



MECKLENBURG COUNTY
Land Use and Environmental Services Agency
Water and Land Resources

August 2, 2006

Mr. Ethan Brown
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 Mr. Brown:

Please find enclosed the laboratory report and a disk containing spreadsheets with analytical data for the December 2005 semi-annual water quality-monitoring event for the closed Harrisburg Road Landfill. Sampling was delayed until January 2006 due to inclement weather during the scheduled sampling time in December. Sampling and analysis was performed per the approved revised "Sampling and Analysis Plan" for Harrisburg Road Landfill dated May 11, 2004. Samples were collected from seven monitoring wells (HBW-12B, HBW-14, HBW-17B, HBW-20, HBW-21, HBW-22, HBW-28), two potable wells (HBW-744 and Clubhouse Well) and, three surface-water sampling locations (HBSW-2006, HBSW-2008 and, HBSW-2010).

Historical analytical data is included in the spreadsheet for comparative purposes. The spreadsheets have been updated to reflect parameters that are currently monitored per the revised sampling and analysis plan dated May 11, 2004.

Detection levels and 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. The spreadsheets are labeled to reflect the units used for reporting. Results exceeding water quality standards are highlighted in yellow for ease of identification.

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Surface water samples:

No metals or VOCs were detected in any of the three surface-water sampling locations (HBSW-2006, HBSW-2008 and HBSW-2010). All field-measured parameters were within the established regulatory limits and consistent with historical measurements. The table below summarizes field-measured parameters for surface-water samples.

Sample Location	Temp. (°C)	pH	Specific Conductivity (umho/cm)	Dissolved Oxygen (mg/l)
HBSW-2006	9.4	7.17	156	10.88
HBSW-2008	9.7	7.27	149	12.28
HBSW-2010	9.9	7.58	215	12.57

Groundwater samples:

No toxic metals were detected above the 2L standard in any of the samples collected.

Iron exceeds the standard in samples collected from wells HBW-12B, HBW-14, HBW-17B, HBW-20 and HBW-28. The concentrations of iron detected are within the historical range of detection and are likely naturally occurring, not resulting from influence by the landfill.

Manganese exceeds the standard in samples collected from wells HBW-12B and HBW-14, HBW-17B and HBW-28. The manganese concentrations detected in these samples are within the historical range of detection and are not likely due to influence by the landfill.

Color exceeds the standard in the samples collected from well HBW-14. The color measurement is within the historical range for HBW-14.

The following eight volatile organic compounds ("VOCs") were detected in the sample collected from well HBW-17B:

VOC	Sample Result ug/l	2L Standard ug/l
1,1-Dichloroethane	27	700
1,2-Dichloropropane	9	0.56
Benzene	19	1
Dibromochloromethane	73	None
cis-1,2 Dichloroethene	93	70
Methylene Chloride	60	5
Tetrachloroethylene	75	0.7
Trichloroethylene	56	2.8
Vinyl Chloride	13	0.015
Xylenes (total)	30	530

No VOCs were detected in any other groundwater samples.

Field-measured parameters for groundwater samples are summarized in the table below:

Sample Location	Temp. °C	pH	Specific Conductivity (umho/cm)
HBW-12B	13.6	6.32	395
HBW-14	14.8	6.39	222
HBW-17B	15.8	5.25	64
HBW-20	17.2	6.70	94
HBW-21	16.0	6.07	615
HBW-22	16.5	5.95	85
HBW-28	16.8	5.22	22
HBW-744	15.1	6.70	169
Clubhouse Well	16.0	6.31	77

pH measurements were more acidic than the standard in samples collected from all locations except HBW-744. The pH measurements however are within the historical ranges for each location except for upgradient well HBW-28 which was a historical low.

Total coliform bacteria analysis was performed for groundwater samples collected from monitoring well HBW-12B and potable wells HBW-744 and Clubhouse Well per the requirements of Section 3328.3, 5.1, pages 3-123 and 3-124 of the local zoning ordinance. The sample collected from HBW-14 was not analyzed by the lab. Total coliform bacteria were present in the sample collected from HBW-14 and potable well HBW-744. Fecal bacteria were not detected in the sample for HBW-744.

Please call me at (704) 336-5454, if you have any further questions about this report.



Sincerely,

Dennis F. Tyndall, P.G.
Hydrogeologist
Groundwater and Wastewater Services

Enclosures: Harrisburg Road Landfill Analytical Report

cc: Joe Hack, Project Manager, LUESA Solid Waste Program

