

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

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Carmen Johnson

MEMORANDUM

TO: Bill Sessoms

FROM: Bobby Lutfy *BL*

RE: Hydrogeologic Completeness Review Of The Harnett County
Dunn/Erwin Site Study

Most of the Rules seem to be addressed in the Site Study, however some things were noted during the completeness review that will need some revisions. Please have Harnett County or their consultant address the following questions and comments:

.1618(c) (1)

- (A) Much of the general topography is not legible on the Regional Characterization Map (Sheet Number C 1). There is no topography illustrated within the landfill boundaries.
- (D) The report text states the "Green Acres" mobile home park is within the two mile radius, however on the Regional Characterization Map (Sheet Number C 1) it is shown to be outside the two mile radius.
- (D) On the top of Page II-3 reference is made to "700 single family residences in the two mile perimeter area", but then it goes on to reference "three of the thirty five residences". I think there are probably 700 residences within the two mile radius and 35 residences within the 2000 foot radius, however this needs to be clarified.

.1618(c) (2)

- (B) On Page II-5, Existing Land Use and Zoning, it states the "majority of this area is zoned RA-30". Is there any portion of the 2000 foot radius study area that is zoned differently?

The property boundaries of the additional tract of land owned by Harnett County need to be shown on the Local Characterization Map (Sheet Number C 2). However they need to be shown in a way that distinguishes this property from the permitted landfill facility.

- (E) I was able to locate only two of the three referenced private wells on the Local Characterization Map (Sheet Number C 2).

.1622(3)

- The wetlands delineated on the Facility Plan (Sheet No.C 3) are different than the wetlands delineated on Figure No. 1 in Section IV, Appendix B. Either the wetlands shown on the Facility Plan need to be changed or the Facility Plan should note that the wetlands delineated are post-construction wetlands as approved by the US Army Corps of Engineers.

.1623(a)

- On Page 1 of the Supplemental Geologic And Hydrogeologic Report it references Table 1 and Table 2. I was not able to locate either of these tables in the report.
- I was not able to identify the locations of all the borings, piezometers, and monitoring wells. Some do not appear on the Hydrogeology Map (Sheet Number C 5), and Figure 8 in the Westinghouse Report is not legible.
- (2)(A) One of the reports describes a spring fed lake (that has now been drained) in the approximate location of the proposed leachate storage pond. What happened to the spring? Little subsurface characterization has been provided for the area of the proposed leachate storage pond.
- (4)(E) A table needs to be prepared that identifies the lithologic (hydrogeologic) units of the uppermost aquifer and provides saturated hydraulic conductivity, porosity, and effective porosity values representative of each unit.

- (9) The ground-water contour map needs to identify "the water table elevations or potentiometric data at each (boring) location used to generate the ground-water contours". What is the date of the water level measurements used to generate the ground-water contour map? Is the ground-water contour map based upon shallow borings or deep borings? It appears the end of the ground-water contours between PZ-44 and PZ-42 should bend around toward the North.
- (13) (C) Discussion needs to be provided on the overall suitability of the site and which areas are most suitable for MSWLF units.
- (13) (D) Further discussion is needed on the ability to effectively monitor the MSWLF unit. The perched water tables, relatively imperious clay units, and the lack of control of the property to the discharge point all present complications to effective monitoring of the MSWLF unit.

The Appendix II sampling of September 1995 indicates ground-water contamination in monitoring wells MW-6, MW-7b, and MW-8. The level of some of the organic constituents in wells MW-6 and MW-7b has been determined to be above the Groundwater Standards and/or statistically significant. The potentiometric map indicates the proposed lined landfill unit to be somewhat downgradient of these monitoring wells and of the active unlined landfill unit. Further assessment of the nature and extent of contamination and direction and rate of ground-water flow in this area will be necessary in order to determine if the proposed lined landfill area is suitable.

Construction of the proposed lined landfill unit could interfere with assessment and possible corrective action of the existing landfill unit. The existing contaminant plume might make it difficult to monitor the two landfill units separately. This could create a situation where additional buffer and alternative monitoring is needed, or possibly even prohibit the construction of the lined landfill unit at the proposed location.

Responses to these comments and questions are needed before a full technical hydrogeologic review of the Dunn/Erwin Landfill Site Study can be completed.