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January 9, 2004

Bladen County Solid Waste Management
1522 Mercer Mill Road
Elizabethtown, North Carolina 28337



Attention: **Mr. Ed Dowless**

Reference: **Results of Groundwater Assessment Monitoring**
Appendix I Sampling Event - December, 2003
Bladen County Landfill
Elizabethtown, North Carolina
S&ME Project No. 1034-95-147

Dear Mr. Dowless:

This correspondence comprises a report detailing analytical results and groundwater data obtained with regard to an Appendix I sampling event conducted by S&ME, Inc. at the former Bladen County Landfill in December, 2003.

As per a letter dated May 30, 2000 from Mr. Larry Rose with the North Carolina Division of Waste Management, Solid Waste Section, permission was granted for monitoring wells MW-2, MW-6 and the surface water samples to be eliminated from the semi-annual sampling requirements. Therefore, monitoring wells MW-2, MW-6 and the surface water samples were not sampled during this sampling event.

GROUNDWATER DATA

On December 22 - 23, 2003, S&ME personnel collected groundwater data and samples from seven groundwater monitoring wells located at the former landfill site. Prior to sampling and initiation of data collection, each well was opened in order to allow water levels to equilibrate. The water level depth was then measured from the top of each well casing to the nearest .01 foot using an electronic water level indicator. The water level measurements are provided in the attached Table 1. As per our telephone conversation with Mr. Larry Rose in August 2001, a turbidity meter was used to collect turbidity readings from each well. Prior to the collection of the groundwater samples, the pH, temperature, specific conductivity and turbidity were measured for each well volume by a field meter. This data is provided in the attached Table 2 (Groundwater Parameters).

Wells were purged prior to sampling using disposable bailers. Wells were purged by bailing a quantity of water equal to a minimum of three times the volume of standing water in the well, or to dryness. Groundwater parameters (temperature, conductivity, pH and turbidity) were measured after each well volume was purged. These parameters are detailed in Table 2. As per Mr. Rose, the wells were sampled one day after they were purged to allow suspended solids in the water column to settle in order to reduce the possible interference of suspended solids with the RCRA Metal analyses.

After the completion of purging, groundwater samples were collected using the bailer. The groundwater samples were transferred to laboratory pre-prepared bottles containing hydrochloric acid and nitric acid for storage in a prechilled cooler. Hydrochloric acid and nitric acid were used to preserve samples for analysis to detect volatile compounds and metals, as per requirements set forth by US Environmental Protection Agency (EPA) protocols for individual analyses. After the sampling round was completed, samples were transported under standard chain-of-custody protocol to ENCO Laboratories, an analytical laboratory located in Cary, North Carolina.

ANALYTICAL METHODOLOGY AND RESULTS

As per Mr. Larry Rose with North Carolina Division of Waste Management, Solid Waste Section, the groundwater samples were analyzed for Appendix I volatile organic compounds and RCRA Metals. Table 3 summarizes the analytical results by well and constituent for the December 2003 sampling event. A copy of the laboratory results and the associated chain-of-custody are attached. The following table shows the listed constituents, detected in the December 2003 sampling event compared to the July 2003 sampling event.

Well No.	July 2003		December 2003	
	Metals (ug/L)	Organics (ug/L)	Metals (ug/L)	Organics (ug/L)
MW-1				
MW-3	Cadmium 1.7 (total)			
MW-4				
MW-5				
MW-7				
MW-8	Cadmium 2.1 (total)		Cadmium 7.7 (total)	
MW-9	Cadmium 1.0 (total)	c-1,2-Dichloroethene 6.0		c-1,2-Dichloroethene 6.4 Chlorobenzene 7.2

Notes:

Constituents not listed were below the detection limit of the analytical method.
 Constituents detected in quantities above regulatory levels set forth in 15A NCAC 2L, "Criteria and Standards Applicable to the Groundwaters of North Carolina" are printed in **bold type**.
 For comparison purposes metal concentrations were converted from mg/L to ug/L.

S&ME appreciates the opportunity to work with you on this project. Should you have any questions or comments, or require additional information, please contact our office at (910) 323-1091.

Sincerely,

S&ME, Inc.



Jamie T. Honeycutt
Environmental Staff

Senior Review by



Michael W. Behen, P.E.
Senior Geotechnical Engineer

TABLE 1 Monitoring Well and Sampling Data: December, 2003

WELL ID	Well Depth BTOC	Water Level BTOC	Approximate Volume Purged (Gallons)
MW-1	41.19	14.00	13.05
MW-3	21.50	6.84	4.00 ^A
MW-4	44.04	34.35	4.70
MW-5	30.00	23.58	1.00 ^A
MW-7	15.25	1.41	6.60
MW-8	30.60	17.30	2.00 ^A
MW-9	23.00	9.57	6.30

Notes:

All measurements in feet.

BTOC Below top of casing

^A Well bailed dry prior to removal of three wells volumes

Table 2 Groundwater Parameters: December, 2003

		MW-1	MW-3 ^D	MW-4	MW-5 ^C	MW-7	MW-8 ^C	MW-9
Initial	Temperature^A	63.0	62.0	62.0	64.0	60.0	58.0	60.0
	pH	6.5	5.6	8.3	7.2	7.0	5.8	5.9
	Conductivity^B	166	150	196	457	410	311	983
	Turbidity^E	18.0	12.0	4.0	62.0	18.0	26.0	20.2
1st Volume	Temperature^A	63.0	64.0	64.0	63.0	61.0	59.0	60.0
	pH	6.7	5.4	7.8	7.0	6.8	6.0	6.0
	Conductivity^B	144	143	172	430	380	310	954
	Turbidity^E	37.0	94.0	13.0	195.0	17.0	40.0	50.3
2nd Volume	Temperature^A	63.0	64.0	64.0	-	62.0	-	61.0
	pH	6.9	5.1	7.1	-	6.5	-	6.5
	Conductivity^B	137	145	175	-	388	-	968
	Turbidity^E	42.0	120.0	17.0	-	20.0	-	65.0
3rd Volume	Temperature^A	63.0	-	64.0	-	62.0	-	62.0
	pH	6.9	-	7.3	-	6.3	-	6.6
	Conductivity^B	139	-	175	-	379	-	970
	Turbidity^E	48.0	-	30.0	-	23.0	-	50.0
Turbidity^E at time of sample collection		10.0	85.0	15.0	27.0	5.0	29.5	30.0

Notes:

- A Measured in degrees Fahrenheit.
- B Measured in microhms.
- C Well bailed dry after one well volume.
- D Well bailed dry after two well volumes.
- E Measured in NTU.

Table 3 Groundwater Analytical Results: December, 2003

Constituent	2L ^A	MW-1	MW-3	MW-4	MW-5	MW-7	MW-8	MW-9
c-1,2-Dichloroethene	70 ug/L							6.4
Chlorobenzene	50 ug/L							7.2
Cadmium (total)	0.005 mg/L						0.0077	

Notes:

Constituents not listed were below the detection limit of the analytical method.

- A Regulatory standards as set forth in 15A NCAC 2L, "Classifications and Standards Applicable to the Groundwaters of North Carolina" or in guidance documents issued by the NCDENR Solid Waste Section. **Analytical results greater than applicable standards are given in bold print.**

**APPENDIX
LABORATORY DATA**

Environmental Conservation Laboratories, Inc.
1015 Passport Way
Cary, North Carolina 27513-2042
919 / 677-1669
Fax 919 / 677-9846
www.encolabs.com



CLIENT : S&ME, Inc.
ADDRESS: 409 Chicago Dr.
Suite 116
Fayetteville, NC 28306

REPORT # : CRY15129
DATE SUBMITTED: December 23, 2003
DATE REPORTED : January 2, 2004

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ATTENTION: Jamie Honeycutt

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

REFERENCE: BLADEN COUNTY LF

Bladen County LF

12/23/03

CRY15129-1	: MW-1	@ 09:45
CRY15129-2	: MW-3	@ 09:10
CRY15129-3	: MW-4	@ 08:50
CRY15129-4	: MW-5	@ 08:35
CRY15129-5	: MW-7	@ 09:30
CRY15129-6	: MW-8	@ 08:10
CRY15129-7	: MW-9	@ 08:15
CRY15129-8	: TRIP BLANK	@ 00:00

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. This data has been produced in accordance with ELAC Standards (July, 1999). This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

PROJECT MANAGER

A handwritten signature in cursive script that reads "Chuck Smith".

Chuck Smith

ENCO LABORATORIES

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RESULTS OF ANALYSIS

PA METHOD APPENDIX I, 8260 -
VOLATILE ORGANICS

	<u>MW-1</u>	<u>MW-3</u>	<u>Units</u>
chloromethane	10 U	10 U	ug/L
vinyl Chloride	10 U	10 U	ug/L
chloromethane	10 U	10 U	ug/L
chloroethane	10 U	10 U	ug/L
trichlorofluoromethane	5.0 U	5.0 U	ug/L
1,1-Dichloroethene	5.0 U	5.0 U	ug/L
acetone	100 U	100 U	ug/L
chloroethane	10 U	10 U	ug/L
carbon Disulfide	100 U	100 U	ug/L
ethylene Chloride	10 U	10 U	ug/L
acrylonitrile	200 U	200 U	ug/L
1,2-Dichloroethene	5.0 U	5.0 U	ug/L
1,1-Dichloroethane	5.0 U	5.0 U	ug/L
vinyl Acetate	50 U	50 U	ug/L
1,2-Dichloroethene	5.0 U	5.0 U	ug/L
2-Butanone	100 U	100 U	ug/L
monochloromethane	5.0 U	5.0 U	ug/L
chloroform	5.0 U	5.0 U	ug/L
1,1,1-Trichloroethane	5.0 U	5.0 U	ug/L
carbon tetrachloride	10 U	10 U	ug/L
1,2-Dichloroethane	5.0 U	5.0 U	ug/L
benzene	5.0 U	5.0 U	ug/L
trichloroethene	5.0 U	5.0 U	ug/L
1,2-Dichloropropane	5.0 U	5.0 U	ug/L

= Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

PA METHOD APPENDIX I, 8260 (cont.) -

<u>OLATILE ORGANICS</u>	<u>MW-1</u>	<u>MW-3</u>	<u>Units</u>
ibromomethane	10 U	10 U	ug/L
romodichloromethane	5.0 U	5.0 U	ug/L
-1,3-Dichloropropene	10 U	10 U	ug/L
-Methyl-2-Pentanone	100 U	100 U	ug/L
oluene	5.0 U	5.0 U	ug/L
-1,3-Dichloropropene	10 U	10 U	ug/L
,1,2-Trichloroethane	5.0 U	5.0 U	ug/L
etrachloroethene	5.0 U	5.0 U	ug/L
-Hexanone	50 U	50 U	ug/L
ibromochloromethane	5.0 U	5.0 U	ug/L
,2-Dibromoethane	5.0 U	5.0 U	ug/L
hlorobenzene	5.0 U	5.0 U	ug/L
,1,1,2-Tetrachloroethane	5.0 U	5.0 U	ug/L
thylbenzene	5.0 U	5.0 U	ug/L
-Xylene & p-Xylene	5.0 U	5.0 U	ug/L
-Xylene	5.0 U	5.0 U	ug/L
tyrene	10 U	10 U	ug/L
romoform	5.0 U	5.0 U	ug/L
,1,2,2-Tetrachloroethane	5.0 U	5.0 U	ug/L
,2,3-Trichloropropane	15 U	15 U	ug/L
-1,4-Dichloro-2-Butene	100 U	100 U	ug/L
,4-Dichlorobenzene	5.0 U	5.0 U	ug/L
,2-Dichlorobenzene	5.0 U	5.0 U	ug/L
,2-Dibromo-3-Chloropropane	25 U	25 U	ug/L
<u>urrogate:</u>	<u>% RECOV</u>	<u>% RECOV</u>	<u>LIMITS</u>
ibromofluoromethane	*70	75	73-138
3-Toluene	86	92	77-118
romofluorobenzene	107	106	70-130
ate Analyzed	12/26/03 13:34	12/26/03 14:05	

= Surrogate recovery outside historical limits. Data released without qualification based on acceptable recovery for two of three surrogates.
 = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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RESULTS OF ANALYSIS

<u>TOTAL METALS</u>	<u>METHOD</u>	<u>MW-1</u>	<u>MW-3</u>	<u>Units</u>
Arsenic Date Analyzed	6010	0.010 U 12/31/03 13:28	0.010 U 12/31/03 13:39	mg/L
Barium Date Analyzed	6010	0.50 U 12/31/03 13:28	0.50 U 12/31/03 13:39	mg/L
Cadmium Date Analyzed	6010	0.0010 U 12/31/03 13:28	0.0010 U 12/31/03 13:39	mg/L
Chromium Date Analyzed	6010	0.010 U 12/31/03 13:28	0.010 U 12/31/03 13:39	mg/L
Lead Date Analyzed	6010	0.010 U 12/31/03 13:28	0.010 U 12/31/03 13:39	mg/L
Selenium Date Analyzed	6010	0.020 U 12/31/03 13:28	0.020 U 12/31/03 13:39	mg/L
Silver Date Analyzed	6010	0.010 U 12/31/03 13:28	0.010 U 12/31/03 13:39	mg/L
<u>Mercury</u>	<u>METHOD</u>	<u>MW-1</u>	<u>MW-3</u>	<u>Units</u>
Mercury Date Analyzed	7470	0.00020 U 12/30/03 17:30	0.00020 U 12/30/03 17:30	mg/L

= Compound was analyzed for but not detected to the level shown.

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RESULTS OF ANALYSIS

PA METHOD APPENDIX I, 8260 -
VOLATILE ORGANICS

	<u>MW-4</u>	<u>MW-5</u>	<u>Units</u>
chloromethane	10 U	10 U	ug/L
vinyl Chloride	10 U	10 U	ug/L
chloromethane	10 U	10 U	ug/L
chloroethane	10 U	10 U	ug/L
trichlorofluoromethane	5.0 U	5.0 U	ug/L
1,1-Dichloroethene	5.0 U	5.0 U	ug/L
acetone	100 U	100 U	ug/L
chloromethane	10 U	10 U	ug/L
carbon Disulfide	100 U	100 U	ug/L
ethylene Chloride	10 U	10 U	ug/L
acrylonitrile	200 U	200 U	ug/L
1,2-Dichloroethene	5.0 U	5.0 U	ug/L
1,1-Dichloroethane	5.0 U	5.0 U	ug/L
vinyl Acetate	50 U	50 U	ug/L
1,2-Dichloroethene	5.0 U	5.0 U	ug/L
2-Butanone	100 U	100 U	ug/L
chlorochloromethane	5.0 U	5.0 U	ug/L
chloroform	5.0 U	5.0 U	ug/L
1,1,1-Trichloroethane	5.0 U	5.0 U	ug/L
carbon tetrachloride	10 U	10 U	ug/L
1,2-Dichloroethane	5.0 U	5.0 U	ug/L
benzene	5.0 U	5.0 U	ug/L
trichloroethene	5.0 U	5.0 U	ug/L
1,2-Dichloropropane	5.0 U	5.0 U	ug/L

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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RESULTS OF ANALYSIS

PA METHOD APPENDIX I, 8260 (cont.) -

<u>VOLATILE ORGANICS</u>	<u>MW-4</u>	<u>MW-5</u>	<u>Units</u>
Dibromomethane	10 U	10 U	ug/L
Dibromodichloromethane	5.0 U	5.0 U	ug/L
1,3-Dichloropropene	10 U	10 U	ug/L
2-Methyl-2-Pentanone	100 U	100 U	ug/L
Toluene	5.0 U	5.0 U	ug/L
1,3-Dichloropropene	10 U	10 U	ug/L
1,1,2-Trichloroethane	5.0 U	5.0 U	ug/L
Tetrachloroethene	5.0 U	5.0 U	ug/L
2-Hexanone	50 U	50 U	ug/L
Dibromochloromethane	5.0 U	5.0 U	ug/L
1,2-Dibromoethane	5.0 U	5.0 U	ug/L
Chlorobenzene	5.0 U	5.0 U	ug/L
1,1,1,2-Tetrachloroethane	5.0 U	5.0 U	ug/L
o-Tolylbenzene	5.0 U	5.0 U	ug/L
m-Xylene & p-Xylene	5.0 U	5.0 U	ug/L
o-Xylene	5.0 U	5.0 U	ug/L
Styrene	10 U	10 U	ug/L
Formoform	5.0 U	5.0 U	ug/L
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	ug/L
1,2,3-Trichloropropane	15 U	15 U	ug/L
1,4-Dichloro-2-Butene	100 U	100 U	ug/L
1,4-Dichlorobenzene	5.0 U	5.0 U	ug/L
1,2-Dichlorobenzene	5.0 U	5.0 U	ug/L
1,2-Dibromo-3-Chloropropane	25 U	25 U	ug/L
Surrogate:	% RECOV	% RECOV	LIMITS
Dibromofluoromethane	75	73	73-138
8-Toluene	87	87	77-118
Dibromofluorobenzene	111	111	70-130
Date Analyzed	12/26/03 14:36	12/26/03 15:07	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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RESULTS OF ANALYSIS

<u>TOTAL METALS</u>	<u>METHOD</u>	<u>MW-4</u>	<u>MW-5</u>	<u>Units</u>
Arsenic	6010	0.010 U	0.010 U	mg/L
Date Analyzed		12/31/03 14:02	12/31/03 14:11	
Barium	6010	0.50 U	0.50 U	mg/L
Date Analyzed		12/31/03 14:02	12/31/03 14:11	
Cadmium	6010	0.0010 U	0.0010 U	mg/L
Date Analyzed		12/31/03 14:02	12/31/03 14:11	
Chromium	6010	0.010 U	0.010 U	mg/L
Date Analyzed		12/31/03 14:02	12/31/03 14:11	
Lead	6010	0.010 U	0.010 U	mg/L
Date Analyzed		12/31/03 14:02	12/31/03 14:11	
Selenium	6010	0.020 U	0.020 U	mg/L
Date Analyzed		12/31/03 14:02	12/31/03 14:11	
Silver	6010	0.010 U	0.010 U	mg/L
Date Analyzed		12/31/03 14:02	12/31/03 14:11	
<u>Mercury</u>	<u>METHOD</u>	<u>MW-4</u>	<u>MW-5</u>	<u>Units</u>
Mercury	7470	0.00020 U	0.00020 U	mg/L
Date Analyzed		12/30/03 17:30	12/30/03 17:30	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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RESULTS OF ANALYSIS

EPA METHOD APPENDIX I, 8260 -
VOLATILE ORGANICS

	<u>MW-7</u>	<u>MW-8</u>	<u>Units</u>
Chloromethane	10 U	10 U	ug/L
Vinyl Chloride	10 U	10 U	ug/L
Bromomethane	10 U	10 U	ug/L
Chloroethane	10 U	10 U	ug/L
Trichlorofluoromethane	5.0 U	5.0 U	ug/L
,1-Dichloroethene	5.0 U	5.0 U	ug/L
Acetone	100 U	100 U	ug/L
Iodomethane	10 U	10 U	ug/L
Carbon Disulfide	100 U	100 U	ug/L
Methylene Chloride	10 U	10 U	ug/L
Acrylonitrile	200 U	200 U	ug/L
-1,2-Dichloroethene	5.0 U	5.0 U	ug/L
,1-Dichloroethane	5.0 U	5.0 U	ug/L
Vinyl Acetate	50 U	50 U	ug/L
-1,2-Dichloroethene	5.0 U	5.0 U	ug/L
-Butanone	100 U	100 U	ug/L
Bromochloromethane	5.0 U	5.0 U	ug/L
Chloroform	5.0 U	5.0 U	ug/L
,1,1-Trichloroethane	5.0 U	5.0 U	ug/L
Carbon tetrachloride	10 U	10 U	ug/L
,2-Dichloroethane	5.0 U	5.0 U	ug/L
Benzene	5.0 U	5.0 U	ug/L
Trichloroethene	5.0 U	5.0 U	ug/L
,2-Dichloropropane	5.0 U	5.0 U	ug/L

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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RESULTS OF ANALYSIS

EPA METHOD APPENDIX I, 8260 (cont.) -			
<u>VOLATILE ORGANICS</u>	<u>MW-7</u>	<u>MW-8</u>	<u>Units</u>
Dibromomethane	10 U	10 U	ug/L
Bromodichloromethane	5.0 U	5.0 U	ug/L
c-1,3-Dichloropropene	10 U	10 U	ug/L
4-Methyl-2-Pentanone	100 U	100 U	ug/L
Toluene	5.0 U	5.0 U	ug/L
c-1,3-Dichloropropene	10 U	10 U	ug/L
1,1,2-Trichloroethane	5.0 U	5.0 U	ug/L
Tetrachloroethene	5.0 U	5.0 U	ug/L
2-Hexanone	50 U	50 U	ug/L
Dibromochloromethane	5.0 U	5.0 U	ug/L
1,2-Dibromoethane	5.0 U	5.0 U	ug/L
Chlorobenzene	5.0 U	5.0 U	ug/L
1,1,1,2-Tetrachloroethane	5.0 U	5.0 U	ug/L
Ethylbenzene	5.0 U	5.0 U	ug/L
m-Xylene & p-Xylene	5.0 U	5.0 U	ug/L
o-Xylene	5.0 U	5.0 U	ug/L
Styrene	10 U	10 U	ug/L
Bromoform	5.0 U	5.0 U	ug/L
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	ug/L
1,2,3-Trichloropropane	15 U	15 U	ug/L
c-1,4-Dichloro-2-Butene	100 U	100 U	ug/L
1,4-Dichlorobenzene	5.0 U	5.0 U	ug/L
1,2-Dichlorobenzene	5.0 U	5.0 U	ug/L
1,2-Dibromo-3-Chloropropane	25 U	25 U	ug/L
Surrogate:	% RECOV	% RECOV	LIMITS
Dibromofluoromethane	77	*72	73-138
1,8-Toluene	92	87	77-118
Bromofluorobenzene	106	106	70-130
Date Analyzed	12/26/03 15:38	12/26/03 16:08	

= Surrogate recovery outside historical limits. Data released without qualification based on acceptable recovery for two of three surrogates.
 = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
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RESULTS OF ANALYSIS

<u>TOTAL METALS</u>	<u>METHOD</u>	<u>MW-7</u>	<u>MW-8</u>	<u>Units</u>
Arsenic Date Analyzed	6010	0.010 U 12/31/03 14:19	0.010 U 12/31/03 14:27	mg/L
Barium Date Analyzed	6010	0.50 U 12/31/03 14:19	0.50 U 12/31/03 14:27	mg/L
Cadmium Date Analyzed	6010	0.0010 U 12/31/03 14:19	0.0077 12/31/03 14:27	mg/L
Chromium Date Analyzed	6010	0.010 U 12/31/03 14:19	0.010 U 12/31/03 14:27	mg/L
Lead Date Analyzed	6010	0.010 U 12/31/03 14:19	0.010 U 12/31/03 14:27	mg/L
Selenium Date Analyzed	6010	0.020 U 12/31/03 14:19	0.020 U 12/31/03 14:27	mg/L
Silver Date Analyzed	6010	0.010 U 12/31/03 14:19	0.010 U 12/31/03 14:27	mg/L
<u>Mercury</u>	<u>METHOD</u>	<u>MW-7</u>	<u>MW-8</u>	<u>Units</u>
Mercury Date Analyzed	7470	0.00020 U 12/30/03 17:30	0.00020 U 12/30/03 17:30	mg/L

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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 DATE REPORTED: January 2, 2004
 REFERENCE : BLADEN COUNTY LF
 PROJECT NAME : Bladen County LF

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RESULTS OF ANALYSIS

EPA METHOD APPENDIX I, 8260 -
VOLATILE ORGANICS

	<u>MW-9</u>	<u>TRIP BLANK</u>	<u>Units</u>
Chloromethane	10 U	10 U	ug/L
Vinyl Chloride	10 U	10 U	ug/L
Bromomethane	10 U	10 U	ug/L
Chloroethane	10 U	10 U	ug/L
Trichlorofluoromethane	5.0 U	5.0 U	ug/L
1,1-Dichloroethene	5.0 U	5.0 U	ug/L
Acetone	100 U	100 U	ug/L
Iodomethane	10 U	10 U	ug/L
Carbon Disulfide	100 U	100 U	ug/L
Methylene Chloride	10 U	10 U	ug/L
Acrylonitrile	200 U	200 U	ug/L
1,2-Dichloroethene	5.0 U	5.0 U	ug/L
1,1-Dichloroethane	5.0 U	5.0 U	ug/L
Vinyl Acetate	50 U	50 U	ug/L
1,2-Dichloroethene	6.4	5.0 U	ug/L
2-Butanone	100 U	100 U	ug/L
Bromochloromethane	5.0 U	5.0 U	ug/L
Chloroform	5.0 U	5.0 U	ug/L
1,1,1-Trichloroethane	5.0 U	5.0 U	ug/L
Carbon tetrachloride	10 U	10 U	ug/L
1,2-Dichloroethane	5.0 U	5.0 U	ug/L
Benzene	5.0 U	5.0 U	ug/L
Trichloroethene	5.0 U	5.0 U	ug/L
1,2-Dichloropropane	5.0 U	5.0 U	ug/L

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

REPORT # : CRY15129
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RESULTS OF ANALYSIS

EPA METHOD APPENDIX I, 8260 (cont.) -

<u>VOLATILE ORGANICS</u>	<u>MW-9</u>	<u>TRIP BLANK</u>	<u>Units</u>
Dibromomethane	10 U	10 U	ug/L
Bromodichloromethane	5.0 U	5.0 U	ug/L
m-1,3-Dichloropropene	10 U	10 U	ug/L
4-Methyl-2-Pentanone	100 U	100 U	ug/L
Toluene	5.0 U	5.0 U	ug/L
m-1,3-Dichloropropene	10 U	10 U	ug/L
1,1,2-Trichloroethane	5.0 U	5.0 U	ug/L
Tetrachloroethene	5.0 U	5.0 U	ug/L
2-Hexanone	50 U	50 U	ug/L
Dibromochloromethane	5.0 U	5.0 U	ug/L
1,2-Dibromoethane	5.0 U	5.0 U	ug/L
Chlorobenzene	7.2	5.0 U	ug/L
1,1,1,2-Tetrachloroethane	5.0 U	5.0 U	ug/L
Ethylbenzene	5.0 U	5.0 U	ug/L
m-Xylene & p-Xylene	5.0 U	5.0 U	ug/L
o-Xylene	5.0 U	5.0 U	ug/L
Styrene	10 U	10 U	ug/L
Bromoform	5.0 U	5.0 U	ug/L
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	ug/L
1,2,3-Trichloropropane	15 U	15 U	ug/L
m-1,4-Dichloro-2-Butene	100 U	100 U	ug/L
1,4-Dichlorobenzene	5.0 U	5.0 U	ug/L
1,2-Dichlorobenzene	5.0 U	5.0 U	ug/L
1,2-Dibromo-3-Chloropropane	25 U	25 U	ug/L
Surrogate:	% RECOV	% RECOV	LIMITS
Dibromofluoromethane	78	86	73-138
1,8-Toluene	88	92	77-118
Bromofluorobenzene	105	110	70-130
Date Analyzed	12/26/03 16:39	12/26/03 10:36	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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RESULTS OF ANALYSIS

<u>TOTAL METALS</u>	<u>METHOD</u>	<u>MW-9</u>	<u>TRIP BLANK</u>	<u>Units</u>
Arsenic Date Analyzed	6010	0.010 U 12/31/03 14:35	NR	mg/L
Barium Date Analyzed	6010	0.50 U 12/31/03 14:35	NR	mg/L
Cadmium Date Analyzed	6010	0.0010 U 12/31/03 14:35	NR	mg/L
Chromium Date Analyzed	6010	0.010 U 12/31/03 14:35	NR	mg/L
Lead Date Analyzed	6010	0.010 U 12/31/03 14:35	NR	mg/L
Selenium Date Analyzed	6010	0.020 U 12/31/03 14:35	NR	mg/L
Silver Date Analyzed	6010	0.010 U 12/31/03 14:35	NR	mg/L
<u>Mercury</u>	<u>METHOD</u>	<u>MW-9</u>	<u>TRIP BLANK</u>	<u>Units</u>
Mercury Date Analyzed	7470	0.00020 U 12/30/03 17:30	NR	mg/L

NR = Analysis not requested for this sample.
 = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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RESULTS OF ANALYSIS

EPA METHOD APPENDIX I, 8260 -
VOLATILE ORGANICS

	<u>LAB</u> <u>BLANK</u>	<u>Units</u>
Chloromethane	10 U	ug/L
Vinyl Chloride	10 U	ug/L
Bromomethane	10 U	ug/L
Chloroethane	10 U	ug/L
Trichlorofluoromethane	5.0 U	ug/L
1,1-Dichloroethene	5.0 U	ug/L
Acetone	100 U	ug/L
Iodomethane	10 U	ug/L
Carbon Disulfide	100 U	ug/L
Methylene Chloride	10 U	ug/L
Acrylonitrile	200 U	ug/L
1,2-Dichloroethene	5.0 U	ug/L
1,1-Dichloroethane	5.0 U	ug/L
Vinyl Acetate	50 U	ug/L
1,2-Dichloroethene	5.0 U	ug/L
2-Butanone	100 U	ug/L
Bromochloromethane	5.0 U	ug/L
Chloroform	5.0 U	ug/L
1,1,1-Trichloroethane	5.0 U	ug/L
Carbon tetrachloride	10 U	ug/L
1,2-Dichloroethane	5.0 U	ug/L
Benzene	5.0 U	ug/L
Trichloroethene	5.0 U	ug/L
1,2-Dichloropropane	5.0 U	ug/L

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES

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 PROJECT NAME : Bladen County LF

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RESULTS OF ANALYSIS

EPA METHOD APPENDIX I, 8260 (cont.) -
VOLATILE ORGANICS

	<u>LAB BLANK</u>	<u>Units</u>
Dibromomethane	10 U	ug/L
Bromodichloromethane	5.0 U	ug/L
m-1,3-Dichloropropene	10 U	ug/L
1-Methyl-2-Pentanone	100 U	ug/L
Toluene	5.0 U	ug/L
m-1,3-Dichloropropene	10 U	ug/L
1,1,2-Trichloroethane	5.0 U	ug/L
Tetrachloroethene	5.0 U	ug/L
2-Hexanone	50 U	ug/L
Dibromochloromethane	5.0 U	ug/L
1,2-Dibromoethane	5.0 U	ug/L
Chlorobenzene	5.0 U	ug/L
1,1,1,2-Tetrachloroethane	5.0 U	ug/L
Ethylbenzene	5.0 U	ug/L
m-Xylene & p-Xylene	5.0 U	ug/L
o-Xylene	5.0 U	ug/L
Styrene	10 U	ug/L
Bromoform	5.0 U	ug/L
1,1,2,2-Tetrachloroethane	5.0 U	ug/L
1,2,3-Trichloropropane	15 U	ug/L
m-1,4-Dichloro-2-Butene	100 U	ug/L
1,4-Dichlorobenzene	5.0 U	ug/L
1,2-Dichlorobenzene	5.0 U	ug/L
1,2-Dibromo-3-Chloropropane	25 U	ug/L
<u>Surrogate:</u>	<u>% RECOV</u>	<u>LIMITS</u>
Dibromofluoromethane	84	73-138
18-Toluene	89	77-118
Bromofluorobenzene	111	70-130
Date Analyzed	12/26/03 09:34	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
 REPORT # : CRY15129
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RESULTS OF ANALYSIS

<u>TOTAL METALS</u>	<u>METHOD</u>	<u>LAB BLANK</u>	<u>Units</u>
Arsenic Date Analyzed	6010	0.010 U 12/31/03 12:49	mg/L
Barium Date Analyzed	6010	0.50 U 12/31/03 12:49	mg/L
Cadmium Date Analyzed	6010	0.0010 U 12/31/03 12:49	mg/L
Chromium Date Analyzed	6010	0.010 U 12/31/03 12:49	mg/L
Lead Date Analyzed	6010	0.010 U 12/31/03 12:49	mg/L
Selenium Date Analyzed	6010	0.020 U 12/31/03 12:49	mg/L
Silver Date Analyzed	6010	0.010 U 12/31/03 12:49	mg/L
<u>Mercury</u>	<u>METHOD</u>	<u>LAB BLANK</u>	<u>Units</u>
Mercury Date Analyzed	7470	0.00020 U 12/30/03 17:30	mg/L

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
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LABORATORY CERTIFICATIONS

Laboratory Certification: NCDENR:591

All analyses reported with this project were analyzed by the facility indicated unless identified below.

ENCO LABORATORIES

REPORT # : CRY15129
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 PROJECT NAME : Bladen County LF

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QUALITY CONTROL DATA

<u>Parameter</u>	<u>% RECOVERY</u> <u>MS/MSD/LCS</u>	<u>ACCEPT</u> <u>LIMITS</u>	<u>% RPD</u> <u>MS/MSD</u>	<u>ACCEPT</u> <u>LIMITS</u>
<u>EPA Method APPENDIX I, 8260</u>				
1,1-Dichloroethene	84/ 75/ 79	36-177	11	30
Benzene	77/ 73/ 81	53-150	5	23
Trichloroethene	79/ 81/ 78	64-124	2	25
Toluene	*8/*14/ 90	40-161	**54	23
Chlorobenzene	86/ 88/ 86	44-128	2	22
<u>TOTAL METALS</u>				
Arsenic, 6010	93/ 89/ 97	64-126	4	12
Barium, 6010	94/ 87/ 98	74-119	8	11
Cadmium, 6010	97/ 91/103	68-121	6	12
Chromium, 6010	95/ 89/101	73-120	6	17
Lead, 6010	94/ 90/100	68-126	4	19
Selenium, 6010	90/ 88/ 94	65-129	2	10
Silver, 6010	97/ 90/106	69-121	7	12
<u>Mercury</u>				
Mercury, 7470	111/108/101	70-136	3	12
Mercury, 7470	111/102/101	70-136	8	12
Mercury, 7470	100/108/101	70-136	8	12
Mercury, 7470	100/102/101	70-136	2	12

- * = MS/MSD recoveries outside historical limits. Data released without qualification based on an acceptable LCS recovery.
- ** = %RPD exceeds criteria due to non-homogenous sample matrix.
- < = Less Than
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- LCS = Laboratory Control Standard
- RPD = Relative Percent Difference



ENVIRONMENTAL CONSERVATION LABORATORIES

OSARF # 2062

4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
Ph. (904) 296-3007 • Fax (904) 296-6210

10207 General Drive
Orlando, Florida 32824-8529
Ph. (407) 826-5314 • Fax (407) 850-6945

1015 Passport Way
Cary, North Carolina 27513
Ph. (919) 677-1669 • Fax (919) 677-9846

P1262

CHAIN OF CUSTODY RECORD

PROJECT REFERENCE: **Bladen County LF**

PROJECT NO.: **BLADEN COUNTY LF**

PO NUMBER: **9910-323-1091**

MATRIX TYPE: **PCRA Metals**

REQUIRED ANALYSIS: **2260-API-NC**

PAGE **1** OF **1**

EXPEDITED REPORT DELIVERY (surcharge)

STANDARD REPORT DELIVERY

Date Due: _____

PROJECT LOC: **Bladen County LF**

SAMPLER(S) NAME: **Keneth Baldwin**

CLIENT NAME: **S&ME, Inc.**

CLIENT PROJECT MANAGER: **Jamie Honeycutt**

CLIENT ADDRESS (CITY, STATE, ZIP): **409 Chicago Dr. Suite 116 Fayetteville, NC 28306**

PHONE: **(910) 323-3499**

STATION	DATE	TIME	GRAB	COMP	SAMPLE IDENTIFICATION	SURFACE WATER										NUMBER OF CONTAINERS SUBMITTED	PRESERVATIVE	REMARKS
						GROUND WATER	WASTEWATER	DRINKING WATER	SOIL/SOLID/SEDIMENT	NONAQUEOUS LIQUID (oil, solvent, etc.)	AIR	SLUDGE	OTHER					
1	12-23-03	9:45			MW-1	X										1	3	
2		9:10			MW-3	X										1	3	
3		8:50			MW-4	X										1	3	
4		8:35			MW-5	X										1	3	
5		9:30			MW-7	X										1	3	
6		8:10			MW-8	X										1	3	
7		8:15			MW-9	X										1	3	
8	12-23-03				TRIP BLANK	X										0	3	
9																		
10																		
11																		
12																		
13																		
14																		

SAMPLE KIT PREPARED BY: **DORLANDO**

RELINQUISHED BY: (SIGNATURE) **Keneth Baldwin** DATE: **12-23-03** TIME: **2:20**

RECEIVED BY: (SIGNATURE) **Byron James** DATE: **12/23/03** TIME: **11:40**

RECEIVED FOR LABORATORY BY: (SIGNATURE) **Byron James** DATE: **12/23/03** TIME: **11:40**

CUSTOMER INTACT:

ENCO LOG NO. **04101100**

REMARKS: