



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

December 11, 2007

Ms. Joan Smyth, P.G.
G. N. Richardson & Associates, Inc.
14 N. Boylan Avenue
Raleigh, North Carolina 27603

Re: Additional Information Request
Permit to Construct Application
Design Hydrogeologic Report
Halifax County C & D Landfill, Area 2
Permit 42-02
Doc ID RCO 3534

Dear Ms. Smyth:

The Solid Waste Section (SWS) has reviewed the Design Hydrogeologic Study for Area 2 of the Halifax County C & D Landfill. The review has been conducted under the new rules for Construction and Demolition (C&D) Landfills, effective January 1, 2007. These rules address C&D units operating prior to January 1, 2007 that receive waste after June 30, 2008 and Permit to Construct applications received at least 180 days prior to receiving a Permit to Operate. Required revisions are listed under the title of the report that is a component of the Permit to Construct Application. The numbers correspond to the paragraphs numbered within each report.

Facility and Engineering Plan

Title Sheet Revise the title to designate the phase to which the application applies. It is understood that Area 2 will be constructed in sequential phases. However, only one phase at a time is permitted. Based on the 5.7 acreage specified in the application, it appears that Phase 1 and Phase 2 are combined for one permit. Table 1 in the report already shows a list of proposed phases. Revising the title of the report to denote one, not both, of these phases will identify exactly which phase is intended to satisfy the requirement of Rule .0539(c). This rule specifies that plans are to be prepared for "a [italics and underscore added] phase of development not to exceed approximately five years of operating capacity." The 5.7 acres specified in the application represent approximately 10 years of operation.

Table 1 Revise the leftmost column to designate which of the three phases is intended to be permitted in accordance with Rule .0547(3)(b), which pertains to an "initial phase" of development.

Design Hydrogeologic Report

Title Sheet Revise the title of the Design Hydrogeologic Report to identify the one phase to which the application applies.

Table of Contents Delete references to Rules .0503 and .0504 or renumber the references according to current rules. Although many requirements in the “old” and “new” rules are identical, deleting or renumbering the references will update the report and show compliance with current Rules.

- 1.0 Delete references to Rules .0503 and .0504 in the last sentence of the first paragraph and first sentence in the second paragraph. Even under the “old rules” there were no C&D rules numbered “504(1) through (6)”; the numbering ended at 504(2)(h)(xi).
- 2.1 Revise the fourth sentence in the fourth paragraph to reflect more objectivity in what is reported. The sentence conveys certainty about the availability of municipal water but speculative about who paid for it. It is acceptable to report that the actual number of connections to municipal water supply is unknown.
- 2.2 It is unclear whether the “runoff conveyance” is a waterless “shallow swale” or live stream running through the footprint. On cross section CD-3 in Figure 7, the groundwater elevation is depicted above the ground elevation at BP-7, indicating groundwater discharge. When viewing the “swale” in the three dimensions made possible by correlating Figures 4 and 7, the watercourse appears to be a perennial stream.
- 3.1.5 Sheet 6 on which the “hydrogeologic profiles” are shown could not be located.
- 3.1.6 It is not clear exactly where the hydrograph for long term water level is located.
- 3.4.1 In the last sentence of the section, revise “geologic” to “hydrogeological” when referring to the cross sections shown in Figure 7. This will match the reference in the report to the title of the sheet in the plans.
- 3.4.2 Sheet Y on which the “conceptual ground water flow model” is depicted could not be located.
- 3.4.4 Where describing the recharge area as “small”, state the acreage of “drainage basin” to which this comparison is made.

Appendix G of the Design Hydrogeologic Report

- 2.0 Specify the full name of the other proposed groundwater monitoring wells—“CD MW-2” and “CD MW-3.” Consistency about including the “CD” portion of the well numbers will prevent them from inadvertently getting confused with other well series at the site whose identification also includes “MW-”.

Also include in the paragraph a statement to the effect that the proposed groundwater monitoring wells are located at a “relevant point of compliance as approved by the Division.” This will more directly show compliance with the new Rule .0544 (b)(1)(B).

- 2.3 Specify which groundwater unit—NTU’s or mg/L—will be used to measure turbidity during development and sampling of the proposed groundwater monitoring wells.
- 9.2 Specify that well decommissioning will be in accordance to applicable 2C rules in lieu of solely under the direction of the SWS.

Tables and Figures

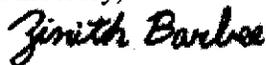
Table 1 Depth of proposed monitoring wells should be specified, which lithologic unit will be monitored should be named, and well construction specifications and details should be submitted.

Figure 5 Include in the legend the symbol and explanation for the “half-moon” figure used to denote MW-11, MW-15, etc. The legend identifies other symbols but not the one denoting the aforementioned wells.

Figure 7 Revise the hydrogeological section CD-1 to show BP-11, show a corrected groundwater elevation at BP-6, and show in the legend which water table—at time of boring, stabilized, seasonal, or long term seasonal—is depicted on the cross sections.

This review addressed requirements effective at the time the application had been submitted and addressed new C & D requirements effective on January 1, 2007. Please contact me if you have any questions. I can be reached at 919-508-8525.

Sincerely,



Zimith Barbee
Hydrogeologist
Solid Waste Section

cc: Ed Mussler
Frank Ralph
Central File

Solid Waste Section
Public Utilities Director