

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

James B. Hunt, Jr., Governor  
Jonathan B. Howes, Secretary  
William L. Meyer, Director



February 20, 1995

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Mr. Randall Fletcher  
County Manager  
Avery County  
P.O. Box 640  
Newland, N.C. 28657

RE: Monitoring Well Replacement at the Avery County Closed Landfill  
(Permit # 06-01)

Dear Mr. Fletcher,

The Groundwater Sampling Report for the October 18, 1994 sampling event at the Avery County landfill indicated that monitoring well-1 (MW-1) was damaged and a sample could not be collected for analysis. Because the monitoring system at the site has only two downgradient wells it is important that both wells are functional and can be sampled. Each well has a significant role in helping determine water quality at the site. This is particularly true since synthetic volatile organic compounds have been detected during past sampling episodes.

Therefore, it is necessary that MW-1 be replaced. The location and design of the proposed monitoring well must be approved by the Solid Waste Section prior to well installation. The replacement monitoring well should be installed according to the following conditions:

1. The well is to be constructed according to State Well Construction Standards 15A NCAC 2C and the specifications in the "North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities" as illustrated by the "Typical Monitoring Well Schematic" that is enclosed.
2. The well is to be placed within the permitted boundary of the facility in an area free of landfill waste or debris, and in an area not subject to flooding. The location should allow for monitoring of the same general area as the replaced well.

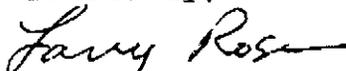
3. The well should be drilled to a depth (and likewise, the screen placed at a vertical location) that will insure that future drought conditions, which may lower the water table, will not render the well ineffective. The top of the well screen should be placed just above the level of the seasonal high water table. It is important that the well is not screened too shallow or too deep.
4. The screen should be a maximum of 15 feet in length. The sand pack should extend no more than 2 feet above or 1 foot below the screen. A bentonite seal of at least 1.0 foot should be installed above the screened interval.
5. The well must be thoroughly developed after construction in order to reduce suspended solids, flush out the well and re-establish equilibrium in the aquifer.

Within 15 days of completion of the well installation, a complete and accurate Well Completion Record (DHS 3342) and Typical Schematic should be submitted to this office. In addition, please provide a summary of the hydrogeological data accumulated from the boring operation. Include the boring log and other pertinent subsurface information.

The existing damaged well that is to be replaced should be permanently abandoned according to the procedures cited in 15A NCAC 2C with the exception that no disinfection is to be done.

Thank you for your cooperation. If you have any questions, please call this office at (919) 733-0692.

Sincerely,



Larry Rose  
Hydrogeological Technician  
Solid Waste Section

cc: Julian Foscue  
Al Hetzell

Enclosure



# TYPICAL MONITORING WELL SCHEMATIC

