

NC DENR
Division of Waste Management - Solid Waste

**Environmental Monitoring
Reporting Form**

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- Prepare one form for each individually monitored unit.
- Please type or print legibly.
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i)).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Municipal Engineering Services Co., PA

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Jonathan Pfohl

Phone: (919) 772-5393

E-mail: jpfohl@mesco.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Lenoir County Closed MSWLF and Active C&D Landfill	2949 Hodges Farm Road LaGrange, NC 28501	54-03	.1600	July 15, 2008

Environmental Status: (Check all that apply)

- Initial/Background Monitoring Detection Monitoring Assessment Monitoring Corrective Action

Type of data submitted: (Check all that apply)

- Groundwater monitoring data from monitoring wells Methane gas monitoring data
 Groundwater monitoring data from private water supply wells Corrective action data (specify) _____
 Leachate monitoring data Other(specify) _____
 Surface water monitoring data

Notification attached?

- No. No groundwater or surface water standards were exceeded.
 Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
 Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Jonathan Pfohl

Environmental Specialist

(919) 772-5393

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Signature

Date

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

Semi-Annual Assessment Monitoring and Statistical Analysis Report

Prepared for

Lenoir County Closed MSWLF and Active C&D Landfill
LaGrange, North Carolina

July 2008

Permit Number: 54-03

MESCO Project Number: G08015.0

Completed on May 29, 2009



Municipal Engineering Services Company, P.A.
Garner, Boone and Morehead City, North Carolina

**Municipal
Services****Engineering
Company, P.A.**

May 29, 2009

Ms. Jaclynne Drummond
Solid Waste Section
Division of Waste Management
North Carolina Department of Environment and Natural Resources
401 Oberlin Road, Suite 150
Raleigh, NC 27605

Re: Groundwater Sampling Report and Statistical Analysis
Lenoir County Closed MSWLF and Active C&D Landfill
Permit No.54-03
MESCO Project No. G08015.0

Dear Ms. Drummond:

Introduction

The Lenoir County Closed Unlined MSWLF and Active Construction and Demolition (C&D) Landfill located near LaGrange NC, currently operating under permit #54-03 is required to submit semi-annual compliance reports as a condition of 15A NCAC 13B.1630. This sampling event was conducted on July 15, 2008 and performed according to the semi-annual monitoring schedule prescribed by the NC Solid Waste Section rules/regulations.

The closed MSWLF ceased operation prior to 1998 and the C&D landfill continues operation upon the closed MSWLF. Since they are in essence one contiguous landfill they are combined and treated as a single unit for overall continuity in reporting. The assessment monitoring program currently consists of seven groundwater and two surface water sampling locations. This report includes a summary of field procedures, laboratory analysis, statistical analysis, tables and graphs of current/historical data, single-day potentiometric map with flow directions/rates, and the complete laboratory analytical report.

Sampling Procedure

This sampling event consisted of collection of water samples from six downgradient groundwater monitoring wells (MW-3, MW-4, MW-6, MW-9, MW-11, MW-12), one background well (MW-1), and the downstream surface water SW-1. Upstream surface water point SW-2 was reported to be dry; therefore was not sampled. All monitoring locations are shown upon the enclosed single day potentiometric map. This sampling event was conducted by Environment 1 Inc., (E1) of Greenville, NC.

All sampling was reported to be conducted utilizing methodology outlined in the NCDENR *Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling* revised April 2008. The depth to water in each well was gaged prior to purging to quantify the static water level and utilized for construction of the attached single day potentiometric map. The required field parameters (pH, specific conductance, and temperature) were measured upon sample extraction.

All samples were collected by E1 in laboratory prepared prepreserved containers. All samples were properly collected and transported to E1 in Greenville NC under proper chain of custody (C-O-C) within the specified hold times for each analysis.

Field and Laboratory Results

All of the groundwater monitoring wells contained in the Sampling and Analysis Plan (SAP) revised in 2002 were sampled and analyzed for the complete Appendix I list of Volatile Organic Compounds (VOCs) and total metals per EPA method 8260 and 6010, respectively. In addition to the Appendix I list of constituents downgradient MW-3 was also analyzed for the Appendix II VOA's, sulfide, cyanide, pesticides, PCB's, and semi-VOA's since this location has historically been found to contain statistically significant VOC detections. Additional water samples were also obtained from every monitoring well and analyzed for the C&D parameter list as outlined in 15A NCAC 13B.0544 (D) which includes alkalinity, sulfate, TSS, iron, manganese, chloride, and mercury. Quality control measures were also implemented during this event which included submittal and subsequent quantification of a trip (TB) and equipment (EB) blanks.

The field parameters are included in the laboratory analysis report and the data appears to be generally consistent relative to each other and congruent with data historically reported. All water samples were analyzed utilizing the stringent Method Detection Limits (MDL) with reference to the Solid Waste Section detection limits (SWSL) values current as of the sampling event. All detected constituents were referenced to the Groundwater Protection Standards (GWP) and compared to the North Carolina Groundwater Standards (NCGW2L) or the North Carolina Surface Water Standards (NCSW2B) for regulatory exceedance. The results are shown in the enclosed tables titled "Detection Scan".

The following table summarizes all of the VOC constituents that exceeded the NCGW2L/NCSW2B Standards during this monitoring event.

Table 1. NCGW2L Exceedance Summary (VOCs)

Well	Benzene	1,2-DCA	PCE	VCM	Cumulative Total
NCGW2L	1	0.38	0.7	0.015	-
MW-3	<u>2.1</u>	<u>1</u>	<u>1.5</u>	<u>11.3</u>	15.9
MW-4	<u>1.9</u>			<u>0.6^j</u>	2.5
MW-12				<u>0.8^j</u>	0.8 ^j
Total	4	1	1.5	12.7	19.2

Underlined indicates detected above own respective historical identified range. "^j" <SWSL therefore estimated concentration s presented in ug/L

Downgradient monitoring wells MW-3, MW-4, and MW-12 were found to contain VOC detections above the NCGW2L Standard during this sampling event. All three locations were found to contain a mixture of dissolved phase aromatic hydrocarbons, chlorinated aliphatic hydrocarbon (CAH) intermediates, and their biodegradation byproducts. All VOCs detected above the NCGW2L Standard were also found outside of their own respective identified range during this event. Further with the exception of benzene within MW-4 all VOC constituents detected in exceedance of the NCGW2L have never been detected at this specific location until this event. Generally all of the detected VOCs are not grossly elevated, typical of contaminants commonly found in groundwater at MSWLF facilities. The source of these VOCs is likely attributed to leachate and or landfill gas (LFG) that originated from the closed unlined landfill.

Sitewide cumulative quantifiable VOC concentrations were found at 47 ug/L during this event after being absent sitewide since a single VOC detection in MW-3 in July 2006. Due to the disparity between historical data and data from this event results of temporal trend analysis at a 95% confidence level through Sen's Slope Estimator and Mann Kendall analysis indicate that the site-wide cumulative VOC concentrations are currently not conforming to any trend.

Statistical Analysis

MESCO also completed the statistical analysis as required by the Solid Waste Section. The statistical analysis was conducted upon all of the monitoring wells surrounding the closed MSWLF. The purpose of these analyses was to determine, in comparison to background levels, statistical significance of the Appendix I constituents detected during the July 2008 event. The statistical analysis was conducted utilizing Chemstat which was developed specifically for RCRA Subtitle D sites and conforms to both EPA and SWS protocols.

Interwell Analyses (Metals)

A preliminary data screening was conducted upon the metals detected in all monitoring locations. Parameters with concentrations found below quantifiable levels (SWSL) and below those detected within the background well were eliminated and a statistical analysis was not conducted for that particular constituent/well.

An inter-well statistical analysis was conducted upon metals detected during this sampling event. Since C&D Landfills are not required to complete statistical analysis and there is very limited historical data iron and manganese were omitted from this analysis. Monitoring well MW-1 was defined as the background well, and an upper tolerance limit (UTL) with 95% coverage was computed for each detected constituent from the background data at a 95% level of confidence. For each tested constituent, an appropriate statistical analysis method was selected based on the percentages of non-detects (%ND) in the historical background data. The following table (Table 2) summarizes the methods used for four different %ND ranges.

Table 2. Statistical Analysis Methods for Various %ND Ranges

%ND	Analysis Method	ND Substitution
%ND<15%	Parametric tolerance limit	1/2 ND
15%<%ND<50%	Parametric tolerance limit	Cohen or 1/2 ND
50%<%ND<90%	Non-parametric tolerance limit	1/2 ND
90%<%ND	Poisson tolerance limit	-

NOTE: For parametric tolerance interval, normality of the background data was checked by the Shapiro-Wilks normality test, as the method requires that the data be normally distributed.

Two (2) metals were tested for statistical significance. Since barium and zinc have rarely been detected within the background well, the Poisson Tolerance Limit on the log of the data with no ND substitution was utilized.

Poisson Prediction Interval (VOCs)

All historical VOC detections in the background well MW-1 were pooled to determine the total number of detections, from which the expected number of detections in a single downgradient monitoring point (y^*) was derived by utilizing the Poisson prediction interval. The parameter y^* is defined by the following equation:

$$y^* = cy + \frac{t^2 c}{2} + tc \sqrt{y \left(1 + \frac{1}{c} \right) + \frac{t^2}{4}}$$

where

$c = 1/n$ (n = number of background samples)

t = one-sided value of student's t -Statistic at 95% confidence ^a

y = number of events observed in n previous samples

y^* = expected number of events in a single future sample

^a Gibbons, R.D., 1994, Statistical methods for groundwater monitoring: John Wiley & Sons, Inc., p.12.

For each monitoring location showing any VOC detections, the number of detected VOCs was counted with each detection being considered a "hit". The number was then compared with the expected number of detections derived from the background VOC data. The value of Student's t -Statistic was derived from tabulated values included in Gibbons (1994).

Results

Data distributions were reviewed using box and whiskers plots. In order to evaluate variability in concentrations with respect to time and season, time series plots were generated for all of the analytes detected above the NCGW2L Standard. Time series plots were also visually evaluated for seasonality and "outliers" (defined as data that appears to be incongruent with respect to historical results). Although the analytical data for this event was found to contain several unprecedented VOC detections which appear to be anomalous their presence does not change the outcome of the statistical analysis; therefore further outlier tests were not conducted. No apparent seasonality was found in the latest data record.

The number of metal detections continue to be consistent with historical results. The interwell analysis results conducted upon all of the monitoring wells indicate that none of the metal concentrations have increased over background levels during this event.

The Poisson Tolerance Interval at a 95% confidence level was completed for all of the VOCs detected above the SWSL or the NCGW2L Standard. Due to the lack of historical VOC detections within the background well any VOC detection is considered statistically significant via the Poisson Tolerance Interval. All of the monitoring locations found to be impacted statistically by VOCs are summarized in the following table 3.

Table 3. Poisson Tolerance Interval Analyses Summary for VOCs

Well	1,4-DCB	Benzene	Chlorobenzene	Cis-1,2DCE	PCE	TCE	1,1-DCA	1,2-DCA	VCM	Cumulative	Maximum Historical Cumulative
MW-3		2.1		<u>9.4</u>	1.5	<u>2.5</u>	10	1	11.3	37.8	39.4
MW-4	<u>1</u>	1.9	<u>6.3</u>							9.2	58.2
Total	1	4	6.3	9.4	1.5	2.5	10	1	11.3	47	-

Bold indicates detected \geq NCGW2L. Underlined indicates detected above own respective historical identified range concentrations presented in ug/L.

The total site-wide cumulative VOC concentration during this event was found at 47 ug/L and at the highest recorded since 2002 when the SAP was revised. This is the corresponding time that MW-8 and MW-10, located in very close proximity to the waste limit, was replaced with MW-11 and MW-12 respectively. The culmination of low VOC concentrations and inconsistent detections in comparison to historical data exhibited during this event may be an indication of artifact contamination.

Groundwater and Surface Water Characterization

MESCO completed and enclosed single-day potentiometric map created from groundwater elevation data obtained reported by E1 during this event. Groundwater flow rates and directions were also calculated based upon this data and is included in the attached table. The flow rates ranged from approximately 7 feet/year (MW-3) to 34 feet/year (MW-4) averaging approximately 19.5 feet/year. The flow directions and gradients are consistent with historical observations, showing no changes that would result in a different interpretation of the groundwater system or hinder the effectiveness of the current monitoring network.

Conclusion

Although there appears to be evidence that the analytical VOC data for this event may contain an inordinate amount of artifact contamination, the statistical analysis results conclude that MW-3 and MW-4 have been impacted by dissolved phase VOCs. Research continues to indicate that if the VOCs have indeed recently impacted the surficial aquifer that the plume will remain isolated within the relevant compliance boundary for a reasonable period of time. There is evidence that natural attenuation has occurred and is expected to continue. The closed MSWLF has a cohesive cap to reduce percolation/leachate generation, institutional controls are in place, and there are no known potential receptors within the compliance boundary. Therefore there are no crucial or critical conditions that would warrant emergency measures or actions at this time.

The site was sampled again on January 28, 2009 which yielded analytical data which is significantly better and more congruent to historical data than the the results of this event. The formal report/statistical analysis will be submitted soon. Please contact me either by phone at (919) 772-5393, or by email at jpfohl@mesco.com should you have any questions or concerns regarding this report.

Sincerely,

MUNICIPAL ENGINEERING SERVICES CO., P.A.



Jonathan Pfohl
Environmental Specialist

Enclosures

cc: Mr. Tom Miller
Lenoir County

Detection Scan All Detections above SWSL, NCSW2B, or NCGW2L
 Lenoir County Closed MSWLF and C&D Landfill

Well ID	Parameter Name ¹	Sample Date	Result	Unit	MDL ⁴	SWSL ²	NCGW2L ³	GWP ⁵	Exceedance	Preliminary Cause
MW-1	Chloride	7/15/08	39	ug/l	5.0	5	250000			
MW-1	Iron	7/15/08	635	ug/l	14.0	300	300		335	Natural
MW-1	TDS	7/15/08	43	ug/l	1.0	1	500000			
MW-3	1,1-Dichloroethane	7/15/08	10	ug/l	0.16	5	70			
MW-3	1,2-Dichloroethane	7/15/08	1	ug/l	0.12	1	0.38		0.62	Leachate &/or LFG
MW-3	Benzene	7/15/08	2.1	ug/l	0.16	1	1		1.1	Leachate &/or LFG
MW-3	Chloride	7/15/08	55	ug/l	5.0	5	250000			
MW-3	Cis-1,2-Dichloroethene	7/15/08	9.4	ug/l	0.14	5	70			
MW-3	Iron	7/15/08	69550	ug/l	14.0	300	300		69250	Natural
MW-3	TDS	7/15/08	200	ug/l	1.0	1	500000			
MW-3	Tetrachloroethene	7/15/08	1.5	ug/l	0.16	1	0.7		0.8	Leachate &/or LFG
MW-3	Total Alkalinity	7/15/08	101	ug/l	1.0	1		NE		
MW-3	Trichloroethene	7/15/08	2.5	ug/l	0.13	1	2.8			
MW-3	Vinyl Chloride	7/15/08	11.3	ug/l	0.34	1	0.015		11.285	Leachate &/or LFG
MW-3	Zinc	7/15/08	23	ug/l	1.86	10	1050			
MW-4	1,4-Dichlorobenzene	7/15/08	1	ug/l	0.21	1	1.4			
MW-4	Benzene	7/15/08	1.9	ug/l	0.16	1	1		0.9	Leachate &/or LFG
MW-4	Chloride	7/15/08	16	ug/l	5.0	5	250000			
MW-4	Chlorobenzene	7/15/08	6.3	ug/l	0.13	3	50			
MW-4	Iron	7/15/08	42925	ug/l	14.0	300	300		42625	Natural
MW-4	TDS	7/15/08	186	ug/l	1.0	1	500000			
MW-4	Total Alkalinity	7/15/08	121	ug/l	1.0	1		NE		
MW-4	Vinyl Chloride	7/15/08	0.6^j	ug/l	0.34	1	0.015		0.585	Leachate &/or LFG
MW-6	Chloride	7/15/08	7	ug/l	5.0	5	250000			
MW-6	Iron	7/15/08	397	ug/l	14.0	300	300		97	Natural
MW-6	Manganese	7/15/08	51	ug/l	0.50	50	50		1	Natural
MW-6	TDS	7/15/08	56	ug/l	1.0	1	500000			
MW-6	Zinc	7/15/08	15	ug/l	1.86	10	1050			
MW-9	Chloride	7/15/08	9	ug/l	5.0	5	250000			
MW-9	Iron	7/15/08	2050	ug/l	14.0	300	300		1750	Natural
MW-9	Manganese	7/15/08	476	ug/l	0.50	50	50		426	Natural
MW-9	TDS	7/15/08	65	ug/l	1.0	1	500000			
MW-9	Total Alkalinity	7/15/08	5	ug/l	1.0	1		NE		

Well ID	Parameter Name ¹	Sample Date	Result	Unit	MDL ⁴	SWSL ²	NCGW2L ³	GWP ⁵	Exceedance	Preliminary Cause
MW-11	Chloride	7/15/08	43	ug/l	5.0	5	250000			
MW-11	Iron	7/15/08	1333	ug/l	14.0	300	300		1033	Natural
MW-11	TDS	7/15/08	41	ug/l	1.0	1	500000			
MW-12	Barium	7/15/08	182	ug/l	0.11	100	2000			
MW-12	Chloride	7/15/08	34	ug/l	5.0	5	250000			
MW-12	Mercury	7/15/08	0.49	ug/l	0.13	0.2	1.1			
MW-12	TDS	7/15/08	115	ug/l	1.0	1	500000			
MW-12	Vinyl Chloride	7/15/08	0.8^j	ug/l	0.34	1	0.015		0.785	Leachate &/or LFG

¹ Table only contains detected constituents

² SWSL = Solid Waste Section Reporting Limit (Current as of Sampling Event)

³ NCGW2L = North Carolina Ground Water 2L Standard (Current as of Sampling Event)

⁴ MDL = Method Detection Limit

⁵ GWP = Groundwater Protection Standard (Current as of Sampling Event)

LFG = Landfill Gas

Detection Scan All Detections Reported by Laboratory
 Lenoir County Closed MSWLF and C&D Landfill

Sample ID	Parameter Name ¹	Sample Date	Result	Unit	MDL ²	SWSL ³	NCGW 2L ⁴	NCSW 2B ⁵	GWP ⁶	Exceedance	Preliminary Cause
MW-1	2-Butanone	7/15/08	1.2	ug/l	0.85	100.0	4200				
MW-1	Acetone	7/15/08	3.1	ug/l	1.21	100.0	700				
MW-1	Antimony	7/15/08	0.1	ug/l	0.08	6.0			1.4		
MW-1	Arsenic	7/15/08	0.1	ug/l	0.07	10.0	50				
MW-1	Barium	7/15/08	22.9	ug/l	0.34	100.0	2000				
MW-1	Beryllium	7/15/08	0.1	ug/l	0.17	1.0			1.4		
MW-1	Cadmium	7/15/08	0.1	ug/l	0.04	1.0	1.75				
MW-1	Chloride	7/15/08	39	ug/l	5.0	5.0	250000				
MW-1	Chloromethane	7/15/08	0.2	ug/l	0.18	1.0	2.6				
MW-1	Cobalt	7/15/08	0.9	ug/l	2.53	10.0			70		
MW-1	Copper	7/15/08	0.5	ug/l	2.24	10.0	1000				
MW-1	Iron	7/15/08	635	ug/l	14.0	300.0	300		335	Natural	
MW-1	Lead	7/15/08	0.5	ug/l	0.04	10.0	15				
MW-1	Manganese	7/15/08	16	ug/l	0.50	50.0	50				
MW-1	Mercury	7/15/08	0.02	ug/l	0.13	0.20	1.1				
MW-1	Nickel	7/15/08	1.1	ug/l	1.35	50.0	100				
MW-1	Silver	7/15/08	0.1	ug/l	2.32	10.0	18				
MW-1	Sulfate	7/15/08	13.2	ug/l	5.0	250.0	250000				
MW-1	TDS	7/15/08	43	ug/l	1.0	1.0	500000				
MW-1	Vanadium	7/15/08	1.3	ug/l	1.21	25.0			3.5		
MW-1	Zinc	7/15/08	7	ug/l	1.86	10.0	1050				
MW-3	1,1-Dichloroethane	7/15/08	10	ug/l	0.16	5.0	70				
MW-3	1,1-Dichloroethene	7/15/08	0.4	ug/l	0.14	5.0	7				
MW-3	1,2-Dichloroethane	7/15/08	1	ug/l	0.12	1.0	0.38		0.62	Leachate &/or LFG	
MW-3	1,4-Dichlorobenzene	7/15/08	0.9	ug/l	0.21	1.0	1.4				
MW-3	2-Butanone	7/15/08	1.6	ug/l	0.85	100.0	4200				
MW-3	Acetone	7/15/08	4.5	ug/l	1.21	100.0	700				
MW-3	Antimony	7/15/08	0.1	ug/l	0.08	6.0			1.4		
MW-3	Arsenic	7/15/08	2.3	ug/l	0.07	10.0	50				
MW-3	Barium	7/15/08	73.1	ug/l	0.34	100.0	2000				
MW-3	Benzene	7/15/08	2.1	ug/l	0.16	1.0	1		1.1	Leachate &/or LFG	
MW-3	Cadmium	7/15/08	0.1	ug/l	0.04	1.0	1.75				
MW-3	Chloride	7/15/08	55	ug/l	5.0	5.0	250000				
MW-3	Chlorobenzene	7/15/08	0.6	ug/l	0.13	3.0	50				
MW-3	Chloromethane	7/15/08	0.6	ug/l	0.18	1.0	2.6				
MW-3	Cis-1,2-Dichloroethene	7/15/08	9.4	ug/l	0.14	5.0	70				
MW-3	Cobalt	7/15/08	0.6	ug/l	2.53	10.0			70		
MW-3	Copper	7/15/08	0.4	ug/l	2.24	10.0	1000				
MW-3	Dichlorodifluoromethane	7/15/08	3.1	ug/l	0.16	5.0	1400				
MW-3	Ethylbenzene	7/15/08	0.5	ug/l	0.16	1.0	550				
MW-3	Iron	7/15/08	69550	ug/l	14.0	300.0	300		69250	Natural	
MW-3	Lead	7/15/08	0.1	ug/l	0.04	10.0	15				
MW-3	Manganese	7/15/08	29	ug/l	0.50	50.0	50				
MW-3	Mercury	7/15/08	0.05	ug/l	0.13	0.20	1.1				
MW-3	Methylene Chloride	7/15/08	0.2	ug/l	0.14	1.0	4.6				
MW-3	Naphthalene	7/15/08	0.2	ug/l	0.13	10.0	21				
MW-3	Nickel	7/15/08	0.7	ug/l	1.35	50.0	100				
MW-3	Selenium	7/15/08	1.4	ug/l	0.14	10.0	50				
MW-3	Sulfate	7/15/08	7	ug/l	5.0	250.0	250000				
MW-3	TDS	7/15/08	200	ug/l	1.0	1.0	500000				
MW-3	Tetrachloroethene	7/15/08	1.5	ug/l	0.16	1.0	0.7		0.8	Leachate &/or LFG	
MW-3	Total Alkalinity	7/15/08	101	ug/l	1.0	1.0			NE		
MW-3	Trichloroethene	7/15/08	2.5	ug/l	0.13	1.0	2.8				
MW-3	Vanadium	7/15/08	0.8	ug/l	1.21	25.0			3.5		
MW-3	Vinyl Chloride	7/15/08	11.3	ug/l	0.34	1.0	0.015		11.285	Leachate &/or LFG	

Sample ID	Parameter Name ¹	Sample Date	Result	Unit	MDL ²	SWSL ³	NCGW 2L ⁴	NCSW 2B ⁵	GWP ⁶	Exceedance	Preliminary Cause
MW-3	Xylenes	7/15/08	0.8	ug/l	0.48	5.0	530				
MW-3	Zinc	7/15/08	23	ug/l	1.86	10.0	1050				
MW-4	1,1-Dichloroethane	7/15/08	0.8	ug/l	0.16	5.0	70				
MW-4	1,4-Dichlorobenzene	7/15/08	1	ug/l	0.21	1.0	1.4				
MW-4	Acetone	7/15/08	3.3	ug/l	1.21	100.0	700				
MW-4	Antimony	7/15/08	0.1	ug/l	0.08	6.0			1.4		
MW-4	Arsenic	7/15/08	8.7	ug/l	0.07	10.0	50				
MW-4	Barium	7/15/08	17.7	ug/l	0.34	100.0	2000				
MW-4	Benzene	7/15/08	1.9	ug/l	0.16	1.0	1			0.9	Leachate &/or LFG
MW-4	Cadmium	7/15/08	0.1	ug/l	0.04	1.0	1.75				
MW-4	Chloride	7/15/08	16	ug/l	5.0	5.0	250000				
MW-4	Chlorobenzene	7/15/08	6.3	ug/l	0.13	3.0	50				
MW-4	Chloroethane	7/15/08	0.6	ug/l	0.29	10.0	2800				
MW-4	Chloromethane	7/15/08	0.3	ug/l	0.18	1.0	2.6				
MW-4	Chromium	7/15/08	0.3	ug/l	1.38	10.0	50				
MW-4	Cobalt	7/15/08	0.6	ug/l	2.53	10.0			70		
MW-4	Copper	7/15/08	0.7	ug/l	2.24	10.0	1000				
MW-4	Iron	7/15/08	42925	ug/l	14.0	300.0	300			42625	Natural
MW-4	Lead	7/15/08	0.3	ug/l	0.04	10.0	15				
MW-4	Manganese	7/15/08	47	ug/l	0.50	50.0	50				
MW-4	Mercury	7/15/08	0.02	ug/l	0.13	0.20	1.1				
MW-4	Nickel	7/15/08	0.5	ug/l	1.35	50.0	100				
MW-4	Selenium	7/15/08	1.2	ug/l	0.14	10.0	50				
MW-4	Silver	7/15/08	0.1	ug/l	2.32	10.0	18				
MW-4	Sulfate	7/15/08	13.4	ug/l	5.0	250.0	250000				
MW-4	TDS	7/15/08	186	ug/l	1.0	1.0	500000				
MW-4	Total Alkalinity	7/15/08	121	ug/l	1.0	1.0			NE		
MW-4	Vanadium	7/15/08	4.1	ug/l	1.21	25.0			3.5		
MW-4	Vinyl Chloride	7/15/08	0.6^j	ug/l	0.34	1.0	0.015			0.585	Leachate &/or LFG
MW-4	Zinc	7/15/08	2.2	ug/l	1.86	10.0	1050				
MW-6	2-Butanone	7/15/08	1.2	ug/l	0.85	100.0	4200				
MW-6	Acetone	7/15/08	2.8	ug/l	1.21	100.0	700				
MW-6	Antimony	7/15/08	0.2	ug/l	0.08	6.0			1.4		
MW-6	Arsenic	7/15/08	0.3	ug/l	0.07	10.0	50				
MW-6	Barium	7/15/08	27.1	ug/l	0.34	100.0	2000				
MW-6	Beryllium	7/15/08	0.1	ug/l	0.17	1.0			1.4		
MW-6	Cadmium	7/15/08	0.2	ug/l	0.04	1.0	1.75				
MW-6	Chloride	7/15/08	7	ug/l	5.0	5.0	250000				
MW-6	Cobalt	7/15/08	0.6	ug/l	2.53	10.0			70		
MW-6	Copper	7/15/08	1.3	ug/l	2.24	10.0	1000				
MW-6	Iron	7/15/08	397	ug/l	14.0	300.0	300			97	Natural
MW-6	Lead	7/15/08	1	ug/l	0.04	10.0	15				
MW-6	Manganese	7/15/08	51	ug/l	0.50	50.0	50			1	Natural
MW-6	Mercury	7/15/08	0.01	ug/l	0.13	0.20	1.1				
MW-6	Nickel	7/15/08	0.8	ug/l	1.35	50.0	100				
MW-6	Selenium	7/15/08	1.3	ug/l	0.14	10.0	50				
MW-6	Sulfate	7/15/08	31.8	ug/l	5.0	250.0	250000				
MW-6	TDS	7/15/08	56	ug/l	1.0	1.0	500000				
MW-6	Tetrachloroethene	7/15/08	0.3	ug/l	0.16	1.0	0.7				
MW-6	Thallium	7/15/08	0.1	ug/l	0.04	5.0			0.28		
MW-6	Vanadium	7/15/08	0.8	ug/l	1.21	25.0			3.5		
MW-6	Zinc	7/15/08	15	ug/l	1.86	10.0	1050				
MW-9	2-Butanone	7/15/08	1.6	ug/l	0.85	100.0	4200				
MW-9	Acetone	7/15/08	3.4	ug/l	1.21	100.0	700				
MW-9	Arsenic	7/15/08	0.8	ug/l	0.07	10.0	50				
MW-9	Barium	7/15/08	51.7	ug/l	0.34	100.0	2000				
MW-9	Beryllium	7/15/08	0.1	ug/l	0.17	1.0			1.4		
MW-9	Cadmium	7/15/08	0.1	ug/l	0.04	1.0	1.75				

Sample ID	Parameter Name ¹	Sample Date	Result	Unit	MDL ²	SWSL ³	NCGW 2L ⁴	NCSW 2B ⁵	GWP ⁶	Exceedance	Preliminary Cause
MW-9	Chloride	7/15/08	9	ug/l	5.0	5.0	250000				
MW-9	Chloromethane	7/15/08	0.3	ug/l	0.18	1.0	2.6				
MW-9	Cobalt	7/15/08	6.2	ug/l	2.53	10.0			70		
MW-9	Copper	7/15/08	0.4	ug/l	2.24	10.0	1000				
MW-9	Iron	7/15/08	2050	ug/l	14.0	300.0	300			1750	Natural
MW-9	Lead	7/15/08	0.2	ug/l	0.04	10.0	15				
MW-9	Manganese	7/15/08	476	ug/l	0.50	50.0	50			426	Natural
MW-9	Mercury	7/15/08	0.1	ug/l	0.13	0.20	1.1				
MW-9	Nickel	7/15/08	2.2	ug/l	1.35	50.0	100				
MW-9	Selenium	7/15/08	0.2	ug/l	0.14	10.0	50				
MW-9	Sulfate	7/15/08	22.5	ug/l	5.0	250.0	250000				
MW-9	TDS	7/15/08	65	ug/l	1.0	1.0	500000				
MW-9	Thallium	7/15/08	0.1	ug/l	0.04	5.0			0.28		
MW-9	Total Alkalinity	7/15/08	5	ug/l	1.0	1.0			NE		
MW-9	Vanadium	7/15/08	0.8	ug/l	1.21	25.0			3.5		
MW-9	Zinc	7/15/08	7.4	ug/l	1.86	10.0	1050				
MW-11	2-Butanone	7/15/08	1.6	ug/l	0.85	100.0	4200				
MW-11	Acetone	7/15/08	4.8	ug/l	1.21	100.0	700				
MW-11	Antimony	7/15/08	0.1	ug/l	0.08	6.0			1.4		
MW-11	Arsenic	7/15/08	0.2	ug/l	0.07	10.0	50				
MW-11	Barium	7/15/08	22.5	ug/l	0.11	100.0	2000				
MW-11	Beryllium	7/15/08	0.1	ug/l	0.06	1.0			1.4		
MW-11	Cadmium	7/15/08	0.1	ug/l	0.04	1.0	1.75				
MW-11	Chloride	7/15/08	43	ug/l	5.0	5.0	250000				
MW-11	Chloromethane	7/15/08	0.4	ug/l	0.18	1.0	2.6				
MW-11	Cobalt	7/15/08	0.3	ug/l	0.03	10.0			70		
MW-11	Copper	7/15/08	1	ug/l	0.05	10.0	1000				
MW-11	Iron	7/15/08	1333	ug/l	14.0	300.0	300			1033	Natural
MW-11	Lead	7/15/08	0.2	ug/l	0.04	10.0	15				
MW-11	Manganese	7/15/08	15	ug/l	0.50	50.0	50				
MW-11	Nickel	7/15/08	0.7	ug/l	0.06	50.0	100				
MW-11	TDS	7/15/08	41	ug/l	1.0	1.0	500000				
MW-11	Vanadium	7/15/08	1.8	ug/l	0.07	25.0			3.5		
MW-11	Zinc	7/15/08	4	ug/l	0.04	10.0	1050				
MW-12	Acetone	7/15/08	3.9	ug/l	1.21	100.0	700				
MW-12	Antimony	7/15/08	0.2	ug/l	0.08	6.0			1.4		
MW-12	Arsenic	7/15/08	0.6	ug/l	0.07	10.0	50				
MW-12	Barium	7/15/08	182	ug/l	0.11	100.0	2000				
MW-12	Benzene	7/15/08	0.4	ug/l	0.16	1.0	1				
MW-12	Beryllium	7/15/08	0.1	ug/l	0.06	1.0			1.4		
MW-12	Cadmium	7/15/08	0.2	ug/l	0.04	1.0	1.75				
MW-12	Chloride	7/15/08	34	ug/l	5.0	5.0	250000				
MW-12	Chloromethane	7/15/08	0.2	ug/l	0.18	1.0	2.6				
MW-12	Cobalt	7/15/08	1.6	ug/l	0.03	10.0			70		
MW-12	Copper	7/15/08	1	ug/l	0.05	10.0	1000				
MW-12	Iron	7/15/08	192	ug/l	14.0	300.0	300				
MW-12	Lead	7/15/08	0.1	ug/l	0.04	10.0	15				
MW-12	Manganese	7/15/08	15	ug/l	0.50	50.0	50				
MW-12	Mercury	7/15/08	0.49	ug/l	0.13	0.20	1.1				
MW-12	Nickel	7/15/08	2.4	ug/l	0.06	50.0	100				
MW-12	Selenium	7/15/08	2.1	ug/l	0.14	10.0	50				
MW-12	Sulfate	7/15/08	7.8	ug/l	5.0	250.0	250000				
MW-12	TDS	7/15/08	115	ug/l	1.0	1.0	500000				
MW-12	Vanadium	7/15/08	0.5	ug/l	0.07	25.0			3.5		
MW-12	Vinyl Chloride	7/15/08	0.8^j	ug/l	0.34	1.0	0.015			0.785	Leachate &/or LFG
MW-12	Zinc	7/15/08	3	ug/l	0.04	10.0	1050				
SW-1	Acetone	7/15/08	3.7	ug/l	1.21	100.0		2000			
SW-1	Antimony	7/15/08	0.1	ug/l	0.08	6.0		640			

Sample ID	Parameter Name ¹	Sample Date	Result	Unit	MDL ²	SWSL ³	NCGW 2L ⁴	NCSW 2B ⁵	GWP ⁶	Exceedance	Preliminary Cause
SW-1	Arsenic	7/15/08	3.1	ug/l	0.07	10.0		10			
SW-1	Barium	7/15/08	41.7	ug/l	0.11	100.0		200000			
SW-1	Cadmium	7/15/08	0.1	ug/l	0.04	1.0		2			
SW-1	Chloromethane	7/15/08	0.3	ug/l	0.18	1.0		96			
SW-1	Cobalt	7/15/08	0.3	ug/l	0.03	10.0		270			
SW-1	Copper	7/15/08	0.9	ug/l	0.05	10.0		7			
SW-1	Lead	7/15/08	1.4	ug/l	0.04	10.0		25			
SW-1	Nickel	7/15/08	0.4	ug/l	0.06	50.0		88			
SW-1	Toluene	7/15/08	0.2	ug/l	0.13	1.0		11			
SW-1	Vanadium	7/15/08	2.2	ug/l	0.07	25.0		NE			
SW-1	Zinc	7/15/08	1.9	ug/l	0.04	10.0		50			
EB	Cadmium	7/15/08	0.1	ug/l	0.04	1.0	1.75				
EB	Cobalt	7/15/08	0.1	ug/l	0.03	10.0			70		
EB	Iron	7/15/08	93	ug/l	14.0	300.0	300				
EB	Lead	7/15/08	0.2	ug/l	0.04	10.0	15				
EB	Mercury	7/15/08	0.07	ug/l	0.13	0.20	1.1				
EB	Nickel	7/15/08	0.3	ug/l	1.35	50.0	100				
EB	Silver	7/15/08	0.1	ug/l	0.04	10.0	18				
EB	Thallium	7/15/08	0.3	ug/l	0.04	5.0			0.28		
EB	Vanadium	7/15/08	0.1	ug/l	1.21	25.0			3.5		
EB	Zinc	7/15/08	2.6	ug/l	1.86	10.0	1050				

¹ Table contains all constituents detected above MDL

² MDL = Method Detection Limit

³ SWSL = Solid Waste Section Reporting Limit (Current as of Sampling Event)

⁴ NCGW2L = North Carolina Ground Water 2L Standard (Current as of Sampling Event)

⁵ NCSW2B = North Carolina Surface Water 2B Standard for Specific Stream Classification (Current as of Sampling Event)

⁶ GWP = Groundwater Protection Standard (Current as of Sampling Event)

⁷ =The reported value is estimated & between the laboratory MDL & the SWSL, adjusted for actual sample preparation data and moisture content, where applicable.

LFG = Landfill Gas

NE = Not Established

**Hydrologic Properties at Monitoring Well Locations
Lenoir County Closed MSWLF and C&D Landfill**

Monitoring Well	Hydraulic Conductivity (cm/sec)	Effective Porosity (%)	Hydraulic Gradient	Flow Rate (ft/yr)	Flow Direction	Water Table Depth (ft)	Water Table Elevation (ft)
MW-1	4.30E-04	20%	0.012	27.6	N30E	16.13	82.21
MW-3	1.30E-04	20%	0.010	6.8	N47E	7.94	55.93
MW-4	5.40E-04	20%	0.012	34.3	N27E	8.98	59.05
MW-6	na	na	0.010	na	N6W	13.27	72.29
MW-9	3.80E-04	20%	0.008	15.0	N48E	6.79	55.61
MW-11	6.59E-04	20%	0.007	24.8	N36E	14.11	64.15
MW-12	2.10E-04	20%	0.008	8.5	N44E	17.25	60.21

NOTE: 1. Hydraulic conductivity (K), values for MW-1 through MW-10 were obtained from GAI Consultants (June 1996).

K values for MW-11 and MW-12 were based on slug test results conducted by MESCO in July 1999.

2. Water levels were measured prior to sampling by Environment 1, Inc. on July 15, 2008.

Flow rate (Q) is defined by the equation:

where

$$Q = -\frac{K}{n_e} \cdot \frac{dh}{dl}$$

K = hydraulic conductivity

n_e = effective porosity

dh = head difference

dl = horizontal distance

Statistical Analysis Results Summary

Inter-Well Analysis Summary
Lenoir County Closed MSWLF and Active C&D Landfill

Background Well: MW-1

Barium, total

%ND	Normality	Method	ND Adj.	Upper Limit (a = 95%)	Unit
93.55	-	Poisson tolerance limit	ND	10.5	Log[ug/l]

Well	Result	Significance
MW-12	5.204	no

Zinc, total

%ND	Normality	Method	ND Adj.	Upper Limit (a = 95%)	Unit
93.55	-	Poisson tolerance limit	ND	7.5	log[ug/l]

Well	Result	Significance
MW-3	3.14	no
MW-6	2.71	no

NOTE: Bold-faced monitoring points indicate detected levels exceed North Carolina Groundwater Standard.

**Summary of Pooled VOCs in Background Well (MW-1)
Lenoir County Closed MSWLF and Active C&D Landfill**

Constituent	Samples	NDs	% NDs
1,1,1,2-Tetrachloroethane	31	31	100.00
1,1,1-Trichloroethane	31	31	100.00
1,1,2,2-Tetrachloroethane	31	31	100.00
1,1,2-Trichloroethane	31	31	100.00
1,1-Dichloroethane	31	31	100.00
1,1-Dichloroethene	31	31	100.00
1,2,3-Trichloropropane	31	31	100.00
1,2-Dibromo-3-chloropropane	31	31	100.00
1,2-Dibromoethane	31	31	100.00
1,2-Dichlorobenzene	31	31	100.00
1,2-Dichloroethane	31	31	100.00
1,2-Dichloropropane	31	31	100.00
1,4-Dichlorobenzene	31	31	100.00
2-Butanone	31	31	100.00
2-Hexanone	31	31	100.00
4-Methyl-2-Pentanone	31	31	100.00
Acetone	31	31	100.00
Acrylonitrile	31	31	100.00
Benzene	31	31	100.00
Bromochloromethane	31	31	100.00
Bromodichloromethane	31	31	100.00
Bromoform	31	31	100.00
Bromomethane	31	31	100.00
Carbon disulfide	31	31	100.00
Carbon tetrachloride	31	31	100.00
Chlorobenzene	31	31	100.00
Chloroethane	31	31	100.00
Chloroform	31	31	100.00
Chloromethane	31	31	100.00
cis-1,2-Dichloroethene	31	31	100.00
cis-1,3-Dichloropropene	31	31	100.00
Chlorodibromomethane	31	31	100.00
Dibromomethane	31	31	100.00
Ethylbenzene	31	31	100.00
Iodomethane	31	31	100.00
Dichloromethane	31	31	100.00
Styrene	31	31	100.00
Tetrachloroethylene	31	31	100.00
Toluene	31	31	100.00
trans-1,2-Dichloroethene	31	31	100.00
trans-1,3-Dichloropropene	31	31	100.00
trans-1,4-Dichloro-2-butene	31	31	100.00
Trichloroethylene	31	31	100.00
Trichlorofluoromethane	31	31	100.00
Vinyl acetate	31	31	100.00
Vinyl chloride	31	31	100.00
Xylene	31	31	100.00
Total	1457	1457	100.00

**Poisson Prediction Interval Based upon Pooled Background VOCs
Lenoir County Closed MSWLF and Active C&D Landfill**

All detected VOCs (Background Well: MW-1)

Constituent	MW-3	MW-4
1,1-Dichloroethane	x	
1,2-Dichloroethane	x	
Benzene	x	x
Cis-1,2-Dichloroethene	x	
Tetrachloroethene	x	
Trichloroethene	x	
Vinyl Chloride	x	
1,4-Dichlorobenzene		x
Chlorobenzene		x
Detection(s) per Scan	7.00	3.00

Non-quantifiable "j" qualifier concentrations treated as ND for statistical analysis purposes

Total number of sampling events [n] = 31

Total number of detections in background wells [y] = 0

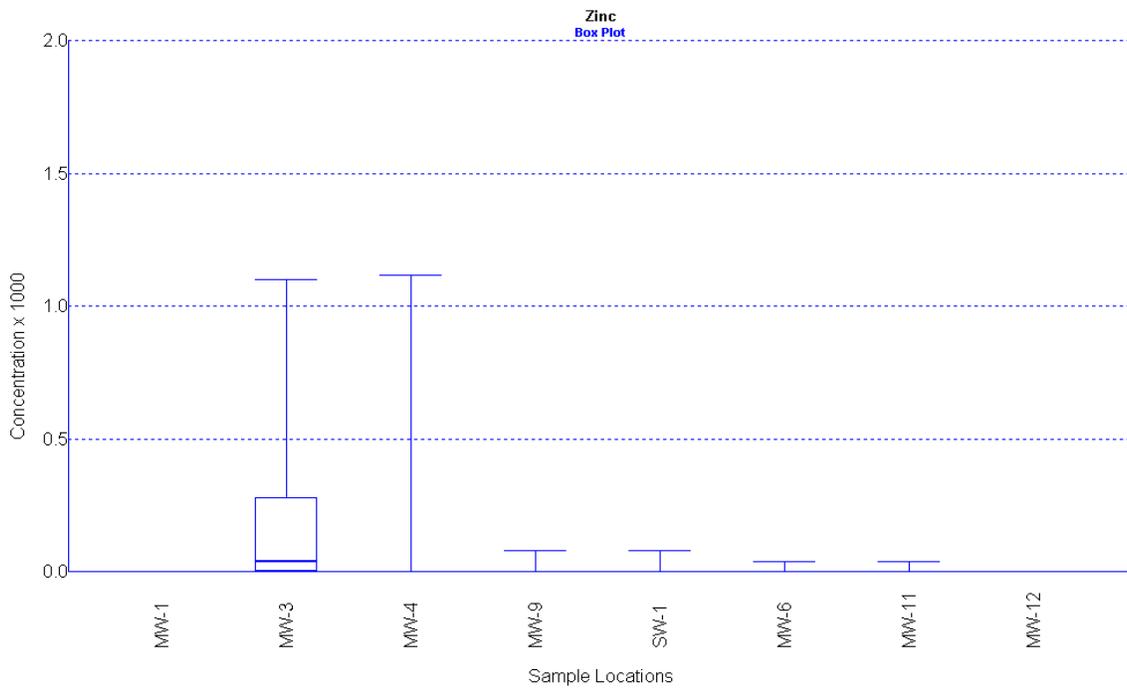
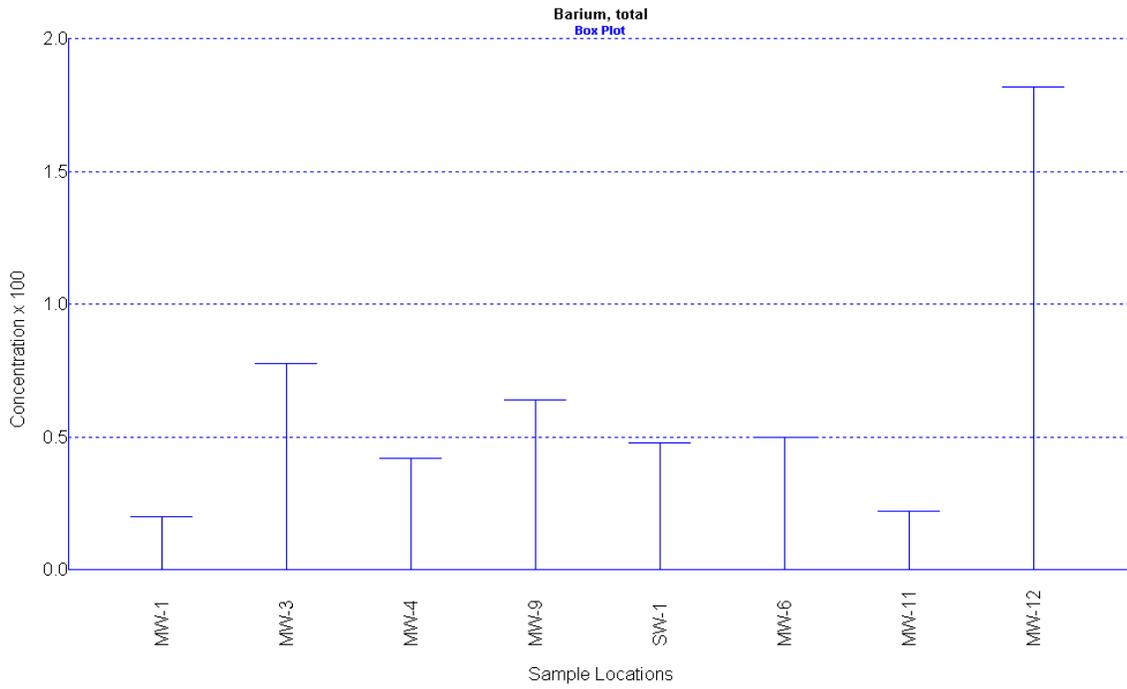
Number of comparisons (downgradient wells) [k] = 6

One-sided value of Student's t-statistic (95% confidence) [t] = 2.51

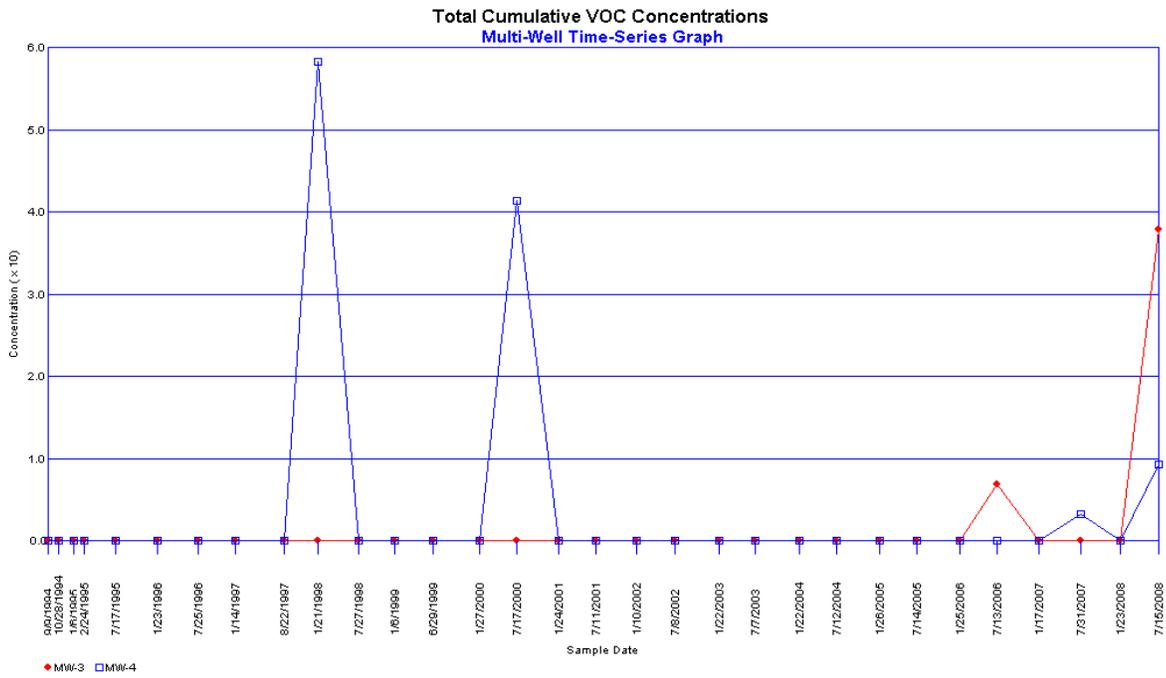
Expected number of detections in a single future sample [y*] = **0.2038**

**Statistically Significant VOC Detections within MW-3 & MW-4
at a 95% Confidence Level**

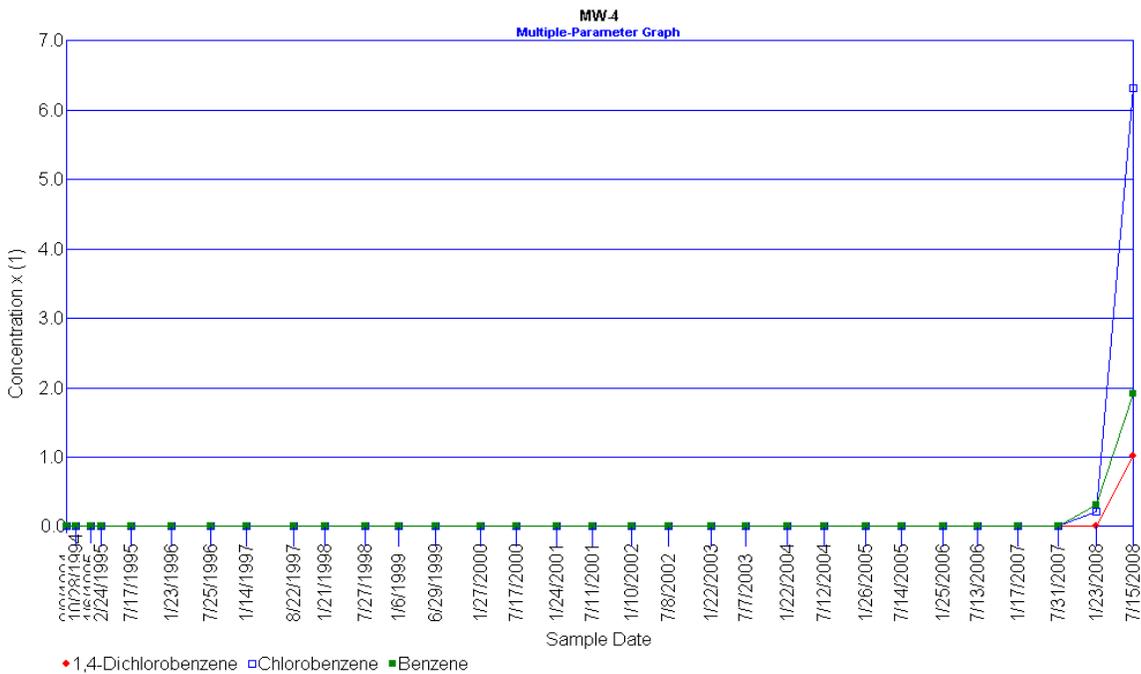
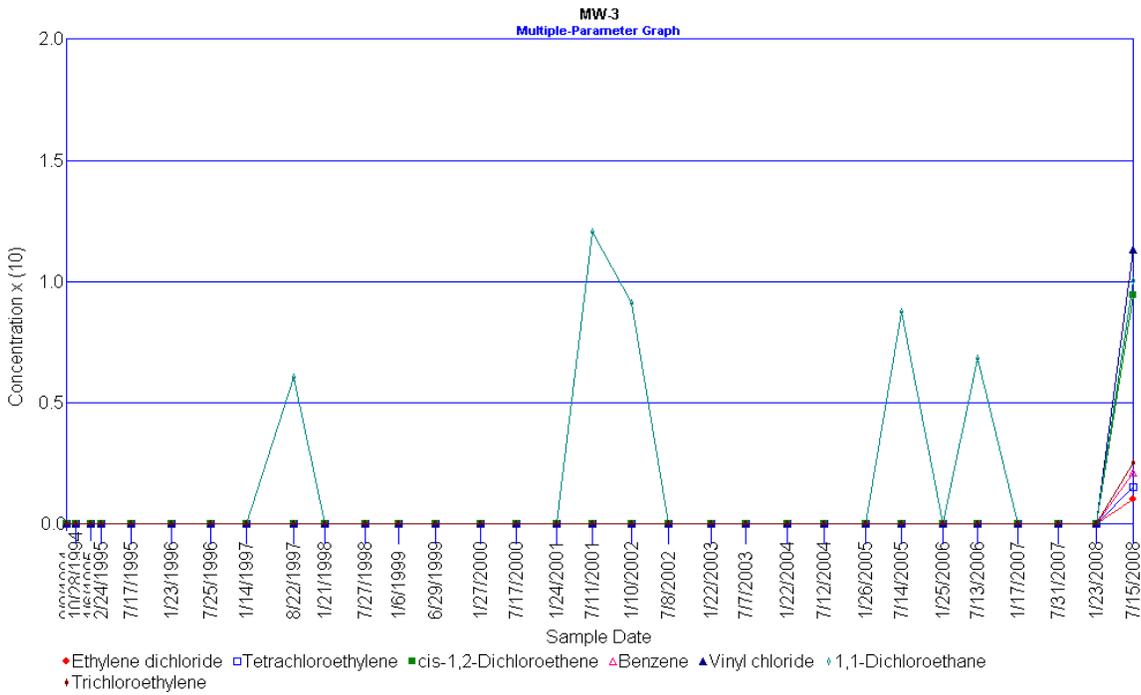
Box Plots for Select Constituents (Metals)
Lenoir County Closed MSWLF and Active C&D Landfill



Time Series Plots for Select Constituents (VOCs)
Lenoir County Closed MSWLF and Active C&D Landfill



Time Series Plots for Select Constituents (VOCs)
Lenoir County Closed MSWLF and Active C&D Landfill



Basic Statistics

Basic Statistics**Parameter: Barium, total**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

212	Total Observations
Total Non-Detects	195
Pooled Mean	218.277
Pooled Std Dev	76.6436
Background Mean	220.496
Background Std Dev	78.2021

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total		
MW-1	31	29	93.5484	6835.37		

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	220.496	78.2021	0	3236	104.387

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-3	31	29	93.5484	6911.87		
MW-4	31	29	93.5484	6876.47		
MW-9	31	29	93.5484	6901.57		
SW-1	29	27	93.1034	6381.45		
MW-6	21	19	90.4762	4387.47		
MW-11	19	17	89.4737	3842.45		
MW-12	19	16	84.2105	4138.1		

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	222.964	72.1672	2.46774	19.7296	3253	104.935
MW-4	221.822	74.7442	1.32581	19.7296	3249	104.806
MW-9	222.631	72.8036	2.13548	19.7296	3254	104.968
SW-1	220.05	76.5842	-0.445634	20.0669	3052	105.241
MW-6	208.927	87.2492	-11.5687	21.9531	2272	108.19
MW-11	202.234	95.4037	-18.2613	22.6314	2062	108.526
MW-12	217.795	68.396	-2.70107	22.6314	2200	115.789

Analysis of Variance Statistics

SS Wells	8632.05
SS Total	1.23946e+006

Kruskal-Wallis Statistics

Non-Detect Rank	98
Background Rank Sum	3236
Background Rank Mean	104.387
H Statistic	0.584514
H Adjusted for Ties	2.63539

Basic Statistics**Parameter: Zinc**

Original Data (Not Transformed)
 Non-Detects Replaced with 1/2 DL

	Total Observations
212	
Total Non-Detects	160
Pooled Mean	55.8271
Pooled Std Dev	137.73
Background Mean	22.2784
Background Std Dev	7.21524

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total		
MW-1	31	29	93.5484	690.63		

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	22.2784	7.21524	0	2673.5	86.2419

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-3	31	12	38.7097	6006		
MW-4	31	22	70.9677	2116.93		
MW-9	31	24	77.4194	912.73		
SW-1	29	26	89.6552	702.32		
MW-6	21	14	66.6667	604.7		
MW-11	19	16	84.2105	416.12		
MW-12	19	17	89.4737	385.92		

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	193.742	262.306	171.464	32.1166	4742	152.968
MW-4	68.2881	197.502	46.0097	32.1166	3458	111.548
MW-9	29.4429	19.1334	7.16452	32.1166	3220	103.871
SW-1	24.2179	14.8118	1.93954	32.6657	2621	90.3793
MW-6	28.7952	14.6983	6.51685	35.7361	2372	112.952
MW-11	21.9011	12.0248	-0.377334	36.8403	1799	94.6842
MW-12	20.3116	9.36603	-1.96681	36.8403	1692.5	89.0789

Analysis of Variance Statistics

SS Wells	741074
SS Total	4.0026e+006

Kruskal-Wallis Statistics

Non-Detect Rank	80.5
Background Rank Sum	2673.5
Background Rank Mean	86.2419
H Statistic	25.9083
H Adjusted for Ties	45.4434

Basic Statistics**Parameter: 1,1-Dichloroethane**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
211	
Total Non-Detects	202
Pooled Mean	2.42019
Pooled Std Dev	1.43818
Background Mean	2.23355
Background Std Dev	0.738654

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	69.24

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.23355	0.738654	0	3146.5	101.5

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	25	80.6452	109.26
MW-4	31	28	90.3226	78.46
MW-9	31	31	100	69.24
SW-1	28	28	100	61.74
MW-6	21	21	100	44.24
MW-11	19	19	100	39.24
MW-12	19	19	100	39.24

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	3.52452	2.82497	1.29097	0.350189	3785.5	122.113
MW-4	2.53097	1.32039	0.297419	0.350189	3457	111.516
MW-9	2.23355	0.738654	0	0.350189	3146.5	101.5
SW-1	2.205	0.772981	-0.0285484	0.359447	2842	101.5
MW-6	2.10667	0.875222	-0.126882	0.389655	2131.5	101.5
MW-11	2.06526	0.91221	-0.168285	0.401695	1928.5	101.5
MW-12	2.06526	0.91221	-0.168285	0.401695	1928.5	101.5

Analysis of Variance Statistics

SS Wells	48.4936
SS Total	434.357

Kruskal-Wallis Statistics

Non-Detect Rank	101.5
Background Rank Sum	3146.5
Background Rank Mean	101.5
H Statistic	3.22156
H Adjusted for Ties	26.2806

Basic Statistics**Parameter: Ethylene dichloride**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
212	
Total Non-Detects	211
Pooled Mean	2.19047
Pooled Std Dev	0.775427
Background Mean	2.23161
Background Std Dev	0.744487

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	69.18

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.23161	0.744487	0	3286	106

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	30	96.7742	70.12
MW-4	31	31	100	69.18
MW-9	31	31	100	69.18
SW-1	29	29	100	64.18
MW-6	21	21	100	44.18
MW-11	19	19	100	39.18
MW-12	19	19	100	39.18

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	2.26194	0.668338	0.0303226	0.199428	3392	109.419
MW-4	2.23161	0.744487	0	0.199428	3286	106
MW-9	2.23161	0.744487	0	0.199428	3286	106
SW-1	2.2131	0.76704	-0.0185095	0.202837	3074	106
MW-6	2.10381	0.88217	-0.127803	0.221903	2226	106
MW-11	2.06211	0.919466	-0.169508	0.228759	2014	106
MW-12	2.06211	0.919466	-0.169508	0.228759	2014	106

Analysis of Variance Statistics

SS Wells	1.11446
SS Total	126.872

Kruskal-Wallis Statistics

Non-Detect Rank	106
Background Rank Sum	3286
Background Rank Mean	106
H Statistic	0.0822353
H Adjusted for Ties	5.83871

Basic Statistics**Parameter: Benzene**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
212	
Total Non-Detects	207
Pooled Mean	2.20953
Pooled Std Dev	0.742879
Background Mean	2.23355
Background Std Dev	0.738654

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	69.24

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.23355	0.738654	0	3224	104

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	30	96.7742	71.26
MW-4	31	29	93.5484	71.28
MW-9	31	31	100	69.24
SW-1	29	29	100	64.24
MW-6	21	21	100	44.24
MW-11	19	19	100	39.24
MW-12	19	17	89.4737	39.68

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	2.29871	0.622274	0.0651613	0.19072	3332	107.484
MW-4	2.29935	0.600233	0.0658065	0.19072	3436	110.839
MW-9	2.23355	0.738654	0	0.19072	3224	104
SW-1	2.21517	0.761027	-0.018376	0.19398	3016	104
MW-6	2.10667	0.875222	-0.126882	0.212213	2184	104
MW-11	2.06526	0.91221	-0.168285	0.218771	1976	104
MW-12	2.08842	0.860809	-0.145127	0.218771	2186	115.053

Analysis of Variance Statistics

SS Wells	1.42968
SS Total	116.444

Kruskal-Wallis Statistics

Non-Detect Rank	104
Background Rank Sum	3224
Background Rank Mean	104
H Statistic	0.749965
H Adjusted for Ties	10.8533

Basic Statistics**Parameter: cis-1,2-Dichloroethene**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
212	
Total Non-Detects	211
Pooled Mean	2.23118
Pooled Std Dev	0.91357
Background Mean	2.23258
Background Std Dev	0.74157

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	69.21

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.23258	0.74157	0	3286	106

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	30	96.7742	78.54
MW-4	31	31	100	69.21
MW-9	31	31	100	69.21
SW-1	29	29	100	64.21
MW-6	21	21	100	44.21
MW-11	19	19	100	39.21
MW-12	19	19	100	39.21

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	2.53355	1.41874	0.300968	0.233135	3392	109.419
MW-4	2.23258	0.74157	0	0.233135	3286	106
MW-9	2.23258	0.74157	0	0.233135	3286	106
SW-1	2.21414	0.764033	-0.0184427	0.23712	3074	106
MW-6	2.10524	0.878696	-0.127343	0.259409	2226	106
MW-11	2.06368	0.915837	-0.168896	0.267424	2014	106
MW-12	2.06368	0.915837	-0.168896	0.267424	2014	106

Analysis of Variance Statistics

SS Wells	4.242
SS Total	176.103

Kruskal-Wallis Statistics

Non-Detect Rank	106
Background Rank Sum	3286
Background Rank Mean	106
H Statistic	0.0822353
H Adjusted for Ties	5.83871

Basic Statistics**Parameter: Tetrachloroethylene**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

212	Total Observations
Total Non-Detects	209
Pooled Mean	2.19755
Pooled Std Dev	0.759899
Background Mean	2.23355
Background Std Dev	0.738654

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	69.24

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.23355	0.738654	0	3255	105

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	30	96.7742	70.66
MW-4	31	31	100	69.24
MW-9	31	31	100	69.24
SW-1	29	29	100	64.24
MW-6	21	19	90.4762	44.78
MW-11	19	19	100	39.24
MW-12	19	19	100	39.24

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	2.27935	0.637798	0.0458065	0.195417	3362	108.452
MW-4	2.23355	0.738654	0	0.195417	3255	105
MW-9	2.23355	0.738654	0	0.195417	3255	105
SW-1	2.21517	0.761027	-0.018376	0.198758	3045	105
MW-6	2.13238	0.814505	-0.101167	0.21744	2416	115.048
MW-11	2.06526	0.91221	-0.168285	0.224159	1995	105
MW-12	2.06526	0.91221	-0.168285	0.224159	1995	105

Analysis of Variance Statistics

SS Wells	1.09116
SS Total	121.841

Kruskal-Wallis Statistics

Non-Detect Rank	105
Background Rank Sum	3255
Background Rank Mean	105
H Statistic	0.534778
H Adjusted for Ties	12.7768

Basic Statistics**Parameter: Trichloroethylene**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
212	
Total Non-Detects	211
Pooled Mean	2.19809
Pooled Std Dev	0.769835
Background Mean	2.2321
Background Std Dev	0.743028

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	69.195

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.2321	0.743028	0	3286	106

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	30	96.7742	71.63
MW-4	31	31	100	69.195
MW-9	31	31	100	69.195
SW-1	29	29	100	64.195
MW-6	21	21	100	44.195
MW-11	19	19	100	39.195
MW-12	19	19	100	39.195

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	2.31065	0.625751	0.0785484	0.19776	3392	109.419
MW-4	2.2321	0.743028	0	0.19776	3286	106
MW-9	2.2321	0.743028	0	0.19776	3286	106
SW-1	2.21362	0.765537	-0.0184761	0.201141	3074	106
MW-6	2.10452	0.880433	-0.127573	0.220047	2226	106
MW-11	2.06289	0.917651	-0.169202	0.226846	2014	106
MW-12	2.06289	0.917651	-0.169202	0.226846	2014	106

Analysis of Variance Statistics

SS Wells	1.38568
SS Total	125.048

Kruskal-Wallis Statistics

Non-Detect Rank	106
Background Rank Sum	3286
Background Rank Mean	106
H Statistic	0.0822353
H Adjusted for Ties	5.83871

Basic Statistics**Parameter: Vinyl chloride**

Original Data (Not Transformed)
 Non-Detects Replaced with 1/2 DL

212	Total Observations
Total Non-Detects	209
Pooled Mean	4.41637
Pooled Std Dev	1.60624
Background Mean	4.45194
Background Std Dev	1.4936

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	138.01

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	4.45194	1.4936	0	3255	105

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	30	96.7742	149.14
MW-4	31	30	96.7742	138.44
MW-9	31	31	100	138.01
SW-1	29	29	100	128.01
MW-6	21	21	100	88.01
MW-11	19	19	100	78.01
MW-12	19	18	94.7368	78.64

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	4.81097	1.74633	0.359032	0.411351	3362	108.452
MW-4	4.46581	1.45398	0.013871	0.411351	3360	108.387
MW-9	4.45194	1.4936	0	0.411351	3255	105
SW-1	4.41414	1.53859	-0.0377976	0.418383	3045	105
MW-6	4.19095	1.76764	-0.260983	0.457709	2205	105
MW-11	4.10579	1.84156	-0.346146	0.471852	1995	105
MW-12	4.13895	1.77108	-0.312988	0.471852	2101	110.579

Analysis of Variance Statistics

SS Wells	9.34338
SS Total	544.384

Kruskal-Wallis Statistics

Non-Detect Rank	105
Background Rank Sum	3255
Background Rank Mean	105
H Statistic	0.22305
H Adjusted for Ties	5.32904

Basic Statistics**Parameter: 1,4-Dichlorobenzene**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
212	
Total Non-Detects	210
Pooled Mean	2.1991
Pooled Std Dev	0.753533
Background Mean	2.23597
Background Std Dev	0.731368

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	69.315

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.23597	0.731368	0	3270.5	105.5

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	30	96.7742	70.11
MW-4	31	30	96.7742	70.21
MW-9	31	31	100	69.315
SW-1	29	29	100	64.315
MW-6	21	21	100	44.315
MW-11	19	19	100	39.315
MW-12	19	19	100	39.315

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	2.26161	0.665091	0.0256452	0.193712	3376	108.903
MW-4	2.26484	0.658476	0.028871	0.193712	3377	108.935
MW-9	2.23597	0.731368	0	0.193712	3270.5	105.5
SW-1	2.21776	0.753514	-0.0182091	0.197024	3059.5	105.5
MW-6	2.11024	0.866541	-0.12573	0.215543	2215.5	105.5
MW-11	2.06921	0.903145	-0.166757	0.222203	2004.5	105.5
MW-12	2.06921	0.903145	-0.166757	0.222203	2004.5	105.5

Analysis of Variance Statistics

SS Wells	1.15641
SS Total	119.808

Kruskal-Wallis Statistics

Non-Detect Rank	105.5
Background Rank Sum	3270.5
Background Rank Mean	105.5
H Statistic	0.136306
H Adjusted for Ties	4.86179

Basic Statistics**Parameter: Chlorobenzene**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
212	
Total Non-Detects	209
Pooled Mean	2.21917
Pooled Std Dev	0.812039
Background Mean	2.2321
Background Std Dev	0.743028

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1	31	31	100	69.195

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.2321	0.743028	0	3255	105

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-3	31	30	96.7742	69.73
MW-4	31	29	93.5484	75.565
MW-9	31	31	100	69.195
SW-1	29	29	100	64.195
MW-6	21	21	100	44.195
MW-11	19	19	100	39.195
MW-12	19	19	100	39.195

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-3	2.24935	0.695724	0.0172581	0.207705	3361	108.419
MW-4	2.43758	0.94054	0.205484	0.207705	3467	111.839
MW-9	2.2321	0.743028	0	0.207705	3255	105
SW-1	2.21362	0.765537	-0.0184761	0.211255	3045	105
MW-6	2.10452	0.880433	-0.127573	0.231112	2205	105
MW-11	2.06289	0.917651	-0.169202	0.238253	1995	105
MW-12	2.06289	0.917651	-0.169202	0.238253	1995	105

Analysis of Variance Statistics

SS Wells	2.72235
SS Total	139.135

Kruskal-Wallis Statistics

Non-Detect Rank	105
Background Rank Sum	3255
Background Rank Mean	105
H Statistic	0.354839
H Adjusted for Ties	8.4777

Interwell Analyses for Metals

Poisson Tolerance Limit**Parameter: Barium, total**

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

Poisson Count of 31 background Samples = 177.027

Degrees of Freedom = 356

95% Confidence Values

Chi-Squared Value (95% Confidence) = 400.997

Lambda (from Zack's formula) = 6.4677

Smallest Degrees of Freedom = 23

Upper Tolerance Limit (95%) = 10.5

99% Confidence Values

Chi-Squared Value (99% Confidence) = 420.999

Lambda (from Zack's formula) = 6.79031

Smallest Degrees of Freedom = 29

Upper Tolerance Limit (99%) = 13.5

	Date	Result	Impacted 95%	Impacted 99%
MW-12	2/23/2000	ND<6.21461	FALSE	FALSE
	2/23/2000	ND<6.21461	FALSE	FALSE
	7/17/2000	ND<6.21461	FALSE	FALSE
	1/24/2001	ND<6.21461	FALSE	FALSE
	7/11/2001	ND<6.21461	FALSE	FALSE
	1/10/2002	ND<6.21461	FALSE	FALSE
	7/8/2002	ND<6.21461	FALSE	FALSE
	1/22/2003	ND<6.21461	FALSE	FALSE
	7/7/2003	ND<6.21461	FALSE	FALSE
	1/22/2004	ND<6.21461	FALSE	FALSE
	7/12/2004	ND<6.21461	FALSE	FALSE
	1/26/2005	ND<6.21461	FALSE	FALSE
	7/14/2005	ND<6.21461	FALSE	FALSE
	1/25/2006	ND<6.21461	FALSE	FALSE
	7/13/2006	ND<6.21461	FALSE	FALSE
	1/17/2007	ND<4.60517	FALSE	FALSE
	7/31/2007	4.46361	FALSE	FALSE
	1/23/2008	4.23844	FALSE	FALSE
	7/15/2008	5.20401	FALSE	FALSE

Poisson Tolerance Limit**Parameter: Zinc**

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

Poisson Count of 31 background Samples = 111.706

Degrees of Freedom = 225

95% Confidence Values

Chi-Squared Value (95% Confidence) = 260.992

Lambda (from Zack's formula) = 4.20955

Smallest Degrees of Freedom = 17

Upper Tolerance Limit (95%) = 7.5

99% Confidence Values

Chi-Squared Value (99% Confidence) = 277.269

Lambda (from Zack's formula) = 4.47208

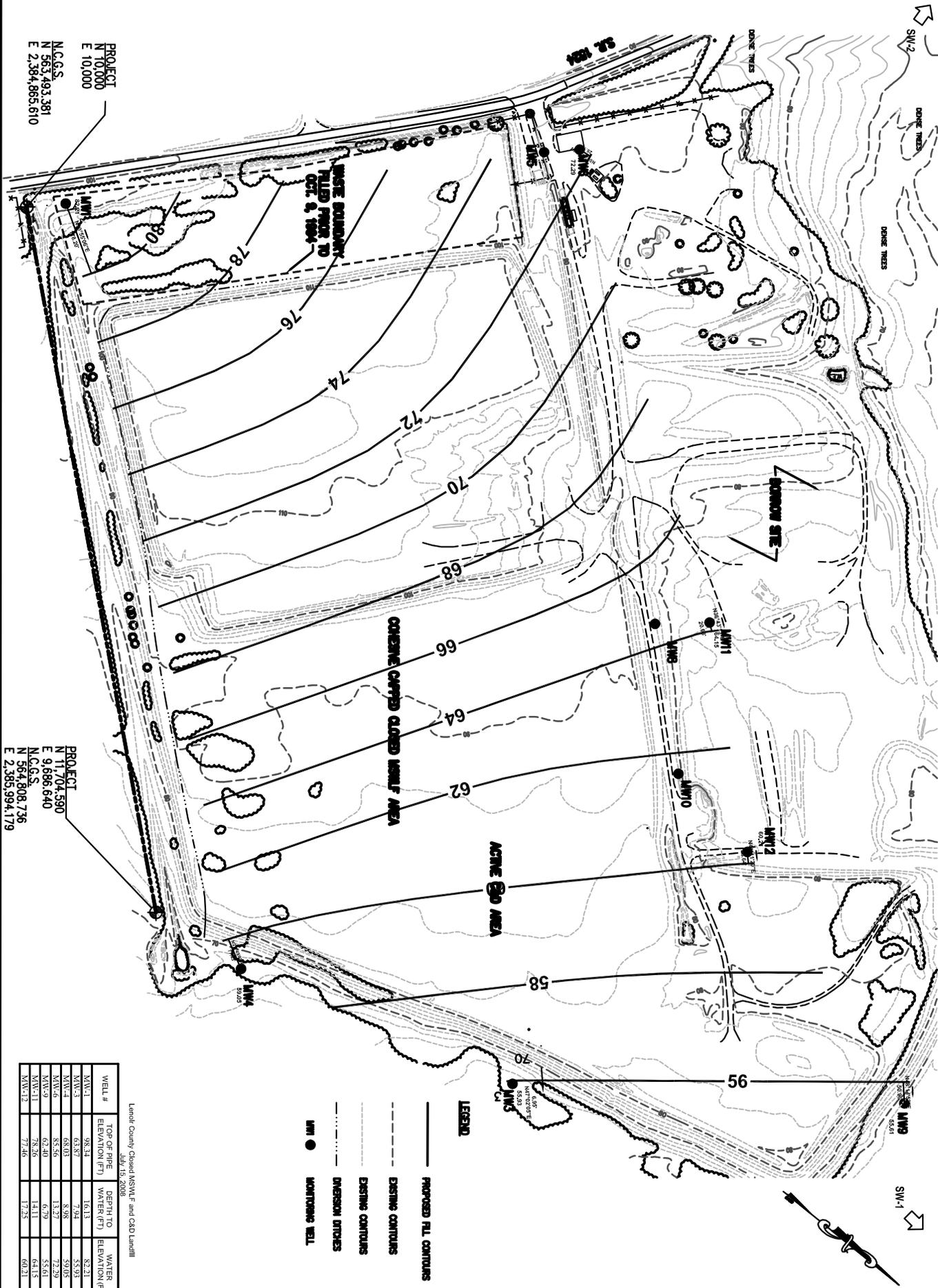
Smallest Degrees of Freedom = 22

Upper Tolerance Limit (99%) = 10

	Date	Result	Impacted 95%	Impacted 99%
MW-3	9/9/1994	ND<3.91202	FALSE	FALSE
	10/28/1994	ND<3.91202	FALSE	FALSE
	1/6/1995	ND<3.91202	FALSE	FALSE
	2/24/1995	ND<3.91202	FALSE	FALSE
	7/17/1995	ND<3.91202	FALSE	FALSE
	1/23/1996	ND<3.91202	FALSE	FALSE
	7/25/1996	ND<3.91202	FALSE	FALSE
	1/14/1997	ND<3.91202	FALSE	FALSE
	7/11/1997	ND<3.91202	FALSE	FALSE
	1/21/1998	ND<3.91202	FALSE	FALSE
	7/27/1998	5.18739	FALSE	FALSE
	1/6/1999	5.84932	FALSE	FALSE
	6/29/1999	6.49527	FALSE	FALSE
	1/27/2000	6.62007	FALSE	FALSE
	7/17/2000	ND<3.91202	FALSE	FALSE
	1/24/2001	5.78074	FALSE	FALSE
	7/11/2001	6.34914	FALSE	FALSE
	1/10/2002	5.4161	FALSE	FALSE
	7/8/2002	6.06611	FALSE	FALSE
	1/22/2003	5.63479	FALSE	FALSE
	7/7/2003	7.00397	FALSE	FALSE
	1/22/2004	5.33754	FALSE	FALSE
	7/12/2004	4.83628	FALSE	FALSE
	1/26/2005	4.46591	FALSE	FALSE
	7/14/2005	5.0689	FALSE	FALSE
	1/25/2006	4.04305	FALSE	FALSE
	7/13/2006	ND<3.91202	FALSE	FALSE
	1/17/2007	4.48864	FALSE	FALSE
7/31/2007	4.07754	FALSE	FALSE	
1/23/2008	3.29584	FALSE	FALSE	
7/15/2008	3.13549	FALSE	FALSE	
MW-6	7/27/1998	ND<3.91202	FALSE	FALSE
	1/6/1999	ND<3.91202	FALSE	FALSE
	6/29/1999	ND<3.91202	FALSE	FALSE
	1/27/2000	4.07754	FALSE	FALSE
	7/17/2000	4.02535	FALSE	FALSE
	1/24/2001	ND<3.91202	FALSE	FALSE
	7/11/2001	ND<3.91202	FALSE	FALSE
	1/10/2002	ND<3.91202	FALSE	FALSE
	7/8/2002	ND<3.91202	FALSE	FALSE
	1/22/2003	ND<3.91202	FALSE	FALSE
	7/7/2003	3.93183	FALSE	FALSE
	1/22/2004	ND<3.91202	FALSE	FALSE
	7/12/2004	ND<3.91202	FALSE	FALSE
	1/26/2005	ND<3.91202	FALSE	FALSE
	7/14/2005	ND<3.91202	FALSE	FALSE
	1/25/2006	ND<3.91202	FALSE	FALSE
	7/13/2006	ND<3.91202	FALSE	FALSE
	1/17/2007	2.56495	FALSE	FALSE
	7/31/2007	0.993252	FALSE	FALSE
	1/23/2008	4.06044	FALSE	FALSE
7/15/2008	2.70805	FALSE	FALSE	

PROJECT
 N 10,000
 E 10,000
 N.C.G.S.
 N 563,493.381
 E 2,384,985.610

PROJECT
 N 11,704,590
 E 9,686,640
 N.C.G.S.
 N 564,808.736
 E 2,385,994.179



- LEGEND**
- PROPOSED FIL CONTOURS
 - EXISTING CONTOURS
 - EXISTING CONTOURS
 - - - DIMENSION DRIVERS
 - MONITORING WELL

WELL #	TOP OF PIPE ELEVATION (FT)	DEPTH TO WATER (FT)	WATER ELEVATION (FT)
MW-1	98.54	16.13	82.21
MW-2	63.87	7.64	55.93
MW-3	68.03	8.98	59.05
MW-4	83.50	13.27	72.29
MW-5	62.40	6.79	55.61
MW-6	78.26	14.11	64.15
MW-7	77.46	17.25	60.21

Lenoir County Closed MSWLF and C&D Landfill
 July 15, 2008

**GROUNDWATER SAMPLING
 MUNICIPAL SOLID WASTE LANDFILL
 LENOIR COUNTY
 NORTH CAROLINA**



**POTENTIOMETRIC MAP
 SINGLE DAY**

NO.	DATE	BY	REV.	DESCRIPTION
1	7/15/08			ISSUED FOR PERMIT
2				
3				
4				
5				

Laboratory Results

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6009

LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

DATE COLLECTED: 07/15/08
DATE REPORTED : 08/28/08

REVIEWED BY: 

PARAMETERS	MDL	Well					Analysis		Method		
		SWSL	#1	#3	#4	#6	#9	Date		Analyst	
PH (field measurement), Units			4.4	5.9	5.7	4.4	5.0	07/15/08	RJH	SM4500HB	
Total Alkalinity, mg/l	1.0	1.0	--- U	101	121	---	U	5	07/15/08	TRB	SM2320B
Chloride, mg/l	5.0	5.0	39	55	16	7	9	07/16/08	MDM	SM4500-CLB	
Cyanide, ug/l	5.0	10.0		---	U			07/29/08	SEJ	SM4500 CN-	
Total Dissolved Residue, mg/l	1.0	1.0	43	200	186	56	65	07/17/08	TRB	SM2540C	
Sulfate, mg/l	5.0	250.0	13.2 J	7.0 J	13.4 J	31.8 J	22.5 J	07/25/08	TRB	SM4500-S04	
Antimony, ug/l	0.08	6.0	0.1 J	0.1 J	0.1 J	0.2 J	---	U	07/17/08	CMF	EPA200.8
Arsenic, ug/l	0.07	10.0	0.1 J	2.3 J	8.7 J	0.3 J	0.8 J	07/17/08	CMF	EPA200.8	
Barium, ug/l	0.34	100.0	22.9 J	73.1 J	17.7 J	27.1 J	51.7 J	07/17/08	CMF	EPA200.8	
Beryllium, ug/l	0.17	1.0	0.1 J	---	U	---	U	0.1 J	07/17/08	CMF	EPA200.8
Cadmium, ug/l	0.04	1.0	0.1 J	0.1 J	0.1 J	0.2 J	0.1 J	07/17/08	CMF	EPA200.8	
Cobalt, ug/l	2.53	10.0	0.9 J	0.6 J	0.6 J	0.6 J	6.2 J	07/17/08	CMF	EPA200.8	
Copper, ug/l	2.24	10.0	0.5 J	0.4 J	0.7 J	1.3 J	0.4 J	07/17/08	CMF	EPA200.8	
Total Chromium, ug/l	1.38	10.0	---	U	---	U	---	U	07/17/08	CMF	EPA200.8
Iron, ug/l	14.0	300.0	635	69550	42925	397	2050	08/05/08	ADD	SM3111B	
Manganese, ug/l	0.50	50.0	16 J	29 J	47 J	51	476	07/30/08	LFJ	EPA200.7	
Lead, ug/l	0.04	10.0	0.5 J	0.1 J	0.3 J	1.0 J	0.2 J	07/17/08	CMF	EPA200.8	
Mercury, ug/l	0.13	0.20	0.02 J	0.05 J	0.02 J	0.01 J	0.1 J	07/17/08	CMF	EPA200.8	
Nickel, ug/l	1.35	50.0	1.1 J	0.7 J	0.5 J	0.8 J	2.2 J	07/17/08	CMF	EPA200.8	
Selenium, ug/l	0.14	10.0	---	U	1.4 J	1.2 J	1.3 J	0.2 J	07/17/08	CMF	EPA200.8
Silver, ug/l	2.32	10.0	0.1 J	---	U	0.1 J	---	U	07/17/08	CMF	EPA200.8
Thallium, ug/l	0.04	5.0	---	U	---	U	0.1 J	07/17/08	CMF	EPA200.8	
Tin, ug/l	2.75	100.0	---	U	---	U		07/30/08	LFJ	EPA200.7	
Vanadium, ug/l	1.21	25.0	1.3 J	0.8 J	4.1 J	0.8 J	0.8 J	07/17/08	CMF	EPA200.8	
Zinc, ug/l	1.86	10.0	7.0 J	23	2.2 J	15	7.4 J	07/17/08	CMF	EPA200.8	
Sulfide, ug/l	100	1000	---	U	---	U		07/22/08	LFJ	SM4500-S2D	
Conductivity (at 25c), uMhos	1.0	1.0	89	415	345	118	133	07/15/08	RJH	SM2510B	
Temperature, °C			19	21	22	21	21	07/15/08	RJH	SM2550B	
Static Water Level, feet			16.13	7.94	8.98	13.27	6.79	07/15/08	RJH		
Well Depth, feet			38.94	15.82	15.92	16.96	21.82	07/15/08	RJH		

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Laboratory Analyses — Environmental Consultants

Environment 1, Incorporated

Drinking Water ID: 37215
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6009

LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

DATE COLLECTED: 07/15/08
DATE REPORTED : 08/28/08

REVIEWED BY: 

PARAMETERS	MDL	Well		SW-1	SW-2	Analysis		Method			
		SWSL	#11			#12	Date		Analyst	Code	
PH (field measurement), Units			4.7	4.4	6.9	Missing	07/15/08 RJH	SM4500HB			
Total Alkalinity, mg/l	1.0	1.0	---	U	---	U	07/16/08 TRB	SM2320B			
Chloride, mg/l	5.0	5.0	43	34			07/16/08 MDM	SM4500-CLB			
Total Dissolved Residue, mg/l	1.0	1.0	41	115			07/17/08 TRB	SM2540C			
Sulfate, mg/l	5.0	250.0	---	U	7.8	J	07/25/08 TRB	SM4500-SO4E			
Antimony, ug/l	0.08	6.0	0.1	J	0.2	J	0.1	J	Missing	07/17/08 CMF	EPA200.8
Arsenic, ug/l	0.07	10.0	0.2	J	0.6	J	3.1	J	Missing	07/17/08 CMF	EPA200.8
Barium, ug/l	0.11	100.0	22.5	J	182		41.7	J	Missing	07/17/08 CMF	EPA200.8
Beryllium, ug/l	0.06	1.0	0.1	J	0.1	J	---	U	Missing	07/17/08 CMF	EPA200.8
Cadmium, ug/l	0.04	1.0	0.1	J	0.2	J	0.1	J	Missing	07/17/08 CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	0.3	J	1.6	J	0.3	J	Missing	07/17/08 CMF	EPA200.8
Copper, ug/l	0.05	10.0	1.0	J	1.0	J	0.9	J	Missing	07/17/08 CMF	EPA200.8
Total Chromium, ug/l	0.11	10.0	---	U	---	U	---	U	Missing	07/17/08 CMF	EPA200.8
Iron, ug/l	14.0	300.0	1333		192	J	08/05/08 ADD	SM3111B			
Manganese, ug/l	0.50	50.0	15	J	15	J	07/30/08 LPJ	EPA200.7			
Lead, ug/l	0.04	10.0	0.2	J	0.1	J	1.4	J	Missing	07/17/08 CMF	EPA200.8
Mercury, ug/l	0.13	0.20	---	U	0.49		07/17/08 CMF	EPA200.8			
Nickel, ug/l	0.06	50.0	0.7	J	2.4	J	0.4	J	Missing	07/17/08 CMF	EPA200.8
Selenium, ug/l	0.14	10.0	---	U	2.1	J	---	U	Missing	07/17/08 CMF	EPA200.8
Silver, ug/l	0.04	10.0	---	U	---	U	---	U	Missing	07/17/08 CMF	EPA200.8
Thallium, ug/l	0.04	5.0	---	U	---	U	---	U	Missing	07/17/08 CMF	EPA200.8
Vanadium, ug/l	0.07	25.0	1.8	J	0.5	J	2.2	J	Missing	07/17/08 CMF	EPA200.8
Zinc, ug/l	0.04	10.0	4.0	J	3.0	J	1.9	J	Missing	07/17/08 CMF	EPA200.8
Conductivity (at 25c), uMhos	1.0	1.0	57		189		126		Missing	07/15/08 RJH	SM2510B
Temperature, °C			20		21		25		Missing	07/15/08 RJH	SM2550B
Static Water Level, feet			14.11		17.25					07/15/08 RJH	
Well Depth, feet			35.61		38.39					07/15/08 RJH	
8260 (duplicate)									Missing	/ /	

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009
ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/23/08
DATE ANALYZED: 08/18/08
DATE REPORTED: 08/28/08

REVIEWED BY: 

PESTICIDES AND PCB'S EPA METHOD 8081A

PARAMETERS, ug/l	MDL	SWSL	Well #3
1. Aldrin	0.029	0.05	--- U
2. Alpha-BHC	0.032	0.05	--- U
3. Beta-BHC	0.031	0.05	--- U
4. Delta-BHC	0.030	0.05	--- U
5. Gamma-BHC (Lindane)	0.032	0.05	--- U
6. Chlordane	0.320	0.50	--- U
7. 4,4-DDD	0.051	0.10	--- U
8. 4,4-DDE	0.049	0.10	--- U
9. 4,4-DDT	0.052	0.10	--- U
10. Dieldrin	0.042	0.07	--- U
11. Endosulfan I	0.056	0.10	--- U
12. Endosulfan II	0.046	0.10	--- U
13. Endosulfan Sulfate	0.072	0.10	--- U
14. Endrin	0.053	0.10	--- U
15. Endrin Aldehyde	0.068	0.10	--- U
16. Heptachlor	0.039	0.05	--- U
17. Heptachlor Epoxide	0.042	0.07	--- U
18. Methoxychlor	0.530	1.00	--- U
19. Pcb's (Aroclors)	0.500	2.00	--- U
20. Toxaphene	0.690	1.00	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

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CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/23/08
DATE ANALYZED: 08/11/08
DATE REPORTED: 08/28/08

REVIEWED BY: 

LANDFILL APPENDIX II EPA METHOD 8151A

PARAMETERS, ug/l	MDL	SWSL	Well #3
1. 2,4-D	0.36	2.0	--- U
2. Dinosab	0.54	1.0	--- U
3. 2,4,5-TP	0.42	2.0	--- U
4. 2,4,5-T	0.47	2.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37713
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009

ANALYST: MAO
DATE COLLECTED: 07/15/08
DATE ANALYZED: 07/29/08
DATE REPORTED: 08/28/08

Page: 1

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Well #1	Well #4	Well #6	Well #9	Well #11
1. Chloromethane	0.18	1.0	0.20 J	0.30 J	---	0.30 J	0.40 J
2. Vinyl Chloride	0.34	1.0	---	0.60 J	---	---	---
3. Bromomethane	0.26	10.0	---	---	---	---	---
4. Chloroethane	0.29	10.0	---	0.60 J	---	---	---
5. Trichlorofluoromethane	0.13	1.0	---	---	---	---	---
6. 1,1-Dichloroethene	0.14	5.0	---	---	---	---	---
7. Acetone	1.21	100.0	3.10 J	3.30 J	2.80 J	3.40 J	4.80 J
8. Iodomethane	0.12	10.0	---	---	---	---	---
9. Carbon Disulfide	0.14	100.0	---	---	---	---	---
10. Methylene Chloride	0.14	1.0	---	---	---	---	---
11. trans-1,2-Dichloroethene	0.13	5.0	---	---	---	---	---
12. 1,1-Dichloroethane	0.16	5.0	---	0.80 J	---	---	---
13. Vinyl Acetate	0.20	50.0	---	---	---	---	---
14. Cis-1,2-Dichloroethene	0.14	5.0	---	---	---	---	---
15. 2-Butanone	0.85	100.0	1.20 J	---	1.20 J	1.60 J	1.60 J
16. Bromochloromethane	0.11	3.0	---	---	---	---	---
17. Chloroform	0.13	5.0	---	---	---	---	---
18. 1,1,1-Trichloroethane	0.11	1.0	---	---	---	---	---
19. Carbon Tetrachloride	0.13	1.0	---	---	---	---	---
20. Benzene	0.16	1.0	---	1.90	---	---	---
21. 1,2-Dichloroethane	0.12	1.0	---	---	---	---	---
22. Trichloroethane	0.13	1.0	---	---	---	---	---
23. 1,2-Dichloropropane	0.17	1.0	---	---	---	---	---
24. Bromodichloromethane	0.13	1.0	---	---	---	---	---
25. Cis-1,3-Dichloropropene	0.17	1.0	---	---	---	---	---
26. 4-Methyl-2-Pentanone	0.68	100.0	---	---	---	---	---
27. Toluene	0.13	1.0	---	---	---	---	---
28. trans-1,3-Dichloropropene	0.14	1.0	---	---	---	---	---
29. 1,1,2-Trichloroethane	0.20	1.0	---	---	---	---	---
30. Tetrachloroethene	0.16	1.0	---	---	0.30 J	---	---
31. 2-Hexanone	1.00	50.0	---	---	---	---	---
32. Dibromochloromethane	0.14	3.0	---	---	---	---	---
33. 1,2-Dibromoethane	0.13	1.0	---	---	---	---	---
34. Chlorobenzene	0.13	3.0	---	6.30	---	---	---
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	---	---	---	---	---
36. Ethylbenzene	0.16	1.0	---	---	---	---	---
37. Xylenes	0.48	5.0	---	---	---	---	---
38. Dibromomethane	0.17	10.0	---	---	---	---	---
39. Styrene	0.16	1.0	---	---	---	---	---
40. Bromoform	0.11	3.0	---	---	---	---	---
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	---	---	---	---	---
42. 1,2,3-Trichloropropane	0.06	1.0	---	---	---	---	---
43. 1,4-Dichlorobenzene	0.21	1.0	---	1.00	---	---	---
44. 1,2-Dichlorobenzene	0.13	5.0	---	---	---	---	---
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	---	---	---	---	---
46. Acrylonitrile	1.49	200.0	---	---	---	---	---
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	---	---	---	---	---

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

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FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009
ANALYST: MAO
DATE COLLECTED: 07/15/08
DATE ANALYZED: 07/29/08
DATE REPORTED: 08/28/08

Page: 2

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Well #12	SW-1
1. Chloromethane	0.18	1.0	0.20 J	0.30 J
2. Vinyl Chloride	0.34	1.0	0.80 J	---
3. Bromomethane	0.26	10.0	---	---
4. Chloroethane	0.29	10.0	---	---
5. Trichlorofluoromethane	0.13	1.0	---	---
6. 1,1-Dichloroethene	0.14	5.0	---	---
7. Acetone	1.21	100.0	3.90 J	3.70 J
8. Iodomethane	0.12	10.0	---	---
9. Carbon Disulfide	0.14	100.0	---	---
10. Methylene Chloride	0.14	1.0	---	---
11. trans-1,2-Dichloroethene	0.13	5.0	---	---
12. 1,1-Dichloroethane	0.16	5.0	---	---
13. Vinyl Acetate	0.20	50.0	---	---
14. Cis-1,2-Dichloroethene	0.14	5.0	---	---
15. 2-Butanone	0.85	100.0	---	---
16. Bromochloromethane	0.11	3.0	---	---
17. Chloroform	0.13	5.0	---	---
18. 1,1,1-Trichloroethane	0.11	1.0	---	---
19. Carbon Tetrachloride	0.13	1.0	---	---
20. Benzene	0.16	1.0	0.40 J	---
21. 1,2-Dichloroethane	0.12	1.0	---	---
22. Trichloroethene	0.13	1.0	---	---
23. 1,2-Dichloropropane	0.17	1.0	---	---
24. Bromodichloromethane	0.13	1.0	---	---
25. Cis-1,3-Dichloropropene	0.17	1.0	---	---
26. 4-Methyl-2-Pentanone	0.68	100.0	---	---
27. Toluene	0.13	1.0	---	0.20 J
28. trans-1,3-Dichloropropene	0.14	1.0	---	---
29. 1,1,2-Trichloroethane	0.20	1.0	---	---
30. Tetrachloroethane	0.16	1.0	---	---
31. 2-Hexanone	1.00	50.0	---	---
32. Dibromochloromethane	0.14	3.0	---	---
33. 1,2-Dibromoethane	0.13	1.0	---	---
34. Chlorobenzene	0.13	3.0	---	---
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	---	---
36. Ethylbenzene	0.16	1.0	---	---
37. Xylenes	0.48	5.0	---	---
38. Dibromomethane	0.17	10.0	---	---
39. Styrene	0.16	1.0	---	---
40. Bromoform	0.11	3.0	---	---
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	---	---
42. 1,2,3-Trichloropropane	0.06	1.0	---	---
43. 1,4-Dichlorobenzene	0.21	1.0	---	---
44. 1,2-Dichlorobenzene	0.13	5.0	---	---
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	---	---
46. Acrylonitrile	1.49	200.0	---	---
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	---	---

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

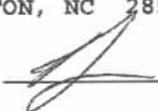
PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/17/08
DATE ANALYZED: 07/27/08
DATE REPORTED: 08/28/08

Page: 1

REVIEWED BY: 

SEMI-VOLATILE ORGANICS EPA METHOD 8270C

PARAMETERS, ug/l	MDL	SWSL	Well #3
1. Acenaphthene	2.66	10.0	--- U
2. Acenaphthylene	2.60	10.0	--- U
3. Anthracene	2.97	10.0	--- U
4. Benzo[a]anthracene	4.16	10.0	--- U
5. Benzo[b]fluoranthene	3.32	10.0	--- U
6. Benzo[k]fluoranthene	4.23	10.0	--- U
7. Benzo[g,h,i]perylene	2.61	10.0	--- U
8. Benzo[a]pyrene	3.27	10.0	--- U
9. 4-Bromophenyl Phenyl Ether	2.63	10.0	--- U
10. Butyl Benzyl Phthalate	5.78	10.0	--- U
11. Bis-(2-Chloroethoxy) Methane	3.14	10.0	--- U
12. Bis-(2-Chloroethyl) Ether	2.58	10.0	--- U
13. Bis-(2-Chloroisopropyl) Ether	2.58	10.0	--- U
14. 2-Chloronaphthalene	2.17	10.0	--- U
15. 4-Chlorophenyl Phenyl Ether	2.42	10.0	--- U
16. Chrysene	4.04	10.0	--- U
17. Dibenzo[a,h]anthracene	2.78	10.0	--- U
18. Di-N-Butyl Phthalate	3.09	10.0	--- U
19. Dimethyl Phthalate	3.78	10.0	--- U
20. Diethyl Phthalate	3.92	10.0	--- U
21. 2,4-Dinitrotoluene	3.95	10.0	--- U
22. 2,6-Dinitrotoluene	3.88	10.0	--- U
23. Di-N-Octyl Phthalate	2.81	10.0	--- U
24. Bis-(2-Ethylhexyl) Phthalate	9.97	15.0	--- U
25. Fluoranthene	3.92	10.0	--- U
26. Fluorene	2.95	10.0	--- U
27. Hexachlorobenzene	2.61	10.0	--- U
28. Hexachlorocyclopentadiene	4.16	10.0	--- U
29. Indeno[1,2,3-cd]pyrene	2.91	10.0	--- U
30. Isophorone	3.74	10.0	--- U
31. Nitrobenzene	2.85	10.0	--- U
32. N-Nitrosodimethylamine	4.25	10.0	--- U
33. N-Nitrosodiphenylamine	3.95	10.0	--- U
34. N-Nitrosodi-N-Propylamine	4.06	10.0	--- U
35. Phenanthrene	3.24	10.0	--- U
36. Pyrene	3.63	10.0	--- U
37. 4-Chloro-3-Methylphenol	3.79	20.0	--- U
38. 2-Chlorophenol	2.75	10.0	--- U
39. O-Cresol	3.68	10.0	--- U
40. P-Cresol	4.12	10.0	--- U
41. 2,4-Dichlorophenol	5.19	10.0	--- U
42. 2,6-Dichlorophenol	4.89	10.0	--- U
43. 2,4-Dimethylphenol	3.21	10.0	--- U
44. 4,6-Dinitro-2-Methylphenol	4.77	50.0	--- U
45. 2,4-Dinitrophenol	4.37	50.0	--- U
46. Ethyl Methanesulfonate	5.26	10.0	--- U
47. Methyl Methanesulfonate	4.92	10.0	--- U
48. 2-Nitrophenol	3.64	10.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/17/08
DATE ANALYZED: 07/27/08
DATE REPORTED: 08/28/08

Page: 2

REVIEWED BY: 

SEMI-VOLATILE ORGANICS EPA METHOD 8270C

PARAMETERS, ug/l	MDL	SWSL	Well #3
49. 4-Nitrophenol	3.17	50.0	--- U
50. Pentachlorophenol	5.33	25.0	--- U
51. Phenol	1.86	10.0	--- U
52. 2,3,4,6-Tetrachlorophenol	3.12	10.0	--- U
53. 2,4,5-Trichlorophenol	4.17	10.0	--- U
54. 2,4,6-Trichlorophenol	3.84	10.0	--- U
55. Acetophenone	2.89	10.0	--- U
56. 2-Acetylaminofluorene	3.98	20.0	--- U
57. 4-Aminobiphenyl	4.12	20.0	--- U
58. Benzyl Alcohol	4.47	20.0	--- U
59. 4-Chloroaniline	3.36	20.0	--- U
60. Chlorobenzilate	5.12	10.0	--- U
61. Diallate	2.98	10.0	--- U
62. Dibenzofuran	4.28	10.0	--- U
63. 3,3-Dichlorobenzidine	4.22	20.0	--- U
64. Dimethoate	3.98	20.0	--- U
65. P-Dimethylaminoazobenzene	2.89	10.0	--- U
66. 7,12-Dimethylbenz[a]anthracene	5.26	10.0	--- U
67. 3,3-Dimethylbenzidine	3.21	10.0	--- U
68. 1,3-Dinitrobenzene	2.89	20.0	--- U
69. Diphenylamine	5.10	10.0	--- U
70. Disulfoton	4.28	10.0	--- U
71. Pamphur	3.98	20.0	--- U
72. Hexachloropropene	4.31	10.0	--- U
73. Isosafrole	2.88	10.0	--- U
74. Kepone	2.78	20.0	--- U
75. Methapyrilene	3.54	100.0	--- U
76. 3-Methylchloroanthrene	4.21	10.0	--- U
77. 2-Methylnaphthalene	3.79	10.0	--- U
78. Methyl Parathion	4.32	10.0	--- U
79. m-Cresol	3.81	10.0	--- U
80. 1,4-Naphthoquinone	4.00	10.0	--- U
81. 1-Naphthylamine	5.61	10.0	--- U
82. 2-Naphthylamine	4.62	10.0	--- U
83. 2-Nitroaniline	3.61	50.0	--- U
84. 3-Nitroaniline	4.81	50.0	--- U
85. 4-Nitroaniline	4.22	20.0	--- U
86. 5-Nitro-O-Toluidine	4.01	10.0	--- U
87. N-Nitrosodi-n-butylamine	3.63	10.0	--- U
88. N-Nitrosodiethylamine	3.83	20.0	--- U
89. N-Nitrosomethylethylamine	3.83	10.0	--- U
90. N-Nitrosopiperidine	5.19	20.0	--- U
91. N-Nitrosopyrrolidine	2.89	10.0	--- U
92. Parathion	3.12	10.0	--- U
93. Pentachlorobenzene	3.92	10.0	--- U
94. Pentachloronitrobenzene	3.71	20.0	--- U
95. Phenacetin	4.41	20.0	--- U
96. 1,4 Benzenediamine	2.99	10.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

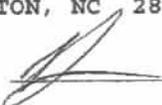
PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/17/08
DATE ANALYZED: 07/27/08
DATE REPORTED: 08/28/08

Page: 3

REVIEWED BY: 

SEMI-VOLATILE ORGANICS EPA METHOD 8270C

PARAMETERS, ug/l	MDL	SWSL	Well #3
97. Phorate	3.86	10.0	--- U
98. Pronamide	3.69	10.0	--- U
99. Safrole	4.12	10.0	--- U
100. 1,2,4,5-Tetrachlorobenzene	5.01	10.0	--- U
101. Thionazin	4.62	20.0	--- U
102. O-Toluidine	4.11	10.0	--- U
103. 1,3,5-Trinitrobenzene	3.98	10.0	--- U
104. 0,0,0-Triethyl Phosphorothiccate	3.61	10.0	--- U
105. Hexachloroethane	1.49	10.0	--- U
106. Isodrin	3.11	20.0	--- U

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Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009
ANALYST: MAO
DATE COLLECTED: 07/15/08
DATE ANALYZED: 07/29/08
DATE REPORTED: 08/28/08

Page: 1

REVIEWED BY: 

LANDFILL APPENDIX II EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Well #3
1. Chloromethane	0.18	1.0	0.60 J
2. Vinyl Chloride	0.34	1.0	11.30
3. Bromomethane	0.26	10.0	--- U
4. Chloroethane	0.29	10.0	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U
6. 1,1-Dichloroethene	0.14	5.0	0.40 J
7. Acetone	1.21	100.0	4.50 J
8. Iodomethane	0.12	10.0	--- U
9. Carbon Disulfide	0.14	100.0	--- U
10. Methylene Chloride	0.14	1.0	0.20 J
11. trans-1,2-Dichloroethene	0.13	5.0	--- U
12. 1,1-Dichloroethane	0.16	5.0	10.00
13. Vinyl Acetate	0.20	50.0	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	9.40
15. 2-Butanone	0.85	100.0	1.60 J
16. Bromochloromethane	0.11	3.0	--- U
17. Chloroform	0.13	5.0	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U
20. Benzene	0.16	1.0	2.10
21. 1,2-Dichloroethane	0.12	1.0	1.00
22. Trichloroethene	0.13	1.0	2.50
23. 1,2-Dichloropropane	0.17	1.0	--- U
24. Bromodichloromethane	0.13	1.0	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U
27. Toluene	0.13	1.0	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U
30. Tetrachloroethane	0.16	1.0	1.50
31. 2-Hexanone	1.00	50.0	--- U
32. Dibromochloromethane	0.14	3.0	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U
34. Chlorobenzene	0.13	3.0	0.60 J
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U
36. Ethylbenzene	0.16	1.0	0.50 J
37. Xylenes	0.48	5.0	0.80 J
38. Dibromomethane	0.17	10.0	--- U
39. Styrene	0.16	1.0	--- U
40. Bromoform	0.11	3.0	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	0.90 J
44. 1,2-Dichlorobenzene	0.13	5.0	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U
46. Acrylonitrile	1.49	200.0	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U
48. Acrolein	5.46	50.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

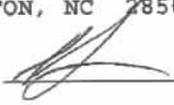
P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009
ANALYST: MAO
DATE COLLECTED: 07/15/08
DATE ANALYZED: 07/29/08
DATE REPORTED: 08/28/08

Page: 2

REVIEWED BY: 

LANDFILL APPENDIX II EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Well #3
49. Allyl Chloride	0.17	10.0	--- U
50. Chloroprene	0.16	20.0	--- U
51. 1,3-Dichlorobenzene	0.13	5.0	--- U
52. Dichlorodifluoromethane	0.16	5.0	3.10 J
53. 1,3-Dichloropropane	0.12	1.0	--- U
54. 2,2-Dichloropropane	0.18	15.0	--- U
55. 1,1-Dichloropropene	0.13	5.0	--- U
56. Ethyl Methacrylate	0.14	10.0	--- U
57. Hexachlorobutadiene	0.22	10.0	--- U
58. Isobutyl Alcohol	5.23	100.0	--- U
59. Methacrylonitrile	1.64	100.0	--- U
60. Methyl Methacrylate	0.10	30.0	--- U
61. Naphthalene	0.13	10.0	0.20 J
62. Propionitrile	1.60	150.0	--- U
63. 1,2,4-Trichlorobenzene	0.11	10.0	--- U
64. Acetonitrile	5.96	50.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Inc.
 P.O. Box 7085, 114 Oakmont Dr.
 Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CLIENT: 6009 Week: 29

LENOIR CO. LANDFILL (OLD)
 COUNTY OF LENOIR
 MR. TOM MILLER
 P.O. BOX 756
 KINSTON NC 28502

(252) 566-5408

CHAIN OF CUSTODY RECORD

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	DISINFECTED				EPA 8081A	8260B App. II	8260 App. II 1	8151A Landfill	CHLORINE NEUTRALIZED AT COLLECTION	PH CHECK (LAB)	CONTAINER TYPE, P/G	CHEMICAL PRESERVATION	PARAMETERS	CLASSIFICATION:
	DATE	TIME				<input type="checkbox"/> CHLORINE	<input type="checkbox"/> UV	<input type="checkbox"/> NONE											
Well #1					9														
Well #3	02	1508		21	14	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Well #4					8														
Well #6					8														
Well #9					8														
Well #11					8														
Well #12					8														
SW-1					4														
SW-2					4														
RELINQUISHED BY (SIG.)		DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)														
RELINQUISHED BY (SIG.)		DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)														
RELINQUISHED BY (SIG.)		DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)														
COMMENTS:															SAMPLER MUST BE PLACED IN A "C" FOR COMPOSITE SAMPLE OR A "G" FOR GRAB SAMPLE IN THE BLOCKS ABOVE FOR EACH PARAMETER REQUESTED.				
SAMPLER MUST BE PLACED IN A "C" FOR COMPOSITE SAMPLE OR A "G" FOR GRAB SAMPLE IN THE BLOCKS ABOVE FOR EACH PARAMETER REQUESTED.															SAMPLER MUST BE PLACED IN A "C" FOR COMPOSITE SAMPLE OR A "G" FOR GRAB SAMPLE IN THE BLOCKS ABOVE FOR EACH PARAMETER REQUESTED.				

Instructions for completing this form are on the reverse side.

Environment 1, Incorporated

Drinking Water ID: 17715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

ID#: 6009 A

LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON ,NC 28502

DATE COLLECTED: 07/15/08
DATE REPORTED : 08/28/08

REVIEWED BY: 

PARAMETERS	MDL	Trip SWSL Blank	Equipment Blank	Analysis		Method Code
				Date	Analyst	
Cyanide, ug/l	5.0	10.0	---	U	07/18/08 SEJ	SM4500 CN-E
Antimony, ug/l	0.08	6.0	---	U	07/29/08 CMF	EPA200.8
Arsenic, ug/l	0.07	10.0	---	U	07/29/08 CMF	EPA200.8
Barium, ug/l	0.11	100.0	---	U	07/29/08 CMF	EPA200.8
Beryllium, ug/l	0.06	1.0	---	U	07/29/08 CMF	EPA200.8
Cadmium, ug/l	0.04	1.0	0.1	J	07/29/08 CMF	EPA200.8
Cobalt, ug/l	0.03	10.0	0.1	J	07/29/08 CMF	EPA200.8
Copper, ug/l	0.05	10.0	---	U	07/29/08 CMF	EPA200.8
Total Chromium, ug/l	0.11	10.0	---	U	07/29/08 CMF	EPA200.8
Iron, ug/l	14.0	300.0	93	J	08/05/08 ADD	SM3111B
Manganese, ug/l	0.50	50.0	---	U	07/30/08 LFFJ	EPA200.7
Lead, ug/l	0.04	10.0	0.2	J	07/29/08 CMF	EPA200.8
Mercury, ug/l	0.13	0.20	0.07	J	07/29/08 CMF	EPA200.8
Nickel, ug/l	1.35	50.0	0.3	J	07/29/08 CMF	EPA200.8
Selenium, ug/l	0.14	10.0	---	U	07/29/08 CMF	EPA200.8
Silver, ug/l	0.04	10.0	0.1	J	07/29/08 CMF	EPA200.8
Thallium, ug/l	0.04	5.0	0.3	J	07/29/08 CMF	EPA200.8
Tin, ug/l	2.75	100.0	---	U	07/30/08 LFFJ	EPA200.7
Vanadium, ug/l	1.21	25.0	0.1	J	07/29/08 CMF	EPA200.8
Zinc, ug/l	1.86	10.0	2.6	J	07/29/08 CMF	EPA200.8
Sulfide, ug/l	100	1000	---	U	07/22/08 LFFJ	SM4500-S2D

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009 A

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/23/08
DATE ANALYZED: 08/18/08
DATE REPORTED: 08/28/08

REVIEWED BY: 

PESTICIDES AND PCB'S EPA METHOD 8081A

PARAMETERS, ug/l	MDL	SWSL	Equipment Blank
1. Aldrin	0.029	0.05	--- U
2. Alpha-BHC	0.032	0.05	--- U
3. Beta-BHC	0.031	0.05	--- U
4. Delta-BHC	0.030	0.05	--- U
5. Gamma-BHC (Lindane)	0.032	0.05	--- U
6. Chlordane	0.320	0.50	--- U
7. 4,4-DDD	0.051	0.10	--- U
8. 4,4-DDE	0.049	0.10	--- U
9. 4,4-DDT	0.052	0.10	--- U
10. Dieldrin	0.042	0.07	--- U
11. Endosulfan I	0.056	0.10	--- U
12. Endosulfan II	0.046	0.10	--- U
13. Endosulfan Sulfate	0.072	0.10	--- U
14. Endrin	0.053	0.10	--- U
15. Endrin Aldehyde	0.068	0.10	--- U
16. Heptachlor	0.039	0.05	--- U
17. Heptachlor Epoxide	0.042	0.07	--- U
18. Methoxychlor	0.530	1.00	--- U
19. Pcb's (Aroclors)	0.500	2.00	--- U
20. Toxaphene	0.650	1.00	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Laboratory Analyses — Environmental Consultants

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009 A

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/23/08
DATE ANALYZED: 08/11/08
DATE REPORTED: 08/28/08

REVIEWED BY:  _____

LANDFILL APPENDIX II EPA METHOD 8151A

PARAMETERS, ug/l	MDL	SWSL	Equipment Blank
1. 2,4-D	0.36	2.0	--- U
2. Dinoseb	0.54	1.0	--- U
3. 2,4,5-TP	0.42	2.0	--- U
4. 2,4,5-T	0.47	2.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009 A

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/17/08
DATE ANALYZED: 07/27/08
DATE REPORTED: 08/28/08

Page: 1

REVIEWED BY: 

SEMI-VOLATILE ORGANICS EPA METHOD 8270C

PARAMETERS, ug/l	MDL	SWSL	Equipment Blank
1. Acenaphthene	2.66	10.0	--- U
2. Acenaphthylene	2.60	10.0	--- U
3. Anthracene	2.97	10.0	--- U
4. Benzo[a]anthracene	4.16	10.0	--- U
5. Benzo[b]fluoranthene	3.32	10.0	--- U
6. Benzo[k]fluoranthene	4.23	10.0	--- U
7. Benzo[g,h,i]perylene	2.61	10.0	--- U
8. Benzo[a]pyrene	3.27	10.0	--- U
9. 4-Bromophenyl Phenyl Ether	2.63	10.0	--- U
10. Butyl Benzyl Phthalate	5.78	10.0	--- U
11. Bis-(2-Chloroethoxy) Methane	3.14	10.0	--- U
12. Bis-(2-Chloroethyl) Ether	2.58	10.0	--- U
13. Bis-(2-Chloroisopropyl) Ether	2.58	10.0	--- U
14. 2-Chloronaphthalene	2.17	10.0	--- U
15. 4-Chlorophenyl Phenyl Ether	2.42	10.0	--- U
16. Chrysene	4.04	10.0	--- U
17. Dibenzo[a,h]anthracene	2.78	10.0	--- U
18. Di-N-Butyl Phthalate	3.09	10.0	--- U
19. Dimethyl Phthalate	3.78	10.0	--- U
20. Diethyl Phthalate	3.92	10.0	--- U
21. 2,4-Dinitrotoluene	3.95	10.0	--- U
22. 2,6-Dinitrotoluene	3.88	10.0	--- U
23. Di-N-Octyl Phthalate	2.81	10.0	--- U
24. Bis-(2-Ethylhexyl) Phthalate	9.97	15.0	--- U
25. Fluoranthene	3.92	10.0	--- U
26. Fluorene	2.95	10.0	--- U
27. Hexachlorobenzene	2.61	10.0	--- U
28. Hexachlorocyclopentadiene	4.16	10.0	--- U
29. Indeno[1,2,3-Cd]pyrene	2.91	10.0	--- U
30. Isophorone	3.74	10.0	--- U
31. Nitrobenzene	2.85	10.0	--- U
32. N-Nitrosodimethylamine	4.25	10.0	--- U
33. N-Nitrosodiphenylamine	3.95	10.0	--- U
34. N-Nitrosodi-N-Propylamine	4.06	10.0	--- U
35. Phenanthrene	3.24	10.0	--- U
36. Pyrene	3.63	10.0	--- U
37. 4-Chloro-3-Methylphenol	3.79	20.0	--- U
38. 2-Chlorophenol	2.75	10.0	--- U
39. O-Cresol	3.68	10.0	--- U
40. P-Cresol	4.12	10.0	--- U
41. 2,4-Dichlorophenol	5.19	10.0	--- U
42. 2,6-Dichlorophenol	4.89	10.0	--- U
43. 2,4-Dimethylphenol	3.21	10.0	--- U
44. 4,6-Dinitro-2-Methylphenol	4.77	50.0	--- U
45. 2,4-Dinitrophenol	4.37	50.0	--- U
46. Ethyl Methanesulfonate	5.26	10.0	--- U
47. Methyl Methanesulfonate	4.92	10.0	--- U
48. 2-Nitrophenol	3.64	10.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009 A

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/17/08
DATE ANALYZED: 07/27/08
DATE REPORTED: 08/28/08

Page: 2

REVIEWED BY: 

SEMI-VOLATILE ORGANICS EPA METHOD 8270C

PARAMETERS, ug/l	MDL	SWSL	Equipment Blank
49. 4-Nitrophenol	3.17	50.0	--- U
50. Pentachlorophenol	5.33	25.0	--- U
51. Phenol	1.86	10.0	--- U
52. 2,3,4,6-Tetrachlorophenol	3.12	10.0	--- U
53. 2,4,5-Trichlorophenol	4.17	10.0	--- U
54. 2,4,6-Trichlorophenol	3.84	10.0	--- U
55. Acetophenone	2.89	10.0	--- U
56. 2-Acetylaminofluorene	3.98	20.0	--- U
57. 4-Aminobiphenyl	4.12	20.0	--- U
58. Benzyl Alcohol	4.47	20.0	--- U
59. 4-Chloroaniline	3.36	20.0	--- U
60. Chlorobenzilate	5.12	10.0	--- U
61. Diallate	2.98	10.0	--- U
62. Dibenzofuran	4.28	10.0	--- U
63. 3,3-Dichlorobenzidine	4.22	20.0	--- U
64. Dimethoate	3.98	20.0	--- U
65. P-Dimethylaminoazobenzene	2.89	10.0	--- U
66. 7,12-Dimethylbenz[<i>a</i>]anthracene	5.26	10.0	--- U
67. 3,3-Dimethylbenzadine	3.21	10.0	--- U
68. 1,3-Dinitrobenzene	2.89	20.0	--- U
69. Diphenylamine	5.10	10.0	--- U
70. Disulfoton	4.28	10.0	--- U
71. Pamphur	3.98	20.0	--- U
72. Hexachloropropene	4.31	10.0	--- U
73. Isosafrole	2.88	10.0	--- U
74. Kepone	2.78	20.0	--- U
75. Methapyrilene	3.54	100.0	--- U
76. 3-Methylchloroanthrene	4.21	10.0	--- U
77. 2-Methylnaphthalene	3.79	10.0	--- U
78. Methyl Parathion	4.32	10.0	--- U
79. m-Cresol	3.81	10.0	--- U
80. 1,4-Naphthoquinone	4.00	10.0	--- U
81. 1-Naphthylamine	5.61	10.0	--- U
82. 2-Naphthylamine	4.62	10.0	--- U
83. 2-Nitroaniline	3.61	50.0	--- U
84. 3-Nitroaniline	4.81	50.0	--- U
85. 4-Nitroaniline	4.22	20.0	--- U
86. 5-Nitro-O-Toluidine	4.01	10.0	--- U
87. N-Nitrosodi-n-butylamine	3.63	10.0	--- U
88. N-Nitrosodiethylamine	3.83	20.0	--- U
89. N-Nitrosomethylethylamine	3.83	10.0	--- U
90. N-Nitrosopiperidine	5.19	20.0	--- U
91. N-Nitrosopyrrolidine	2.89	10.0	--- U
92. Parathion	3.12	10.0	--- U
93. Pentachlorobenzene	3.92	10.0	--- U
94. Pentachloronitrobenzene	3.71	20.0	--- U
95. Phenacetin	4.41	20.0	--- U
96. 1,4 Benzenediamine	2.99	10.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009 A

ANALYST: CHS
DATE COLLECTED: 07/15/08
DATE EXTRACTED: 07/17/08
DATE ANALYZED: 07/27/08
DATE REPORTED: 08/28/08

Page: 3

REVIEWED BY: 

SEMI-VOLATILE ORGANICS EPA METHOD 8270C

PARAMETERS, ug/l	MDL	SWSL	Equipment Blank
97. Phorate	3.86	10.0	--- U
98. Pronamide	3.69	10.0	--- U
99. Safrole	4.12	10.0	--- U
100. 1,2,4,5-Tetrachlorobenzene	5.01	10.0	--- U
101. Thionazin	4.62	20.0	--- U
102. O-Toluidine	4.11	10.0	--- U
103. 1,3,5-Trinitrobenzene	3.98	10.0	--- U
104. 0,0,0-Triethyl Phosphorothioate	3.61	10.0	--- U
105. Hexachloroethane	1.49	10.0	--- U
106. Isodrin	3.11	20.0	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009 A

ANALYST: MAO
DATE COLLECTED: 07/15/08
DATE ANALYZED: 07/29/08
DATE REPORTED: 08/28/08

Page: 1

REVIEWED BY: 

LANDFILL APPENDIX II EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Trip Blank	Equipment Blank
1. Chloromethane	0.18	1.0	--- U	--- U
2. Vinyl Chloride	0.34	1.0	--- U	--- U
3. Bromomethane	0.26	10.0	--- U	--- U
4. Chloroethane	0.29	10.0	--- U	--- U
5. Trichlorofluoromethane	0.13	1.0	--- U	--- U
6. 1,1-Dichloroethene	0.14	5.0	--- U	--- U
7. Acetone	1.21	100.0	--- U	--- U
8. Iodomethane	0.12	10.0	--- U	--- U
9. Carbon Disulfide	0.14	100.0	--- U	--- U
10. Methylene Chloride	0.14	1.0	--- U	--- U
11. trans-1,2-Dichloroethene	0.13	5.0	--- U	--- U
12. 1,1-Dichloroethane	0.16	5.0	--- U	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U
14. Cis-1,2-Dichloroethene	0.14	5.0	--- U	--- U
15. 2-Butanone	0.85	100.0	--- U	--- U
16. Bromochloromethane	0.11	3.0	--- U	--- U
17. Chloroform	0.13	5.0	--- U	--- U
18. 1,1,1-Trichloroethane	0.11	1.0	--- U	--- U
19. Carbon Tetrachloride	0.13	1.0	--- U	--- U
20. Benzene	0.16	1.0	--- U	--- U
21. 1,2-Dichloroethane	0.12	1.0	--- U	--- U
22. Trichloroethene	0.13	1.0	--- U	--- U
23. 1,2-Dichloropropane	0.17	1.0	--- U	--- U
24. Bromodichloromethane	0.13	1.0	--- U	--- U
25. Cis-1,3-Dichloropropene	0.17	1.0	--- U	--- U
26. 4-Methyl-2-Pentanone	0.68	100.0	--- U	--- U
27. Toluene	0.13	1.0	--- U	--- U
28. trans-1,3-Dichloropropene	0.14	1.0	--- U	--- U
29. 1,1,2-Trichloroethane	0.20	1.0	--- U	--- U
30. Tetrachloroethene	0.16	1.0	--- U	--- U
31. 2-Hexanone	1.00	50.0	--- U	--- U
32. Dibromochloromethane	0.14	3.0	--- U	--- U
33. 1,2-Dibromoethane	0.13	1.0	--- U	--- U
34. Chlorobenzene	0.13	3.0	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.14	5.0	--- U	--- U
36. Ethylbenzene	0.16	1.0	--- U	--- U
37. Xylenes	0.48	5.0	--- U	--- U
38. Dibromomethane	0.17	10.0	--- U	--- U
39. Styrene	0.16	1.0	--- U	--- U
40. Bromoform	0.11	3.0	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.16	3.0	--- U	--- U
42. 1,2,3-Trichloropropane	0.06	1.0	--- U	--- U
43. 1,4-Dichlorobenzene	0.21	1.0	--- U	--- U
44. 1,2-Dichlorobenzene	0.13	5.0	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.26	13.0	--- U	--- U
46. Acrylonitrile	1.49	200.0	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.14	100.0	--- U	--- U
48. Acrolein	5.46	50.0	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Incorporated

Drinking Water ID: 37115
Wastewater ID: 10

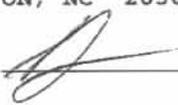
P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

PHONE (252) 756-6208
FAX (252) 756-0633

CLIENT: LENOIR CO. LANDFILL (OLD)
COUNTY OF LENOIR
MR. TOM MILLER
P.O. BOX 756
KINSTON, NC 28502

CLIENT ID: 6009 A
ANALYST: MAO
DATE COLLECTED: 07/15/08
DATE ANALYZED: 07/29/08
DATE REPORTED: 08/28/08

Page: 2

REVIEWED BY: 

LANDFILL APPENDIX II EPA METHOD 8260B

PARAMETERS, ug/l	MDL	SWSL	Trip Blank	Equipment Blank
49. Allyl Chloride	0.17	10.0	--- U	--- U
50. Chloroprene	0.16	20.0	--- U	--- U
51. 1,3-Dichlorobenzene	0.13	5.0	--- U	--- U
52. Dichlorodifluoromethane	0.16	5.0	--- U	--- U
53. 1,3-Dichloropropane	0.12	1.0	--- U	--- U
54. 2,2-Dichloropropane	0.18	15.0	--- U	--- U
55. 1,1-Dichloropropene	0.13	5.0	--- U	--- U
56. Ethyl Methacrylate	0.14	10.0	--- U	--- U
57. Hexachlorobutadiene	0.22	10.0	--- U	--- U
58. Isobutyl Alcohol	5.23	100.0	--- U	--- U
59. Methacrylonitrile	1.64	100.0	--- U	--- U
60. Methyl Methacrylate	0.10	30.0	--- U	--- U
61. Naphthalene	0.13	10.0	--- U	--- U
62. Propionitrile	1.60	150.0	--- U	--- U
63. 1,2,4-Trichlorobenzene	0.11	10.0	--- U	--- U
64. Acetonitrile	5.96	50.0	--- U	--- U

J = Between MDL and SWSL, U = Below ALL Quantitation Limits.

Environment 1, Inc.
 P.O. Box 7085, 114 Oakmont Dr.
 Greenville, NC 27858

Phone (252) 756-6208 • Fax (252) 756-0633

CLIENT: 6009 A Week: 29

LENOIR CO. LANDFILL (OLD)
 COUNTY OF LENOIR
 MR. TOM MILLER
 P.O. BOX 756
 KINSTON NC 28502

(252) 566-5408

CHAIN OF CUSTODY RECORD

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	DISINFECTION		Cyanide	Metals	Sulfide	EPA 8270C	8270C Dup. 1	EPA 8081A	8260B App. II	8260 App. II 1	8151A Landfill	CHLORINE NEUTRALIZED AT COLLECTION	pH CHECK (LAB)	CONTAINER TYPE, PIG	CHEMICAL PRESERVATION	
	DATE	TIME				CHLORINE	LIV														NONE
Trip Blank	07	15:08			2	<input type="checkbox"/>	<input type="checkbox"/>														
Equipment Blank	07	15:08			9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
RELINQUISHED BY (SIG.) (SAMPLER)	DATE/TIME		RECEIVED BY (SIG.)	DATE/TIME		RECEIVED BY (SIG.)		DATE/TIME		COMMENTS:		SAMPLER MUST BE MAINTAINED DURING SHIPMENT/DELIVERY		SAMPLER RECEIVED IN LAB AT 6.6 °C		CLASSIFICATION:		PARAMETERS:			
RELINQUISHED BY (SIG.)	DATE/TIME		RECEIVED BY (SIG.)	DATE/TIME		RECEIVED BY (SIG.)		DATE/TIME		COMMENTS:		SAMPLER RECEIVED IN LAB AT 6.6 °C		CLASSIFICATION:		PARAMETERS:					
RELINQUISHED BY (SIG.)	DATE/TIME		RECEIVED BY (SIG.)	DATE/TIME		RECEIVED BY (SIG.)		DATE/TIME		COMMENTS:		SAMPLER RECEIVED IN LAB AT 6.6 °C		CLASSIFICATION:		PARAMETERS:					

Instructions for completing this form are on the reverse side.

Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested.