



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

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

September 7, 2010

Mike Griffin,  
Griffin Brothers Companies  
North Mecklenburg C&D Landfill  
Infill Expansion Area  
19109 West Catawba Avenue, Suite 200  
Cornelius, NC 28031-5613

RE: North Mecklenburg C&D Landfill  
Permit to Construct Application – June 14, 2010  
Infill Expansion Area  
Mecklenburg County, North Carolina  
Approval of Vertical Separation Requirements and  
Design Hydrogeologic Report  
Permit No. 60-13  
Document ID No. 11524  
Attached SWS letter for approval of the Design Hydrogeologic Report – June 7,  
2010

Dear Mr. Griffin:

The Solid Waste Section (SWS) has reviewed the referenced Permit to Construct Application, dated June 14, 2010 for hydrogeologic criteria, including portions of the Engineering Plan Section 4.3, 4.5, 5.4.3, 6.1, 6.2; Appendix B- (Approval letter for the Design Hydrogeologic Report – June 7, 2010); Appendix D – Geotechnical Evaluation; the Landfill Gas Monitoring Plan / Water Quality Monitoring Plan (Document ID #11495– revised May 2010), and Drawings C-207, C-208, C-209, C-601, C-602.

The Solid Waste Section stamped approved the separate Design Hydrogeologic Report on June 4, 2010. This Report also included the Water Quality Monitoring Plan and the Landfill Gas Monitoring Plan. The Design Hydrogeologic Report is located at the Solid Waste Section's Web Site in pdf format, under ID Number, 10790. The subject Permit to Construct Application also includes the same Water Quality Monitoring Plan – Revised May 26, 2010 and the Gas Control Plan – Revised May 17, 2010, that was included in the Design Hydrogeologic Report. There is a slight modification to the Water Quality Plan since May 26, 2010. There is a now a requirement to sample for the constituent,

Mr. Mike Griffin,  
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Tetrahydrofuran. This requirement is noted on the last page of the Water Quality Monitoring Plan, included in the Permit to Construct Application.

For reference, the attached letter (dated June 7, 2010) is the SWS's approval for the Design Hydrogeological Report, the Water Quality Monitoring Plan, and the Landfill Gas Control Plan. Also stated in the letter; piezometers, wells, located within the proposed infill landfill area can be abandoned now, or after a Permit to Construct is issued by the SWS, but before landfill construction activities commence.

The Design Hydrogeologic Report, the Water Quality Monitoring Plan, the Explosive Gas Management Plan, and the proposed vertical separation buffers meet the criteria required in 15A NCAC 13B .0538(b), 15A NCAC 13B.0540(2)(a)(b), and 15A NCAC 13B .0544 and therefore, this portion of the Permit to Construct application is approved.

If you have any questions, please do not hesitate to call me at (919) 508-8524.

Sincerely,



Brian Wootton  
Hydrogeologist  
NC Solid Waste Section

cc:	Scott L. Brown	Brown & Caldwell
	Ron Gilkerson	Griffin Brothers
	Robert Kendrick	BP Barber
	Ed Mussler	NC Solid Waste Section
	John Murray	NC Solid Waste Section
	Teresa Bradford	NC Solid Waste Section
	Central File	NC Solid Waste Section



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June 7, 2010

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RE: North Mecklenburg C&D Landfill  
Infill Expansion Area  
Mecklenburg County, North Carolina  
Approval of Design Hydrogeologic Report  
Permit No. 60-13  
Document ID No. 10789

Dear Mr. Griffin:

I have reviewed the Design Hydrogeologic Report dated April 2010, and supplemental documentation, (i.e. revised Water Quality Monitoring Plan – May 26, 2010 - Appendix 6 of the Design Hydrogeologic Report and the revised Gas Control Plan - May 17, 2010- Appendix 7 of the Design Hydrogeologic Report) for the C&D Infill expansion between closed Expansion I C&D landfill and active Expansion II C&D landfill.

The Water Quality Monitoring Plan is amended to include sampling of ten (10) detection groundwater monitoring wells. Most of the wells are existing and will be renumbered MW-1 through MW-10. The location of groundwater monitoring wells are located on Drawing S19 – “Monitoring Plan”– in Appendix 10 of the Design Hydrogeologic Report. Existing piezometers, groundwater wells, and borings located within the footprint of this new phase are to be abandoned (sealed) prior to construction activities commencing at this phase. Existing surface sampling locations SW-1, SW-2, SW-3, and SW-4 will remain the same. Additional surface sampling points, SW-5 and SW-6 will be added to the sampling program. SW-5 will be located at the inlet (upstream) and SW-6 will be located at the outlet (downstream) of the buried pipes that will direct surface water beneath the Infill Expansion area as indicated on Drawing S19.

The Gas Control Plan states a total of eleven (11) additional new gas wells monitoring wells will be installed. Gas monitoring wells MW-1 through GMW-8 are existing. GMW-1, GMW-2, and GMW-3 will be abandoned prior to construction commencing of the Infill expansion phase. Drawing S19 shows the location of the existing gas monitoring wells and the approximate location of the proposed eleven (11) new gas monitoring wells. The proposed new gas monitoring wells are not labeled on this drawing, but need to be labeled appropriately at the time of construction. The Section recommends a Professional Geologist be on site during the installation of the new landfill gas monitoring wells. The design and construction of the landfill gas monitoring wells shall be in accordance with the applicable North Carolina Well Construction Standards listed in 15A NCAC 2C and the Gas Control Plan. The landfill gas monitoring wells shall be located as depicted on Sheet S19. Upon completion of the landfill gas monitoring well installations, boring logs and well construction records for each well shall be submitted to the Section. The gas wells and specified structures shall be sampled according to the schedule stated in the Gas Control Plan. Also, the Gas Control Plan shall meet the criteria required in 15A NCAC 13B .0544(d).

The Design Hydrogeologic Report (including the Water Quality Monitoring Plan, and the Gas Control Plan) meet the criteria required in 15A NCAC 13B .0538(b), 13B.0540(2), and 15A NCAC 13B .0544. An electronic pdf format copy of the approved Design Hydrogeological Report (ID Document No. 10790) can be obtained on the Solid Waste Section's website located at: <http://wastenotnc.org/sw/swfacilitylist.asp>

**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. Please adhere to the following conditions:**

Prior to construction of the phase or cell(s) within the 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".

- a. In areas where soil is to be undercut, abandoned piezometers, monitoring wells, and borings must not be grouted to pre-grade land surface, but to the proposed base grade surface to prevent having to cut excess grout and potentially damaging the wells.
- b. 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 .0538(b)(2)(J) and submitted to the Solid Waste Section in accordance with 15A NCAC 02C.0114(b).

The new groundwater monitoring wells and new surface water sampling point(s) associated with the new phase must be sampled for the Appendix I constituent list,

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including Mercury, Chloride, Manganese, Sulfate, Iron, specific conductance, pH, temperature, Alkalinity, and Total Dissolved Solids, and Tetrahydrofuran 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.**

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If you have any questions, please do not hesitate to call me at (919) 508-8524.

Sincerely,



Brian Wootton  
Hydrogeologist  
NC Solid Waste Section

cc:    Ron Gilkerson                      Griffin Brothers  
      Thomas Bolyard                    Enviro-Pro, P.C.  
      Robert Kendrick                    BP Barber  
      Ed Mussler                            NC Solid Waste Section  
      John Murray                         NC Solid Waste Section  
      Teresa Bradford                    NC Solid Waste Section  
      Central File                         NC Solid Waste Section