

DENR USE ONLY:

Paper Report

Electronic Data - Email CD (data loaded: Yes / No)

Doc/Event #:

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)).
- 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 Company, 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)
Greene County Closed MSWLF	Walstonburg, NC	40-02	.1600	March 30, 2010

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.

Mark Brown, LG, PG

Sr. Professional Geologist

(919) 772-5393

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Affix NC Licensed Professional Geologist Seal

Signature

Date

PO Box 97, Garner, NC 27529

Facility Representative Address

C-0281

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009



Semi-Annual Assessment Monitoring and Statistical Analysis Report

Prepared for

Greene County Closed MSWLF and Active C&D Landfill
Walstonburg, North Carolina

March 2010

Permit Number: 40-02

MESCO Project Number: G09010.0

Completed on August 7, 2010



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

**Municipal
Services**



**Engineering
Company, P.A.**

August 7, 2010

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: Water Quality Sampling Report and Statistical Analysis
Greene County Closed unlined MSWLF and Active C&D Landfill
Permit No. 40-02
MESCO Project No. G09010.0

Dear Ms. Drummond:

The Greene County Closed Unlined MSWLF and active Construction and Demolition (C&D) Landfill located near Walstonburg, NC currently operating under permit #40-02 is required to submit semi-annual compliance reports as a condition of 15A NCAC 13B.1630. This sampling event was performed on March 30, 2010 according to the semi-annual monitoring schedule prescribed by the NC Solid Waste Section rules/regulations.

The closed municipal solid waste landfill facility (MSWLF) ceased operation prior to 1998 and the C&D landfill is being constructed upon the closed MSWLF. Since they are, in essence, one contiguous landfill, they are treated as a single unit for overall continuity in assessment and reporting and are monitored under 15A NCAC 13B.1600 ("the .1600 Rules"). The current water quality monitoring program includes six groundwater and two surface water sampling locations. This report includes a summary of sampling procedures, laboratory analysis, statistical analysis, groundwater and surface water characteristics and our findings. A single-day potentiometric map with flow directions/rates and a copy of the laboratory analytical report are attached.

Sampling Procedure

Environment 1 Inc., (E1) of Greenville, NC performed this sampling event, which included collection of water samples from five downgradient groundwater monitoring wells (MW-4, MW-5, MW-6, MW-7, MW-8), one background well (MW-1R), and two surface water sampling points (Upstream, Downstream). Sampling points are depicted on the enclosed single-day potentiometric map or the separate surface water map.

Water sampling was reported to be conducted in accordance with 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 electronically prior to purging to quantify the static water level. Water levels were then depicted as contours to construct a single-day potentiometric map (attached). The required field parameters (pH, specific conductance, and temperature) were also reported.

E1 field personnel reportedly collected all samples in laboratory prepared, pre-preserved containers and transported them to E1's laboratory in Greenville NC under proper chain-of-custody (COC) protocol within the specified hold times for each analysis.

Field and Laboratory Results

Groundwater monitoring wells and surface water monitoring locations presented in the *Sampling and Analysis Plan* (SAP) adopted from the *Transition Plan* were sampled during this event. Water samples were analyzed for the 40 CFR Part 258, Appendix I (Appendix I) list of volatile organic compounds (VOCs) and total metals. Samples were also inadvertently 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). Please note that, although the data for the C&D parameters are presented in this report, this facility operates under "the .1600 Rules" and are exempt from the additional parameters outlined in 15A NCAC 13B .0544. Quality control measures were also implemented during this event which included submittal and subsequent quantification of a trip (TB) and equipment (EB) blanks.

Water samples were reported down to laboratory-specific method detection limits (MDL) with reference to the Solid Waste Section Limits (SWSL). All detected constituents were compared to the North Carolina Groundwater Standards (2L Standards), Groundwater Protection Standards (GWP) where a 2L Standard has not been assigned, or the North Carolina Surface Water Standards (2B Standards).

None of the Appendix I list of metals were detected at levels exceeding their respective 2L Standards. Silver was detected in the "Upstream" and "Downstream" samples above its 2B Standard. Because silver was detected in the "Upstream" sample located upgradient of the landfill, its detection is considered "background".

VOCs (benzene and vinyl chloride) were detected in concentrations above their respective 2L Standard in well MW-4. Both VOCs were detected at levels outside of their own respective historically identified range during this event. Generally, the detected VOCs were not grossly elevated, typical of contaminants commonly found in groundwater at MSWLF facilities. The source is likely attributed to leachate/ landfill gas (LFG) that originated from the closed unlined MSWLF.

Groundwater and Surface Water Characterization

MESCO prepared a single-day potentiometric map from ground water elevation data reported by EI during this event. Groundwater flow direction and rates were calculated based upon this data and are included in the attached table. Estimated flow direction was determined to be easterly with flow rates ranging from approximately 7.0 ft./yr. (MW-1R) to 572 ft./yr. (MW-8) for an average of approximately 115.8 ft./yr. Estimated flow directions and gradients are generally consistent with past events .

Findings

The statistical analysis, performed in accordance with SWS requirements, suggests that the surficial aquifer, in close proximity to MW-4, appears to be impacted by dissolved phase VOCs. However, the closed MSWLF has a cohesive cap to reduce pecculation/leachate generation, institutional controls are in place, and there are no known potential receptors within 2,000 feet of the property boundary. The SWS has approved monitored natural attenuation (MNA) as the remedy for the groundwater contamination detected at this site. MNA performance monitoring is being submitted under separate heading. 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.



J. Pfohl

(for)
Jonathan Pfohl
Environmental Specialist

Enclosures

cc: Mr. David Jones
Greene County

Tables

Table 1
Detection Scan All Appendix I VOCs and Metal Detections above SWSL, GWP, 2L, or 2B
Greene County Active C&D over Closed MSWLF

Well ID	Parameter Name ¹	Sample Date	Result	Unit	MDL ²	SWSL ³	2L ⁴	2B ⁵	GWP ⁶	Exceedance	Preliminary Cause
MW-4	Barium	3/30/10	193	ug/l	0.03	100	700				
MW-4	1,4-Dichlorobenzene	3/30/10	5.3	ug/l	0.39	1	6				
MW-4	Benzene	3/30/10	5.3	ug/l	0.24	1	1			4.3	L & /or LFG
MW-4	Chloroethane	3/30/10	18.6	ug/l	0.48	10	2800				
MW-4	Cis-1,2-Dichloroethene	3/30/10	13.7	ug/l	0.25	5	70				
MW-4	Ethylbenzene	3/30/10	4.1	ug/l	0.21	1	550				
MW-4	Methylene Chloride	3/30/10	1	ug/l	0.64	1	4.6				
MW-4	Toluene	3/30/10	1	ug/l	0.23	1	1000				
MW-4	Vinyl Chloride	3/30/10	10.3	ug/l	0.63	1	0.03			10.27	L & /or LFG
MW-5	Vinyl Chloride	3/30/10	2.9	ug/l	0.63	1	0.03			2.87	L & /or LFG
Upstream	Silver	3/30/10	0.1j	ug/l	0.03	10		0.06		0.04	B & N
Downstream	Silver	3/30/10	0.1j	ug/l	0.03	10		0.06		0.04	N
Downstream	Zinc	3/30/10	13	ug/l	0.08	10		50			

¹ Table contains only constituents detected above SWSL, GWP, 2L, or 2B

² MDL = Method Detection Limit

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

⁴ 2L = North Carolina 15A NCAC 2L Groundwater Quality Standard (Current as of Sampling Event)

⁵ 2B = North Carolina 15 NCAC 2B Surface Water Quality Standard for this Specific Stream Classification (Current as of Sampling Event)

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

^j =The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.

A = Artifact Contamination from Laboratory (Detected in EB, FB, and laboratory associated method blanks)

L = Leachate

LFG = Landfill Gas

N = Natural (Erosion of Natural Deposits)

B = Background

O = Statistical Outlier

NE = Not Established

BOLD = Concentration > 2L, or 2B Standard (Current as of Sampling Event)

Table 2
Hydrologic Properties at Monitoring Well Locations
Greene County Active C&D over Closed MSWLF

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-1R	1.20E-04	37%	0.020	6	N41E	3.01	118.77
MW-4	1.10E-04	40%	0.033	10	S48E	11.98	105.91
MW-5	1.40E-04	37%	0.024	9	S88E	14.42	101.34
MW-6	1.90E-04	43%	0.021	10	N41E	9.06	108.35
MW-7	1.98E-04	7%	0.030	87	S19E	9.72	100.76
MW-8	1.14E-03	7%	0.034	695	S08E	6.16	105.2

NOTE: Data for hydraulic conductivities for all but MW-7 & MW-8 obtained from GAI Consultants' Water Quality Modifications (October, 1994)
 Data for hydraulic conductivities for MW-7 & MW-8 obtained from slug tests performed by MESCO (June, 2007)
 Hydrologic Gradient taken from the March 30, 2010 sampling event.
 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

Min v_x : 6
 Mean v_x : 136
 Median v_x : 10
 Max v_x : 695

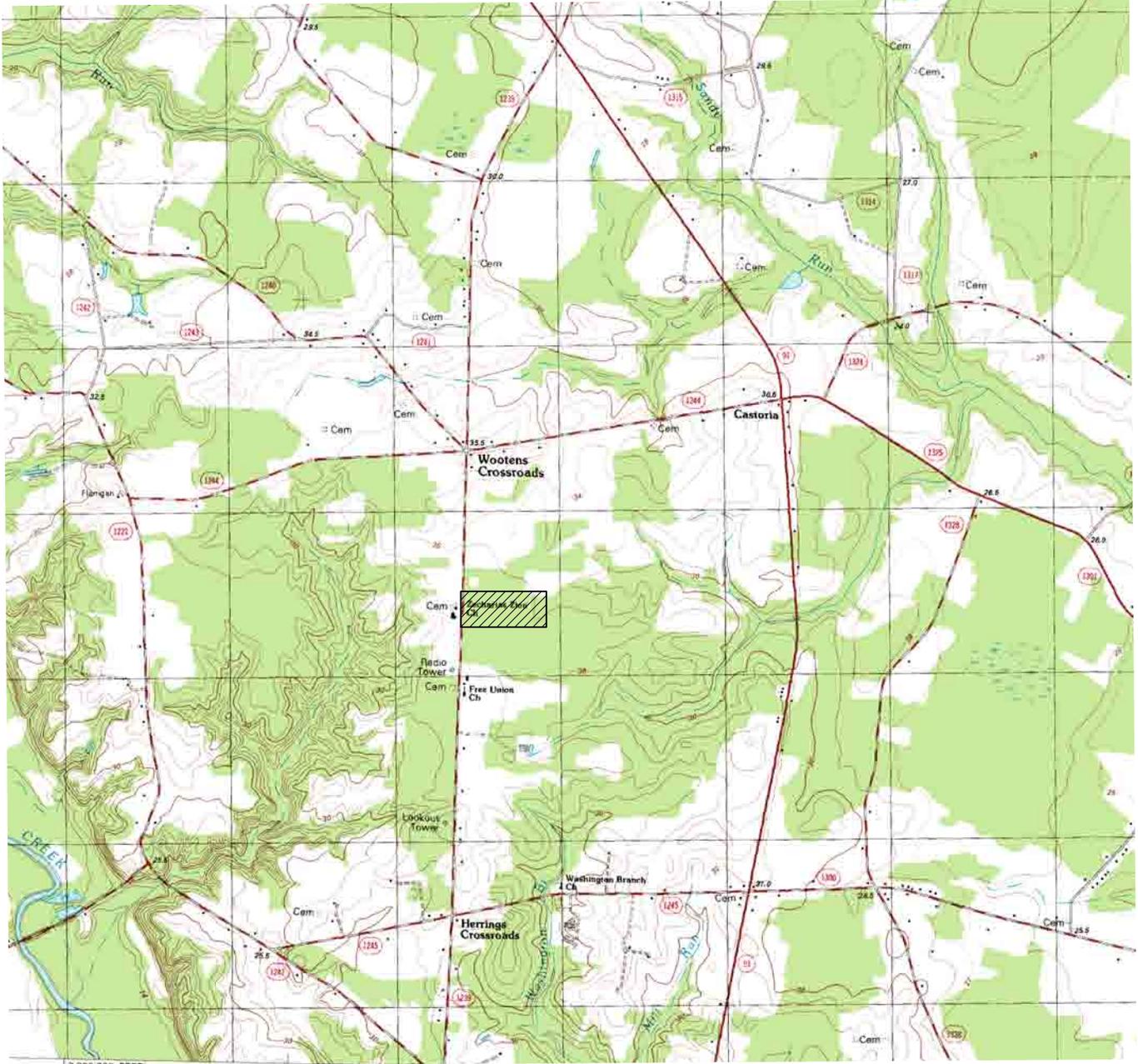
Single-Day Potentiometric Map

Topographic Map with Site Location

Semi-Annual Groundwater Sampling Report

PLATE 1

Greene County



QUADRANGLE LEGEND

ROAD CLASSIFICATION

- Primary highway, hard surface
- Secondary highway, hard surface
- Light-duty road, hard or improved surface
- Unimproved road
- Interstate Route
- U. S. Route
- State Route

Date Completed	07/07/2010
Created By	M. Clement
Project Name	Semi-Annual Groundwater Report
Site Name	Greene County
Project Number	G10010.0

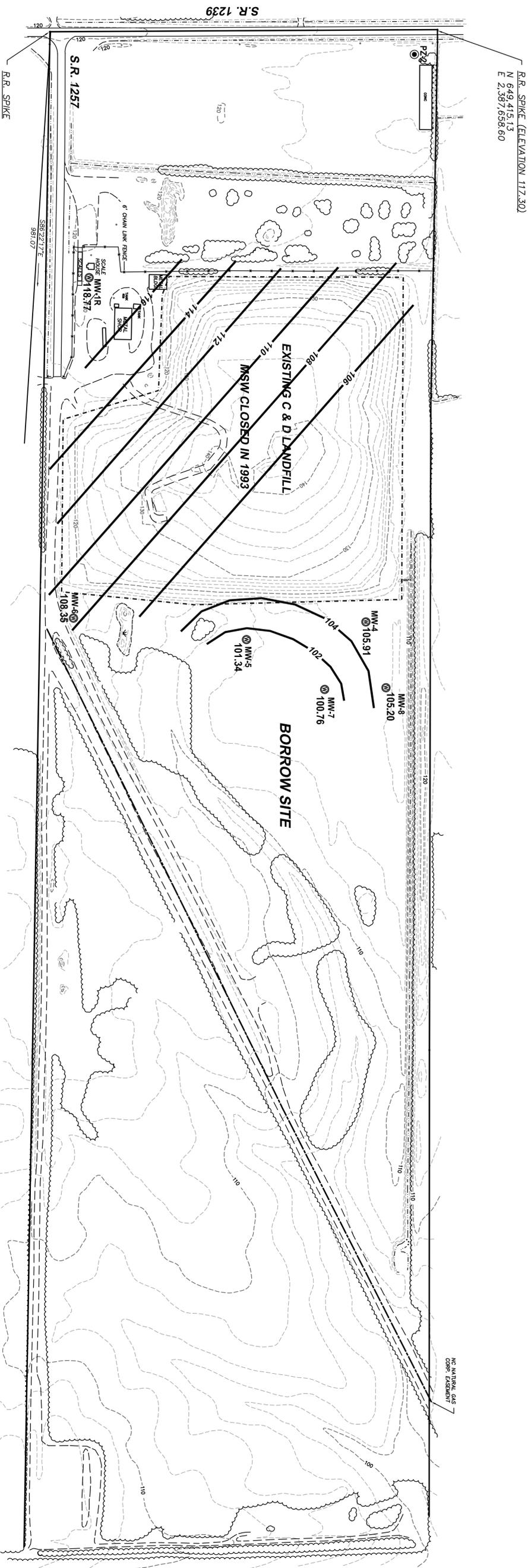
Municipal Engineering Services Company, PA

NOTE: Topographical map assembled from corresponding USGS 7.5-min. quadrangles of the subject region.

- LEGEND**
- EXISTING DIVERSION DITCH
 - - - - EXISTING CONTOURS
 - BOUNDARY
 - MW-1R MONITORING WELL
 - PZ-2 PIEZOMETER
 - 101.34 GROUNDWATER ELEVATIONS
 - 116 GROUNDWATER CONTOUR (March 30, 2010)

NOTES

THIS MAP WAS GENERATED FROM AERIAL PHOTOS
 FLOWN ON 7-22-94 BY TRIANGLE AERIAL MAPPING
 SUPPLEMENTED WITH SURVEYS BY MUNICIPAL ENGINEERING
 SERVICES CO., PA.



Greene County Closed MSWLF 3/30/10

WELL #	TOP OF PIPE ELEVATION (FT)	DEPTH TO WATER (FT)	WATER ELEVATION (FT)
MW-1R	121.78	3.01	118.77
MW-4	117.89	11.98	105.91
MW-5	115.76	14.42	101.34
MW-6	117.41	9.06	108.35
MW-7	110.48	9.72	100.76
MW-8	111.36	6.16	105.20

**ACTIVE C&D OVER CLOSED MSW
 LANDFILL FACILITY
 GREENE COUNTY
 NORTH CAROLINA**

LICENSE NUMBER: C-0281

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

P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
 P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
 P.O. BOX 828 MOREHEAD CITY, N.C. 28557 (252) 726-9481

DATE	BY	REV.	DESCRIPTION

SCALE: 1" = 120'

DATE: 6/1/10
 DRAWN BY: M. GERMAN
 CHG. BY: M. BROWN

PROJECT NUMBER: G10010.0

Statistical Analysis Results Summary

Statistical Analysis Methodologies

A statistical analysis was performed on metal and VOC detections utilizing Chemstat software, which was developed specifically for RCRA Subtitle D sites and conforms to both current EPA and SWS protocols. A step-wise approach was utilized to evaluate trends in groundwater quality to identify a potential release from the landfill. Analytical data underwent preliminary data evaluation to reduce the data set and to determine if any “outliers” (defined as data that appears to be incongruent with respect to historical results) or seasonality exists that may potentially effect the results of the subsequent statistical analysis. All statistical tests were evaluated at the 0.05 level of significance, 95% confidence level, and were conducted as one-tailed tests. Statistical background values were calculated using un-manipulated data from historical semi-annual sampling events for this facility from 1994 to the current event. Historical data compiled for monitoring well(s) were used as the baseline. Groundwater data from the downgradient well(s) were compared to the pooled background groundwater data (inter-well) using methods which varied depending upon the percentage of non-detects. If necessary and applicable further intra-well analysis was conducted to compare current data from a single well is compared to it's own respective historical data. Finally parameters that indicated statistical significance after previous tests are evaluated to estimate the change in concentration over time to determine if there is an upward trend.

Preliminary Data Evaluation

A preliminary data screening was conducted upon detections. Parameters detected 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.

Data distributions were reviewed using box and whiskers plots (enclosed charts). In order to evaluate variability in concentrations with respect to time and season, time series plots were generated for select constituents (enclosed charts). Time series plots were also visually evaluated for seasonality and “outliers”. Suspected outliers were than further evaluated through Dixon's Test for Outliers or Rosner's Test for Outliers depending upon the number of samples and the data distribution. Outliers are generally not censored from the current nor historical data set prior to statistical analysis but are further evaluated and or qualified as necessary.

Inter-well Analyses

Inter-well statistical analysis was conducted upon total metals detected during this sampling event. 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 1 summarizes the methods used for four different %ND ranges.

Table 1. 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.

Intra-well Analysis

Intra-well analysis was conducted only upon those constituents that were found to be statistically significant by inter-well analysis and there is sufficient historical samples known to not be impacted. With intra-well comparisons, data from a single well is compared to historical data from the same well. In general, intra-well analysis is typically used to differentiate true contamination from spatial variability. Intra-well analysis is generally conducted through interpretation of Shewhart-CUSUM and/or Exponentially Weighted Moving Average (EWMA) control charts. where applicable.

Poisson Prediction Interval (VOCs)

All historical VOC detections in the background well MW-1 were pooled in order 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 (Table A2) 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 (Table A3). The value of Student’s t -Statistic was derived from tabulated values included in Gibbons (1994).

Determine Data Trend Over Time

The parameters that indicated statistical significance a further qualitative evaluation is employed to determine trends in concentration over time. Implementation of Mann-Kendall Trend Analysis or Sen's Slope Analysis is generally used to determine if the concentration trend is increasing, decreasing, or remaining constant.

**Inter-Well Analysis Summary
Greene County Active C&D over Closed MSWLF**

Background Well: MW-1

Barium, total

%ND	Normality	Method	ND Adj.	Upper Limit (a = 95%)	Unit
39.29	-	Non-parametric Tolerance Interval	1/2ND	327	ug/l

Well	Result	Significance
MW-4	193	no

NOTE: Bold-faced monitoring points indicate detected levels exceed NCGW2L Standard

**No Statistically Significant Metal Detections within any Monitoring Location
at a 95% Confidence Level**

**Poisson Prediction Interval Based upon Pooled Background Appendix I VOCs
Greene County Active C&D over Closed MSWLF**

All detected VOCs >SWSL (Background Well: MW-1R)

Well	1,4-DCB	Benzene	Ethylbenzene	Toluene	cis-1,2-DCE	Chloroethane	DCM	VCM	Total Cumulative Concentration	Total Detections >SWSL
2L	6	1	550	1000	70	2800	4.6	0.030	-	-
MW-4	5.3	5.3	<u>4.1</u>	1	13.7	18.6	1	<u>10.3</u>	59.3	8
MW-5								<u>2.9</u>	2.9	1
TOTAL	5.3	5.3	4.1	1	13.7	18.6	1	13.2	62.2	9

All Concentrations in ug/L

"j" qualifiers omitted for statistical analysis purposes

Bold = Detected above 2L Standard (Current as of Sampling Event)

Shaded = Increasing concentration trend per Sen's Slope Indicator Analysis

Underlined = Concentration detected outside own historically identified range

Total number of sampling events [n] = 34

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

Number of comparisons (downgradient wells) [k] = 5

One-sided value of Student's t-statistic (95% confidence) [t] = 2.45

Expected number of detections in a single future sample [y*] = 0.03

Statistically significant number of VOC detections within:

MW-4 & MW-5

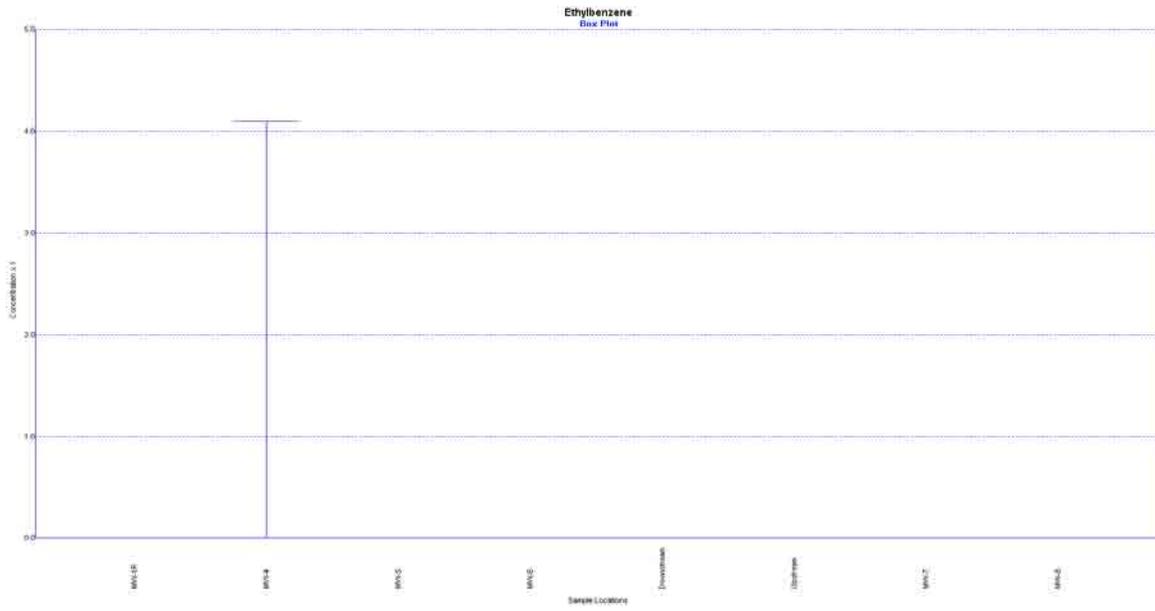
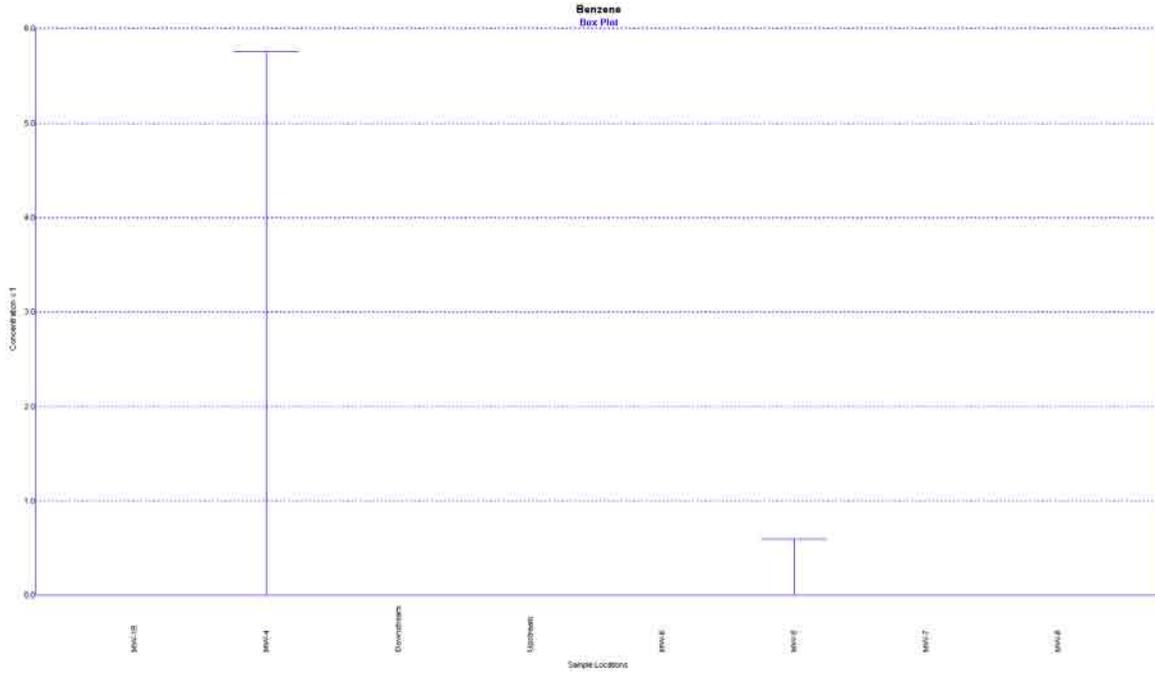
Per the Poisson Tolerance Interval Method at a 95% Confidence Level

No VOCs have exhibited an increasing trend in concentration per Sen's Slope Indicator Analysis

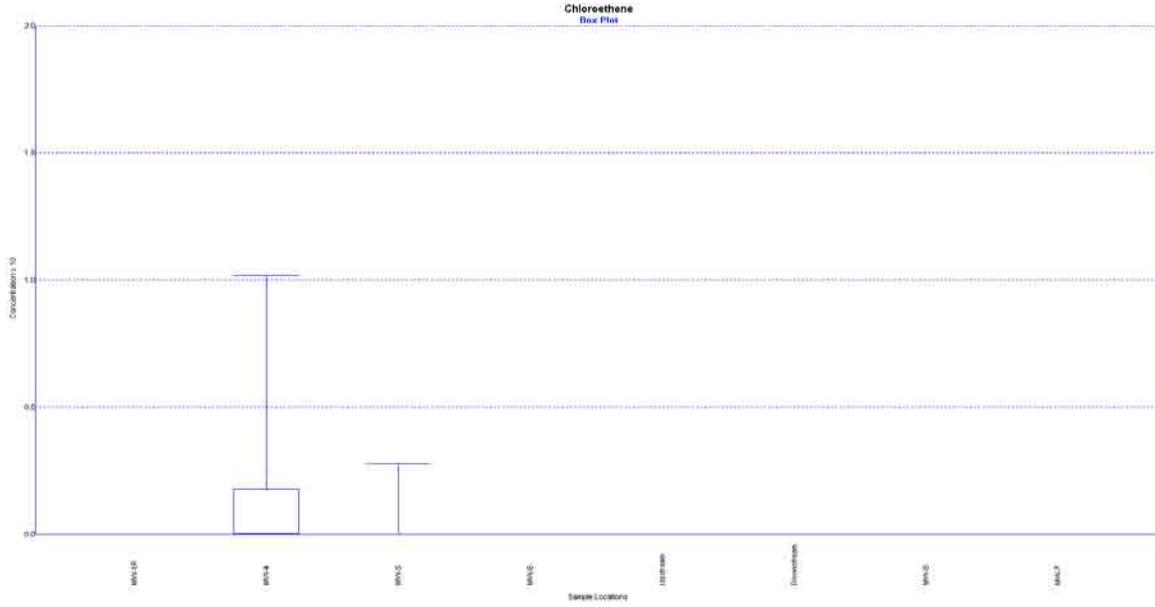
**Summary of Pooled Appendix I VOCs in Background Well (MW-1R)
Greene County Active C&D over Closed MSWLF**

Constituent	Samples	NDs	% NDs
1,1,1,2-Tetrachloroethane	34	34	100.00
1,1,1-Trichloroethane	34	34	100.00
1,1,2,2-Tetrachloroethane	34	34	100.00
1,1,2-Trichloroethane	34	34	100.00
1,1-Dichloroethane	34	34	100.00
1,1-Dichloroethene	34	34	100.00
1,2,3-Trichloropropane	34	34	100.00
1,2-Dibromo-3-chloropropane	34	34	100.00
1,2-Dibromoethane	34	34	100.00
1,2-Dichlorobenzene	34	34	100.00
1,2-Dichloroethane	34	34	100.00
1,2-Dichloropropane	34	34	100.00
1,4-Dichlorobenzene	34	34	100.00
2-Butanone	34	34	100.00
2-Hexanone	34	34	100.00
4-Methyl-2-Pentanone	34	34	100.00
Acetone	34	34	100.00
Acrylonitrile	34	34	100.00
Benzene	34	34	100.00
Bromochloromethane	34	34	100.00
Bromodichloromethane	34	34	100.00
Bromoform	34	34	100.00
Bromomethane	34	34	100.00
Carbon disulfide	34	34	100.00
Carbon tetrachloride	34	34	100.00
Chlorobenzene	34	34	100.00
Chloroethane	34	34	100.00
Chloroform	34	34	100.00
Chloromethane	34	34	100.00
cis-1,2-Dichloroethene	34	34	100.00
cis-1,3-Dichloropropene	34	34	100.00
Chlorodibromomethane	34	34	100.00
Dibromomethane	34	34	100.00
Ethylbenzene	34	34	100.00
Iodomethane	34	34	100.00
Dichloromethane	34	34	100.00
Styrene	34	34	100.00
Tetrachloroethylene	34	34	100.00
Toluene	34	34	100.00
trans-1,2-Dichloroethene	34	34	100.00
trans-1,3-Dichloropropene	34	34	100.00
trans-1,4-Dichloro-2-butene	34	34	100.00
Trichloroethylene	34	34	100.00
Trichlorofluoromethane	34	34	100.00
Vinyl acetate	34	34	100.00
Vinyl chloride	34	34	100.00
Xylene	34	34	100.00
Total	1598	1598	100.00

**Box Plots for Select Constituents (VOCs)
Greene County Active C&D over Closed MSWLF**

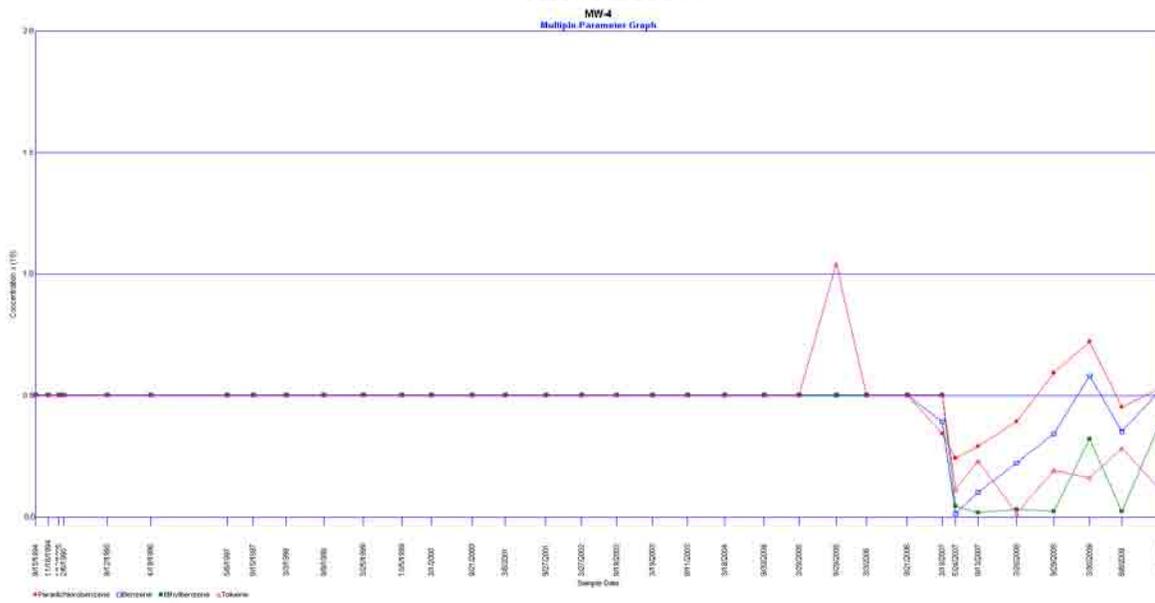


Box Plots for Select Constituents (VOCs)
Greene County Active C&D over Closed MSWLF



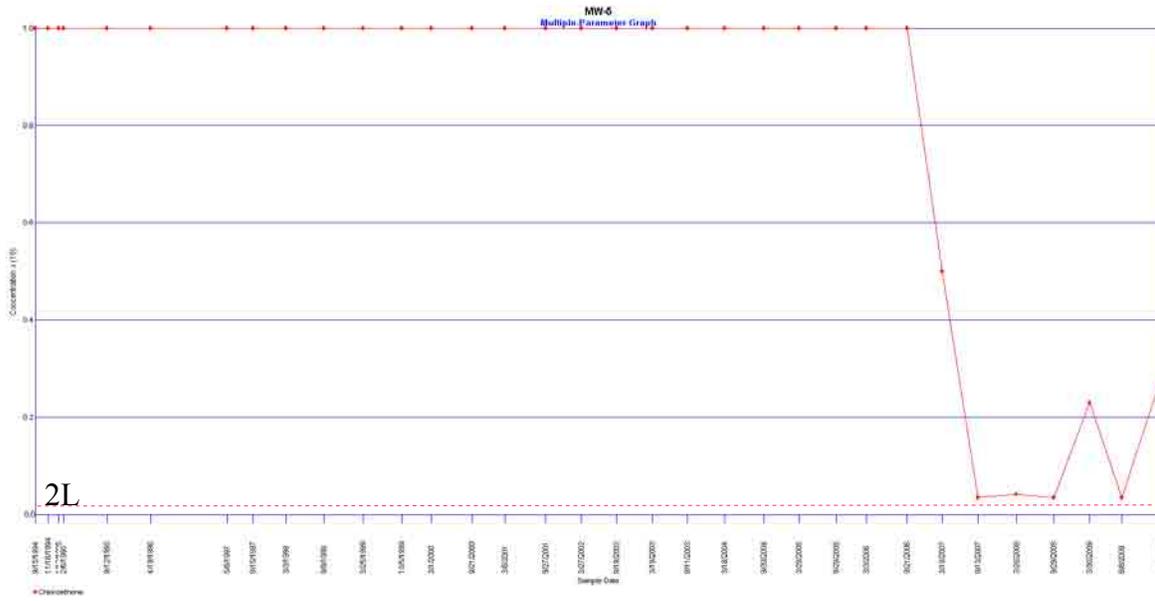
Time Series Plots for Select Constituents
Greene County Active C&D over Closed MSWLF
 ND=Detection Limit

AROMATICS



Time Series Plots for Select Constituents
Greene County Active C&D over Closed MSWLF
 ND=Detection Limit

CAH's



Threshold Report**Parameter: Barium, total****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	27 (79.4118%)	3/19/2007	152
			5/24/2007	172
			9/13/2007	108
			3/28/2008	171
			9/29/2008	124
			3/30/2009	327
			9/8/2009	138

There are 7 compliance wells

Well	Samples	ND	Date	Result
MW-6	33	30 (90.9091%)	3/17/1997	680
			3/3/1998	640
			9/9/1998	540
MW-4	34	30 (88.2353%)	4/19/1996	900
			3/17/1997	590
			9/19/2002	680
			3/30/2010	193
MW-8	7	6 (85.7143%)	6/22/2007	30
MW-7	7	6 (85.7143%)	6/22/2007	40
Upstream	22	22 (100%)		
MW-5	33	33 (100%)		
Downstream	29	29 (100%)		

Basic Statistics**Parameter: Barium, total**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
199	
Total Non-Detects	183
Pooled Mean	205.216
Pooled Std Dev	130.958
Background Mean	226.236
Background Std Dev	60.2352

Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total
MW-1R	34	27	79.4118	7692.02

Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1R	226.236	60.2352	0	3808	112

Compliance Wells

There are 7 compliance wells

Well	Samples	Non-Detects	% ND	Total
MW-6	33	30	90.9091	7710.55
MW-4	34	30	88.2353	8213.63
MW-8	7	6	85.7143	80.28
MW-7	7	6	85.7143	90.395
Upstream	22	22	100	4600.19
MW-5	33	33	100	6600.55
Downstream	29	29	100	5850.38

Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-6	233.653	158.559	7.41714	29.5122	3347	101.424
MW-4	241.577	183.899	15.3416	29.2911	3544	104.235
MW-8	11.4686	20.3279	-214.767	50.1261	736	105.143
MW-7	12.9136	22.1086	-213.322	50.1261	737	105.286
Upstream	209.099	89.4705	-17.1364	33.0448	2024	92
MW-5	200.017	98.3905	-26.2192	29.5122	3036	92
Downstream	201.737	96.7808	-24.4987	30.5276	2668	92

Analysis of Variance Statistics

SS Wells	609864
SS Total	3.39569e+006

Kruskal-Wallis Statistics

Non-Detect Rank	92
Background Rank Sum	3808
Background Rank Mean	112
H Statistic	3.41594
H Adjusted for Ties	15.3639

Threshold Report**Parameter: Benzene****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	34 (100%)		

There are 7 compliance wells

Well	Samples	ND	Date	Result
MW-4	34	27 (79.4118%)	3/19/2007 9/13/2007 3/28/2008 9/29/2008 3/30/2009 9/8/2009 3/30/2010	3.9 1 2.2 3.4 5.8 3.5 5.3
Downstream	29	29 (100%)		
Upstream	22	22 (100%)		
MW-6	33	33 (100%)		
MW-5	33	30 (90.9091%)	3/28/2008 3/30/2009 3/30/2010	0.3 0.6 0.6
MW-7	7	7 (100%)		
MW-8	7	7 (100%)		

Threshold Report**Parameter: Chloroethane****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	34 (100%)		

There are 7 compliance wells

Well	Samples	ND	Date	Result
MW-4	34	26 (76.4706%)	9/21/2006	20.1
			3/19/2007	12.5
			5/24/2007	9.5
			3/28/2008	9.2
			9/29/2008	11.3
			3/30/2009	18.3
			9/8/2009	9.1
			3/30/2010	18.6
Downstream	29	29 (100%)		
MW-5	33	30 (90.9091%)	3/28/2008	1
			3/30/2009	4.4
			3/30/2010	6
MW-6	33	33 (100%)		
MW-7	7	7 (100%)		
MW-8	7	7 (100%)		
Upstream	22	22 (100%)		

Threshold Report**Parameter: Chloroethene****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	34 (100%)		

There are 7 compliance wells

Well	Samples	ND	Date	Result
MW-5	33	30 (90.9091%)	3/28/2008 3/30/2009 3/30/2010	0.4 2.3 2.9
MW-6	33	33 (100%)		
MW-4	34	26 (76.4706%)	3/19/2007 5/24/2007 9/13/2007 3/28/2008 9/29/2008 3/30/2009 9/8/2009 3/30/2010	5.5 2.6 2.5 4.7 7 10.2 6 10.3
Upstream	22	22 (100%)		
Downstream	29	29 (100%)		
MW-8	7	7 (100%)		
MW-7	7	7 (100%)		

Threshold Report**Parameter: cis-1,2-Dichloroethylene****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	34 (100%)		

There are 7 compliance wells

Well	Samples	ND	Date	Result
MW-8	7	7 (100%)		
MW-7	7	7 (100%)		
Downstream	29	29 (100%)		
MW-4	34	24 (70.5882%)	3/29/2005	9.4
			3/3/2006	10.8
			9/21/2006	14.3
			5/24/2007	10
			9/13/2007	9
			3/28/2008	10.2
			9/29/2008	11.6
			3/30/2009	14
			9/8/2009	9.1
			3/30/2010	13.7
MW-6	33	33 (100%)		
Upstream	22	22 (100%)		
MW-5	33	27 (81.8182%)	9/13/2007	0.4
			3/28/2008	1.5
			9/29/2008	0.4
			3/30/2009	2.3
			9/8/2009	0.7
			3/30/2010	2.1

Threshold Report**Parameter: Dichloromethane****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	34 (100%)		

There are 7 compliance wells

Well	Samples	ND	Date	Result
Upstream	22	22 (100%)		
MW-4	34	28 (82.3529%)	9/13/2007 3/28/2008 9/29/2008 3/30/2009 9/8/2009 3/30/2010	0.4 0.7 1.1 1.3 0.9 1
MW-5	33	33 (100%)		
MW-6	33	33 (100%)		
Downstream	29	29 (100%)		
MW-7	7	7 (100%)		
MW-8	7	7 (100%)		

Threshold Report**Parameter: Ethylbenzene****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	34 (100%)		

There are 7 compliance wells

Well	Samples	ND	Date	Result
MW-5	33	33 (100%)		
MW-6	33	33 (100%)		
Downstream	29	29 (100%)		
Upstream	22	22 (100%)		
MW-4	34	28 (82.3529%)	5/24/2007 3/28/2008 9/29/2008 3/30/2009 9/8/2009 3/30/2010	0.43 0.3 0.2 3.2 0.2 4.1
MW-7	7	7 (100%)		
MW-8	7	7 (100%)		

Threshold Report**Parameter: Paradichlorobenzene****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	34 (100%)		

There are 7 compliance wells

Well	Samples	ND	Date	Result
Upstream	22	22 (100%)		
MW-6	33	33 (100%)		
MW-8	7	7 (100%)		
Downstream	29	29 (100%)		
MW-4	34	26 (76.4706%)	3/19/2007 5/24/2007 9/13/2007 3/28/2008 9/29/2008 3/30/2009 9/8/2009 3/30/2010	3.4 2.4 2.9 3.9 5.9 7.2 4.5 5.3
MW-7	7	7 (100%)		
MW-5	33	32 (96.9697%)	3/30/2009	0.5

Threshold Report**Parameter: Silver, total****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	31 (91.1765%)	3/30/2009	0.1
			9/8/2009	0.1
			3/30/2010	0.1

There are 7 compliance wells

Well	Samples	ND	Date	Result
MW-6	33	32 (96.9697%)	9/29/2008	0.1
Downstream	29	27 (93.1034%)	3/30/2009	0.1
			3/30/2010	0.1
MW-4	34	32 (94.1176%)	9/29/2008	0.1
			3/30/2009	0.1
MW-5	33	29 (87.8788%)	9/29/2008	0.1
			3/30/2009	0.1
			9/8/2009	0.1
			3/30/2010	0.1
Upstream	22	21 (95.4545%)	3/30/2010	0.1
MW-7	7	5 (71.4286%)	9/29/2008	0.1
			3/30/2010	0.1
MW-8	7	6 (85.7143%)	3/30/2010	0.1

Threshold Report**Parameter: Toluene****Detected Values Only**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

There is 1 background well

Well	Samples	ND	Date	Result
MW-1R	34	34 (100%)		

There are 7 compliance wells

Well	Samples	ND	Date	Result
MW-5	33	33 (100%)		
Upstream	22	22 (100%)		
Downstream	29	27 (93.1034%)	9/29/2005 3/28/2008	10.9 0.2
MW-6	33	33 (100%)		
MW-4	34	27 (79.4118%)	9/29/2005 5/24/2007 9/13/2007 9/29/2008 3/30/2009 9/8/2009 3/30/2010	10.4 1.1 2.3 1.9 1.6 2.8 1
MW-8	7	7 (100%)		
MW-7	7	7 (100%)		

Non-Parametric Tolerance Interval**Parameter: Barium, total**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 83.8235%

Background Samples (n) = 34

Maximum Background Concentration = 327

Minimum Coverage = 91.6%

Average Coverage = 97.1429%

Well	Sample	Result	Impacted
MW-4	9/15/1994	ND<250	FALSE
MW-4	11/18/1994	ND<250	FALSE
MW-4	1/12/1995	ND<250	FALSE
MW-4	2/6/1995	ND<250	FALSE
MW-4	9/12/1995	ND<250	FALSE
MW-4	4/19/1996	900	TRUE
MW-4	3/17/1997	590	TRUE
MW-4	9/15/1997	ND<250	FALSE
MW-4	3/3/1998	ND<250	FALSE
MW-4	9/9/1998	ND<250	FALSE
MW-4	3/25/1999	ND<250	FALSE
MW-4	10/5/1999	ND<250	FALSE
MW-4	3/1/2000	ND<250	FALSE
MW-4	9/21/2000	ND<250	FALSE
MW-4	3/8/2001	ND<250	FALSE
MW-4	9/27/2001	ND<250	FALSE
MW-4	3/27/2002	ND<250	FALSE
MW-4	9/19/2002	680	TRUE
MW-4	3/19/2003	ND<250	FALSE
MW-4	9/11/2003	ND<250	FALSE
MW-4	3/18/2004	ND<250	FALSE
MW-4	9/30/2004	ND<250	FALSE
MW-4	3/29/2005	ND<250	FALSE
MW-4	9/29/2005	ND<250	FALSE
MW-4	3/3/2006	ND<250	FALSE
MW-4	9/21/2006	ND<250	FALSE
MW-4	3/19/2007	ND<50	FALSE
MW-4	5/24/2007	ND<0.1	FALSE
MW-4	9/13/2007	ND<0.17	FALSE
MW-4	3/28/2008	ND<0.17	FALSE
MW-4	9/29/2008	ND<0.17	FALSE
MW-4	3/30/2009	ND<50	FALSE
MW-4	9/8/2009	ND<0.02	FALSE
MW-4	3/30/2010	193	FALSE

Laboratory Results

Environment 1, Incorporated

Drinking Water ID: 37715
Wastewater ID: 10

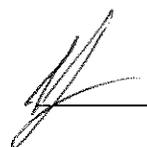
P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

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

ID#: 6005

GREENE CO. LANDFILL
DAVID JONES
P.O. BOX 543
SNOW HILL ,NC 28580

DATE COLLECTED: 03/30/10
DATE REPORTED : 04/15/10

REVIEWED BY: 

PARAMETERS	MDL	Upstream		Downstream		Well	Well	Well	Analysis		Method	
		SWSL				#4	#5	#6	Date	Analyst	Code	
PH (field measurement), Units			5.68	5.93	5.85	4.92	4.86	03/30/10	RJH	SM4500HB		
Antimony, ug/l	0.22	6.0	---	U	0.5 J	---	U	---	U	04/07/10	CMF	EPA200.8
Arsenic, ug/l	0.04	10.0	0.2 J	0.9 J	0.2 J	0.5 J	0.2 J	04/07/10	CMF	EPA200.8		
Barium, ug/l	0.03	100.0	16.5 J	23.7 J	193	34.9 J	19.8 J	04/07/10	CMF	EPA200.8		
Beryllium, ug/l	0.02	1.0	---	U	0.1 J	0.2 J	0.1 J	04/07/10	CMF	EPA200.8		
Cadmium, ug/l	0.02	1.0	---	U	0.1 J	0.2 J	0.1 J	04/07/10	CMF	EPA200.8		
Cobalt, ug/l	0.10	10.0	0.1 J	0.3 J	0.6 J	0.6 J	0.2 J	04/07/10	CMF	EPA200.8		
Copper, ug/l	0.03	10.0	1.2 J	5.4 J	2.1 J	0.3 J	0.1 J	04/07/10	CMF	EPA200.8		
Total Chromium, ug/l	0.03	10.0	1.0 J	1.6 J	0.4 J	---	U	1.0 J	04/07/10	CMF	EPA200.8	
Lead, ug/l	0.01	10.0	0.8 J	1.9 J	1.7 J	0.4 J	1.5 J	04/07/10	CMF	EPA200.8		
Nickel, ug/l	0.05	50.0	0.2 J	1.2 J	1.3 J	0.6 J	---	U	04/07/10	CMF	EPA200.8	
Selenium, ug/l	0.32	10.0	---	U	---	U	0.6 J	---	U	04/07/10	CMF	EPA200.8
Silver, ug/l	0.03	10.0	0.1 J	0.1 J	---	U	0.1 J	---	U	04/07/10	CMF	EPA200.8
Thallium, ug/l	0.05	5.0	---	U	---	U	---	U	04/07/10	CMF	EPA200.8	
Vanadium, ug/l	0.03	25.0	1.7 J	3.1 J	0.6 J	---	U	1.8 J	04/07/10	CMF	EPA200.8	
Zinc, ug/l	0.08	10.0	7.7 J	13	6.4 J	4.6 J	4.9 J	04/07/10	CMF	EPA200.8		
Turbidity, NTU	1.0	1.0	27.5	29.9	13.1	31.0	65.5	03/30/10	RJH	SM2130B		
Conductivity (at 25c), uMhos	1.0	1.0	68	116	393	106	42	03/30/10	RJH	SM2510B		
Dissolved Oxygen, mg/l			2.05	8.54	0.57	0.98	0.91	03/30/10	RJH	SM4500OG		
Temperature, °C			13.46	14.62	14.78	16.17	14.08	03/30/10	RJH	SM2550B		
Static Water Level, feet					11.98	14.42	9.06	03/30/10	RJH			
Well Depth, feet					26.16	28.34	26.87	03/30/10	RJH			
ORP, mv			210.1	214.1	-30.2	115.8	209.8	03/30/10	RJH	SM2580B		

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

ID#: 6005

GREENE CO. LANDFILL
DAVID JONES
P.O. BOX 543
SNOW HILL ,NC 28580

DATE COLLECTED: 03/30/10
DATE REPORTED : 04/15/10

REVIEWED BY: 

PARAMETERS	MDL	Well	Well	Well #1R	Piezometer	Equipment	Analysis		Method
		SWSL #7	#8		#2	Blank	Date	Analyst	Code
PH (field measurement), Units			4.40	4.32	4.72			03/30/10 RJH	SM4500HB
Antimony, ug/l	0.22	6.0	---	U	---	U	---	04/07/10 CMF	EPA200.8
Arsenic, ug/l	0.04	10.0	---	U	---	U	---	04/07/10 CMF	EPA200.8
Barium, ug/l	0.03	100.0	37.8 J	32.6 J	49.5 J		0.2 J	04/07/10 CMF	EPA200.8
Beryllium, ug/l	0.02	1.0	0.1 J	0.1 J	0.1 J		---	04/07/10 CMF	EPA200.8
Cadmium, ug/l	0.02	1.0	---	U	---	U	---	04/07/10 CMF	EPA200.8
Cobalt, ug/l	0.10	10.0	0.6 J	0.3 J	2.1 J		---	04/07/10 CMF	EPA200.8
Copper, ug/l	0.03	10.0	1.7 J	9.2 J	2.4 J		0.4 J	04/07/10 CMF	EPA200.8
Total Chromium, ug/l	0.03	10.0	0.2 J	---	0.4 J		0.1 J	04/07/10 CMF	EPA200.8
Lead, ug/l	0.01	10.0	0.5 J	1.2 J	1.5 J		---	04/07/10 CMF	EPA200.8
Mercury, ug/l	0.08	0.20					---	04/07/10 CMF	EPA200.8
Nickel, ug/l	0.05	50.0	0.6 J	24.0 J	1.3 J		---	04/07/10 CMF	EPA200.8
Selenium, ug/l	0.32	10.0	---	U	---	U	---	04/07/10 CMF	EPA200.8
Silver, ug/l	0.03	10.0	0.1 J	0.1 J	0.1 J		---	04/07/10 CMF	EPA200.8
Thallium, ug/l	0.05	5.0	---	U	0.1 J		---	04/07/10 CMF	EPA200.8
Vanadium, ug/l	0.03	25.0	---	U	---	U	---	04/07/10 CMF	EPA200.8
Zinc, ug/l	0.08	10.0	3.7 J	2.4 J	2.6 J		---	04/07/10 CMF	EPA200.8
Turbidity, NTU	1.0	1.0	2.66	1.95	5.26			03/30/10 RJH	SM2130B
Conductivity (at 25c), uMhos	1.0	1.0	44	32	578			03/30/10 RJH	SM2510B
Dissolved Oxygen, mg/l			7.24	8.50	1.66			03/30/10 RJH	SM4500OG
Temperature, °C			15.24	16.35	13.22			03/30/10 RJH	SM2550B
Static Water Level, feet			9.72	6.16	3.01	9.21		03/30/10 RJH	
Well Depth, feet			21.38	20.24	19.51			03/30/10 RJH	
ORP, mv			314.0	322.4	252.0			03/30/10 RJH	SM2580B

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: GREENE CO. LANDFILL
DAVID JONES
P.O. BOX 543
SNOW HILL, NC 28580

CLIENT ID: 6005
ANALYST: MAO
DATE COLLECTED: 03/30/10
DATE REPORTED: 04/15/10

Page: 1

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed:		04/07/10	04/07/10	04/07/10	04/07/10	04/07/10
	MDL	SWSL	Upstream	Downstream	Well #4	Well #5	Well #6
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	--- U	--- U	10.30	2.90	--- U
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	--- U	--- U	18.60	6.00 J	--- U
5. Trichlorofluoromethane	0.24	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	9.06	100.0	--- U	--- U	--- U	--- U	--- U
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.64	1.0	--- U	--- U	1.00	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U	--- U	1.60 J	0.90 J	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	--- U	13.70	2.10 J	--- U
15. 2-Butanone	2.21	100.0	--- U	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.27	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.25	5.0	--- U	--- U	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.24	1.0	--- U	--- U	5.30	0.60 J	--- U
21. 1,2-Dichloroethane	0.27	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.23	1.0	--- U	--- U	0.60 J	--- U	--- U
23. 1,2-Dichloropropane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.24	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	1.19	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.23	1.0	--- U	--- U	1.00	--- U	--- U
28. trans-1,3-Dichloropropene	0.28	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.25	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.57	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.24	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.30	3.0	--- U	--- U	1.80 J	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.21	1.0	--- U	--- U	4.10	--- U	--- U
37. Xylenes	0.68	5.0	--- U	--- U	2.10 J	--- U	--- U
38. Dibromomethane	0.28	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.19	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.20	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	--- U	--- U	5.30	--- U	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	2.72	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- U	--- U	--- U	--- U	--- 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: GREENE CO. LANDFILL
DAVID JONES
P.O. BOX 543
SNOW HILL, NC 28580

CLIENT ID: 6005

ANALYST: MAO
DATE COLLECTED: 03/30/10
DATE REPORTED: 04/15/10

Page: 2

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

PARAMETERS, ug/l	Date Analyzed		04/07/10	04/07/10	04/07/10	04/13/10	04/13/10
	MDL	SWSL	Well #7	Well #8	Well #1R	Equipment Blank	Trip Blank
1. Chloromethane	0.77	1.0	--- U	--- U	--- U	--- U	--- U
2. Vinyl Chloride	0.63	1.0	--- U	--- U	--- U	--- U	--- U
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	--- U	--- U	--- U	--- U	--- U
5. Trichlorofluoromethane	0.24	1.0	--- U	--- U	--- U	--- U	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U	--- U	--- U	--- U	--- U
7. Acetone	9.06	100.0	--- U	--- U	--- U	--- U	--- U
8. Iodomethane	0.26	10.0	--- U	--- U	--- U	--- U	--- U
9. Carbon Disulfide	0.23	100.0	--- U	--- U	--- U	--- U	--- U
10. Methylene Chloride	0.64	1.0	--- U	--- U	--- U	--- U	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U	--- U	--- U	--- U	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U	--- U	--- U	--- U	--- U
13. Vinyl Acetate	0.20	50.0	--- U	--- U	--- U	--- U	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U	--- U	--- U	--- U	--- U
15. 2-Butanone	2.21	100.0	--- U	2.30 J	--- U	--- U	--- U
16. Bromochloromethane	0.27	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.25	5.0	--- U	0.40 J	--- U	--- U	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U	--- U	--- U	--- U	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U	--- U	--- U	--- U	--- U
20. Benzene	0.24	1.0	--- U	--- U	--- U	--- U	--- U
21. 1,2-Dichloroethane	0.27	1.0	--- U	--- U	--- U	--- U	--- U
22. Trichloroethene	0.23	1.0	--- U	--- U	--- U	--- U	--- U
23. 1,2-Dichloropropane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
24. Bromodichloromethane	0.21	1.0	--- U	--- U	--- U	--- U	--- U
25. Cis-1,3-Dichloropropene	0.24	1.0	--- U	--- U	--- U	--- U	--- U
26. 4-Methyl-2-Pentanone	1.19	100.0	--- U	--- U	--- U	--- U	--- U
27. Toluene	0.23	1.0	--- U	--- U	--- U	--- U	--- U
28. trans-1,3-Dichloropropene	0.28	1.0	--- U	--- U	--- U	--- U	--- U
29. 1,1,2-Trichloroethane	0.25	1.0	--- U	--- U	--- U	--- U	--- U
30. Tetrachloroethene	0.17	1.0	--- U	--- U	--- U	--- U	--- U
31. 2-Hexanone	1.57	50.0	--- U	--- U	--- U	--- U	--- U
32. Dibromochloromethane	0.24	3.0	--- U	--- U	--- U	--- U	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U	--- U	--- U	--- U	--- U
34. Chlorobenzene	0.30	3.0	--- U	--- U	--- U	--- U	--- U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U	--- U	--- U	--- U	--- U
36. Ethylbenzene	0.21	1.0	--- U	--- U	--- U	--- U	--- U
37. Xylenes	0.68	5.0	--- U	--- U	--- U	--- U	--- U
38. Dibromomethane	0.28	10.0	--- U	--- U	--- U	--- U	--- U
39. Styrene	0.19	1.0	--- U	--- U	--- U	--- U	--- U
40. Bromoform	0.20	3.0	--- U	--- U	--- U	--- U	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U	--- U	--- U	--- U	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U	--- U	--- U	--- U	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	--- U	--- U	--- U	--- U	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	--- U	--- U	--- U	--- U	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U	--- U	--- U	--- U	--- U
46. Acrylonitrile	2.72	200.0	--- U	--- U	--- U	--- U	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- U	--- U	--- U	--- U	--- U

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

