium	52.7	50	105.4	80-120
Cadmium	50.7	50	101.4	80-120
Calcium				
Chromium	207	200	103.5	80-120
Cobalt	525	500	105.0	80-120
Copper	257	250	102.8	80-120
Iron	anr			
Lead	493	500	98.6	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	532	500	106.4	80-120
Potassium				
Selenium	2020	2000	101.0	80-120
Silver	48.8	50	97.6	80-120
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	535	500	107.0	80-120
Zinc	518	500	103.6	80-120

Associated samples MP23596: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

6.1.3

SERIAL DILUTION RESULTS SUMMARY

Login Number: F96444
Account: RENCM - Resolve Environmental
Project: Warren County; Warrenton, NC

QC Batch ID: MP23596
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/04/12

Metal	F96444-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	1.80	9.20	411.1(a)	0-10
Barium	133	147	10.0	0-10
Beryllium	3.60	4.20	16.7 (a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	10.3	9.50	7.8	0-10
Cobalt	10.3	11.9	15.5 (a)	0-10
Copper	15.9	18.3	15.1 (a)	0-10
Iron	anr			
Lead	17.8	15.6	12.4 (a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	7.40	8.90	20.3 (a)	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	31.4	34.7	10.5 (a)	0-10
Zinc	80.5	96.1	19.4*(b)	0-10

Associated samples MP23596: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: F96444
Account: RENCM - Resolve Environmental
Project: Warren County; Warrenton, NC

QC Batch ID: MP23596
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 09/04/12

Metal	Sample ml	Final ml	F96444-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	9.8	10	0	0	95.9	0.2	5	100	95.9	80-120
Arsenic	9.8	10	1.8	1.764	97.3	0.2	5	100	95.5	80-120
Barium	9.8	10	133	130.34	370.3	0.2	12.5	250	96.0	80-120
Beryllium	9.8	10	3.6	3.528	53.8	0.2	2.5	50	100.5	80-120
Cadmium	9.8	10	0	0	50	0.2	2.5	50	100.0	80-120
Calcium										
Chromium	9.8	10	10.3	10.094	60.2	0.2	2.5	50	100.2	80-120
Cobalt	9.8	10	10.3	10.094	60.9	0.2	2.5	50	101.6	80-120
Copper	9.8	10	15.9	15.582	115.1	0.2	5	100	99.5	80-120
Iron										
Lead	9.8	10	17.8	17.444	67.5	0.2	2.5	50	100.1	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel	9.8	10	7.4	7.252	107.9	0.2	5	100	100.6	80-120
Potassium										
Selenium	9.8	10	0	0	95.3	0.2	5	100	95.3	80-120
Silver	9.8	10	0	0	44.7	0.2	2.5	50	89.4	80-120
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium	9.8	10	31.4	30.772	81.6	0.2	2.5	50	101.7	80-120
Zinc	9.8	10	80.5	78.89	357.1	0.2	12.5	250	111.3	80-120

Associated samples MP23596: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

6.1.5

Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

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(Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody

ACCUTEST Laboratories

Accutest Laboratories Southeast
Subcontract Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL 407-425-6700 FAX: 407-425-0707
www.accutest.com

PAGE 1 OF 1

EDD MAKER # 7988 8578 5552

Client / Reporting Information

Company Name: Accutest Laboratories
Address: 4405 Vineland Rd.
City: Orlando State: FL Zip: 32811
Phone #: (407) 425-6700 Fax#: (407) 425-0707

Project Information

Project Name: F96444
Please send report to dawnd@accutest.com
For any other issues contact munam@accutest.com

Analytical Information

Matrix Codes
DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Lab ID #	Sample ID	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH/ZnAc	DI WATER	MEOH	TLMS	LAB USE ONLY
	F96444-1	08/28/12	9:05		GW	1					X					X	ME 28
	F96444-2	08/28/12	8:50		GW	1					X					X	
	F96444-3	08/28/12	8:20		GW	1					X					X	
	F96444-4	08/28/12	7:40		GW	1					X					X	
	F96444-5	08/28/12	8:48		SW	1					X					X	
	F96444-6	08/28/12	7:58		SW	1					X					X	
	F96444-7	08/28/12	7:47		SW	1					X					X	
	F96444-8	08/28/12	9:20		GW	1					X					X	
	F96444-9	08/28/12	7:20		WEB	1					X					X	

Turnaround Time (Business days)

Std. 10 Business Days
7 Day *RUSH*
5 Day *RUSH*
3 Day *EMERGENCY*
2 Day *EMERGENCY*
1 Day *EMERGENCY*
Other

Approved By: / Date/Rush Code: 09-06-12

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [x] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULLT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

Ship to Laboratory - ALNJ
Approved by - [signature]

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
1 [signature] ALSE	09-04-12 1700	2 FO	3 FO	9/5/12 1000	4 [signature]
Relinquished by/Affiliation	Date Time:	Received By/Affiliation	Relinquished By/Affiliation	Date Time:	Received By/Affiliation
5		6	7		8

Lab Use Only : Custody Seal In Place: Y N Temp Blank Provided: Y N Preserved Where Applicable: Y N Total # of Coolers: ____ Cooler Temperature (s) Celsius: 3.0°

CLIENT SEAL

(A

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F96444: Chain of Custody
Page 1 of 2
Accutest New Jersey

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: F96444 **Client:** _____ **Project:** _____

Date / Time Received: 9/5/2012 **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Initial/Adjusted): #1: (3/3); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Bar Therm		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

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F96444: Chain of Custody
Page 2 of 2

Southeast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

(Accutest New Jersey)

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F96444
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: RENCM: Warren County; Warrenton, NC

QC Batch ID: MP66493
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/06/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	3.6	13		
Antimony	1.0	.23	.43		
Arsenic	1.0	.078	.35		
Barium	2.0	.13	.29		
Beryllium	1.0	.028	.061		
Boron	10	3.5	.8		
Cadmium	1.0	.024	.13		
Calcium	500	8.2	15		
Chromium	2.0	.11	.11		
Cobalt	1.0	.032	.11		
Copper	2.0	.15	.12		
Iron	50	4.3	7.8		
Lead	1.0	.024	.026		
Magnesium	500	3.7	6.7		
Manganese	2.0	.13	.15		
Molybdenum	2.0	.12	.25		
Nickel	2.0	.1	.02		
Potassium	500	7.3	17		
Selenium	1.0	.074	.3		
Silver	1.0	.02	.053		
Sodium	500	27	9.3		
Strontium	10	.11	.062		
Thallium	1.0	.09	.078	0.23	<1.0
Tin	10	1.1	.11		
Titanium	2.0	.13	.22		
Vanadium	2.0	.046	.15		
Zinc	4.0	.63	.49		

Associated samples MP66493: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F96444
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: RENCM: Warren County; Warrenton, NC

QC Batch ID: MP66493
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/06/12

Metal	F96444-4 Original MS	Spikelot MPIRW1	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium	0.64	1570	2000	78.5	75-125
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP66493: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F96444
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: RENCM: Warren County; Warrenton, NC

QC Batch ID: MP66493
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/06/12

Metal	F96444-4 Original MSD	Spikelot MPIRW1	% Rec	MSD RPD	QC Limit
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium	0.64	1490	2000	74.5N(a)	5.2 20
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP66493: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F96444
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: RENCM: Warren County; Warrenton, NC

QC Batch ID: MP66493
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/06/12

Metal	LCS Result	Spikelot MPLCW3	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium	467	500	93.4	80-120
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP66493: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F96444
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: RENCM: Warren County; Warrenton, NC

QC Batch ID: MP66493
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/06/12

Metal	F96444-4 Original	SDL 2:10	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium	0.637	0.982	54.2 (a)	0-10
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP66493: F96444-1, F96444-2, F96444-3, F96444-4, F96444-5, F96444-6, F96444-7, F96444-8, F96444-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.1.4
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