North Carolina
Department of Environment and Natural Resources

Division of Waste Management

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

March 20, 2001

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Mr. Robert Hunter
Division Solid Waste Director
30 Valley St.
Asheville, NC 28801

RE: Construction and Demolition Debris Suitability Application, Phase 3, Permit 11-07.

Dear Mr. Hunter,

The Solid Waste Section has completed a preliminary review for the hydrogeologic evaluation presented in the Phase 3 Construction and Demolition Debris Landfill Permit Application. Please have your consultant respond to the comments and questions.

Provide boring logs for 515A, 517B, and 519B.

Are there hollow stem auger boring logs for the 500 series in the Phase 3 construction and demolition (C&D) field investigation?

Provide the standard penetration test results for the current study.

Soil testing was only completed on soils collected from boring 519, which is located outside the proposed Phase 3 area. Additional soil tests are needed to develop an understanding of the hydrology and geology of the Phase 3 area. Soil tests completed over 1200 feet away in the cells 4 and 5 area probably do not provide a good representation of soils in the proposed Phase 3 C&D.

There are only two borings completed inside the cell footprint. These borings do not adequately delineate the four-foot top of rock separation required for construction and demolition debris landfills. These two borings, 517 and 518, are located only on the slope.

The crest of the hill has no borings or piezometers identifying the top of rock or the groundwater divide. Identification of the groundwater divide is crucial to understanding the groundwater flow regime. Since groundwater flow is primarily contained in the fractured rock system, information gained concerning top of rock and groundwater flow direction will dictate how much of Phase 3 can be utilized.

Previous groundwater pump tests were completed in hollows where the groundwater flows north towards Blevins Branch. This type of fieldwork has not been completed in the hollows where the primary groundwater flow is in a southerly direction. Pump tests may be required to provide information about groundwater flow in this portion of the site.

There is not enough site-specific information provided in the application to determine how much of the proposed Phase 3 area is suitable for a construction and demolition debris landfill. Two borings completed in the Phase 3 footprint do not adequately establish the top of rock for an eight-acre site. Unlined landfills must have a minimum of four feet separation from top of rock and the top of the long-term seasonal high groundwater table.

Groundwater flow appears to be primarily confined to fractured rock. Data provided does not demonstrate two groundwater monitoring wells will detect a potential release in the groundwater flow regime from the proposed construction and demolition Phase 3 area. Multiple monitoring wells positioned in the rock may be required to detect a release from the C&D into a fracture flow system. Additional field exploration is necessary to determine these issues.

Please call me at (919) 733-0692, extension 346, if you have any questions or concerns regarding this letter.

Sincerely,

Cheryl Marks

Cheryl Marks
Hydrogeologist
Solid Waste Section

cc: James Coffey, Acting Section Chief
Bobby Lutfy, Hydrogeologist
Bill Sessoms, Engineer
Al Hetzell, SWS-Asheville
Tim Grant, CDM