



**MECKLENBURG COUNTY**  
Land Use and Environmental Services Agency  
Solid Waste Services

January 28, 2013

Ms. Jaclynne Drummond  
North Carolina Department of Environment  
and Natural Resources  
Division of Waste Management  
Groundwater Compliance Unit  
Mail Service Center 1646  
Raleigh, NC 27699-1646

Subject: Water Quality Monitoring Report  
Harrisburg Road Landfill, Permit 60-01

Dear Ms. Drummond:

Mecklenburg County conducted semi-annual water quality monitoring at the closed Harrisburg Road Landfill December 17 & 18, 2012 in accordance with the approved revised sample and analysis plan dated May 11, 2004. Samples were collected from seven monitoring wells (HBW12B, HBW14, HBW17B, HBW20, HBW21, HBW22 and background well HBW28), one potable well (HBW744) and, three surface-water sampling locations (HB2006, HB2008 and, HB2010). Laboratory analytical data, field-measured data, and a table of results exceeding water quality standards along with a preliminary explanation of the cause and significance are included on the electronic data deliverable (EDD) submittal on the enclosed CD.

The Maintenance Shop water supply well was sampled on December 17, 2012. No analytes were detected above the 2L standards. The results are attached to this report.

The EDD containing the monitoring data are labeled to reflect the units that are used for reporting. Detection levels and applicable standards have been included for all sampling locations. Surface water standards listed are the water quality standards established for freshwater classification for aquatic life as outlined in 15A NCAC 2B "Classification and Water Quality Standards Applicable to Surface Waters of North Carolina". Groundwater standards listed are the standards outlined in 15A NCAC 2L "Classification of Water Quality Standards applicable to the Groundwaters of North Carolina". If the sample is reported in parts per billion, then the standard is also reported in parts per billion.

**Surface-water samples:**

No analytes were detected in HB2006, HB2008 and HB2010. Field-measured parameters for surface-water samples were within the range of established standards and are summarized in the table below.

Location	Temperature	PH	Specific Conductivity	Dissolved Oxygen
HB2006	11.6 ° C	7.15	0.193 ms/cm	8.67 mg/l
HB2008	12.2 ° C	7.12	0.186 ms/cm	8.67 mg/l
HB2010	11.6 ° C	6.65	0.222 ms/cm	7.86 mg/l

**Groundwater samples:**

Cobalt and Vanadium were detected above the 2L standard in several of the samples. This is due to the new published 2L standards for Cobalt and Vanadium as of October 1, 2010. No other metals were detected above the 2L standard. The table below summarizes metals detections in groundwater samples.

Well ID	Ba ug/l	Be ug/l	Cd ug/l	Cr ug/l	Co ug/l	Cu ug/l	Ni ug/l	Pb ug/l	Vn ug/l	Zn ug/l
HBW744	-----	-----	-----	-----	-----	6.5	-----	-----	-----	-----
HBW12B	-----	-----	-----	-----	-----	10.0	-----	-----	<b>15</b>	-----
HBW14	-----	-----	-----	-----	-----	11	-----	-----	-----	-----
HBW17B	-----	-----	1.2	-----	<b>19</b>	39	-----	-----	<b>6.6</b>	22
HBW20	-----	-----	-----	-----	-----	-----	-----	-----	<b>5.2</b>	-----
HBW21	-----	-----	-----	-----	-----	5.0	-----	-----	<b>9.1</b>	-----
HBW22	-----	-----	-----	8.6	-----	2.1	-----	-----	-----	-----
HBW28	-----	-----	-----	-----	<b>7.7</b>	9.9	-----	6.5	<b>6.6</b>	12
2L Std. ug/l	700	4	2	10	1	1,000	100	15	0.3	1,000

Note: Bolded results exceed 2L Standard

The following nine volatile organic compounds ("VOCs") were detected in the sample collected from well HBW17B:

VOC	Sample Result ug/l	2L Standard ug/l
<b>Benzene</b>	<b>11</b>	<b>1</b>
<b>Tetrachloroethylene</b>	<b>37</b>	<b>0.7</b>
<b>Trichloroethylene</b>	<b>26</b>	<b>3</b>
<b>1,1-Dichloroethane</b>	<b>9</b>	<b>6</b>
<b>1,2-Dichloropropane</b>	<b>10</b>	<b>0.6</b>
<b>cis-1,2 Dichloroethene</b>	<b>120</b>	<b>70</b>
<b>Methylene Chloride</b>	<b>15</b>	<b>5</b>
Xylenes (total)	16	500

Note: Bolded results exceed 2L Standard

No VOC's were detected in any other samples.

In the samples collected from HBW12B, HBW14, HBW17B, HBW20, HBW21 and background monitoring well HBW28, pH was measured to be more acidic than the standard. Field-measured parameters for groundwater samples are summarized in the following table:

Location	Temperature	pH	Conductivity
HBW12B	14.6 °C	<b>6.24</b>	0.265 ms/cm
HBW14	15.3 °C	<b>6.26</b>	0.193 ms/cm
HBW17B	15.7 °C	<b>5.60</b>	0.055 ms/cm
HBW20	16.1 °C	<b>5.82</b>	0.108 ms/cm
HBW21	15.7 °C	<b>6.09</b>	0.268 ms/cm
HBW22	16.3 °C	6.58	0.057 ms/cm
HBW28	16.2 °C	<b>5.46</b>	0.022 ms/cm
HBW744	16.0 °C	6.79	0.179 ms/cm

Note: Bolded results are outside of the 6.5 to 8.5 S.U. range 2L Standard

Please call me at (704) 432-2478, if you have any questions concerning this report.



Sincerely,

Amber R. Grzymski, P.G.  
Project Manager  
LUESA Solid Waste Services

Enclosure: Maintenance Water Supply Well Results



# Environmental Laboratory Services



Laboratory Analysis Report  
Report Date: 01/17/2013 13:38

LOCATION: GWO-90084  
LOC ID: G-LM  
SAMPLE DATE-TIME: 12/17/2012 10:25  
SAMPLE DESCRIPTION: Grab

CHAIN OF CUSTODY #: 121217013

Sample ID:	Parameter	Result	Units	RL	Method	Start Date / Time	Analyst
AE49484	Metals Digestion	Completed			EPA 200.2	12/20/2012 08:34	KGB
AE49484	Barium by ICPOES	< 100	ug/L	100	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Beryllium by ICPOES	< 2.0	ug/L	2.0	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Chromium by ICPOES	< 5.0	ug/L	5.0	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Cobalt by ICPOES	< 5.0	ug/L	5.0	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Copper by ICPOES	260	ug/L	5.0	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Nickel by ICPOES	< 5.0	ug/L	5.0	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Silver by ICPOES	< 5.0	ug/L	5.0	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Vanadium by ICPOES	< 5.0	ug/L	5.0	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Zinc by ICPOES	160	ug/L	20	EPA 200.7	12/28/2012 12:30	CJG
AE49484	Antimony by ICPMS	< 5.0	ug/L	5.0	EPA 200.8	01/09/2013 18:35	CRG
AE49484	Arsenic by ICPMS	< 5.0	ug/L	5.0	EPA 200.8	01/08/2013 16:12	CRG
AE49484	Cadmium by ICPMS	< 1.0	ug/L	1.0	EPA 200.8	01/08/2013 16:12	CRG
AE49484	Lead by ICPMS	< 5.0	ug/L	5.0	EPA 200.8	01/08/2013 16:12	CRG
AE49484	Thallium by ICPMS	< 5.0	ug/L	5.0	EPA 200.8	01/14/2013 12:36	CRG
AE49484	Selenium (TOTAL) Furnace	< 5.0	ug/L	5.0	EPA 200.9	01/08/2013 20:05	NVR
AE49484	1,1,1,2-Tetrachloroethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,1,1-Trichloroethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,1,2,2-Tetrachloroethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,1,2-Trichloroethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,1-Dichloroethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,1-Dichloroethene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,2,3-Trichloropropane	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,2-Dibromo-3-chloropropane	Less than	ug/L	10	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,2-Dibromoethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,2-Dichlorobenzene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,2-Dichloroethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,2-Dichloropropane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,3-Dichlorobenzene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	1,4-Dichlorobenzene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	2-Butanone (MEK)	Less than	ug/L	10	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	2-Chloroethyl vinyl ether	Less than	ug/L	10	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	2-Hexanone	Less than	ug/L	10	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	4-Methyl-2-pentanone	Less than	ug/L	10	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Acetone	Less than	ug/L	10	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Acrolein	Less than	ug/L	50	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Acrylonitrile	Less than	ug/L	50	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Benzene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Bromochloromethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Bromodichloromethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Bromoform	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Bromomethane	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Carbon Disulfide	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Carbon Tetrachloride	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Chlorobenzene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Chloroethane	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484	Chloroform	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA

# Environmental Laboratory Services



Laboratory Analysis Report  
Report Date: 01/17/2013 13:38

LOCATION: GWO-90084  
LOC ID: G-LM  
SAMPLE DATE-TIME: 12/17/2012 10:25  
SAMPLE DESCRIPTION: Grab

CHAIN OF CUSTODY #: 121217013

Parameter	Result	Units	RL	Method	Start Date / Time	Analyst
AE49484 Chloromethane	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 cis-1,2-Dichloroethene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 cis-1,3-Dichloropropene	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Dibromochloromethane	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Dibromomethane	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Ethylbenzene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Iodomethane	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Methylene Chloride	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Methyl-tert-butyl-ether (MTBE)	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Styrene	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Tetrachloroethene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Toluene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Total Xylenes	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 trans-1,2-Dichloroethene	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 trans-1,3-Dichloropropene	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 trans-1,4-Dichloro-2-butene	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Trichloroethene	Less than	ug/L	3	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Trichlorofluoromethane	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Vinyl acetate	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA
AE49484 Vinyl Chloride	Less than	ug/L	5	SW846 / 8260B	12/21/2012 13:53	SDA

Comment:

Laboratory Supervisor: 

The results contained on this report are specific to the samples listed above.

CMU-Environmental Laboratory Services N.C. Certification No. 192 N.C. DHHS Certification No. 37417 EPA Certification No. 01215  
4222 Westmont Drive, Charlotte, North Carolina 28217



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):

Mecklenburg County Land Use & Environmental Services Agency, Solid Waste Services

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

Name: Amber R. Grzymski, P.G. Phone: 704-432-2478

E-mail: Amber.Grzymski@mecklenburgcountync.gov

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Harrisburg Road Landfill	7817 Harrisburg Road, Charlotte	60-01	.0500	December 17-18, 2012

**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.

Amber R. Grzymski, P.G. Project Manager 704-432-2478  
 Facility Representative Name (Print) Title (Area Code) Telephone Number  
 Signature Date 1/28/2013 Affix NC Licensed/ Professional Geologist Seal

Facility Representative Address

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

Revised 6/2009



