Resolve Environmental Services, PLLC

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

RECEIVED
MAR 17 2010
SOLID WASTE SECTION

March 16, 2010

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

Re: ***Additional Water Supply Well Sample Results***
Warren County Closed Sanitary Landfill
Warrenton, North Carolina
Resolve Project No 765.13

Dear Mr. Lane:

Please find the attached laboratory analytical report for the ground water sample collected from WSW-1 near the Warren County Closed Sanitary Landfill on February 26, 2010. Please call if you have any questions or require any additional information at (704) 289-5881.

Sincerely,
Resolve Environmental Services, PLLC

Laura Minor

Laura Minor
Operations Manager

enclosure

Empirical Laboratories, LLC

621 Mainstream Drive, Suite 270
Nashville, TN 37228
615.345.1115 Phone
615.846.5426 Fax

10 March 2010

RECEIVED
MAR 17 2010
SOLID WASTE SECTION

Laura Minor
Resolve Environmental Services, PLLC
410 E Franklin St.
Monroe, NC 28112

RE: RES-Warren County Landfill

Enclosed are the results of analyses for samples received by the laboratory on 02/27/2010 09:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Richard
Project Manager

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WSW-1	1003003-01	Water	02/25/2010 14:30	02/27/2010 09:10

The samples were received and processed using normal regulatory and laboratory protocols. Unless noted in the Final Report, there were no significant data anomalies or failures noted during data assessment and reporting. The results within this report relate only to the samples received and reported for this project and this report shall not be reproduced except in full, without the approval of Empirical Laboratories, LLC.

The test results meet all requirements of NELAC unless otherwise noted. Data uncertainty is linked to the method and regulatory mandated quality control data associated with the sample.

VOC

LCS-Recoveries for Acetonitrile and 2-Butanone in samples OC03026-BS1 and OC03026-BSD1 were outside their acceptable ranges. See included QC for details.

CERTIFICATION INFORMATION

Prior to accepting a Project, Empirical Laboratories, LLC verifies certification requirements and where applicable ensures that the requirements are in place prior to sample analysis. In many cases, states do not carry matrix or program specific certifications. Please contact your Project Manager should specific certification information not be listed in this report. The following is a listing of all applicable certifications for the reported project.

State of North Carolina, Department of Environment and Natural Resources, Certificate No.:643
NELAC Certification #TN47

WSW-1

1003003-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Empirical Laboratories, LLC										
Metals in Water by ICP-AES										
Antimony	ND	5.00	15.0	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Arsenic	ND	3.00	10.0	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Barium	**23.9**	5.00	40.0	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	J
Beryllium	ND	1.00	5.00	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Cadmium	ND	1.00	5.00	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Chromium	ND	2.00	10.0	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Cobalt	ND	5.00	12.5	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Copper	**7.94**	4.00	10.0	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	J
Lead	ND	1.50	3.00	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Nickel	ND	3.00	10.0	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Selenium	ND	3.00	6.00	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Silver	ND	1.00	10.0	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Thallium	ND	3.00	8.00	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Vanadium	ND	5.00	12.5	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	U
Zinc	**12.2**	5.00	20.0	ug/L	1	0C02006	03/02/10	03/03/10	SW6010C	J
Mercury by CVAA										
Mercury	**0.338**	0.0800	0.200	ug/L	1	0C02005	03/02/10	03/02/10	SW7470A	
Volatile Organic Compounds by GC/MS										
Acetone	ND	1.80	10.0	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Acetonitrile	ND	1.67	5.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Benzene	ND	0.140	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Bromochloromethane	ND	0.310	2.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Bromodichloromethane	ND	0.180	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Bromoform	ND	0.500	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Bromomethane	ND	0.320	2.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
2-Butanone	ND	1.60	10.0	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Carbon disulfide	ND	0.260	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Carbon tetrachloride	ND	0.240	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Chlorobenzene	ND	0.210	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Chloroethane	ND	0.270	2.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Chloroform	ND	0.230	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Chloromethane	ND	0.360	2.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Dibromochloromethane	ND	0.180	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,2-Dibromo-3-chloropropane	ND	0.550	2.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,2-Dibromoethane (EDB)	ND	0.240	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Dibromomethane	ND	0.280	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,2-Dichlorobenzene	ND	0.160	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
trans-1,4-Dichloro-2-butene	ND	1.67	5.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U

WSW-1

1003003-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Empirical Laboratories, LLC										
Volatile Organic Compounds by GC/MS										
1,4-Dichlorobenzene	ND	0.250	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,1-Dichloroethane	ND	0.240	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,2-Dichloroethane	ND	0.220	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,1-Dichloroethene	ND	0.280	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
cis-1,2-Dichloroethene	ND	0.450	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
trans-1,2-Dichloroethene	ND	0.530	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,2-Dichloropropane	ND	0.270	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
cis-1,3-Dichloropropene	ND	0.150	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
trans-1,3-Dichloropropene	ND	0.170	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Ethylbenzene	ND	0.150	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
2-Hexanone	ND	0.500	5.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Iodomethane	ND	0.370	5.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Methylene chloride	ND	1.67	5.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
4-Methyl-2-pentanone	ND	0.500	5.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Styrene	ND	0.240	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,1,2,2-Tetrachloroethane	ND	0.230	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,1,1,2-Tetrachloroethane	ND	0.190	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Tetrachloroethene	**0.314**	0.170	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	J
Toluene	ND	0.190	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,1,2-Trichloroethane	ND	0.260	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,1,1-Trichloroethane	ND	0.290	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Trichloroethene	ND	0.500	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Trichlorofluoromethane	ND	0.250	2.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Vinyl chloride	ND	0.200	2.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Vinyl acetate	ND	1.00	5.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Xylenes (total)	ND	0.220	1.00	ug/L	1	0C03026	03/04/10	03/04/10	SW8260B	U
Surrogate: Bromofluorobenzene		*100 %*		*85-120*		*0C03026*	*03/04/10*	*03/04/10*	*SW8260B*	
Surrogate: Dibromofluoromethane		*107 %*		*85-120*		*0C03026*	*03/04/10*	*03/04/10*	*SW8260B*	
Surrogate: 1,2-Dichloroethane-d4		*106 %*		*80-135*		*0C03026*	*03/04/10*	*03/04/10*	*SW8260B*	
Surrogate: Toluene-d8		*104 %*		*85-115*		*0C03026*	*03/04/10*	*03/04/10*	*SW8260B*	

Metals in Water by ICP-AES - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C02006											
Blank (0C02006-BLK1)				Prepared: 03/02/2010 Analyzed: 03/03/2010							
Antimony	ND	5.00	15.0	ug/L							U
Arsenic	ND	3.00	10.0	ug/L							U
Barium	ND	5.00	40.0	ug/L							U
Beryllium	ND	1.00	5.00	ug/L							U
Cadmium	ND	1.00	5.00	ug/L							U
Chromium	ND	2.00	10.0	ug/L							U
Cobalt	ND	5.00	12.5	ug/L							U
Copper	ND	4.00	10.0	ug/L							U
Lead	ND	1.50	3.00	ug/L							U
Nickel	ND	3.00	10.0	ug/L							U
Selenium	ND	3.00	6.00	ug/L							U
Silver	ND	1.00	10.0	ug/L							U
Thallium	ND	3.00	8.00	ug/L							U
Vanadium	ND	5.00	12.5	ug/L							U
Zinc	ND	5.00	20.0	ug/L							U
LCS (0C02006-BS1)				Prepared: 03/02/2010 Analyzed: 03/03/2010							
Antimony	249.3	5.00	15.0	ug/L	250.0		99.7	80-120		20	
Arsenic	247.4	3.00	10.0	ug/L	250.0		99.0	80-120		20	
Barium	2095	5.00	40.0	ug/L	2000		105	80-120		20	
Beryllium	50.52	1.00	5.00	ug/L	50.00		101	80-120		20	
Cadmium	127.8	1.00	5.00	ug/L	125.0		102	80-120		20	
Chromium	196.7	2.00	10.0	ug/L	200.0		98.4	80-120		20	
Cobalt	499.3	5.00	12.5	ug/L	500.0		99.9	80-120		20	
Copper	254.0	4.00	10.0	ug/L	250.0		102	80-120		20	
Lead	258.9	1.50	3.00	ug/L	250.0		104	80-120		20	
Nickel	499.5	3.00	10.0	ug/L	500.0		99.9	80-120		20	
Selenium	242.4	3.00	6.00	ug/L	250.0		97.0	80-120		20	
Silver	244.1	1.00	10.0	ug/L	250.0		97.6	80-120		20	
Thallium	249.3	3.00	8.00	ug/L	250.0		99.7	80-120		20	
Vanadium	483.2	5.00	12.5	ug/L	500.0		96.6	80-120		20	

Metals in Water by ICP-AES - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C02006											
LCS (0C02006-BS1)					Prepared: 03/02/2010 Analyzed: 03/03/2010						
Zinc	481.4	5.00	20.0	ug/L	500.0		96.3	80-120		20	
Duplicate (0C02006-DUP1)		**Source: 1002227-02**			Prepared: 03/02/2010 Analyzed: 03/03/2010						
Antimony	37.63	25.0	75.0	ug/L		38.74			2.92	20	J, D
Arsenic	ND	15.0	50.0	ug/L		ND				20	U
Barium	46.63	25.0	200	ug/L		46.65			0.0472	20	J, D
Beryllium	ND	5.00	25.0	ug/L		ND				20	U
Cadmium	5.278	5.00	25.0	ug/L		1.940				20	J, D
Chromium	ND	10.0	50.0	ug/L		ND				20	U
Cobalt	ND	25.0	62.5	ug/L		ND				20	U
Copper	ND	20.0	50.0	ug/L		ND				20	U
Lead	46.84	7.50	15.0	ug/L		48.08			2.61	20	D
Nickel	ND	15.0	50.0	ug/L		10.47				20	U
Selenium	ND	15.0	30.0	ug/L		ND				20	U
Silver	ND	5.00	50.0	ug/L		ND				20	U
Thallium	ND	15.0	40.0	ug/L		ND				20	U
Vanadium	ND	25.0	62.5	ug/L		ND				20	U
Zinc	ND	25.0	100	ug/L		5.112				20	U
Duplicate (0C02006-DUP2)		**Source: 1002207-02**			Prepared: 03/02/2010 Analyzed: 03/03/2010						
Antimony	ND	25.0	75.0	ug/L		ND				20	U
Arsenic	ND	15.0	50.0	ug/L		ND				20	U
Barium	220.4	25.0	200	ug/L		219.6			0.377	20	D
Beryllium	ND	5.00	25.0	ug/L		ND				20	U
Cadmium	ND	5.00	25.0	ug/L		ND				20	U
Chromium	ND	10.0	50.0	ug/L		ND				20	U
Cobalt	ND	25.0	62.5	ug/L		5.320				20	U
Copper	ND	20.0	50.0	ug/L		ND				20	U
Lead	ND	7.50	15.0	ug/L		ND				20	U
Nickel	ND	15.0	50.0	ug/L		7.242				20	U
Selenium	ND	15.0	30.0	ug/L		ND				20	U
Silver	ND	5.00	50.0	ug/L		ND				20	U

Metals in Water by ICP-AES - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C02006											
Duplicate (0C02006-DUP2)		**Source: 1002207-02**		Prepared: 03/02/2010 Analyzed: 03/03/2010							
Thallium	ND	15.0	40.0	ug/L		ND				20	U
Vanadium	ND	25.0	62.5	ug/L		ND				20	U
Zinc	49.79	25.0	100	ug/L		47.58			4.55	20	J, D
Duplicate (0C02006-DUP3)		**Source: 1002227-02RE1**		Prepared: 03/02/2010 Analyzed: 03/04/2010							
Antimony	ND	125	375	ug/L		40.02				20	U
Arsenic	ND	75.0	250	ug/L		ND				20	U
Barium	ND	125	1000	ug/L		45.00				20	U
Beryllium	ND	25.0	125	ug/L		ND				20	U
Cadmium	ND	25.0	125	ug/L		5.658				20	U
Chromium	ND	50.0	250	ug/L		ND				20	U
Cobalt	ND	125	312	ug/L		ND				20	U
Copper	ND	100	250	ug/L		ND				20	U
Lead	40.91	37.5	75.0	ug/L		49.18			18.4	20	J, D
Nickel	ND	75.0	250	ug/L		ND				20	U
Selenium	ND	75.0	150	ug/L		ND				20	U
Silver	ND	25.0	250	ug/L		ND				20	U
Thallium	ND	75.0	200	ug/L		ND				20	U
Vanadium	ND	125	312	ug/L		ND				20	U
Zinc	ND	125	500	ug/L		ND				20	U

Mercury by CVAA - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C02005											
Blank (0C02005-BLK1)					Prepared & Analyzed: 03/02/2010						
Mercury	ND	0.0800	0.200	ug/L							
LCS (0C02005-BS1)					Prepared & Analyzed: 03/02/2010						
Mercury	2.070	0.0800	0.200	ug/L	2.000		103	80-120			
Matrix Spike (0C02005-MS1)		**Source: 1002211-01**			Prepared & Analyzed: 03/02/2010						
Mercury	1.693	0.0800	0.200	ug/L	2.000	ND	84.7	80-120			
Matrix Spike (0C02005-MS2)		**Source: 1003003-01**			Prepared & Analyzed: 03/02/2010						
Mercury	2.057	0.0800	0.200	ug/L	2.000	0.3381	85.9	80-120			
Matrix Spike Dup (0C02005-MSD1)		**Source: 1002211-01**			Prepared & Analyzed: 03/02/2010						
Mercury	1.653	0.0800	0.200	ug/L	2.000	ND	82.6	80-120	2.44	20	
Matrix Spike Dup (0C02005-MSD2)		**Source: 1003003-01**			Prepared & Analyzed: 03/02/2010						
Mercury	1.985	0.0800	0.200	ug/L	2.000	0.3381	82.4	80-120	3.53	20	

Volatile Organic Compounds by GC/MS - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C03026											
Blank (0C03026-BLK1)				Prepared & Analyzed: 03/04/2010							
Acetone	ND	1.80	10.0	ug/L							U
Acetonitrile	ND	1.67	5.00	ug/L							U
Benzene	ND	0.140	1.00	ug/L							U
Bromochloromethane	ND	0.310	2.00	ug/L							U
Bromodichloromethane	ND	0.180	1.00	ug/L							U
Bromoform	ND	0.500	1.00	ug/L							U
Bromomethane	ND	0.320	2.00	ug/L							U
2-Butanone	ND	1.60	10.0	ug/L							U
Carbon disulfide	ND	0.260	1.00	ug/L							U
Carbon tetrachloride	ND	0.240	1.00	ug/L							U
Chlorobenzene	ND	0.210	1.00	ug/L							U
Chloroethane	ND	0.270	2.00	ug/L							U
Chloroform	ND	0.230	1.00	ug/L							U
Chloromethane	ND	0.360	2.00	ug/L							U
Dibromochloromethane	ND	0.180	1.00	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.550	2.00	ug/L							U
1,2-Dibromoethane (EDB)	ND	0.240	1.00	ug/L							U
Dibromomethane	ND	0.280	1.00	ug/L							U
1,2-Dichlorobenzene	ND	0.160	1.00	ug/L							U
trans-1,4-Dichloro-2-butene	ND	1.67	5.00	ug/L							U
1,4-Dichlorobenzene	ND	0.250	1.00	ug/L							U
1,1-Dichloroethane	ND	0.240	1.00	ug/L							U
1,2-Dichloroethane	ND	0.220	1.00	ug/L							U
1,1-Dichloroethene	ND	0.280	1.00	ug/L							U
cis-1,2-Dichloroethene	ND	0.450	1.00	ug/L							U
trans-1,2-Dichloroethene	ND	0.530	1.00	ug/L							U
1,2-Dichloropropane	ND	0.270	1.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.150	1.00	ug/L							U
trans-1,3-Dichloropropene	ND	0.170	1.00	ug/L							U
Ethylbenzene	ND	0.150	1.00	ug/L							U

Volatile Organic Compounds by GC/MS - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C03026											
Blank (0C03026-BLK1)				Prepared & Analyzed: 03/04/2010							
2-Hexanone	ND	0.500	5.00	ug/L							U
Iodomethane	ND	0.370	5.00	ug/L							U
Methylene chloride	ND	1.67	5.00	ug/L							U
4-Methyl-2-pentanone	ND	0.500	5.00	ug/L							U
Styrene	ND	0.240	1.00	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.230	1.00	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.190	1.00	ug/L							U
Tetrachloroethene	ND	0.170	1.00	ug/L							U
Toluene	ND	0.190	1.00	ug/L							U
1,1,2-Trichloroethane	ND	0.260	1.00	ug/L							U
1,1,1-Trichloroethane	ND	0.290	1.00	ug/L							U
Trichloroethene	ND	0.500	1.00	ug/L							U
Trichlorofluoromethane	ND	0.250	2.00	ug/L							U
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L							U
Vinyl chloride	ND	0.200	2.00	ug/L							U
Vinyl acetate	ND	1.00	5.00	ug/L							U
Xylenes (total)	ND	0.220	1.00	ug/L							U
Surrogate: Bromofluorobenzene	*30.08*			*ug/L*	*30.00*		*100*	*85-120*			
Surrogate: Dibromofluoromethane	*31.45*			*ug/L*	*30.00*		*105*	*85-120*			
Surrogate: 1,2-Dichloroethane-d4	*30.96*			*ug/L*	*30.00*		*103*	*80-135*			
Surrogate: Toluene-d8	*30.97*			*ug/L*	*30.00*		*103*	*85-115*			
LCS (0C03026-BS1)				Prepared & Analyzed: 03/04/2010							
Acetone	80.0	1.80	10.0	ug/L	100.0		80.0	40-140		30	
Acetonitrile	185	1.67	5.00	ug/L	500.0		37.0	50-150		30	
Benzene	49.5	0.140	1.00	ug/L	50.00		99.0	80-120		30	
Bromochloromethane	46.1	0.310	2.00	ug/L	50.00		92.2	65-130		30	
Bromodichloromethane	51.9	0.180	1.00	ug/L	50.00		104	75-120		30	
Bromoform	50.5	0.500	1.00	ug/L	50.00		101	70-130		30	
Bromomethane	28.6	0.320	2.00	ug/L	50.00		57.1	30-145		30	
2-Butanone	172	1.60	10.0	ug/L	100.0		172	30-150		30	
Carbon disulfide	55.4	0.260	1.00	ug/L	50.00		111	35-160		30	

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Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C03026											
LCS (0C03026-BS1)					Prepared & Analyzed: 03/04/2010						
Carbon tetrachloride	50.9	0.240	1.00	ug/L	50.00		102	65-140		30	
Chlorobenzene	47.8	0.210	1.00	ug/L	50.00		95.7	80-120		30	
Chloroethane	45.8	0.270	2.00	ug/L	50.00		91.6	60-135		30	
Chloroform	51.6	0.230	1.00	ug/L	50.00		103	65-135		30	
Chloromethane	54.7	0.360	2.00	ug/L	50.00		109	40-125		30	
Dibromochloromethane	50.4	0.180	1.00	ug/L	50.00		101	60-135		30	
1,2-Dibromo-3-chloropropane	49.7	0.550	2.00	ug/L	50.00		99.3	50-130		30	
1,2-Dibromoethane (EDB)	49.4	0.240	1.00	ug/L	50.00		98.8	80-120		30	
Dibromomethane	52.0	0.280	1.00	ug/L	50.00		104	75-125		30	
1,2-Dichlorobenzene	48.7	0.160	1.00	ug/L	50.00		97.5	70-120		30	
trans-1,4-Dichloro-2-butene	32.4	1.67	5.00	ug/L	50.00		64.9	50-150		30	
1,4-Dichlorobenzene	48.3	0.250	1.00	ug/L	50.00		96.6	75-125		30	
1,1-Dichloroethane	47.6	0.240	1.00	ug/L	50.00		95.1	70-135		30	
1,2-Dichloroethane	49.7	0.220	1.00	ug/L	50.00		99.5	70-130		30	
1,1-Dichloroethene	49.1	0.280	1.00	ug/L	50.00		98.3	70-130		30	
cis-1,2-Dichloroethene	49.3	0.450	1.00	ug/L	50.00		98.5	70-125		30	
trans-1,2-Dichloroethene	45.9	0.530	1.00	ug/L	50.00		91.7	60-140		30	
1,2-Dichloropropane	50.1	0.270	1.00	ug/L	50.00		100	75-125		30	
cis-1,3-Dichloropropene	52.3	0.150	1.00	ug/L	50.00		105	70-130		30	
trans-1,3-Dichloropropene	55.4	0.170	1.00	ug/L	50.00		111	55-140		30	
Ethylbenzene	49.8	0.150	1.00	ug/L	50.00		99.6	75-125		30	
2-Hexanone	94.9	0.500	5.00	ug/L	100.0		94.9	55-130		30	
Iodomethane	32.2	0.370	5.00	ug/L	50.00		64.5	50-140		30	
Methylene chloride	45.7	1.67	5.00	ug/L	50.00		91.4	55-140		30	
4-Methyl-2-pentanone	99.9	0.500	5.00	ug/L	100.0		99.9	60-135		30	
Styrene	56.5	0.240	1.00	ug/L	50.00		113	65-135		30	
1,1,2,2-Tetrachloroethane	48.9	0.230	1.00	ug/L	50.00		97.7	65-130		30	
1,1,1,2-Tetrachloroethane	48.6	0.190	1.00	ug/L	50.00		97.3	80-130		30	
Tetrachloroethene	51.2	0.170	1.00	ug/L	50.00		102	45-150		30	
Toluene	47.9	0.190	1.00	ug/L	50.00		95.7	75-120		30	

Volatile Organic Compounds by GC/MS - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C03026											
LCS (0C03026-BS1)					Prepared & Analyzed: 03/04/2010						
1,1,2-Trichloroethane	48.7	0.260	1.00	ug/L	50.00		97.4	75-125		30	
1,1,1-Trichloroethane	49.3	0.290	1.00	ug/L	50.00		98.6	65-130		30	
Trichloroethene	49.3	0.500	1.00	ug/L	50.00		98.6	70-125		30	
Trichlorofluoromethane	52.2	0.250	2.00	ug/L	50.00		104	60-145		30	
1,2,3-Trichloropropane	46.0	0.500	1.00	ug/L	50.00		92.0	75-125		30	
Vinyl chloride	56.0	0.200	2.00	ug/L	50.00		112	50-145		30	
Vinyl acetate	103	1.00	5.00	ug/L	99.95		103	60-150		30	
Xylenes (total)	140	0.220	1.00	ug/L	150.0		93.3	75-130		30	
Surrogate: Bromofluorobenzene	*29.48*			*ug/L*	*30.00*		*98.3*	*85-120*			
Surrogate: Dibromofluoromethane	*30.64*			*ug/L*	*30.00*		*102*	*85-120*			
Surrogate: 1,2-Dichloroethane-d4	*30.59*			*ug/L*	*30.00*		*102*	*80-135*			
Surrogate: Toluene-d8	*29.50*			*ug/L*	*30.00*		*98.3*	*85-115*			
LCS Dup (0C03026-BSD1)					Prepared & Analyzed: 03/04/2010						
Acetone	81.7	1.80	10.0	ug/L	100.0		81.7	40-140	2.12	30	
Acetonitrile	177	1.67	5.00	ug/L	500.0		35.5	50-150	4.10	30	
Benzene	49.6	0.140	1.00	ug/L	50.00		99.2	80-120	0.216	30	
Bromochloromethane	45.1	0.310	2.00	ug/L	50.00		90.1	65-130	2.35	30	
Bromodichloromethane	50.9	0.180	1.00	ug/L	50.00		102	75-120	1.87	30	
Bromoform	52.3	0.500	1.00	ug/L	50.00		105	70-130	3.50	30	
Bromomethane	26.7	0.320	2.00	ug/L	50.00		53.4	30-145	6.75	30	
2-Butanone	167	1.60	10.0	ug/L	100.0		167	30-150	2.90	30	
Carbon disulfide	54.7	0.260	1.00	ug/L	50.00		109	35-160	1.14	30	
Carbon tetrachloride	51.2	0.240	1.00	ug/L	50.00		102	65-140	0.566	30	
Chlorobenzene	47.6	0.210	1.00	ug/L	50.00		95.1	80-120	0.586	30	
Chloroethane	44.1	0.270	2.00	ug/L	50.00		88.1	60-135	3.87	30	
Chloroform	52.4	0.230	1.00	ug/L	50.00		105	65-135	1.52	30	
Chloromethane	52.0	0.360	2.00	ug/L	50.00		104	40-125	5.17	30	
Dibromochloromethane	50.7	0.180	1.00	ug/L	50.00		101	60-135	0.502	30	
1,2-Dibromo-3-chloropropane	50.1	0.550	2.00	ug/L	50.00		100	50-130	0.937	30	
1,2-Dibromoethane (EDB)	49.4	0.240	1.00	ug/L	50.00		98.8	80-120	0.0729	30	
Dibromomethane	50.8	0.280	1.00	ug/L	50.00		102	75-125	2.36	30	

Volatile Organic Compounds by GC/MS - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C03026											
LCS Dup (0C03026-BSD1)					Prepared & Analyzed: 03/04/2010						
1,2-Dichlorobenzene	48.6	0.160	1.00	ug/L	50.00		97.3	70-120	0.240	30	
trans-1,4-Dichloro-2-butene	31.8	1.67	5.00	ug/L	50.00		63.6	50-150	2.05	30	
1,4-Dichlorobenzene	47.1	0.250	1.00	ug/L	50.00		94.1	75-125	2.53	30	
1,1-Dichloroethane	47.3	0.240	1.00	ug/L	50.00		94.6	70-135	0.491	30	
1,2-Dichloroethane	49.8	0.220	1.00	ug/L	50.00		99.7	70-130	0.229	30	
1,1-Dichloroethene	47.5	0.280	1.00	ug/L	50.00		95.0	70-130	3.37	30	
cis-1,2-Dichloroethene	47.9	0.450	1.00	ug/L	50.00		95.9	70-125	2.74	30	
trans-1,2-Dichloroethene	45.7	0.530	1.00	ug/L	50.00		91.4	60-140	0.393	30	
1,2-Dichloropropane	50.7	0.270	1.00	ug/L	50.00		101	75-125	1.28	30	
cis-1,3-Dichloropropene	50.6	0.150	1.00	ug/L	50.00		101	70-130	3.31	30	
trans-1,3-Dichloropropene	54.5	0.170	1.00	ug/L	50.00		109	55-140	1.62	30	
Ethylbenzene	50.0	0.150	1.00	ug/L	50.00		100	75-125	0.481	30	
2-Hexanone	95.0	0.500	5.00	ug/L	100.0		95.0	55-130	0.175	30	
Iodomethane	29.0	0.370	5.00	ug/L	50.00		58.1	50-140	10.4	30	
Methylene chloride	46.1	1.67	5.00	ug/L	50.00		92.2	55-140	0.918	30	
4-Methyl-2-pentanone	99.8	0.500	5.00	ug/L	100.0		99.8	60-135	0.146	30	
Styrene	56.9	0.240	1.00	ug/L	50.00		114	65-135	0.722	30	
1,1,2,2-Tetrachloroethane	48.9	0.230	1.00	ug/L	50.00		97.9	65-130	0.189	30	
1,1,1,2-Tetrachloroethane	49.7	0.190	1.00	ug/L	50.00		99.5	80-130	2.23	30	
Tetrachloroethene	51.4	0.170	1.00	ug/L	50.00		103	45-150	0.350	30	
Toluene	47.3	0.190	1.00	ug/L	50.00		94.7	75-120	1.10	30	
1,1,2-Trichloroethane	48.9	0.260	1.00	ug/L	50.00		97.9	75-125	0.503	30	
1,1,1-Trichloroethane	50.7	0.290	1.00	ug/L	50.00		101	65-130	2.86	30	
Trichloroethene	49.3	0.500	1.00	ug/L	50.00		98.7	70-125	0.0697	30	
Trichlorofluoromethane	51.4	0.250	2.00	ug/L	50.00		103	60-145	1.40	30	
1,2,3-Trichloropropane	49.1	0.500	1.00	ug/L	50.00		98.3	75-125	6.61	30	
Vinyl chloride	52.4	0.200	2.00	ug/L	50.00		105	50-145	6.51	30	
Vinyl acetate	103	1.00	5.00	ug/L	99.95		103	60-150	0.459	30	
Xylenes (total)	141	0.220	1.00	ug/L	150.0		93.9	75-130	0.636	30	
Surrogate: Bromofluorobenzene	*29.35*			*ug/L*	*30.00*		*97.8*	*85-120*			

Volatile Organic Compounds by GC/MS - Quality Control

Empirical Laboratories, LLC

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C03026											
LCS Dup (0C03026-BSD1)					Prepared & Analyzed: 03/04/2010						
Surrogate: Dibromofluoromethane	*31.02*			*ug/L*	*30.00*		*103*	*85-120*			
Surrogate: 1,2-Dichloroethane-d4	*30.24*			*ug/L*	*30.00*		*101*	*80-135*			
Surrogate: Toluene-d8	*29.45*			*ug/L*	*30.00*		*98.2*	*85-115*			

Notes and Definitions

U	Analyte included in the analysis, but not detected
N	Predigested spike recovery not within control limits.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
D	Data reported from a dilution
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Empirical ~~TestAmerica~~ INCORPORATED

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring: YES - NC

Client Name: RESOLVE ENV Client #:
Address: 410 E. FRANKLIN ST
City/State/Zip Code: MONROE, NC 28227
Project Manager: LAURA MINOR
Telephone Number: 704 289-5881 Fax: 704 292-2910
Sampler Name: (Print Name) TERRY KENNEDY
Sampler Signature:

Project Name: WARREN COUNTY LANDFILL
Project #:
Site/Location ID: WARRENTON State: NC
Report To: LAURA MINOR
Invoice To: LAURA MINOR
Quote #: PO#:

TAT: ___ Standard ___ Rush (surcharges may apply)
Date Needed:
Fax Results: Y N

QC Deliverables: ___ None ___ Level 2 (Batch QC) ___ Level 3 ___ Level 4 Other:

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: APPENDIX I VOCS 8260	APPENDIX I METALS								REMARKS
WSW-1 -01	2/25/10	1430	G		DW	1	3						X	X								JS-Hg, Ic-Ni
1003003																						

Special Instructions:

4.1°C

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
	2/24/10			2/26	9:30
	2/26	15:02			WS
	2/27	9:10		2/27/10	~~09:00~~ 09:10

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp:
Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment:

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1003003 Number of Coolers: 1 of 1

Client: Resolve Env. Project: Warren Co. Landfill

Date/Time Received: 910 2/27/10 Date cooler(s) opened: 2/27/10

Opened By (print): Frank River (signature): [signature]
Will Schwab

Circle response below as appropriate

1. How did the samples arrive?: FedEx UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 4375

2. Were custody seals on outside of cooler(s)? ..... Yes No

How many: 1 Seal date: 2-26-10 Seal Initials: [illegible]

3. Were custody seals unbroken and intact at the date and time of arrival? ..... Yes No N/A

4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... Yes No N/A

5. Were custody papers filled out properly (ink, signed, etc.)? ..... Yes No N/A

6. Did you sign custody papers in the appropriate place for acceptance? ..... Yes No N/A

7. Was project identifiable from custody papers? ..... Yes No N/A

8. If required, was enough ice present in the cooler(s)? ..... Yes No N/A

Type of Coolant: WET DRY BLUE NONE Temperature of Samples upon Receipt: 4.1°C

Dates samples were logged-in: 3/1/10

9. Initial this form to acknowledge login of sample(s): (Name): Will Schwab (Initial): WS

10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A

11. Did all bottles arrive unbroken? ..... Yes No N/A

12. Was all required bottle label information complete? ..... Yes No N/A

13. Did all bottle labels agree with custody papers? ..... Yes No N/A

14. Were correct containers used for the analyses indicated? ..... Yes No N/A

15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A

16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A

17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A

18. Was headspace present in any included VOA vials? ..... Yes No N/A

pH<2 for metals

If Non-Conformance issues were present, list by sample ID: _____

_____ CAR#: _____