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Doc/Event #:

NC DENR

# Environmental Monitoring Reporting Form

Division of Waste Management - Solid Waste

**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 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)
Greene County Active C&D and Closed MSWLF	105 Landfill Road Walstonburg, NC 27888	40-02	.1600	September 29, 2014

### 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) MNA Paramaters MW-1R & MW-4  
 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.

Steven R. Gandy, Ph.D., P.E.

Senior Project Manager

(919) 772-5393

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Affix NC Licensed/ Professional Geologist Seal

*Signature*

6/10/15  
Date

P.O. Box 97, Garner, NC 27529

Facility Representative Address

C-0281

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

Revised 6/2009



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**Semi-Annual Water Quality Monitoring Report  
with Corrective Action Update**

*Prepared for*

Greene County Active C&D over Closed Unlined Landfill  
Walstonburg, North Carolina

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**September 2014**

**Permit Number: 40-02**

**MESCO Project Number: G14010.0**

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Submittal: June 10, 2015

P.O. Box 97  
Garner, NC 27529  
License No. C-0281



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

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June 10, 2015

Ms. Jaclynne Drummond  
 Solid Waste Section (SWS)  
 NCDENR Division of Waste Management  
 217 West Jones Street  
 Raleigh, NC 27603

Subject: ***Semi-Annual Water Quality Monitoring Report with Corrective Action Update***  
 Greene County Active C&D and Closed Unlined Landfill  
 Event Date: September 29, 2014  
 Permit No. 40-02  
 MESCO Project No. G14010.0

Dear Ms. Drummond:

### **Introduction**

On behalf of Greene County, Municipal Engineering Services Company, P.A. (MESCO) is pleased to present this *Semi-Annual Water Quality Report with Corrective Action Update* for fall 2014 at the Active Construction and Demolition (C&D) Landfill and Closed Unlined Sanitary Landfill. NCDENR Solid Waste Rules 15ANCAC13B.1630 through .1637 requires that Greene County provide this report to the SWS on a semi-annual basis. This report documents the quality of the ground and surface waters during this monitoring event performed on September 29, 2014. A brief corrective action update and qualitative evaluation comparing current and historical data is also presented. During this event the only constituents attributed to anthropogenic sources in concentrations above North Carolina Groundwater Standards (2L) were benzene and vinyl chloride in sample MW-4.

### **Background**

The Greene County Active Construction and Demolition (C&D) Landfill and Closed Unlined Sanitary Landfill is located off Fire Tower Road (SR 1239), Walstonburg, Greene County, North Carolina and operates under permit #40-02. A topographic map showing the facility location is included as **Figure 1**.

Prior to operating as a C&D landfill, the site operated as an approximate 13-acre unlined sanitary landfill which stopped receiving waste prior to January 1, 1998 in accordance with the *Greene County Transition Plan*. The C&D landfill is operating on a portion of the top of the MSW unit which are monitored together.

Water quality has been monitored at this facility on at least a semi-annual basis since 1994. MESCO submitted an *Assessment and Corrective Action (ACM)* [DIN:8776] report dated August 30, 2007. MESCO then developed a *Corrective Action Plan (CAP)* which was revised on February 12, 2010 (*CAP-Rev. 5*) [DIN:9670] and subsequently approved on February 16, 2010 [DIN:671]. Groundwater remediation using monitored natural attenuation (MNA) was initiated on March 30, 2010 and has continued on a semi-annual basis since. A *Corrective Action Evaluation Report (CAER)* was submitted to the SWS on October 16, 2012 (DIN:17502) which was reviewed by the SWS and responded to on December 6, 2012 (DIN:17837).

As specified within rule 15A NCAC 13B.1632(i), the SWS Environmental Monitoring Report Form, and a recent SWS memorandum this report contains sampling procedures, field and laboratory results, corrective action update, groundwater and surface water characterization, and findings. Well construction summary table, sampling and analysis summary table, detections compared to Standards tables, a groundwater flow directions/rates table, potentiometric map, quality assurance/quality control data, and field/laboratory analytical data results are enclosed herein.

## Sampling Procedures

Environment 1 (E1) of Greenville, NC, reportedly performed this monitoring event utilizing portable monitoring methodology in accordance with the approved Sampling & Analysis Plan (SAP) contained in the *CAP-Rev.5*. E1 reportedly collected groundwater samples from all locations designated in the SAP which includes five downgradient groundwater monitoring wells (MW-4, MW-5, MW-6, MW-7 and MW-8), one background well (MW-1R) and both surface water points (Upstream and Downstream). Quality control measures included submittal and analysis of an equipment blank (EB), field blank (FB) and trip blank (TB). Surface water and groundwater monitoring locations are depicted on **Figure 1** and **Figure 2** respectively. A summary detailing the construction of the water monitoring wells is presented on **Table 1**.

Static water levels in each well were measured electronically prior to purging. Samples were transported under C-O-C protocol and analyzed within the hold times specified for each method.

## Field Parameter Data

E1 quantified the field parameters pH, specific conductance, temperature, turbidity, oxidation reduction potential (ORP) and dissolved oxygen (DO) which is presented in the laboratory analysis report in **Appendix A**.

## Laboratory Results

E1 performed analysis of water samples for the constituents listed in Appendix II of 40 CFR 258. Both total and dissolved metals were reported as requested by the SWS in the *CAER* response (DIN 17837). In addition, samples from MW-4 and background well MW-1, were analyzed for the full suite of MNA performance parameters as part of corrective action. MNA analysis was conducted for volatile fatty acids, methane, ethane, ethene, and dissolved hydrogen by Microseeps Inc. of Pittsburgh, PA. A sampling and analysis table summarizing the locations, constituents, and methods is presented on **Table 2**. Laboratory results and C-O-Cs are contained in **Appendix A**.

Water samples were analyzed to the laboratory-established Method Detection Limits (MDL), which are at or below current Solid Waste Section Limits (SWSL). **Table 3** summarizes Appendix I contaminant constituents detected in groundwater and surface water samples above the current SWSL, Groundwater Protection Standards (GWP), North Carolina Groundwater Standards (2L), the applicable Class C North Carolina Surface Water Standards (2B) and Maximum Contaminant Levels (MCL) also known as “Federal Primary Drinking Water Standards”. **Table 4** summarizes the few “j-qualified” Appendix II exclusive detections (defined in this report as not also listed in Appendix I) above the MDL.

## Quality Control Samples

Six of the eighteen (33%) targeted total metals were detected in low non-quantifiable (“j” qualified) concentrations in the EB. Tin and vanadium were detected in the EB and most of the other water samples at comparable levels. Therefore, it is likely the reported levels of tin and vanadium are either false positives or high bias attributed to lab or field induced artifact contamination.

## Groundwater Samples

Metals were not detected in any sample above 2L Standards.

VOCs benzene and vinyl chloride have consistently been detected in concentrations above their respective 2L Standards in samples collected from MW-4 since the detection levels were reduced in March 2007. The plume is delineated east of MW-4 as evidenced by the lack of VOC detections in collected from MW-7 and MW-8.

Targeted Appendix II exclusive parameters were not detected in levels above the SWSL nor established applicable Standards.

A site map spatially depicting contaminants detected in excess of the 2L Standard during this event is presented on **Figure 2**.

## Surface Water Samples

No constituents were detected in either of the surface waters in concentrations in excess of applicable 2B Standard.

## Groundwater Characterization

A single-day potentiometric map of the uppermost aquifer is presented on **Figure 2**, using ground water elevation data reported by E1 for this event. Reported groundwater elevations were all within their respective historically identified range. Groundwater flow direction and rates were calculated based on reported data and are included in **Table 5**. Estimated flow flow rates during this event, quantified through modified Darcy's equation, ranged from about 14 ft/yr (MW-1R) to 168 ft/yr (MW-8) for a site-wide average of approximately 56 ft/yr.

## Corrective Action Update

Groundwater remediation measures utilizing MNA per *CAP-Rev. 5* continues to be implemented at the facility. This is the tenth consecutive semi-annual event that MNA monitoring has been performed at MW-4 and background well MW-1R. MNA data presented in **Table 5** continues to indicate that favorable geochemical conditions exist for continued natural attenuation.

## Findings

The laboratory results indicate the surficial aquifer near MW-4 continue to be impacted by low level dissolved phase Appendix I VOC(s) in concentrations above the 2L Standard. Quantitative evaluations reveal concentrations of constituents detected above the 2L Standard during this event remain within their own respective historically identified range and an increasing trend is not evident (**Figure 3**).

MW-4 has exhibited a reduction of total VOCs (-62%), decrease of benzene (-16%) and a decrease of vinyl chloride (-39%) compared to it's respective baseline averages established during the initial four corrective action events (**Figure 4**). The horizontal plume extent beyond MW-4 likely confined within the review boundary as evidenced by the continued lack of detections in sentinel wells MW-7 and MW-8.

Generally consistent with the findings of the *CAER*, targeted contaminant concentrations are not increasing and there is adequate evidence that natural attenuation is occurring in the groundwater at the facility.

## Closing

Semi-annual water quality and MNA monitoring continued at the facility and was sampled again on March 24, 2015. If you have any questions or comments regarding this report, please contact us at (919) 772-5393 or by email at [jpfohl@mesco.com](mailto:jpfohl@mesco.com) or [sgandy@mesco.com](mailto:sgandy@mesco.com).

Sincerely,

**MUNICIPAL ENGINEERING SERVICES CO., P.A.**



Jonathan Pfohl  
Environmental Specialist



Steven R. Gandy, Ph.D, P.E.  
Senior Project Manager

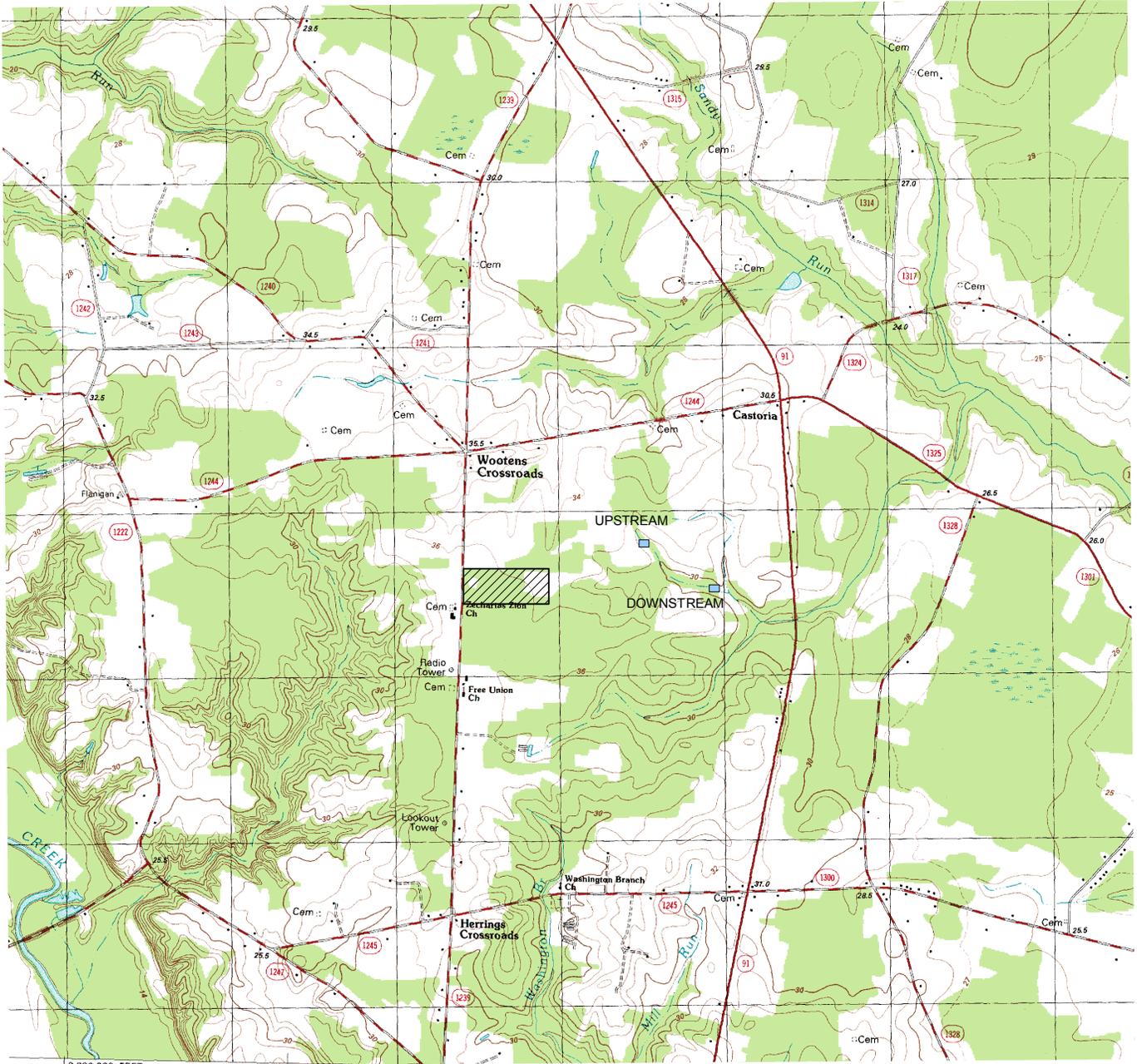
Enclosures

cc: Mr. David Jones (Greene County)  
Ms. Christine Ritter (NC Solid Waste Section)

# Figures

# Topographic Map with Site Location

## Greene County Active C&D over Closed MSWLF



**105 Landfill Road (SR1257)**  
**Walstonburg, NC**  
**Lat:35-31-29.7520**  
**Long:-77-41-49.4325**  
**Northing:648520.2533**  
**Easting:2387660.4409**

### QUADRANGLE LEGEND

#### ROAD CLASSIFICATION

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

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

0 ————— 3,334'

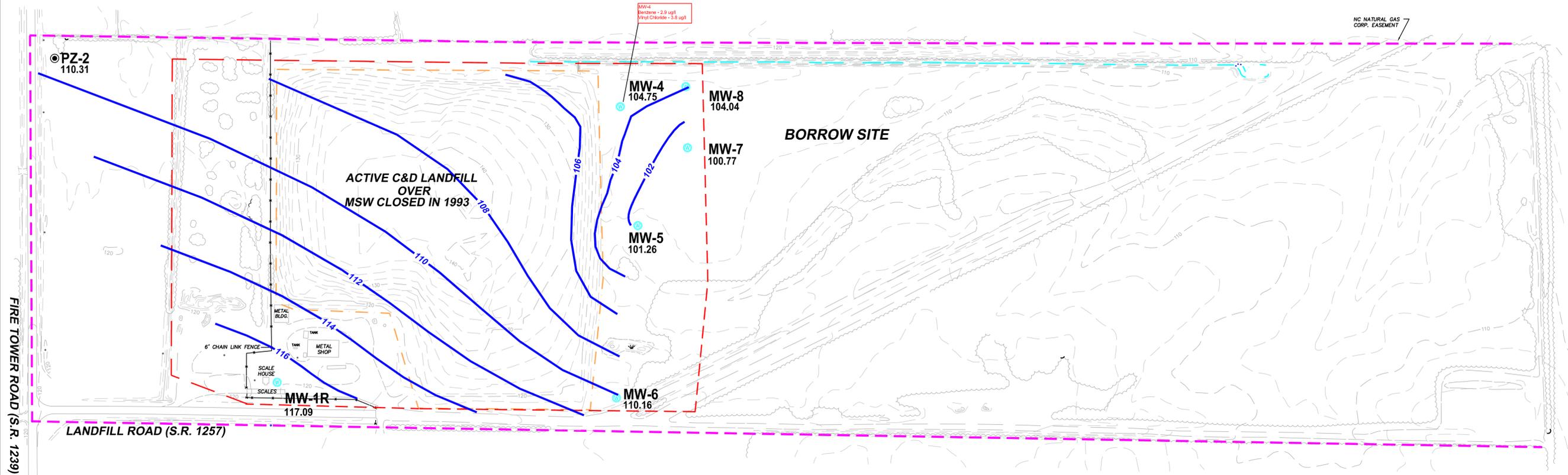
# FIGURE 1

- LEGEND**
- 250' FROM WASTE OR 50' FROM PROPERTY LINE
  - EXISTING EROSION CONTROL DIVERSION DITCH
  - 120 — EXISTING TOPOGRAPHIC CONTOURS
  - PROPERTY LINE
  - WASTE LIMIT OF UNLINED MSWLF
  - MW-1R ● MONITORING WELL
  - PZ-2 ● PIEZOMETER
  - 99.54 GROUNDWATER POTENTIOMETRIC ELEVATION
  - 112 — GROUNDWATER CONTOUR

**NOTES**

THIS MAP WAS GENERATED FROM AERIAL PHOTOS  
 FLOWN ON 2-22-94 BY TRIANGLE AERIAL MAPPING,  
 SUPPLEMENTED WITH SURVEYS BY MUNICIPAL ENGINEERING  
 SERVICES CO., PA.

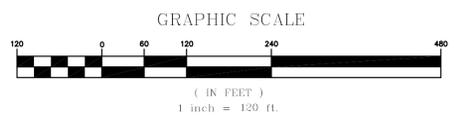
**Municipal Engineering Services**  
 Company, P.A.  
 P.O. BOX 97, GARNER, N.C. 27529  
 P.O. BOX 349, BOONE, N.C. 28607  
 (919) 772-5393 (828) 262-1767  
 LICENSE NUMBER: C-0281



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

Groundwater Levels & VOCs Detected Above 2L Standards  
 September 29, 2014

WELL #	TOP OF CASING ELEVATION	DEPTH TO WATER	GROUNDWATER POTENTIOMETRIC ELEVATION	BENZENE (ug/l)	VCM (ug/l)	
15A NCAC 2L Groundwater Quality Standard					1.0	0.03
MW-1R	121.78	4.69	117.09			
MW-4	117.89	13.14	104.75	2.9	3.8	
MW-5	115.76	14.5	101.26			
MW-6	117.41	7.25	110.16			
MW-7	110.48	9.71	100.77			
MW-8	111.36	7.32	104.04			
PZ-2	119.59	9.28	110.31			

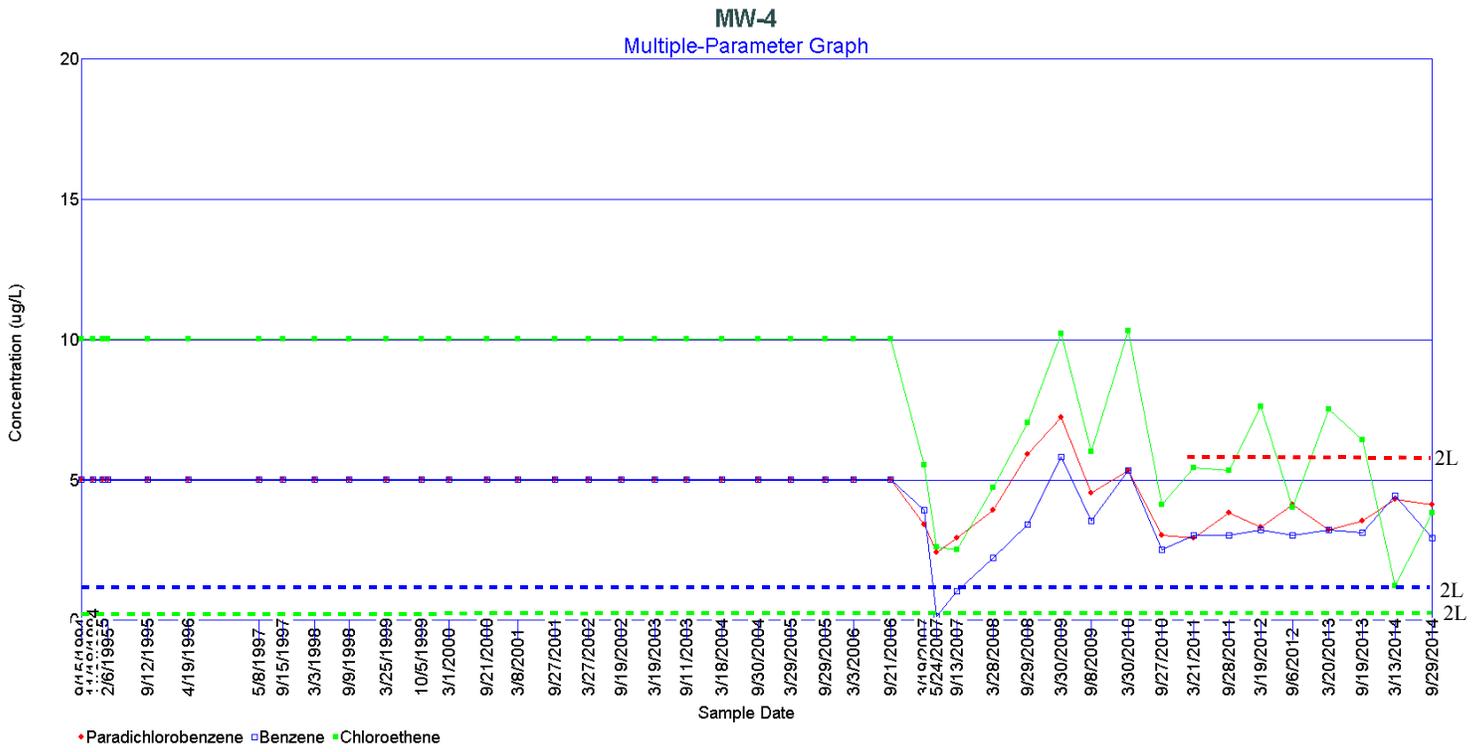


POTENTIOMETRIC MAP OF UPPERMOST AQUIFER  
 WITH DETECTIONS ABOVE 2L STANDARDS

SCALE:	SEE SCALEBAR
DATE:	3/17/15
DRWN. BY:	R. MOSS
CHKD. BY:	S. GANDY
PROJECT NUMBER:	G14010.0
DRAWING NO.:	FIGURE 2
SHEET NO.:	1 OF 1

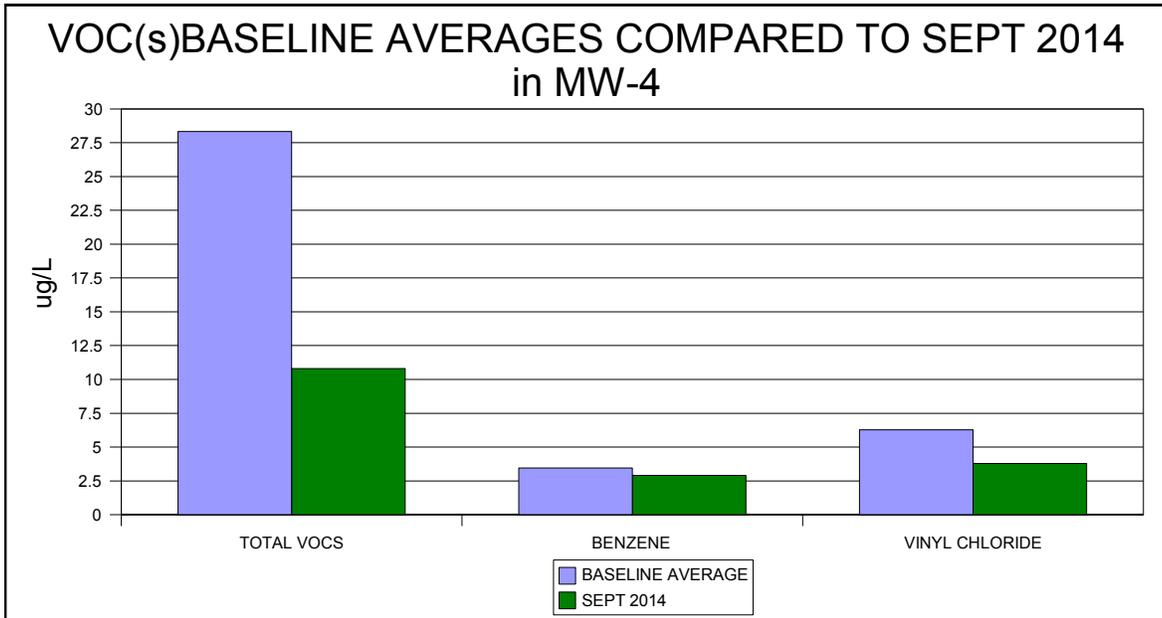
**FIGURE 2**

**Figure 3**  
**Time-Series Graphs of Select Constituents**  
**September 29, 2014**



Non-Detects Represented at Detection Limit

**Figure 4**  
**Histograms of VOC Concentrations in MW-4**  
**(March 30, 2010-September 28, 2011) Compared to September 29, 2014**



	TOTAL VOCS (ug/l)	BENZENE (ug/l)	VINYL CHLORIDE (ug/l)
<b>BASELINE</b>			
MARCH 2010	59.30	5.30	10.30
SEPT. 2010	17.40	2.50	4.10
MARCH 2011	17.50	3.00	5.40
SEPT. 2011	19.10	3.00	5.30
<b>BASELINE AVERAGE</b>	<b>28.33</b>	<b>3.45</b>	<b>6.28</b>

	TOTAL VOCS (ug/l)	BENZENE (ug/l)	VINYL CHLORIDE (ug/l)
<b>CURRENT</b>			
<b>SEPT 2014</b>	<b>10.80</b>	<b>2.90</b>	<b>3.80</b>

	TOTAL VOCS	BENZENE	VINYL CHLORIDE
<b>COMPARISON</b>			
DIFFERENCE (ug/l)	-17.53	-0.55	-2.48
DIFFERENCE (%)	-62	-16	-39

# Tables

**Table 1**  
**Groundwater Monitoring Well Construction Table**  
**September 29, 2014**

Monitoring Well	Date Installed	Well Diameter (inches)	Total Well Depth (ft bgs)	Top of Screen Depth (ft bgs)	Screen Length (ft)	Geology of Screened Interval	Top of Casing Elevation (ft amsl)	Ground Elevation (ft amsl)	Groundwater Elevation (ft amsl)	Depth to Water (ft btoc)	Latitude	Longitude
MW-1R	11/19/1981	2	18.20	3.20	15	Soil	121.78	119.79	117.09	4.69	35.525139	-77.695158
MW-4	8/26/1994	2	24.10	9.10	15	Soil	117.89	115.14	104.75	13.14	35.526914	-77.692369
MW-5	8/26/1994	2	29.00	14.00	15	Soil	115.76	113.16	101.26	14.5	35.526133	-77.692242
MW-6	8/28/1994	2	28.80	13.80	15	Soil	117.41	114.54	110.16	7.25	35.525008	-77.692431
MW-7	8/29/1994	2	18.50	6.50	12	Soil	110.48	107.75	100.77	9.71	35.526639	-77.691833
MW-8	6/21/2007	2	17.98	6.98	11	Soil	111.36	108.71	104.04	7.32	35.527039	-77.691842
PZ-2	11/19/1981	2	20.00	10.00	10	Soil	119.59	116.58	110.31	9.28	35.527278	-77.696911

NOTE:  
bgs = below ground surface  
amsl= above mean sea level  
btoc = below top casing (PVC well casing)

**Table 2**  
**Sampling and Analysis Summary**  
**September 29, 2014**

	Reason Not Sampled	App. I			App. II													MNA													Field Parameter						
		VOCs	Metals, Total Dissolved	Metals, Total	VOCs (App II)	Total Metals (App II)	Metals, Total Dissolved (App II)	Pesticides	Herbicides-Chlorinated	Polychlorinated biphenyl (PCB)	Semivolatile Organics (SVOCs)	Total Cyanide	Sulfide	VFA	Hydrogen	Methane/Ethane/Ethane	Dissolved CO2	Alkalinity	Sulfate	Sulfide	Chloride	TOC	COD	BOD	Iron, total	Iron, total dissolved	Iron, Ferrous	Nitrate	Turbidity	Dissolved Oxygen (DO)	Oxidation Reduction Potential (ORP)	Temperature	Conductivity	pH			
		Lab EPA 8260B	Lab EPA200.8	Lab EPA200.8	Lab EPA 8260B	Lab EPA 6000/7000	Lab EPA200.8	Lab EPA 8081B	Lab SW8151A	Lab EPA 8081B	Lab EPA 8270D	Lab EPA 9014	Lab SM18 4500-S D	Lab AM23G	Lab AM20GAX	Lab AM20GAX	Lab SM4500CO2C	Lab SM2320B	Lab SM426C	Lab SM18 4500-S2D	Lab SM4500-CLB	Lab SM 5310C	Lab HACH8000	Lab SM5210B	Lab SM3111B	Lab 3111B-99	Lab SM3111B	Lab EPA353.2	Lab SM2130B	Field Meter	Field Meter	Field Meter	Field Meter	Field Meter			
MW-1R					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
MW-4					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
MW-5					x	x	x	x	x	x	x	x	x																								
MW-6					x	x	x	x	x	x	x	x	x																								
MW-7					x	x	x	x	x	x	x	x	x																								
MW-8					x	x	x	x	x	x	x	x	x																								
Downstream			x				x																														
Upstream			x																																		
EB					x	x		x	x	x	x	x	x																								
TB																																					
FB					x	x																															

App I & II = Appendix Lists from current 40 CFR 258

**Table 3**  
**Detections in Water Samples Above SWSL, GWP, 2L, or 2B (Appendix I)**  
**September 29, 2014**

Sample ID	Parameter Name <sup>1</sup>	Sample Date	Result	Unit	MDL <sup>2</sup>	SWSL <sup>3</sup>	2L <sup>4</sup>	2B <sup>5</sup>	GWP <sup>6</sup>	MCL <sup>7</sup>	Preliminary Cause <sup>8</sup>
MW-1R	Zinc, total	9/29/14	42	ug/l	0.53	10	1000			5000	
MW-1R	Zinc, total dissolved	9/29/14	41	ug/l	0.47	10	1000			5000	
MW-4	Zinc, total	9/29/14	21	ug/l	0.53	10	1000			5000	
MW-4	Vinyl Chloride	9/29/14	3.8	ug/l	0.63	1	<b>0.03</b>			<b>2</b>	L &/or LFG
MW-4	1,4-Dichlorobenzene	9/29/14	4.1	ug/l	0.39	1	6			75	
MW-4	Benzene	9/29/14	2.9	ug/l	0.24	1	<b>1</b>			5	L &/or LFG
MW-7	Vanadium, total	9/29/14	3.8 j	ug/l	0.06	25	NE		<b>3.5</b>	NE	
MW-7	Vanadium, total dissolved	9/29/14	1.1 j	ug/l	0.07	25	NE		3.5	NE	
Upstream	Vanadium, total	9/29/14	12.2 j	ug/l	0.06	25		NE		NE	
Upstream	Vanadium, total dissolved	9/29/14	1.5 j	ug/l	0.07	25		NE		NE	
EB	Vanadium, total	9/29/14	0.41 j	ug/l	0.06	25	NE		3.5	NE	

<sup>1</sup> Table contains constituents detected at or above SWSL, GWP, 2L, or 2B

<sup>2</sup> MDL = Method Detection Limit

<sup>3</sup> SWSL = Solid Waste Section Reporting Limit

<sup>4</sup> 2L = North Carolina 15A NCAC 2L Groundwater Quality Standard

<sup>5</sup> 2B = North Carolina 15 NCAC 2B Surface Water Quality Standard for this Specific Stream Classification

<sup>6</sup> GWP = Groundwater Protection Standard

<sup>7</sup> MCL = Primary Drinking Water Standard (not currently applicable for regulatory comparisons)

<sup>8</sup> Preliminary Cause = Refers to a preliminary analysis of the cause and/or source of a detection over the respective 2L/2B Standard.

A definitive source of the detection was not determined as part of this report.

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

L = Leachate

LFG = Landfill Gas

NE = Not Established

**BOLD =** Concentration > 2L, 2B, GWP or MCL Standard

**Table 4**  
**Detections in Water Samples Above MDL (Appendix II Exclusive)**  
**September 29, 2014**

Sample ID	Parameter Name <sup>1</sup>	Sample Date	Result	Unit	MDL <sup>2</sup>	SWSL <sup>3</sup>	2L <sup>4</sup>	2B <sup>5</sup>	GWP <sup>6</sup>	MCL <sup>7</sup>	Preliminary Cause <sup>8</sup>
MW-1R	2,4,5-TP	9/29/14	1.01j	ug/l	0.42	2	50			50	
MW-1R	Tin, total dissolved	9/29/14	0.21j	ug/l	0.06	100	NE	NE	2000	NE	
MW-4	Tin, total	9/29/14	0.1j	ug/l	0.05	100	NE	NE	2000	NE	
MW-4	Tin, total dissolved	9/29/14	0.18j	ug/l	0.06	100	NE	NE	2000	NE	
MW-5	Tin, total dissolved	9/29/14	0.06j	ug/l	0.06	100	NE	NE	2000	NE	
MW-6	Tin, total	9/29/14	0.1j	ug/l	0.05	100	NE	NE	2000	NE	
MW-7	Tin, total	9/29/14	0.05j	ug/l	0.05	100	NE	NE	2000	NE	
MW-8	Tin, total	9/29/14	0.18j	ug/l	0.05	100	NE	NE	2000	NE	
Upstream	Tin, total dissolved	9/29/14	0.14j	ug/l	0.06	100		NE	2000	NE	
Downstream	Tin, total dissolved	9/29/14	0.31j	ug/l	0.06	100		NE	2000	NE	
FB	Tin, total	9/29/14	0.14 j	ug/l	0.05	100	NE	NE	2000	NE	
EB	Tin, total	9/29/14	0.06j	ug/l	0.05	100	NE	NE	2000	NE	

<sup>1</sup> Table contains constituents constituents on App II that are not also listed on App I that were detected at or above SWSL, GWP, 2L, or 2B

<sup>2</sup> MDL = Method Detection Limit

<sup>3</sup> SWSL = Solid Waste Section Reporting Limit

<sup>4</sup> 2L = North Carolina 15A NCAC 2L Groundwater Quality Standard

<sup>5</sup> 2B = North Carolina 15 NCAC 2B Surface Water Quality Standard for this Specific Stream Classification

<sup>6</sup> GWP = Groundwater Protection Standard

<sup>7</sup> MCL = Primary Drinking Water Standard (not currently applicable for regulatory comparisons)

<sup>8</sup> Preliminary Cause = Refers to a preliminary analysis of the cause and/or source of a detection over the respective 2L/2B Standard.

A definitive source of the detection was not determined as part of this report.

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

NE = Not Established

**BOLD =** Concentration > 2L, 2B, GWP or MCL Standard

**Table 5**  
**Hydrologic Properties at Monitoring Well Locations**  
**September 29, 2014**

Monitoring Well	Hydraulic Conductivity (cm/sec)	Effective Porosity (%)	Hydraulic Gradient (ft/ft)	Linear Velocity (ft/yr)	Flow Direction	Depth to Groundwater (ft btoc)	Groundwater Potentiometric Elevation (ft amsl)
MW-1R	1.20E-04	15	0.017	14	N27E	4.69	117.09
MW-4	1.10E-04	15	0.021	16	S48E	13.14	104.75
MW-5	1.40E-04	15	0.041	40	S83E	14.50	101.26
MW-6	1.90E-04	15	0.020	26	N13E	7.25	110.16
MW-7	1.98E-04	7	0.024	71	S51E	9.71	100.77
MW-8	1.14E-03	7	0.010	168	S21E	7.32	104.04
PZ-2	na	na	0.007	na	N19E	9.28	110.31
<b>Minimum</b>	1.10E-04	7	0.010	14	-	4.69	100.77
<b>Average</b>	3.16E-04	12	0.022	56	-	9.41	106.91
<b>Maximum</b>	1.14E-03	15	0.041	168	-	14.5	117.09

NOTE: Data for hydraulic conductivities for wells except 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 from water level elevations reportedly taken on September 29, 2014  
 Flow rate ( $Q$ ) is defined by modified Darcy's equation:

where

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

$K$ = hydraulic conductivity

$n_e$  = effective porosity

$dh$ = head difference

$dl$ = horizontal distance

**Table 6**  
**MNA Parameters at Monitoring Well Locations Summary**  
**September 29, 2014**

Parameters	Method	mdl*	Units	MW-1R	MW-4
				09/29/14	09/29/14
VFA – Acetic Acid	AM23G	8	ug/l	61 j	62 j
VFA – Butyric Acid	AM23G	7	ug/l	<7	<7
VFA – Hexanoic Acid	AM23G	120	ug/l	<120	<120
VFA – i-Hexanoic Acid	AM23G	100	ug/l	<100	<100
VFA – i-Pentanoic Acid	AM23G	8	ug/l	<8	<8
VFA – Lactic Acid	AM23G	12	ug/l	58 j	55 j
VFA – Pentaonic Acid	AM23G	14	ug/l	<14	<14
VFA – Propionic Acid	AM23G	11	ug/l	<11	<11
VFA – Pyruvic Acid	AM23G	9	ug/l	<9	<9
Hydrogen	AM20GAX	0.13	nM	2	2.6
Methane	AM20GAX	0.01	ug/l	0.9	6900
Ethene	AM20GAX	0.01	ug/l	0.01	0.13
Ethane	AM20GAX	0.0010	ug/l	0.0013 j	0.0013 j
CO2-Dissolved	4500CO2C	1000	ug/l	95000	518000
Alkalinity	2320B-97	1000	ug/l	9000	179000
Sulfate	4500SO42E97	5000	ug/l	16800 j	14,700 j
Sulfide	4500S2D-00	100	ug/l	<100	191 j
Chloride	4500CLB-97	5000	ug/l	<5000	<5000
TOC	5310C-00	46	ug/l	1950	9040
COD	H8000-79	20000	ug/l	<2000	34000
BOD	5210B-01	2000	ug/l	<2000	5000
Iron, Total	3111B-99	16	ug/l	463	36775
Iron, Ferrous	3500FEB-97	50	ug/l	<50	34750
Nitrate	353.2 R2-93	40	ug/l	2690 j	<40
Temperature	2550B-00	0.10	C	23	22
ORP	2580B	0.0	mV	121	65
DO	4500OG-01	100	mg/l	3470	1330
pH	4500HB-00	0.10	SU	5.1	5.8
Specific Conductance	2510B-97	1	Umhos/cm	290	410
Turbidity	2130B-01	1	NTU	4.04	13.6

**Notes:**

VFA = Volatile Fatty Acids

mdl\* = Lowest Method Detection Limit for Lab Parameters or Lowest Field Measurement Possible

**Appendix A**  
**Laboratory Analysis Report**  
**Field Analysis Report**  
**Chains of Custody**

# 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: 09/29/14  
DATE REPORTED : 11/12/14

REVIEWED BY: 

PARAMETERS	MDL	Upstream		Downstream		Well	Well	Well	Analysis		Method
		SWSL				#4	#5	#6	Date	Analyst	Code
PH (field measurement), Units			5.9	5.8	5.8	4.7	4.8	09/29/14	BF	4500HB-00	
BOD, mg/l	2.0	2.0			5.0			09/29/14	TRB	5210B-01	
COD, mg/l	20.0	20.0			34			09/30/14	TRB	H8000-79	
Nitrate Nitrogen as N, mg/l	0.04	10.0			---	U		10/01/14	ANO	353.2 R2-9	
Total Organic Carbon, mg/l	0.046	1.0			9.04			09/29/14	SEJ	5310C-00	
Total Alkalinity (to pH 4.5), mg/l	1.0	1.0			179			09/29/14	TRB	2320B-97	
Chloride, mg/l	5.0	5.0			---	U		10/06/14	KKF	4500CLB-97	
Cyanide, ug/l	5.0	10.0			---	U	---	10/03/14	SEJ	4500CNE-99	
Sulfate, mg/l	5.0	250.0			14.7 J			10/06/14	TRB	4500S042N9	
Antimony, ug/l	0.12	6.0	---	U	---	U	0.32 J	10/15/14	LFJ	EPA200.8	
Arsenic, ug/l	0.10	10.0	3.8 J	1.3 J	3.9 J	0.67 J	---	10/20/14	LFJ	EPA200.8	
Barium, ug/l	0.12	100.0	35.7 J	47.1 J	35.0 J	17.0 J	14.9 J	10/15/14	LFJ	EPA200.8	
Beryllium, ug/l	0.04	1.0	---	U	---	U	0.06 J	10/15/14	LFJ	EPA200.8	
Cadmium, ug/l	0.04	1.0	---	U	---	U	0.11 J	10/20/14	LFJ	EPA200.8	
Cobalt, ug/l	0.12	10.0	0.52 J	0.57 J	1.3 J	0.36 J	---	10/15/14	LFJ	EPA200.8	
Copper, ug/l	0.10	10.0	0.93 J	1.3 J	3.0 J	1.0 J	1.5 J	10/15/14	LFJ	EPA200.8	
Total Chromium, ug/l	0.14	10.0	1.5 J	1.1 J	0.44 J	0.18 J	---	10/15/14	LFJ	EPA200.8	
Iron, ug/l	16.0	300.0			36775			10/07/14	MTM	3111B-99	
Lead, ug/l	0.13	10.0	3.3 J	0.91 J	0.33 J	0.42 J	0.18 J	10/15/14	LFJ	EPA200.8	
Mercury, ug/l	0.06	0.20			---	U	---	10/09/14	MTM	245.1 R3-9	
Nickel, ug/l	0.12	50.0	1.3 J	1.2 J	3.8 J	1.7 J	0.67 J	10/15/14	LFJ	EPA200.8	
Selenium, ug/l	0.16	10.0	0.47 J	0.29 J	0.66 J	0.26 J	---	10/20/14	LFJ	EPA200.8	
Silver, ug/l	0.04	10.0	---	U	---	U	---	10/20/14	LFJ	EPA200.8	
Thallium, ug/l	0.13	5.5	---	U	---	U	---	10/20/14	LFJ	EPA200.8	
Tin, ug/l	0.05	100.0			0.10 J		0.10 J	10/15/14	LFJ	EPA200.8	
Vanadium, ug/l	0.06	25.0	12.2 J	1.8 J	2.0 J	0.40 J	0.39 J	10/15/14	LFJ	EPA200.8	
Zinc, ug/l	0.53	10.0	9.0 J		21			10/20/14	LFJ	EPA200.8	
Zinc, ug/l	0.53	10.0		5.2 J		4.9 J	6.9 J	10/29/14	MBL	EPA200.8	
Sulfide, ug/l	100	1000			191 J	---	---	10/03/14	LFJ	4500S2D-00	
Conductivity (at 25c), uMhos/cm	1.0	1.0	122	164	410	61	50	09/29/14	BF	2510B-97	
Dissolved Oxygen, mg/l	0.1	0.1	1.06	1.66	1.33	1.41	1.13	09/29/14	BF	45000G-01	
Temperature, °C			20	19	22	21	22	09/29/14	BF	2550B-00	
Iron, Ferrous, ug/l	50.00	300.0			34750			09/30/14	SEJ	3500FEB-97	
Static Water Level, feet					13.14	14.50	7.25	09/29/14	BF		
Well Depth, feet					26.16	28.34	26.87	09/29/14	BF		
Carbon Dioxide, mg/l	1.0	1.0			518			09/29/14	TRB	4500C02C	
ORP, mv			+100	+124	+65	+99	+112	09/29/14	BF	2580B	
Turbidity (Field), NTU	1.0	1.0	52.5	15.4	13.6	15.9	4.86	09/29/14	BF	2130B-01	

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: 09/29/14  
DATE REPORTED: 11/12/14

REVIEWED BY: 

PARAMETERS	MDL	Well		Well #1R	Piezometer	Equipment	Analysis		Method
		SWSL	#7	#8	#2	Blank	Date	Analyst	Code
PH (field measurement), Units			5.1	4.6	5.1			09/29/14 BF	4500HB-00
BOD, mg/l	2.0	2.0			---	U		09/29/14 TRB	5210B-01
COD, mg/l	20.0	20.0			---	U		09/30/14 TRB	H8000-79
Nitrate Nitrogen as N, mg/l	0.04	10.0			2.69	J		10/01/14 ANO	353.2 R2-9
Total Organic Carbon, mg/l	0.046	1.0			1.95			09/29/14 SEJ	5310C-00
Total Alkalinity (to pH 4.5), mg/l	1.0	1.0			9			09/29/14 TRB	2320B-97
Chloride, mg/l	5.0	5.0			---	U		10/06/14 KKF	4500CLB-97
Cyanide, ug/l	5.0	10.0	---	U	---	U		10/03/14 SEJ	4500CNE-99
Sulfate, mg/l	5.0	250.0			16.8	J		10/06/14 TRB	4500S042E9
Antimony, ug/l	0.12	6.0	0.19	J	---	U		10/15/14 LFJ	EPA200.8
Arsenic, ug/l	0.10	10.0	0.41	J	---	U		10/20/14 LFJ	EPA200.8
Barium, ug/l	0.12	100.0	23.8	J	28.3	J		10/15/14 LFJ	EPA200.8
Beryllium, ug/l	0.04	1.0	0.10	J	0.04	J		10/15/14 LFJ	EPA200.8
Cadmium, ug/l	0.04	1.0	0.09	J	---	U		10/20/14 LFJ	EPA200.8
Cobalt, ug/l	0.12	10.0	0.80	J	0.30	J		10/15/14 LFJ	EPA200.8
Copper, ug/l	0.10	10.0	1.8	J	0.17	J		10/15/14 LFJ	EPA200.8
Total Chromium, ug/l	0.14	10.0	2.2	J	---	U		10/15/14 LFJ	EPA200.8
Iron, ug/l	16.0	300.0			463			10/07/14 MTM	3111B-99
Lead, ug/l	0.13	10.0	2.9	J	0.45	J		10/15/14 LFJ	EPA200.8
Mercury, ug/l	0.06	0.20	---	U	---	U		10/09/14 MTM	245.1 R3-9
Nickel, ug/l	0.12	50.0	1.9	J	0.34	J		10/15/14 LFJ	EPA200.8
Selenium, ug/l	0.16	10.0	0.18	J	---	U		10/20/14 LFJ	EPA200.8
Silver, ug/l	0.04	10.0	0.05	J	---	U		10/20/14 LFJ	EPA200.8
Thallium, ug/l	0.13	5.5	---	U	0.14	J		10/20/14 LFJ	EPA200.8
Tin, ug/l	0.05	100.0	0.05	J	0.18	J		10/15/14 LFJ	EPA200.8
Vanadium, ug/l	0.06	25.0	3.8	J	0.17	J		10/15/14 LFJ	EPA200.8
Zinc, ug/l	0.53	10.0	7.5	J	---	U		10/20/14 LFJ	EPA200.8
Sulfide, ug/l	100	1000	---	U	---	U		10/03/14 LFJ	4500S2D-00
Conductivity (at 25c), uMhos/cm	1.0	1.0	56		33			09/29/14 BF	2510B-97
Dissolved Oxygen, mg/l	0.1	0.1	1.57		5.09			09/29/14 BF	4500OG-01
Temperature, °C			22		21			09/29/14 BF	2550B-00
Iron, Ferrous, ug/l	50.00	300.0			---	U		09/30/14 SEJ	3500FEB-97
Static Water Level, feet			9.71		7.32		4.69	09/29/14 BF	
Well Depth, feet			21.38		20.24		19.51	09/29/14 BF	
Carbon Dioxide, mg/l	1.0	1.0			95			09/29/14 TRB	4500CO2C
ORP, mv			+79		+101			09/29/14 BF	2580B
Turbidity (Field), NTU	1.0	1.0	53.1		---	U	4.04	09/29/14 BF	2130B-01

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

ID#: 6005

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

DATE COLLECTED: 09/29/14  
DATE REPORTED : 11/12/14

REVIEWED BY: 

PARAMETERS	MDL	Trip		Field Blank	Analysis		Method Code
		SWSL	Blank		Date	Analyst	
Antimony, ug/l	0.12	6.0		0.21 J	10/15/14	LFJ	EPA200.8
Arsenic, ug/l	0.10	10.0		--- U	10/20/14	LFJ	EPA200.8
Barium, ug/l	0.12	100.0		--- U	10/15/14	LFJ	EPA200.8
Beryllium, ug/l	0.04	1.0		--- U	10/15/14	LFJ	EPA200.8
Cadmium, ug/l	0.04	1.0		--- U	10/20/14	LFJ	EPA200.8
Cobalt, ug/l	0.12	10.0		--- U	10/15/14	LFJ	EPA200.8
Copper, ug/l	0.10	10.0		--- U	10/15/14	LFJ	EPA200.8
Total Chromium, ug/l	0.14	10.0		--- U	10/15/14	LFJ	EPA200.8
Lead, ug/l	0.13	10.0		--- U	10/15/14	LFJ	EPA200.8
Mercury, ug/l	0.06	0.20		--- U	10/09/14	MTM	245.1 R3-94
Nickel, ug/l	0.12	50.0		--- U	10/15/14	LFJ	EPA200.8
Selenium, ug/l	0.16	10.0		--- U	10/20/14	LFJ	EPA200.8
Silver, ug/l	0.04	10.0		--- U	10/20/14	LFJ	EPA200.8
Thallium, ug/l	0.13	5.5		--- U	10/20/14	LFJ	EPA200.8
Tin, ug/l	0.05	100.0		0.14 J	10/15/14	LFJ	EPA200.8
Vanadium, ug/l	0.06	25.0		0.16 J	10/15/14	LFJ	EPA200.8
Zinc, ug/l	0.53	10.0		--- U	10/20/14	LFJ	EPA200.8

# 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: CHS  
DATE COLLECTED: 09/29/14 Page: 1  
DATE EXTRACTED: 10/02/14  
DATE ANALYZED: 10/06/14  
DATE REPORTED: 11/12/14

REVIEWED BY: 

PESTICIDES AND PCB'S  
EPA METHOD 8081B R2 (07)

PARAMETERS, ug/l	MDL	SWSL	Well #4	Well #5	Well #6	Well #7	Well #8
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	0.075	--- 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	0.075	--- U				
18. Methoxychlor	0.530	1.00	--- U				
19. Pcb's (Aroclors)	0.500	2.00	--- U				
20. Toxaphene	0.690	1.50	--- U				

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

CLIENT ID: 6005  
ANALYST: CHS  
DATE COLLECTED: 09/29/14  
DATE EXTRACTED: 10/02/14  
DATE ANALYZED: 10/06/14  
DATE REPORTED: 11/12/14

Page: 2

REVIEWED BY: 

PESTICIDES AND PCB'S  
EPA METHOD 8081B R2 (07)

PARAMETERS, ug/l	MDL	SWSL	Well #1R	Equipment Blank
1. Aldrin	0.029	0.05	--- U	--- U
2. Alpha-BHC	0.032	0.05	--- U	--- U
3. Beta-BHC	0.031	0.05	--- U	--- U
4. Delta-BHC	0.030	0.05	--- U	--- U
5. Gamma-BHC (Lindane)	0.032	0.05	--- U	--- U
6. Chlordane	0.320	0.50	--- U	--- U
7. 4,4-BDD	0.051	0.10	--- U	--- U
8. 4,4-DDE	0.049	0.10	--- U	--- U
9. 4,4-DDT	0.052	0.10	--- U	--- U
10. Dieldrin	0.042	0.075	--- U	--- U
11. Endosulfan I	0.056	0.10	--- U	--- U
12. Endosulfan II	0.046	0.10	--- U	--- U
13. Endosulfan Sulfate	0.072	0.10	--- U	--- U
14. Endrin	0.053	0.10	--- U	--- U
15. Endrin Aldehyde	0.068	0.10	--- U	--- U
16. Heptachlor	0.039	0.05	--- U	--- U
17. Heptachlor Epoxide	0.042	0.075	--- U	--- U
18. Methoxychlor	0.530	1.00	--- U	--- U
19. Pcb's (Aroclors)	0.500	2.00	--- U	--- U
20. Toxaphene	0.690	1.50	--- U	--- U

# Environment 1, Incorporated

Drinking Water ID: 37715  
Wastewater ID: 10

P.O. BOX 7085, 114 OAKMONT DRIVE  
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PHONE (252) 756-6208  
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CLIENT: GREENE CO. LANDFILL  
DAVID JONES  
P.O. BOX 543  
SNOW HILL, NC 28580

CLIENT ID: 6005

ANALYST: CHS  
DATE COLLECTED: 09/29/14 Page: 1  
DATE EXTRACTED: 10/06/14  
DATE ANALYZED: 10/17/14  
DATE REPORTED: 11/12/14

REVIEWED BY: 

## LANDFILL APPENDIX II EPA METHOD 8151A R1(96)

PARAMETERS, ug/l	MDL	SWSL	Well #4	Well #5	Well #6	Well #7	Well #8
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				

# Environment 1, Incorporated

Drinking Water ID: 37715  
Wastewater ID: 10

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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: CHS  
DATE COLLECTED: 09/29/14  
DATE EXTRACTED: 10/06/14  
DATE ANALYZED: 10/17/14  
DATE REPORTED: 11/12/14

Page: 2

REVIEWED BY: 

## LANDFILL APPENDIX II EPA METHOD 8151A R1(96)

PARAMETERS, ug/l	MDL	SWSL	Well #1R	Equipment Blank
1. 2,4-D	0.36	2.0	--- U	--- U
2. Dinoseb	0.54	1.0	--- U	--- U
3. 2,4,5-TP	0.42	2.0	1.01 J	--- U
4. 2,4,5-T	0.47	2.0	--- U	--- U

# 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: CHS  
DATE COLLECTED: 09/29/14 Page: 1  
DATE EXTRACTED: 10/02/14  
DATE ANALYZED: 10/22/14  
DATE REPORTED: 11/12/14

REVIEWED BY: 

## SEMI-VOLATILE ORGANICS EPA METHOD 8270D R4 (07)

PARAMETERS, ug/l	MDL	SWSL	Well #4	Well #5	Well #6	Well #7	Well #8
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	20.0	--- 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: GREENE CO. LANDFILL  
DAVID JONES  
P.O. BOX 543  
SNOW HILL, NC 28580

CLIENT ID: 6005

ANALYST: CHS  
DATE COLLECTED: 09/29/14 Page: 2  
DATE EXTRACTED: 10/02/14  
DATE ANALYZED: 10/22/14  
DATE REPORTED: 11/12/14

REVIEWED BY: 

## SEMI-VOLATILE ORGANICS EPA METHOD 8270D R4 (07)

PARAMETERS, ug/l	MDL	SWSL	Well #4	Well #5	Well #6	Well #7	Well #8
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-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: GREENE CO. LANDFILL  
DAVID JONES  
P.O. BOX 543  
SNOW HILL, NC 28580

CLIENT ID: 6005

ANALYST: CHS  
DATE COLLECTED: 09/29/14 Page: 3  
DATE EXTRACTED: 10/02/14  
DATE ANALYZED: 10/22/14  
DATE REPORTED: 11/12/14

REVIEWED BY: 

## SEMI-VOLATILE ORGANICS EPA METHOD 8270D R4 (07)

PARAMETERS, ug/l	MDL	SWSL	Well #4	Well #5	Well #6	Well #7	Well #8
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				

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: CHS  
DATE COLLECTED: 09/29/14  
DATE EXTRACTED: 10/02/14  
DATE ANALYZED: 10/22/14  
DATE REPORTED: 11/12/14

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REVIEWED BY: 

SEMI-VOLATILE ORGANICS  
EPA METHOD 8270D R4 (07)

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

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: CHS  
DATE COLLECTED: 09/29/14  
DATE EXTRACTED: 10/02/14  
DATE ANALYZED: 10/22/14  
DATE REPORTED: 11/12/14

Page: 5

REVIEWED BY: 

SEMI-VOLATILE ORGANICS  
EPA METHOD 8270D R4 (07)

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

# 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: CHS  
DATE COLLECTED: 09/29/14  
DATE EXTRACTED: 10/02/14  
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DATE REPORTED: 11/12/14

Page: 6

REVIEWED BY: 

## SEMI-VOLATILE ORGANICS EPA METHOD 8270D R4 (07)

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

# 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: 09/29/14  
DATE REPORTED: 11/12/14

Page: 1

REVIEWED BY: 

## LANDFILL APPENDIX II EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	Date Analyzed:		10/03/14	10/03/14	10/03/14	10/03/14	10/04/14
	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	3.80	--- U	--- U
3. Bromomethane	0.67	10.0	--- U	--- U	--- U	--- U	--- U
4. Chloroethane	0.48	10.0	--- U	--- U	4.20 J	0.80 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	--- 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	0.50 J	0.30 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	3.30 J	0.90 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	2.90	0.30 J	--- U
21. 1,2-Dichloroethane	0.21	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	0.30 J	0.40 J	--- 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	1.40 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	--- 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. 1,1,1,2,2-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	4.10	--- 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

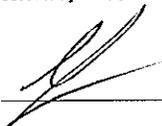
P.O. BOX 7085, 114 OAKMONT DRIVE  
GREENVILLE, N.C. 27835-7085

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: 09/29/14 Page: 2  
DATE REPORTED: 11/12/14

REVIEWED BY: 

LANDFILL APPENDIX II  
EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	Date Analyzed:		10/03/14	10/03/14	10/03/14	10/03/14	10/04/14
	MDL	SWSL	Upstream	Downstream	Well #4	Well #5	Well #6
48. Acrolein	40.57	53.0	--- U	--- U	--- U	--- U	--- U
49. Allyl Chloride	0.20	10.0	--- U	--- U	--- U	--- U	--- U
50. Chloroprene	0.21	20.0	--- U	--- U	--- U	--- U	--- U
51. 1,3-Dichlorobenzene	0.41	5.0	--- U	--- U	--- U	--- U	--- U
52. Dichlorodifluoromethane	0.51	5.0	--- U	--- U	--- U	--- U	--- U
53. 1,3-Dichloropropane	0.28	1.0	--- U	--- U	--- U	--- U	--- U
54. 2,2-Dichloropropane	0.17	15.0	--- U	--- U	--- U	--- U	--- U
55. 1,1-Dichloropropene	0.22	5.0	--- U	--- U	--- U	--- U	--- U
56. Ethyl Methacrylate	0.16	10.0	--- U	--- U	--- U	--- U	--- U
57. Hexachlorobutadiene	0.57	10.0	--- U	--- U	--- U	--- U	--- U
58. Isobutyl Alcohol	12.80	100.0	--- U	--- U	--- U	--- U	--- U
59. Methacrylonitrile	1.93	100.0	--- U	--- U	--- U	--- U	--- U
60. Methyl Methacrylate	0.25	30.0	--- U	--- U	--- U	--- U	--- U
61. Naphthalene	0.47	10.0	--- U	--- U	--- U	--- U	--- U
62. Propionitrile	3.26	150.0	--- U	--- U	--- U	--- U	--- U
63. 1,2,4-Trichlorobenzene	0.50	10.0	--- U	--- U	--- U	--- U	--- U
64. Acetonitrile	36.29	55.0	--- U	--- U	--- U	--- U	--- U

# 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: 09/29/14  
DATE REPORTED: 11/12/14

Page: 3

REVIEWED BY: 

## LANDFILL APPENDIX II EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	Date Analyzed:		10/04/14	10/04/14	10/08/14	10/08/14	10/08/14
	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	--- U	--- U	--- U	--- U
16. Bromochloromethane	0.27	3.0	--- U	--- U	--- U	--- U	--- U
17. Chloroform	0.25	5.0	--- U	0.30 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	0.21	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	0.20 J	--- 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.

# 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: 09/29/14  
DATE REPORTED: 11/12/14

Page: 4

REVIEWED BY: 

LANDFILL APPENDIX II  
EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	Date Analyzed:		10/04/14	10/04/14	10/08/14	10/08/14	10/08/14
	MDL	SWSL	Well #7	Well #8	Well #1R	Equipment Blank	Trip Blank
48. Acrolein	40.57	53.0	--- U	--- U	--- U	--- U	--- U
49. Allyl Chloride	0.20	10.0	--- U	--- U	--- U	--- U	--- U
50. Chloroprene	0.21	20.0	--- U	--- U	--- U	--- U	--- U
51. 1,3-Dichlorobenzene	0.41	5.0	--- U	--- U	--- U	--- U	--- U
52. Dichlorodifluoromethane	0.51	5.0	--- U	--- U	--- U	--- U	--- U
53. 1,3-Dichloropropane	0.28	1.0	--- U	--- U	--- U	--- U	--- U
54. 2,2-Dichloropropane	0.17	15.0	--- U	--- U	--- U	--- U	--- U
55. 1,1-Dichloropropene	0.22	5.0	--- U	--- U	--- U	--- U	--- U
56. Ethyl Methacrylate	0.16	10.0	--- U	--- U	--- U	--- U	--- U
57. Hexachlorobutadiene	0.57	10.0	--- U	--- U	--- U	--- U	--- U
58. Isobutyl Alcohol	12.80	100.0	--- U	--- U	--- U	--- U	--- U
59. Methacrylonitrile	1.93	100.0	--- U	--- U	--- U	--- U	--- U
60. Methyl Methacrylate	0.25	30.0	--- U	--- U	--- U	--- U	--- U
61. Naphthalene	0.47	10.0	--- U	--- U	--- U	--- U	--- U
62. Propionitrile	3.26	150.0	--- U	--- U	--- U	--- U	--- U
63. 1,2,4-Trichlorobenzene	0.50	10.0	--- U	--- U	--- U	--- U	--- U
64. Acetonitrile	36.29	55.0	--- U	--- U	--- U	--- U	--- U

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

CLIENT ID: 6005

ANALYST: MAO  
DATE COLLECTED: 09/29/14  
DATE REPORTED: 11/12/14

Page: 5

REVIEWED BY: 

LANDFILL APPENDIX II  
EPA METHOD 8260B R1 (96)

PARAMETERS, ug/l	Date Analyzed:		10/08/14
	MDL	SWSL	Field Blank
1. Chloromethane	0.77	1.0	--- U
2. Vinyl Chloride	0.63	1.0	--- U
3. Bromomethane	0.67	10.0	--- U
4. Chloroethane	0.48	10.0	--- U
5. Trichlorofluoromethane	0.24	1.0	--- U
6. 1,1-Dichloroethene	0.17	5.0	--- U
7. Acetone	9.06	100.0	--- U
8. Iodomethane	0.26	10.0	--- U
9. Carbon Disulfide	0.23	100.0	--- U
10. Methylene Chloride	0.64	1.0	--- U
11. trans-1,2-Dichloroethene	0.23	5.0	--- U
12. 1,1-Dichloroethane	0.20	5.0	--- U
13. Vinyl Acetate	0.20	50.0	--- U
14. Cis-1,2-Dichloroethene	0.25	5.0	--- U
15. 2-Butanone	2.21	100.0	--- U
16. Bromochloromethane	0.27	3.0	--- U
17. Chloroform	0.25	5.0	--- U
18. 1,1,1-Trichloroethane	0.19	1.0	--- U
19. Carbon Tetrachloride	0.22	1.0	--- U
20. Benzene	0.24	1.0	--- U
21. 1,2-Dichloroethane	0.21	1.0	--- U
22. Trichloroethene	0.23	1.0	--- U
23. 1,2-Dichloropropane	0.21	1.0	--- U
24. Bromodichloromethane	0.21	1.0	--- U
25. Cis-1,3-Dichloropropene	0.24	1.0	--- U
26. 4-Methyl-2-Pentanone	1.19	100.0	--- U
27. Toluene	0.23	1.0	--- U
28. trans-1,3-Dichloropropene	0.28	1.0	--- U
29. 1,1,2-Trichloroethane	0.25	1.0	--- U
30. Tetrachloroethene	0.17	1.0	--- U
31. 2-Hexanone	1.57	50.0	--- U
32. Dibromochloromethane	0.24	3.0	--- U
33. 1,2-Dibromoethane	0.26	1.0	--- U
34. Chlorobenzene	0.30	3.0	--- U
35. 1,1,1,2-Tetrachloroethane	0.22	5.0	--- U
36. Ethylbenzene	0.21	1.0	--- U
37. Xylenes	0.68	5.0	--- U
38. Dibromomethane	0.28	10.0	--- U
39. Styrene	0.19	1.0	--- U
40. Bromoform	0.20	3.0	--- U
41. 1,1,2,2-Tetrachloroethane	0.26	3.0	--- U
42. 1,2,3-Trichloropropane	0.43	1.0	--- U
43. 1,4-Dichlorobenzene	0.39	1.0	--- U
44. 1,2-Dichlorobenzene	0.32	5.0	--- U
45. 1,2-Dibromo-3-Chloropropane	0.34	13.0	--- U
46. Acrylonitrile	2.72	200.0	--- U
47. trans-1,4-Dichloro-2-Butene	0.42	100.0	--- 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

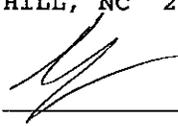
PHONE (252) 756-6208  
FAX (252) 756-0633

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

CLIENT ID: 6005

ANALYST: MAO  
DATE COLLECTED: 09/29/14  
DATE REPORTED: 11/12/14

Page: 6

REVIEWED BY: 

## LANDFILL APPENDIX II EPA METHOD 8260B R1(96)

PARAMETERS, ug/l	Date Analyzed:		10/08/14 Field Blank
	MDL	SWSL	
48. Acrolein	40.57	53.0	--- U
49. Allyl Chloride	0.20	10.0	--- U
50. Chloroprene	0.21	20.0	--- U
51. 1,3-Dichlorobenzene	0.41	5.0	--- U
52. Dichlorodifluoromethane	0.51	5.0	--- U
53. 1,3-Dichloropropane	0.28	1.0	--- U
54. 2,2-Dichloropropane	0.17	15.0	--- U
55. 1,1-Dichloropropene	0.22	5.0	--- U
56. Ethyl Methacrylate	0.16	10.0	--- U
57. Hexachlorobutadiene	0.57	10.0	--- U
58. Isobutyl Alcohol	12.80	100.0	--- U
59. Methacrylonitrile	1.93	100.0	--- U
60. Methyl Methacrylate	0.25	30.0	--- U
61. Naphthalene	0.47	10.0	--- U
62. Propionitrile	3.26	150.0	--- U
63. 1,2,4-Trichlorobenzene	0.50	10.0	--- U
64. Acetonitrile	36.29	55.0	--- U

Environment 1, Inc.  
 P.O. Box 7085, 114 Oakmont Dr.  
 Greenville, NC 27858  
 environment1inc.com  
 Phone (252) 756-6208 • Fax (252) 756-0633

CLIENT: 6005  
 Week: 39  
 GREENE CO. LANDFILL  
 DAVID JONES  
 P.O. BOX 543  
 SNOW HILL NC 28580

(252) 747-5720

CHAIN OF CUSTODY RECORD

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l OR ug/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	DISINFECTION		Field pH	BOD	COD	Nitrate	TOC	Alkalinity	Chloride	Cyanide	Sulfate	Metals	Sulfide	Conductivity	DO	Temperature	Ferrous Iron	Field Parameter	PARAMETERS/TESTS	
	DATE	TIME				CHLORINE	UV																		
Upstream	9-29-14	1335		20	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Downstream	9-29-14	1345		19	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Well #4	9-29-14	1100		22	21	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Well #5	9-29-14	1235		21	11	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Well #6	9-29-14	1315		22	11	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Well #7	9-29-14	1125		22	11	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Well #8	9-29-14	0855		21	11	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Well #1R	9-29-14	0935		23	20	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Piezometer #2	9-29-14	1350			1	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Equipment Blank	9-29-14	0845			10	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
Trip Blank					2	<input checked="" type="checkbox"/>	<input type="checkbox"/>																		
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	COMMENTS:																			
<i>Tom Beatty</i>	9-29-14 1505	<i>[Signature]</i>	9-29-14 305	<i>[Signature]</i>		SAMPLER MUST BE MAINTAINED DURING SHIPMENT/DELIVERY																			
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	SAMPLER MUST BE MAINTAINED DURING SHIPMENT/DELIVERY																			
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	SAMPLER MUST BE MAINTAINED DURING SHIPMENT/DELIVERY																			

PLEASE READ Instructions for completing this form 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. **NO 282052**

CHLORINE NEUTRALIZED AT COLLECTION.

pH CHECK (LAB)

CONTAINER TYPE, PG

CHEMICAL PRESERVATION

A - NONE D - NAOH  
 B - HNO<sub>3</sub> E - HCL  
 C - H<sub>2</sub>SO<sub>4</sub> F - ZINC ACETATE/NAOH  
 G - NA THIOSULFATE

CLASSIFICATION:

WASTEWATER (NPDES)  
 DRINKING WATER  
 DWQGW  
 SOLID WASTE SECTION

SAMPLES COLLECTED BY: *Robby / Tom*

SAMPLES RECEIVED IN LAB AT *0.4* °C

Environment 1, Inc.  
 P.O. Box 7085, 114 Oakmont Dr.  
 Greenville, NC 27858  
 environment1inc.com  
 Phone (252) 756-6208 • Fax (252) 756-0633

CHAIN OF CUSTODY RECORD

CLIENT: 6005 Week: 39

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

(252) 747-5720

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l OR ug/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	DISINFECTION			Field pH	BOD	COD	Nitrate	TOC	Alkalinity	Chloride	Cyanide	Sulfate	Metals	Sulfide	Conductivity	DO	Temperature	Ferrous Iron	Field Parameter	PARAMETERS/TESTS	CLASSIFICATION:	
	DATE	TIME				<input type="checkbox"/> CHLORINE	<input type="checkbox"/> UV	<input type="checkbox"/> NONE																			
Field Blank	9-29-14	0845			3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A	A	C	A	C	A	A	D	A	A	F	A	A	A	E			A - NONE D - NAOH B - HNO <sub>3</sub> E - HCL C - H <sub>2</sub> SO <sub>4</sub> F - ZINC ACETATE/NAOH G - NA THIOSULFATE	CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY <input checked="" type="checkbox"/> SOLID WASTE SECTION <input type="checkbox"/> WASTEWATER (NPDES) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> DWQ/GW
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	COMMENTS:																					
Tom Beardsly	9-29-14 1505	[Signature]	9/29/14 305	[Signature]		SAMPLER MUST PLACE A "C" FOR COMPOSITE SAMPLE OR A "G" FOR GRAB SAMPLE IN THE BLOCKS ABOVE FOR EACH PARAMETER REQUESTED.																					
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	SAMPLER MUST PLACE A "C" FOR COMPOSITE SAMPLE OR A "G" FOR GRAB SAMPLE IN THE BLOCKS ABOVE FOR EACH PARAMETER REQUESTED.																					
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	SAMPLER MUST PLACE A "C" FOR COMPOSITE SAMPLE OR A "G" FOR GRAB SAMPLE IN THE BLOCKS ABOVE FOR EACH PARAMETER REQUESTED.																					

PLEASE READ Instructions for completing this form 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. NO 282051

Environment I, Inc.  
 P.O. Box 7085, 114 Oakmont Dr.  
 Greenville, NC 27858  
 environmentinc.com  
 Phone (252) 756-6208 • Fax (252) 756-0633

**CHAIN OF CUSTODY RECORD**

CLIENT: 6005      Week: 39

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

(252) 747-5720

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l OR ug/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	DISINFECTION		EPA 8270D	8270D Dup. 1	EPA 8081B	8081B Duplicate	8260B App. II	8260 App. II 1	8260 App. II 2	8151A Landfill	CO2	ORP	Field Parameter	PARAMETERS/TESTS	CLASSIFICATION:	
	DATE	TIME				CHLORINE	UV														
Upstream	9-29-14	1935		20	4	<input type="checkbox"/>	<input type="checkbox"/>														
Downstream	9-29-14	1345		19	4	<input type="checkbox"/>	<input type="checkbox"/>														
Well #4	9-29-14	1100		22	21	<input type="checkbox"/>	<input type="checkbox"/>														
Well #5	9-29-14	1235		21	11	<input type="checkbox"/>	<input type="checkbox"/>														
Well #6	9-29-14	1315		22	11	<input type="checkbox"/>	<input type="checkbox"/>														
Well #7	9-29-14	1125		22	11	<input type="checkbox"/>	<input type="checkbox"/>														
Well #8	9-29-14	0855		21	11	<input type="checkbox"/>	<input type="checkbox"/>														
Well #1R	9-29-14	0935		23	20	<input type="checkbox"/>	<input type="checkbox"/>														
Piezometer #2	9-29-14	1358			1	<input type="checkbox"/>	<input type="checkbox"/>														
Equipment Blank	9-29-14	0845			10	<input type="checkbox"/>	<input type="checkbox"/>														
Trip Blank					2	<input type="checkbox"/>	<input type="checkbox"/>														
RELINQUISHED BY (SIG.)	DATE/TIME	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
<i>Tom Beardsley</i>	9-29-14	1505	<i>[Signature]</i>	9/29/14	<i>[Signature]</i>	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14	9/29/14
RELINQUISHED BY (SIG.)	DATE/TIME	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME
RELINQUISHED BY (SIG.)	DATE/TIME	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME

FORM #5

PLEASE READ instructions for completing this form 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. **No 282050**

CHLORINE NEUTRALIZED AT COLLECTION

pH CHECK (LAB)

CONTAINER TYPE, P/G

CHEMICAL PRESERVATION

A - NONE    D - NaOH  
 B - HNO<sub>3</sub>    E - HCL  
 C - H<sub>2</sub>SO<sub>4</sub>    F - ZINC ACETATE/NaOH  
 G - NATHIOSULFATE

CLASSIFICATION:

WASTEWATER (NPDES)  
 DRINKING WATER  
 DWO/GW  
 SOLID WASTE SECTION

CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY

SAMPLES COLLECTED BY: *Bobby / Tom*  
 (Please Print)

SAMPLES RECEIVED IN LAB AT 0.4 °C

COMMENTS:





Microseeps/Pace Analytical Energy Services, LLC  
220 William Pitt Way  
Pittsburgh, PA 15238  
Phone: (412) 826-5245  
Fax: (412) 826-3433

October 13, 2014

Steve Jones  
Environment 1, Inc.  
PO Box 7085  
114 Oakmont Drive  
Greenville, NC 27835

RE: **GREENE CO / 6005**

*Microseeps Workorder: 13495*

Dear Steve Jones:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, September 30, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbin Robl 10/13/2014  
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.  
Please email [info@microseeps.com](mailto:info@microseeps.com).

Total Number of Pages 14

Report ID: 13495 - 578309

Page 1 of 12



### CERTIFICATE OF ANALYSIS

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## LABORATORY ACCREDITATIONS & CERTIFICATIONS

<b>Accreditor:</b>	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
<b>Accreditation ID:</b>	02-00538
<b>Scope:</b>	NELAP Non-Potable Water and Solid & Hazardous Waste
<b>Accreditor:</b>	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
<b>Accreditation ID:</b>	89009003
<b>Scope:</b>	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
<b>Accreditor:</b>	NELAP: New Jersey, Department of Environmental Protection
<b>Accreditation ID:</b>	PA026
<b>Scope:</b>	Non-Potable Water; Solid and Chemical Materials
<b>Accreditor:</b>	NELAP: New York, Department of Health Wadsworth Center
<b>Accreditation ID:</b>	11815
<b>Scope:</b>	Non-Potable Water; Solid and Hazardous Waste
<b>Accreditor:</b>	State of Connecticut, Department of Public Health, Division of Environmental Health
<b>Accreditation ID:</b>	PH-0263
<b>Scope:</b>	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
<b>Accreditor:</b>	NELAP: Texas, Commission on Environmental Quality
<b>Accreditation ID:</b>	T104704453-09-TX
<b>Scope:</b>	Non-Potable Water
<b>Accreditor:</b>	State of New Hampshire
<b>Accreditation ID:</b>	299409
<b>Scope:</b>	Non-potable water
<b>Accreditor:</b>	State of Georgia
<b>Accreditation ID:</b>	Chapter 391-3-26
<b>Scope:</b>	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).



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### SAMPLE SUMMARY

Workorder: 13495 GREENE CO / 6005

Lab ID	Sample ID	Matrix	Date Collected	Date Received
134950001	WL1R	Water	9/29/2014 09:35	9/30/2014 11:00
134950002	WL1R	Bubble Strip	9/29/2014 09:35	9/30/2014 11:00
134950003	WEL4	Water	9/29/2014 11:00	9/30/2014 11:00
134950004	WEL4	Bubble Strip	9/29/2014 11:00	9/30/2014 11:00



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### ANALYTICAL RESULTS

Workorder: 13495 GREENE CO / 6005

Lab ID: 134950001  
 Sample ID: WL1R

Date Received: 9/30/2014 11:00 Matrix: Water  
 Date Collected: 9/29/2014 09:35

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
<b>EDonors - MICR</b>										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	0.058J	mg/l	0.10	0.012	1			10/2/2014 17:00	KB	
Acetic Acid	0.061J	mg/l	0.070	0.0080	1			10/2/2014 17:00	KB	
Propionic Acid	0.011U	mg/l	0.050	0.011	1			10/2/2014 17:00	KB	
Butyric Acid	0.0070U	mg/l	0.050	0.0070	1			10/2/2014 17:00	KB	
Pyruvic Acid	0.0090U	mg/l	0.15	0.0090	1			10/2/2014 17:00	KB	
i-Pentanoic Acid	0.0080U	mg/l	0.15	0.0080	1			10/2/2014 17:00	KB	
Pentanoic Acid	0.014U	mg/l	0.070	0.014	1			10/2/2014 17:00	KB	
i-Hexanoic Acid	0.10U	mg/l	0.20	0.10	1			10/2/2014 17:00	KB	
Hexanoic Acid	0.12U	mg/l	0.50	0.12	1			10/2/2014 17:00	KB	



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### ANALYTICAL RESULTS

Workorder: 13495 GREENE CO / 6005

Lab ID: 134950002

Date Received: 9/30/2014 11:00 Matrix: Bubble Strip

Sample ID: WL1R

Date Collected: 9/29/2014 09:35

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
------------	---------	-------	-----	-----	----	----------	----	----------	----	------

**RISK - MICR**

Analysis Desc: AM20GAX

Analytical Method: AM20GAX

Methane	0.90	ug/l	0.015	0.0060	1			10/11/2014 07:05		TD
Ethane	0.0013J	ug/l	0.010	0.0010	1			10/11/2014 07:05		TD
Ethene	0.0080U	ug/l	0.010	0.0080	1			10/11/2014 07:05		TD
Hydrogen	2.0	nM	0.60	0.13	1			10/11/2014 07:05		TD



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### ANALYTICAL RESULTS

Workorder: 13495 GREENE CO / 6005

Lab ID: 134950003

Date Received: 9/30/2014 11:00 Matrix: Water

Sample ID: WEL4

Date Collected: 9/29/2014 11:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
<b>EDonors - MICR</b>										
Analysis Desc: AM23G			Analytical Method: AM23G							
Lactic Acid	0.055J	mg/l	0.10	0.012	1			10/2/2014 19:19	KB	
Acetic Acid	0.062J	mg/l	0.070	0.0080	1			10/2/2014 19:19	KB	
Propionic Acid	0.011U	mg/l	0.050	0.011	1			10/2/2014 19:19	KB	
Butyric Acid	0.0070U	mg/l	0.050	0.0070	1			10/2/2014 19:19	KB	
Pyruvic Acid	0.0090U	mg/l	0.15	0.0090	1			10/2/2014 19:19	KB	
i-Pentanoic Acid	0.0080U	mg/l	0.15	0.0080	1			10/2/2014 19:19	KB	
Pentanoic Acid	0.014U	mg/l	0.070	0.014	1			10/2/2014 19:19	KB	
i-Hexanoic Acid	0.10U	mg/l	0.20	0.10	1			10/2/2014 19:19	KB	
Hexanoic Acid	0.12U	mg/l	0.50	0.12	1			10/2/2014 19:19	KB	



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### ANALYTICAL RESULTS

Workorder: 13495 GREENE CO / 6005

Lab ID: **134950004** Date Received: 9/30/2014 11:00 Matrix: Bubble Strip  
 Sample ID: **WEL4** Date Collected: 9/29/2014 11:00

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
<b>RISK - MICR</b>										
Analysis Desc: AM20GAX			Analytical Method: AM20GAX							
Methane	6900	ug/l	0.015	0.0060	1			10/11/2014 07:18		TD
Ethane	0.0010U	ug/l	0.010	0.0010	1			10/11/2014 07:18		TD
Ethene	0.13	ug/l	0.010	0.0080	1			10/11/2014 07:18		TD
Hydrogen	2.6	nM	0.60	0.13	1			10/11/2014 07:18		TD



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## ANALYTICAL RESULTS QUALIFIERS

Workorder: 13495 GREENE CO / 6005

---

### DEFINITIONS/QUALIFIERS

**Disclaimer :** The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20Gax, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

**MDL** Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.

**PQL** Practical Quantitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.

**ND** Not detected at or above reporting limit.

**DF** Dilution Factor.

**S** Surrogate.

**RPD** Relative Percent Difference.

**% Rec** Percent Recovery.

**U** Indicates the compound was analyzed for, but not detected at or above the noted concentration.

**J** Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).



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**QUALITY CONTROL DATA**

Workorder: 13495 GREENE CO / 6005

QC Batch: EDON/2272 Analysis Method: AM23G  
 QC Batch Method: AM23G  
 Associated Lab Samples: 134950001, 134950003

METHOD BLANK: 30645

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>EDonors</b>				
Lactic Acid	mg/l	0.012U	0.012	
Acetic Acid	mg/l	0.036J	0.0080	
Propionic Acid	mg/l	0.011U	0.011	
Butyric Acid	mg/l	0.0070U	0.0070	
Pyruvic Acid	mg/l	0.0090U	0.0090	
i-Pentanoic Acid	mg/l	0.0080U	0.0080	
Pentanoic Acid	mg/l	0.014U	0.014	
i-Hexanoic Acid	mg/l	0.10U	0.10	
Hexanoic Acid	mg/l	0.12U	0.12	

LABORATORY CONTROL SAMPLE: 30646

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>EDonors</b>						
Lactic Acid	mg/l	2	2.0	101	70-130	
Acetic Acid	mg/l	2	2.0	103	70-130	
Propionic Acid	mg/l	2	2.2	108	70-130	
Butyric Acid	mg/l	2	2.0	102	70-130	
Pyruvic Acid	mg/l	2	2.2	108	70-130	
i-Pentanoic Acid	mg/l	2	1.9	97	70-130	
Pentanoic Acid	mg/l	2	1.9	95	70-130	
i-Hexanoic Acid	mg/l	2	1.9	97	70-130	
Hexanoic Acid	mg/l	2	1.9	94	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 30647 30648 Original: 134950001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>EDonors</b>											
Lactic Acid	mg/l	0.058	2	2.0	2.0	100	99	70-130	1	30	
Acetic Acid	mg/l	0.061	2	2.1	2.1	103	102	70-130	0.98	30	
Propionic Acid	mg/l	0	2	2.2	2.2	108	109	70-130	0.92	30	



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**QUALITY CONTROL DATA**

Workorder: 13495 GREENE CO / 6005

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 30647                      30648                      Original: 134950001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Butyric Acid	mg/l	0	2	2.1	2.2	106	109	70-130	2.8	30	
Pyruvic Acid	mg/l	0	2	2.1	2.1	106	107	70-130	0.94	30	
i-Pentanoic Acid	mg/l	0	2	2.0	2.0	99	100	70-130	1	30	
Pentanoic Acid	mg/l	0	2	2.0	2.1	102	105	70-130	2.9	30	
i-Hexanoic Acid	mg/l	0	2	2.3	2.2	114	110	70-130	3.6	30	
Hexanoic Acid	mg/l	0	2	1.9	1.9	97	97	70-130	0	30	



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### QUALITY CONTROL DATA

Workorder: 13495 GREENE CO / 6005

QC Batch: DISG/4093 Analysis Method: AM20GAX  
 QC Batch Method: AM20GAX  
 Associated Lab Samples: 134950002, 134950004

METHOD BLANK: 30895

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>RISK</b>				
Methane	ug/l	0.0060U	0.0060	
Ethane	ug/l	0.0010U	0.0010	
Ethene	ug/l	0.0080U	0.0080	

METHOD BLANK: 30897

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>RISK</b>				
Hydrogen	nM	0.13U	0.13	

LABORATORY CONTROL SAMPLE & LCSD: 30898 30901

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>RISK</b>										
Methane	ug/l	8.3	8.8	8.8	106	106	80-120	0	20	
Ethane	ug/l	6.5	6.8	6.8	105	106	80-120	0.95	20	
Ethene	ug/l	16	17	17	104	105	80-120	0.96	20	

LABORATORY CONTROL SAMPLE & LCSD: 30900 30903

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>RISK</b>										
Hydrogen	nM	24	23	23	94	95	80-120	1.1	20	



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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 13495 GREENE CO / 6005

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
134950001	WL1R			AM23G	EDON/2272
134950003	WEL4			AM23G	EDON/2272
134950002	WL1R			AM20GAX	DISG/4093
134950004	WEL4			AM20GAX	DISG/4093



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13495

<b>Section A</b> Required Client Information: Company: ENVIRONMENTAL Address: 14 OAKWOOD DR Email To: GREENVILLE@PAOL.COM Project: 256-6288 Requested Due Date/TAT: 256-6777		<b>Section B</b> Required Project Information: Report To: STAVE JOHNS Copy To: Purchase Order No.: Project Name: GREENE CO. Project Number: 6005		<b>Section C</b> Invoice Information: Attention: Company Name: SANDS Address: Pace Quote Reference: Pace Project Manager: Pace Profile #:	
REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>		Site Location STATE: NC		Requested Analysis Filtered (Y/N)	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.								
			COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME					DATE	TIME	Y	N				
1	USLR					5			HYDROGEN METHYLENE LLUPA											
2	USRL																			
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
ADDITIONAL COMMENTS: FACILITY ID# 4002																				
RELINQUISHED BY / AFFILIATION			DATE			TIME			ACCEPTED BY / AFFILIATION			DATE			TIME			SAMPLE CONDITIONS		
Bobby Joe / E1			9-29-14			3:15P			[Signature]			E1			9/29/14			5:2 Y N		
[Signature]			9-30-14			11:00			[Signature]			PACES			9-30-14			5:2 Y N		

<b>SAMPLER NAME AND SIGNATURE</b> PRINT Name of SAMPLER: Bobby Joe SIGNATURE of SAMPLER: [Signature]					DATE Signed (MM/DD/YY): 9-29-14				
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)						

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
F-ALL-Q-020(rev.07, 15-May-2007)

ORIGINAL

# Cooler Receipt Form

Client Name: Environment 1 Project: Greene Co. Lab Work Order: 13495

16005

**A. Shipping/Container Information (circle appropriate response)**

Courier: FedEx  UPS  USPS  Client Other: \_\_\_\_\_ Air bill Present:  Yes  No

Tracking Number: 12 203 705 01 7526 8779

Custody Seal on Cooler/Box Present: Yes  No  Seals Intact: Yes  No

Cooler/Box Packing Material:  Bubble Wrap  Absorbent  Foam Other: \_\_\_\_\_

Type of Ice:  Wet  Blue  None Ice Intact:  Yes  Melted

Cooler Temperature: 5.20C Radiation Screened: Yes  No  Chain of Custody Present:  Yes  No

Comments: \_\_\_\_\_

**B. Laboratory Assignment/Log-in (check appropriate response)**

	YES	NO	N/A	Comment Reference non-Conformanc
Chain of Custody properly filled out	✓			
Chain of Custody relinquished	✓			
Sampler Name & Signature on COC	✓			
Containers intact	✓			
Were samples in separate bags	✓			
Sample container labels match COC Sample name/date and time collected	✓			
Sufficient volume provided	✓			
Microseeps containers used	✓			
Are containers properly preserved for the requested testing? (as labeled)	✓			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			✓	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			✓	

Comments: \_\_\_\_\_

Cooler contents examined/received by: LJ Date: 9.30.14

Project Manager Review: AK Date: 9/30/14

# 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 A

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

DATE COLLECTED: 09/29/14  
DATE REPORTED : 11/12/14

REVIEWED BY: 

PARAMETERS	MDL	Upstream	Downstream	Well	Well	Well	Analysis		Method
		SWSL		#4	#5	#6	Date	Analyst	Code
Antimony, Total Dissolved, ug/l	0.02	6.0	0.16 J	--- U	0.74 J	--- U	0.14 J	10/15/14 LFJ	EPA200.8
Arsenic, Total Dissolved, ug/l	0.05	10.0	1.7 J	0.83 J	3.1 J	0.44 J	0.13 J	10/20/14 LFJ	EPA200.8
Barium, Total Dissolved, ug/l	0.06	100.0	24.7 J	49.7 J	34.7 J	16.6 J	12.9 J	10/15/14 LFJ	EPA200.8
Beryllium, Total Dissolved, ug/l	0.03	1.0	--- U	--- U	--- U	0.06 J	0.06 J	10/15/14 LFJ	EPA200.8
Cadmium, Total Dissolved, ug/l	0.05	1.0	--- U	--- U	0.23 J	0.15 J	0.08 J	10/20/14 LFJ	EPA200.8
Cobalt, Total Dissolved, ug/l	0.02	10.0	0.38 J	0.57 J	1.4 J	0.35 J	--- U	10/15/14 LFJ	EPA200.8
Copper, Total Dissolved, ug/l	0.06	10.0	0.38 J	1.2 J	0.74 J	0.70 J	1.3 J	10/15/14 LFJ	EPA200.8
Chromium, Total Dissolved, ug/l	0.04	10.0	0.96 J	0.86 J	--- U	--- U	--- U	10/15/14 LFJ	EPA200.8
Lead, Total Dissolved, ug/l	0.02	10.0	0.42 J	0.59 J	--- U	--- U	--- U	10/15/14 LFJ	EPA200.8
Mercury, Total Dissolved, ug/l	0.01	0.20	--- U	--- U	--- U	--- U	--- U	10/09/14 MTM	245.1 R3
Nickel, Total Dissolved, ug/l	0.45	50.0	0.89 J	1.2 J	3.7 J	1.5 J	0.62 J	10/15/14 LFJ	EPA200.8
Selenium, Total Dissolved, ug/l	0.06	10.0	0.19 J	0.17 J	0.54 J	--- U	--- U	10/20/14 LFJ	EPA200.8
Silver, Total Dissolved, ug/l	0.03	10.0	--- U	--- U	--- U	--- U	--- U	10/20/14 LFJ	EPA200.8
Thallium, Total Dissolved, ug/l	0.02	5.5	--- U	--- U	--- U	--- U	--- U	10/20/14 LFJ	EPA200.8
Tin, Total Dissolved, ug/l	0.06	100.0	0.14 J	0.31 J	0.18 J	0.06 J	--- U	10/15/14 LFJ	EPA200.8
Vanadium, Total Dissolved, ug/l	0.07	25.0	1.5 J	1.2 J	0.52 J	0.55 J	0.79 J	10/15/14 LFJ	EPA200.8
Zinc, Total Dissolved, ug/l	0.47	10.0	3.0 J	4.1 J	1.8 J			10/29/14 MEL	EPA200.8
Zinc, Total Dissolved, ug/l	0.47	10.0				4.9 J	5.8 J	10/20/14 LFJ	EPA200.8

# 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 A

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

DATE COLLECTED: 09/29/14  
DATE REPORTED : 11/12/14

REVIEWED BY: 

PARAMETERS	MDL	Well		Well #1R	Analysis		Method		
		SWSL #7	#8		Date	Analyst		Code	
Antimony, Total Dissolved, ug/l	0.02	6.0	0.14 J	---	U	0.17 J	10/15/14 LFFJ	EPA200.8	
Arsenic, Total Dissolved, ug/l	0.05	10.0	0.30 J	0.14 J	---	U	10/20/14 LFFJ	EPA200.8	
Barium, Total Dissolved, ug/l	0.06	100.0	17.7 J	26.8 J	---	U	10/15/14 LFFJ	EPA200.8	
Beryllium, Total Dissolved, ug/l	0.03	1.0	---	---	U	U	10/15/14 LFFJ	EPA200.8	
Cadmium, Total Dissolved, ug/l	0.05	1.0	---	---	U	U	10/20/14 LFFJ	EPA200.8	
Cobalt, Total Dissolved, ug/l	0.02	10.0	0.60 J	0.28 J	---	U	10/15/14 LFFJ	EPA200.8	
Copper, Total Dissolved, ug/l	0.06	10.0	0.48 J	0.18 J	---	U	2.5 J	10/15/14 LFFJ	EPA200.8
Chromium, Total Dissolved, ug/l	0.04	10.0	---	---	U	U	0.39 J	10/15/14 LFFJ	EPA200.8
Lead, Total Dissolved, ug/l	0.02	10.0	0.18 J	0.41 J	---	U	0.56 J	10/15/14 LFFJ	EPA200.8
Mercury, Total Dissolved, ug/l	0.01	0.20	---	---	U	U	---	10/09/14 MTM	245.1 R3
Nickel, Total Dissolved, ug/l	0.45	50.0	0.92 J	0.45 J	---	U	1.6 J	10/15/14 LFFJ	EPA200.8
Selenium, Total Dissolved, ug/l	0.06	10.0	---	---	U	U	0.22 J	10/20/14 LFFJ	EPA200.8
Silver, Total Dissolved, ug/l	0.03	10.0	---	---	U	U	---	10/20/14 LFFJ	EPA200.8
Thallium, Total Dissolved, ug/l	0.02	5.5	---	---	U	U	0.15 J	10/20/14 LFFJ	EPA200.8
Tin, Total Dissolved, ug/l	0.06	100.0	---	---	U	U	0.21 J	10/15/14 LFFJ	EPA200.8
Vanadium, Total Dissolved, ug/l	0.07	25.0	1.1 J	0.76 J	---	U	0.22 J	10/15/14 LFFJ	EPA200.8
Zinc, Total Dissolved, ug/l	0.47	10.0	4.2 J	0.9 J	---	U	41	10/20/14 LFFJ	EPA200.8

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

Environment 1, Inc.  
 P.O. Box 7085, 114 Oakmont Dr.  
 Greenville, NC 27858  
 environmentalinc.com  
 Phone (252) 756-6208 • Fax (252) 756-0633

### CHAIN OF CUSTODY RECORD

Page 1 of 1

CLIENT: 6005 A      Week: 39

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

(252) 747-5720

SAMPLE LOCATION	COLLECTION		TOTAL CHLORINE, mg/l OR ug/l AT COLLECTION	TEMPERATURE, °C AT COLLECTION	# OF CONTAINERS	Metals (Dis.)	DISINFECTION	CHLORINE NEUTRALIZED AT COLLECTION
	DATE	TIME						
Upstream	9-29-14	1335			1	<input checked="" type="checkbox"/>	A	
Downstream	9-29-14	1345			1	<input checked="" type="checkbox"/>	P	
Well #4	9-29-14	1100			1	<input checked="" type="checkbox"/>		
Well #5	9-29-14	1235			1	<input checked="" type="checkbox"/>		
Well #6	9-29-14	1315			1	<input checked="" type="checkbox"/>		
Well #7	9-29-14	1125			1	<input checked="" type="checkbox"/>		
Well #8	9-29-14	0855			1	<input checked="" type="checkbox"/>		
Well #1R	9-29-14	0935			1	<input checked="" type="checkbox"/>		
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	COMMENTS:	PARAMETERS/TESTS	CLASSIFICATION:
<i>Tom Barry</i>	9-29-14 1505	<i>[Signature]</i>	9-29-14 1505	<i>[Signature]</i>	9-29-14 1505		A - NONE D - NaOH B - HNO <sub>3</sub> E - HCL C - H <sub>2</sub> SO <sub>4</sub> F - ZINC ACETATE/NaOH G - Na THIOSULFATE	<input type="checkbox"/> WASTEWATER (NPDES) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> DMO/GW <input checked="" type="checkbox"/> SOLID WASTE SECTION
RELINQUISHED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	RECEIVED BY (SIG.)	DATE/TIME	COMMENTS:	PARAMETERS/TESTS	CLASSIFICATION:
<i>Tom Barry</i>		<i>[Signature]</i>		<i>[Signature]</i>				

PLEASE READ Instructions for completing this form 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. **NO 282048**