

Paper Report

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

Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

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

Instructions:

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

Solid Waste Monitoring Data Submittal Information

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

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

Name: Joan Smyth, P.G.

Phone: 919-828-0577 x 122

E-mail: joan@rsgengineers.com

| Facility name: | Facility Address: | Facility Permit # | NC Landfill Rule: (.0500 or .1600) | Actual sampling dates (e.g., October 20-24, 2006) |
|----------------------------------|---|-------------------|---------------------------------------|--|
| Closed Avery County MSW Landfill | Avery County Landfill Brushy Creek Road Spruce Pine, NC 28777 | 06-01 | .0500 | 11/27/2007 |

Environmental Status: (Check all that apply)

- Initial/Background Monitoring Detection Monitoring Assessment Monitoring Corrective Action

Type of data submitted: (Check all that apply)

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

Notification attached?

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

Certification

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

Joan Smyth, P.G.

Senior Hydrogeologist

919-828-0577 x122

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Joan Smyth
Signature

11/11/08
Date

Affix NC Licensed Professional Geologist/Engineer Seal here:



Closed Avery County MSW Landfill

Ground Water Monitoring Report

November 2007 Semi-annual Monitoring Event

**Avery County Landfill
Newland, North Carolina
NC Solid Waste Permit # 06-01**

Prepared for:
Avery County Solid Waste
175 Linville st.
Newland, North Carolina 28657

January 2008



Richardson Smith Gardner & Associates, Inc.
Engineering and Geological Services
14 North Boylan Avenue
Raleigh, North Carolina 27603

Fall 2007 Ground Water Monitoring Report

**Avery County MSW Landfill
Newland, North Carolina
NC Solid Waste Permit # 06-01**

Prepared for:

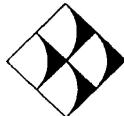
**Avery County Solid Waste
175 Linville st.
Newland, North Carolina 28657**

RSG Project No. **Avery 07-1**


Joan A. Smyth, P.G.
Senior Hydrogeologist



January 2008



RICHARDSON SMITH GARDNER & ASSOCIATES
Engineering and Geological Services
14 N. Boylan Avenue
Raleigh, North Carolina 27603

**Avery County – MSW Landfill
Semi-annual Ground Water Monitoring Report
November 2007 Sampling Event**

1.0 INTRODUCTION1

2.0 SAMPLING PROCEDURES1

3.0 FIELD AND LABORATORY RESULTS1

 3.1 Laboratory Analysis.....1

 3.2 Field and Laboratory Results1

4.0 GROUND WATER CHARACTERIZATION.....2

5.0 CONCLUSIONS.....2

FIGURES

Figure 1 – Ground Water Potentiometric Map

TABLES

Table 1 – Ground Water Elevation Data
Table 2 – Field Parameter Results
Table 3 – Detected Constituents

APPENDICES

Appendix A – Laboratory Analytical Reports

1.0 Introduction

The Avery County Landfill, currently operating under Solid Waste Permit # 06-01 (MSW) is required to submit semi-annual ground water monitoring reports for MSW landfill. This report presents the results of the second semi-annual monitoring event for 2007. This event was performed to comply with the semi-annual monitoring schedule required by NC Solid Waste Regulations.

The ground water monitoring network for the MSW landfill includes three (3) ground water monitoring wells (MW-1, MW-2 & MW-3) and two surface water locations (SW-1 & SW-2). This report includes summaries of the field procedures and laboratory analyses for the MSW site. Also included are summary tables of the results and laboratory analytical reports.

2.0 Sampling Procedures

The sampling event, performed by trained personnel from RSG on 11/27/2007, consisted of collecting samples from three (3) ground water wells, shown in **Figure 1**. This sampling was conducted in accordance with the approved site Sampling and Analysis Plan. Surface water samples were collected from two locations (SW-1 and SW-2) from the landfill.

Sampling methods followed the protocol outlined in the North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities (NCDENR, DWM). The depth to water in each well was gauged prior to purging and sampling. Field measurements of pH, specific conductivity, and temperature were obtained from each well. Water table elevations and field parameter results are included in **Tables 1 and 2**, respectively.

All samples were collected by RSG personnel in laboratory prepared containers for the specified analytical procedures. Samples were collected using new factory sealed teflon bailers. Ground water samples were properly preserved, placed on ice, and transported to the laboratory facility (Environment 1, Inc.), within the specified holding times for each analysis.

3.0 Field and Laboratory Results

3.1 Laboratory Analysis

All samples were transported to the laboratory facility under proper chain of custody analyzed at the specified DWM Practical Quantitation Limits for Appendix I constituents. The laboratory report is attached for your review as **Appendix A**.

3.2 Field and Laboratory Results

Ground water and field measurements included in **Table 2**. Detected constituents are presented in **Table 3**.

Five (5) inorganic constituents (barium, cobalt, copper, lead and zinc) shown in **Table 3**, were detected above the PQL in two wells (MW-1 & MW-2). Of these, two (2) constituents: cobalt in MW-1 and lead in MW-2 were found at concentrations above their 2L standard. **Table 3** summarizes the list of constituents detected.

One organic constituent (1, 4-dichlorobenzene) shown in **Table 3**, was detected above the PQL in two wells (MW-1 & MW-3). This constituent was not detected above the 2L standard. Constituents detected below the PQL are denoted as “J” values and are also included in **Table 3**.

4.0 Ground Water Characterization

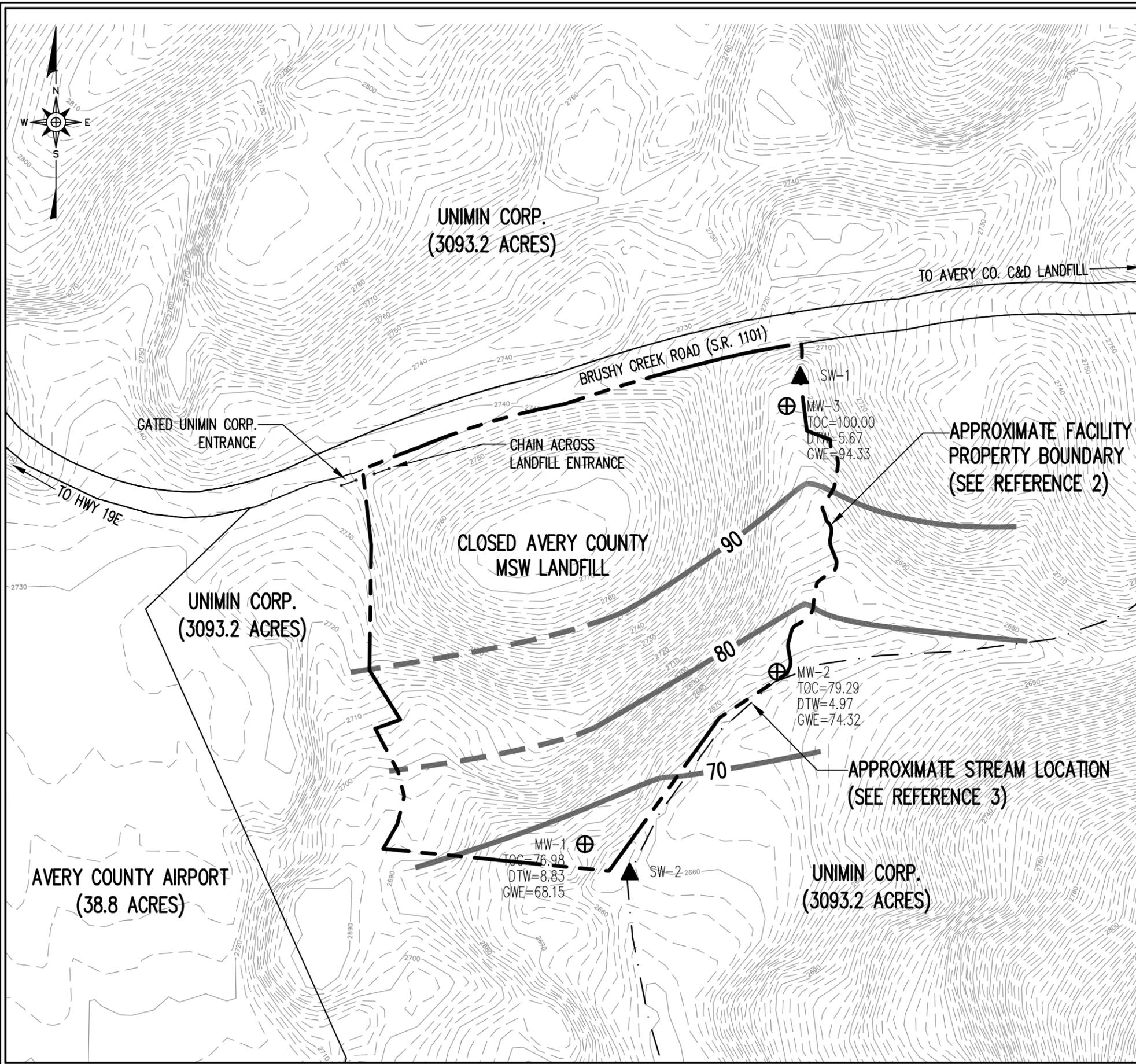
A potentiometric surface map was prepared from ground water elevation data collected during this sampling event. The data indicates that ground water is flowing generally to the south and southeast across most of the site. Hydraulic conductivity data was not available for these wells so ground water velocities could not be calculated. The potentiometric surface map (**Figure 1**) is also attached for your review.

5.0 Conclusions

The results of this monitoring event indicate detectable levels of five (5) inorganic constituents and one (1) organic constituent. The inorganic constituents are likely due to suspended solids in the samples. The next ground water monitoring event is scheduled for April 2008. A report will be submitted to NCDENR upon receipt of laboratory analyses.

Figures

G:\CAD\Avery County\Avery 07-2\sheets\AVERY-B0010.dwg - 1/10/2008 4:56 PM



LEGEND

- EXISTING 10' CONTOUR (SEE REFERENCE 1)
- EXISTING 2' CONTOUR
- PROPERTY LINE (SEE REFERENCE 2)
- ADJACENT PROPERTY LINE
- GIS STREAM LOCATION (SEE REFERENCE 3)
- POTENTIOMETRIC SURFACE (DASHED WHERE INFERRED)
- EXISTING MONITORING WELL
- EXISTING SURFACE WATER MONITORING POINT
- TOC=** TOP OF CASING ELEVATION (SEE NOTE 2)
- DTW=** DEPTH TO WATER
- GWE=** GROUND WATER ELEVATION

NOTES

1. DEPTH TO WATER MEASUREMENTS OBTAINED BY RSG PERSONNEL ON NOVEMBER 27, 2007.
2. TOP OF CASING ELEVATIONS SURVEYED IN REFERENCE TO AN ARBITRARY ELEVATION OF 100' AT MW-3 BY OTHERS.

REFERENCES

1. OVERALL SITE TOPOGRAPHY FROM NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, DATA GENERATED FROM LIDAR DATED MARCH 2005.
2. SITE PROPERTY LINE AND ADJACENT PROPERTIES FROM AVERY COUNTY MAPPING DEPARTMENT.
3. GIS STREAM LOCATIONS OBTAINED FROM THE AVERY COUNTY MAPPING DEPARTMENT.



RICHARDSON SMITH GARDNER & ASSOCIATES
www.rsgengineers.com
14 N. Boylan Ave. Raleigh, N.C. 27603
ph: 919-826-0577 fax: 919-826-3899

| | | | |
|-------------|----------|-------------|-------------|
| FIGURE NO. | 1 | FILE NAME | AVERY-B0010 |
| SCALE: | AS SHOWN | PROJECT NO. | AVERY 07-2 |
| CHECKED BY: | J.A.S. | DATE: | Jan. 2008 |
| DRAWN BY: | J.A.L. | | |

TITLE:
**AVERY COUNTY
 SOLID WASTE DEPARTMENT
 AVERY COUNTY MSW LANDFILL
 POTENTIOMETRIC MAP FALL 2007**

Tables

Table 1
Avery County MSW Landfill
Ground Water Elevation Data
11/27/2007

| Well | TOC Elevation (feet) | Depth to Water (feet) | GW Elev (feet) |
|------|----------------------|-----------------------|----------------|
| MW-1 | 76.98 | 8.83 | 68.15 |
| MW-2 | 79.29 | 4.97 | 74.32 |
| MW-3 | 100 | 5.67 | 94.33 |

Notes:

TOC - Top of casing elevation. These elevations were surveyed by others to an arbitrary datum of 100 feet at MW-3.

Depth to Water - Measured from TOC.

GW Elev. - Ground water elevation in reference to the arbitrary TOC datum shown above.

Table 2
Avery County MSW Landfill
Field Parameters
11/27/2007

| Well Identification # | Static Water Level (ft) * (DTW) | Temperature (°Celsius) | Turbidity (NTU) | Specific Conductivity (uS/cm) | pH |
|-----------------------|------------------------------------|------------------------|-----------------|-------------------------------|-----|
| MW-1 | 8.83 | 12 | 2.1 | 250 | 6 |
| MW-2 | 4.97 | 12 | 68 | 50 | 6.2 |
| MW-3 | 5.67 | 12 | 66.1 | 160 | 6.2 |
| SW-1 | nm | 9 | 6.27 | 80 | 7.1 |
| SW-2 | nm | 8 | 5.6 | 20 | 7.3 |

nm = Not Measured

Table 3
Avery County MSW Landfill
Detected Inorganic and Organic Constituents
11/27/2007

| Constituents | PQL | 2L | MW-1 | MW-2 | MW-3 | SW-1 | SW-2 |
|------------------------|-----|-------|------------|-----------|----------|--------|--------|
| Antimony | 6 | --- | ND | 0.2 J | ND | 0.4 J | 0.1 J |
| Arsenic | 10 | 50 | 1 J | 2.2 J | 1.4 J | ND | ND |
| Barium | 100 | 2000 | 168 | 29.4 J | 36.3 J | 13.5 J | 11.4 J |
| Beryllium | 1 | --- | 0.1 J | 0.2 J | ND | ND | ND |
| Cadmium | 1 | 5 | 1 | 0.4 J | ND | ND | ND |
| Cobalt | 10 | --- | 18 | 3.2 J | 3.9 J | ND | ND |
| Copper | 10 | 1000 | 2.7 J | 50 | 0.8 J | 0.7 J | 0.4 J |
| Lead | 10 | 15 | 1.2 J | 16 | 0.2 J | 0.1 J | ND |
| Nickel | 50 | 100 | 4.1 J | 1.2 J | ND | ND | ND |
| Selenium | 10 | 50 | 2 J | 0.7 J | 0.4 J | ND | ND |
| Total Chromium | 10 | 50 | 0.3 J | 2 J | ND | ND | ND |
| Vanadium | 25 | --- | 1.6 J | 5.4 J | 1.1 J | ND | ND |
| Thallium | 5 | --- | 0.1 J | ND | ND | ND | ND |
| Zinc | 10 | 2100 | 35 | 3.5 J | 2.1 J | 5.3 J | 1.5 J |
| 1,1-Dichloroethane | 5 | 700 | 0.8 J | ND | 0.3 J | ND | 0.3 J |
| 1,4-Dichlorobenzene | 1 | 75 | 1.2 | ND | 1 | ND | ND |
| Acetone | 100 | 700 | ND | 2 J | 1.5 J | ND | 7.2 J |
| Benzene | 1 | 1 | 0.7 J | ND | 0.4 J | ND | ND |
| Chlorobenzene | 3 | 50 | 0.2 J | ND | ND | ND | ND |
| Chloroethane | 10 | 2800 | 0.9 J | ND | 0.3 J | ND | 1.5 J |
| Cis-1,2-Dichloroethene | 5 | 70 | 0.9 J | ND | 0.9 J | ND | ND |
| Vinyl Chloride | 1 | 0.015 | ND | ND | 0.5 J | ND | ND |

ND - Not detected at or above PQL
Shading - Levels above 2L standard or no 2L standard
Bold Letters - Constituent detected above PQL
J - Detected constituents below PQL limit

All PQLs, 2L Standards and Results are in ug/l.

Appendix A

Laboratory Analytical Report

Environment 1, Incorporated

REC'D JAN 1 2008

Drinking Water ID: 37713
Wastewater ID: 10

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

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

ID#: 6056

AVERY COUNTY LANDFILL (OLD)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH ,NC 27603

DATE COLLECTED: 11/27/07
DATE REPORTED : 12/11/07

REVIEWED BY: 

| PARAMETERS | MDL | SWSL | MW-1 | MW-2 | MW-3 | SW-1 | SW-2 | Analysis | | Method |
|----------------------|------|-------|-------|--------|--------|--------|--------|----------|---------|----------|
| | | | | | | | | Date | Analyst | |
| Antimony, ug/l | 0.05 | 6.0 | --- U | 0.2 J | --- U | 0.4 J | 0.1 J | 12/05/07 | CMF | EPA200.8 |
| Arsenic, ug/l | 0.47 | 10.0 | 1.0 J | 2.2 J | 1.4 J | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Barium, ug/l | 0.04 | 100.0 | 168 | 29.4 J | 36.3 J | 13.5 J | 11.4 J | 12/05/07 | CMF | EPA200.8 |
| Beryllium, ug/l | 0.08 | 1.0 | 0.1 J | 0.2 J | --- U | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Cadmium, ug/l | 0.06 | 1.0 | 1 | 0.4 J | --- U | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Cobalt, ug/l | 0.41 | 10.0 | 18 | 3.2 J | 3.9 J | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Copper, ug/l | 0.20 | 10.0 | 2.7 J | 50 | 0.8 J | 0.7 J | 0.4 J | 12/05/07 | CMF | EPA200.8 |
| Total Chromium, ug/l | 0.24 | 10.0 | 0.3 J | 2.0 J | --- U | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Lead, ug/l | 0.07 | 10.0 | 1.2 J | 16 | 0.2 J | 0.1 J | --- U | 12/05/07 | CMF | EPA200.8 |
| Nickel, ug/l | 0.66 | 50.0 | 4.1 J | 1.2 J | --- U | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Selenium, ug/l | 0.35 | 10.0 | 2.0 J | 0.7 J | 0.4 J | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Silver, ug/l | 0.52 | 10.0 | --- U | --- U | --- U | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Thallium, ug/l | 0.07 | 5.0 | 0.1 J | --- U | --- U | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Vanadium, ug/l | 0.42 | 25.0 | 1.6 J | 5.4 J | 1.1 J | --- U | --- U | 12/05/07 | CMF | EPA200.8 |
| Zinc, ug/l | 0.20 | 10.0 | 35 | 3.5 J | 2.1 J | 5.3 J | 1.5 J | 12/05/07 | CMF | EPA200.8 |

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

Environment 1, Incorporated

Drinking Water ID: 17715
Wastewater ID: 10

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

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

CLIENT: AVERY COUNTY LANDFILL (OLD)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6056
ANALYST: MAO
DATE COLLECTED: 11/27/07
DATE REPORTED: 12/11/07

Page: 1

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

| PARAMETERS, ug/l | Date Analyzed: | | 12/03/07 | 12/03/07 | 12/03/07 | 12/03/07 | 12/03/07 | |
|---------------------------------|----------------|-------|----------|----------|----------|----------|----------|---|
| | MDL | SWSL | MW-1 | MW-2 | MW-3 | SW-1 | SW-2 | |
| 1. Chloromethane | 0.18 | 1.0 | --- | U | --- | U | --- | U |
| 2. Vinyl Chloride | 0.34 | 1.0 | --- | U | --- | U | --- | U |
| 3. Bromomethane | 0.26 | 10.0 | --- | U | --- | U | --- | U |
| 4. Chloroethane | 0.29 | 10.0 | 0.90 | J | --- | U | --- | U |
| 5. Trichlorofluoromethane | 0.13 | 1.0 | --- | U | --- | U | --- | U |
| 6. 1,1-Dichloroethene | 0.14 | 5.0 | --- | U | --- | U | --- | U |
| 7. Acetone | 1.21 | 100.0 | --- | U | 2.00 | J | --- | U |
| 8. Iodomethane | 0.12 | 10.0 | --- | U | --- | U | --- | U |
| 9. Carbon Disulfide | 0.14 | 100.0 | --- | U | --- | U | --- | U |
| 10. Methylene Chloride | 0.14 | 1.0 | --- | U | --- | U | --- | U |
| 11. trans-1,2-Dichloroethene | 0.13 | 5.0 | --- | U | --- | U | --- | U |
| 12. 1,1-Dichloroethane | 0.16 | 5.0 | 0.80 | J | --- | U | --- | U |
| 13. Vinyl Acetate | 0.20 | 5.0 | --- | U | --- | U | --- | U |
| 14. Cis-1,2-Dichloroethene | 0.14 | 5.0 | 0.90 | J | --- | U | --- | U |
| 15. 2-Butanone | 0.85 | 100.0 | --- | U | --- | U | --- | U |
| 16. Bromochloromethane | 0.11 | 3.0 | --- | U | --- | U | --- | U |
| 17. Chloroform | 0.13 | 5.0 | --- | U | --- | U | --- | U |
| 18. 1,1,1-Trichloroethane | 0.11 | 1.0 | --- | U | --- | U | --- | U |
| 19. Carbon Tetrachloride | 0.13 | 1.0 | --- | U | --- | U | --- | U |
| 20. Benzene | 0.16 | 1.0 | 0.70 | J | --- | U | --- | U |
| 21. 1,2-Dichloroethane | 0.12 | 1.0 | --- | U | --- | U | --- | U |
| 22. Trichloroethene | 0.13 | 1.0 | --- | U | --- | U | --- | U |
| 23. 1,2-Dichloropropane | 0.17 | 1.0 | --- | U | --- | U | --- | U |
| 24. Bromodichloromethane | 0.13 | 1.0 | --- | U | --- | U | --- | U |
| 25. Cis-1,3-Dichloropropene | 0.17 | 1.0 | --- | U | --- | U | --- | U |
| 26. 4-Methyl-2-Pentanone | 0.68 | 100.0 | --- | U | --- | U | --- | U |
| 27. Toluene | 0.13 | 1.0 | --- | U | --- | U | --- | U |
| 28. trans-1,3-Dichloropropene | 0.14 | 1.0 | --- | U | --- | U | --- | U |
| 29. 1,1,2-Trichloroethane | 0.20 | 1.0 | --- | U | --- | U | --- | U |
| 30. Tetrachloroethene | 0.16 | 1.0 | --- | U | --- | U | --- | U |
| 31. 2-Hexanone | 1.00 | 50.0 | --- | U | --- | U | --- | U |
| 32. Dibromochloromethane | 0.14 | 3.0 | --- | U | --- | U | --- | U |
| 33. 1,2-Dibromoethane | 0.13 | 1.0 | --- | U | --- | U | --- | U |
| 34. Chlorobenzene | 0.13 | 3.0 | 0.20 | J | --- | U | --- | U |
| 35. 1,1,1,2-Tetrachloroethane | 0.14 | 5.0 | --- | U | --- | U | --- | U |
| 36. Ethylbenzene | 0.16 | 1.0 | --- | U | --- | U | --- | U |
| 37. Xylenes | 0.48 | 5.0 | --- | U | --- | U | --- | U |
| 38. Dibromomethane | 0.17 | 10.0 | --- | U | --- | U | --- | U |
| 39. Styrene | 0.16 | 1.0 | --- | U | --- | U | --- | U |
| 40. Bromoform | 0.11 | 3.0 | --- | U | --- | U | --- | U |
| 41. 1,1,2,2-Tetrachloroethane | 0.16 | 3.0 | --- | U | --- | U | --- | U |
| 42. 1,2,3-Trichloropropane | 0.06 | 1.0 | --- | U | --- | U | --- | U |
| 43. 1,4-Dichlorobenzene | 0.21 | 1.0 | 1.20 | J | --- | U | --- | U |
| 44. 1,2-Dichlorobenzene | 0.13 | 5.0 | --- | U | --- | U | --- | U |
| 45. 1,2-Dibromo-3-Chloropropane | 0.26 | 13.0 | --- | U | --- | U | --- | U |
| 46. Acrylonitrile | 1.49 | 200.0 | --- | U | --- | U | --- | U |
| 47. trans-1,4-Dichloro-2-Butene | 0.14 | 100.0 | --- | U | --- | U | --- | U |

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

Environment 1, Incorporated

Drinking Water ID: 17715
Wastewater ID: 10

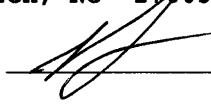
P.O. BOX 7085, 114 OAKMONT DRIVE
GREENVILLE, N.C. 27835-7085

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

CLIENT: AVERY COUNTY LANDFILL (OLD)
MS. JOAN SMYTH
RICHARDSON SMITH GARDNER
14 N. BOYLAN AVENUE
RALEIGH, NC 27603

CLIENT ID: 6056
ANALYST: MAO
DATE COLLECTED: 11/27/07
DATE REPORTED: 12/11/07

Page: 2

REVIEWED BY: 

VOLATILE ORGANICS EPA METHOD 8260B

| PARAMETERS, ug/l | Date Analyzed: | | 12/04/07 Trip Blank |
|---------------------------------|----------------|-------|---------------------------|
| | MDL | SWSL | |
| 1. Chloromethane | 0.18 | 1.0 | --- U |
| 2. Vinyl Chloride | 0.34 | 1.0 | --- U |
| 3. Bromomethane | 0.26 | 10.0 | --- U |
| 4. Chloroethane | 0.29 | 10.0 | --- U |
| 5. Trichlorofluoromethane | 0.13 | 1.0 | --- U |
| 6. 1,1-Dichloroethene | 0.14 | 5.0 | --- U |
| 7. Acetone | 1.21 | 100.0 | --- U |
| 8. Iodomethane | 0.12 | 10.0 | --- U |
| 9. Carbon Disulfide | 0.14 | 100.0 | --- U |
| 10. Methylene Chloride | 0.14 | 1.0 | --- U |
| 11. trans-1,2-Dichloroethene | 0.13 | 5.0 | --- U |
| 12. 1,1-Dichloroethane | 0.16 | 5.0 | --- U |
| 13. Vinyl Acetate | 0.20 | 5.0 | --- U |
| 14. Cis-1,2-Dichloroethene | 0.14 | 5.0 | --- U |
| 15. 2-Butanone | 0.85 | 100.0 | --- U |
| 16. Bromochloromethane | 0.11 | 3.0 | --- U |
| 17. Chloroform | 0.13 | 5.0 | --- U |
| 18. 1,1,1-Trichloroethane | 0.11 | 1.0 | --- U |
| 19. Carbon Tetrachloride | 0.13 | 1.0 | --- U |
| 20. Benzene | 0.16 | 1.0 | --- U |
| 21. 1,2-Dichloroethane | 0.12 | 1.0 | --- U |
| 22. Trichloroethene | 0.13 | 1.0 | --- U |
| 23. 1,2-Dichloropropane | 0.17 | 1.0 | --- U |
| 24. Bromodichloromethane | 0.13 | 1.0 | --- U |
| 25. Cis-1,3-Dichloropropene | 0.17 | 1.0 | --- U |
| 26. 4-Methyl-2-Pentanone | 0.68 | 100.0 | --- U |
| 27. Toluene | 0.13 | 1.0 | --- U |
| 28. trans-1,3-Dichloropropene | 0.14 | 1.0 | --- U |
| 29. 1,1,2-Trichloroethane | 0.20 | 1.0 | --- U |
| 30. Tetrachloroethene | 0.16 | 1.0 | --- U |
| 31. 2-Hexanone | 1.00 | 50.0 | --- U |
| 32. Dibromochloromethane | 0.14 | 3.0 | --- U |
| 33. 1,2-Dibromoethane | 0.13 | 1.0 | --- U |
| 34. Chlorobenzene | 0.13 | 3.0 | --- U |
| 35. 1,1,1,2-Tetrachloroethane | 0.14 | 5.0 | --- U |
| 36. Ethylbenzene | 0.16 | 1.0 | --- U |
| 37. Xylenes | 0.48 | 5.0 | --- U |
| 38. Dibromomethane | 0.17 | 10.0 | --- U |
| 39. Styrene | 0.16 | 1.0 | --- U |
| 40. Bromoform | 0.11 | 3.0 | --- U |
| 41. 1,1,2,2-Tetrachloroethane | 0.16 | 3.0 | --- U |
| 42. 1,2,3-Trichloropropane | 0.06 | 1.0 | --- U |
| 43. 1,4-Dichlorobenzene | 0.21 | 1.0 | --- U |
| 44. 1,2-Dichlorobenzene | 0.13 | 5.0 | --- U |
| 45. 1,2-Dibromo-3-Chloropropane | 0.26 | 13.0 | --- U |
| 46. Acrylonitrile | 1.49 | 200.0 | --- U |
| 47. trans-1,4-Dichloro-2-Butene | 0.14 | 100.0 | --- U |

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

CHAIN OF CUSTODY RECORD

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

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

CLIENT: 6056 Week: 49

AVERY COUNTY (OLD)
 MS. JOAN SMYTH
 RICHARDSON SMITH GARDNER
 14 N. BOYLAN AVENUE
 RALEIGH NC 27602

| SAMPLE LOCATION | COLLECTION | | TOTAL CHLORINE, mg/l | DISINFECTION | AT COLLECTION | TEMPERATURE, °C | # OF CONTAINERS | Metals | EPA 8260B | 8260 Dup. 1 | 8260 Dup. 2 | CHLORINE NEUTRALIZED AT COLLECTION |
|---|------------|------|----------------------|--------------|---------------|-----------------|-----------------|--------|-----------|--|-------------|------------------------------------|
| | DATE | TIME | | | | | | | | | | |
| MW-1 | 11-27-07 | 3:00 | # | CHLORINE | | | 4 | ← | ← | ← | | |
| MW-2 | 11-27-07 | 4:15 | # | UV | | | 3 | ← | ← | ← | | |
| MW-3 | 11-27-07 | 2:00 | 12° | NONE | | | 3 | A | E | E | | |
| SW-1 | 11-27-07 | 1:40 | 9° | | | | 3 | | | | | |
| SW-2 | 11-27-07 | 3:15 | 8° | | | | 3 | | | | | |
| Trip Blank | | | | | | | 2 | | | | | |
| DISINFECTION: CHLORINE <input type="checkbox"/> UV <input type="checkbox"/> NONE <input type="checkbox"/> | | | | | | | | | | | | |
| CHLORINE NEUTRALIZED AT COLLECTION: _____ pH CHECK (LAB): _____ CONTAINER TYPE, P/G: _____ CHEMICAL PRESERVATION: _____ PARAMETERS: A - NONE D - NAOH B - HNO ₃ E - HCL C - H ₂ SO ₄ F - ZINC ACETATE G - NA THIOSULFATE | | | | | | | | | | | | |
| CLASSIFICATION: <input type="checkbox"/> WASTEWATER (NPDES) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> DWQ/GW <input checked="" type="checkbox"/> SOLID WASTE SECTION | | | | | | | | | | | | |
| CHAIN OF CUSTODY MAINTAINED DURING SHIPMENT/DELIVERY: <u>Y</u> N | | | | | | | | | | | | |
| SAMPLES COLLECTED BY: <u>Britt Ransom</u> (Please Print) | | | | | | | | | | | | |
| SAMPLES RECEIVED IN LAB AT <u>116</u> °C | | | | | | | | | | | | |
| RELINQUISHED BY (SIG.) (SAMPLER): <u>Britt Ransom</u> DATE/TIME: <u>11-28-07 1:45</u> | | | | | | | | | | RECEIVED BY (SIG.): <u>UPS Cola SC</u> DATE/TIME: <u>11-28-07 1:45</u> | | |
| RELINQUISHED BY (SIG.): _____ DATE/TIME: _____ | | | | | | | | | | RECEIVED BY (SIG.): <u>Another Lab</u> DATE/TIME: <u>11/28/07 1:45</u> | | |
| RELINQUISHED BY (SIG.): _____ DATE/TIME: _____ | | | | | | | | | | RECEIVED BY (SIG.): _____ DATE/TIME: _____ | | |
| COMMENTS: <u>All samples grab</u> | | | | | | | | | | | | |

Instructions for completing this form are on the reverse side.

Sampler must place a "C" for composite sample or a "G" for Grab sample in the blocks above for each parameter requested. No 157927