



North Carolina Department of Environment and Natural Resources  
Division of Waste Management

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

May 19, 2011

Mr. Tim Rogers, Solid Waste Director  
406 B South Landfill Road  
Dudley, North Carolina 28533

Re: Technical Review of Design Hydrogeologic Report,  
Ground and Surface Water Sampling and Analysis Plan, and  
Landfill Gas Monitoring Plan  
Wayne County Subtitle D Landfill Phase 3 Expansion  
Wayne County, Dudley, North Carolina  
Permit No. 96-06, Document ID No. 13957

Dear Mr. Rogers:

The North Carolina Solid Waste Section has completed a technical review of the Design Hydrogeologic Study *DIN 10382*, Ground and Surface Water Sampling and Analysis Plan *DIN 13717* and Landfill Gas Monitoring Plan *DIN 13611* submitted as part of the Permit to Construct Application for the Wayne County Subtitle D Landfill Phase 3 Expansion.

The Groundwater and Surface Water Sampling and Analysis Plan is amended to include three new groundwater monitoring wells (MW-14, MW-15, and MW-16) associated with the Phase 3 expansion area plus thirteen existing groundwater monitoring wells (MW-1 through MW-13) to comprise a total groundwater monitoring network of sixteen wells. Piezometers installed during subsurface exploration of Phase 3 will need to be abandoned prior commencement of construction activities.

Surface water will be monitored at 4 locations: existing surface water sampling points SW-2, SW-3, SW-4 and SW-5. One leachate sample will be collected at leachate collection point LE-1.

The Design Hydrogeologic Study and the Ground and Surface Water Sampling and Analysis Plan meet the criteria of 15A NCAC 13B .1623(b) and .1624(b) (4), and therefore, this portion of the Permit to Construct Application is approved.

The Landfill Gas Monitoring Plan was submitted and reviewed on April 12, 2011. Seven existing landfill gas monitoring points (MP-17 through MP-21, MP-24 and MP-25) are located on the western and eastern perimeters of Phases 1 and 2 of the landfill. Five additional landfill gas monitoring points MP-26 through MP-30 will be installed on the northern perimeter of Phase 3 of the landfill. The Landfill Gas Monitoring Plan meets the regulatory requirements of 15A NCAC 13B .1626(4) (b).

Piezometers, groundwater monitoring wells, and borings located in the proposed phase for construction may be abandoned now or after a Permit to Construct is issued by the Solid Waste Section. Prior to construction of the new phase, all piezometers, groundwater monitoring wells, and borings located within the footprint must be properly abandoned by overdrilling first (exception of non-cased borings) and sealed with grout in accordance with 15A NCAC 2C.0113 (d) entitled "Abandonment of Wells".

Well abandonment records (GW-30 form) for each decommissioned piezometer, boring, and groundwater monitoring well must be certified by a Licensed Geologist in accordance with rule .1623(b)(2)(I) and submitted to the Solid Waste Section in accordance with 15A NCAC 02C.0114(b). After the piezometers and/or groundwater wells are abandoned and new landfill gas well(s) constructed, submit an updated monitoring well location drawing.

The new groundwater monitoring wells must be sampled for the Appendix I constituent list, including Mercury, Chloride, Manganese, Sulfate, Iron, specific conductance, pH, temperature, Alkalinity, Total Dissolved Solids prior to the Solid Waste Section issuing the Permit to Operate. In addition to a hard copy report, provide the Solid Waste Section with an electronic copy of the groundwater and surface water monitoring data collected at the landfill facility. Guidelines for sampling groundwater and surface water, and submitting data electronically can be located at the Solid Waste Section's web site: [http://wastenotnc.org/swhome/technical\\_assistance.asp](http://wastenotnc.org/swhome/technical_assistance.asp)

**Additional Geologic, Ground Water and Monitoring Requirements will be included in the Permit to Construct.**

If you have any questions, you may contact me at (919)508-8506.

Sincerely,

Christine Ritter  
Hydrogeologist  
Solid Waste Section

Cc: Madelaine German, Municipal Engineering Services Company, P.A.  
Ming-Tai Chao, DWM  
Ed Mussler, DWM  
Wes Hare, DWM