



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

Pat McCrory  
Governor

Dexter R. Matthews  
Director

John E. Skvarla, III  
Secretary

August 16, 2013

Mrs. Amanda Bader, PE  
Solid Waste Director and County Engineer  
Harnett County General Services  
103 East Ivey Street  
Lillington, North Carolina 27546

Re: Permit to Construct Application – Design Hydrogeology Approval  
Anderson Creek C&D Landfill – Phase III  
Permit No. 43-03  
Harnett County  
Doc ID No. 19542

Dear Mr. Bader:

The North Carolina Solid Waste Section (Section) has completed its review of the Permit to Construct Application for the Anderson Creek C&D Landfill Phase III Expansion of presented in the following documents;

*Site Suitability Update & Permit to Construct Application (DIN 19382) Prepared for: Harnett County General Services. Prepared by: CT Clayton, Sr., P.E., Inc. Coats, NC June 28, 2013 and Landfill Gas Monitoring Plan (DIN 19493) Prepared for: Harnett County General Services. Prepared by: Smith Gardner, Inc. Raleigh, NC August 8, 2013*

The Section approves all of the hydrogeologic components of the Permit to Construct application, including the Groundwater Monitoring Plan (DIN 19541) and the Landfill Gas Monitoring Plan (DIN 19493). The Phase III expansion encompasses approximately 11 acres. The Groundwater Monitoring Plan (GWMP) for Phase III includes three (3) new groundwater monitoring wells (CDMW-7, CDMW-8, CDMW-9) in addition to the current monitoring well network. The monitoring well network is divided into three sets: Set A monitors the active C&D landfill (CDMW-2, CDMW-3, CDMW-5, CDMW-7, CDMW-8, CDMW-9), Set B monitors the closed MSW landfill (MW-1, MW-2, MW-4, MW-5) and Set C monitors the surface water (SWPT-1, SWPT-2). This monitoring network shall be sampled for the constituents listed in the approved GWMP. The Landfill Gas Monitoring Plan (LFGMP) includes four (4) landfill gas

monitoring wells, LFG-1 through LFG-4. These wells shall be monitored in accordance with the approved LFGMP. Submit well construction records, Form GW-1b, and boring logs for all newly installed groundwater and landfill gas monitoring wells.

The Design Hydrogeologic Report, the Groundwater Monitoring Plan and the Landfill Gas Monitoring Plan meet the criteria required in 15A NCAC 13B .0538(b) and .0544(d) and therefore, this portion of the Permit to Construct application is approved.

There are existing piezometers within the footprint of the proposed Phase III area. These wells (PZ-7, PZ-11, PZ-12, PZ-13, PZ-16 and PZ-17) will need to be properly abandoned prior to construction activities commencing at Phase III.

**Piezometers, groundwater monitoring wells, and borings, located in proposed Phase III 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 cell(s), all piezometers, ground-water monitoring wells, and borings, located in the proposed cell(s), shall be properly abandoned by overdrilling first (exception of non-cased borings) and sealed with grout in accordance with 15A NCAC 2C .0113, 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 .1623(b)(2)(1) and submitted to the Solid Waste Section in accordance with 15A NCAC 02C.0114(b).

The new groundwater monitoring wells associated with Phase III must be sampled for the Appendix I constituent list prior to the Section issuing the Permit to Operate. In addition to a hard copy, provide the 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 Section's web site:

<http://portal.ncdenr.org/web/wm/sw/envmonitoring>

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

If you have any questions, please do not hesitate to contact me via email [Elizabeth.werner@ncdenr.gov](mailto:Elizabeth.werner@ncdenr.gov) or phone (919) 707-8253.

Sincerely,

Elizabeth S Werner  
Permitting Hydrogeologist  
Solid Waste Section

Cc: Joan Smyth, P.G. – Smith Gardner, Inc.  
Pieter K. Scheer, P.E. – Smith Gardner, Inc.  
Ed Mussler – SWS, Permitting Branch Head  
Ming Tai Chao – SWS, Permitting Engineer  
Robert Hearn – SWS, Environmental Specialist  
Dennis Shackelford – SWS, Field Operations Eastern Supervisor