

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

July 23, 1994

Mr. Charles Mashburn
Alexander County Manager
Adm. Bldg. 255 Liledoun Rd.
Taylorsville, N.C. 28681

RE: Interim Review Of Water Quality Monitoring Transition Plan
Alexander County Landfill, Permit # 02-01

Dear Mr. Mashburn,

There is limited time available for the Solid Waste Section to review and evaluate the Water Quality Monitoring Plan submitted as part of the Transition Plan. It is not possible to do a full technical review of this plan in time to allow for the upgrading of the monitoring system and the initial sampling episode of the baseline sampling event.

Therefore the Solid Waste Section is giving interim authorization for Alexander County to proceed with the upgrade of the ground-water monitoring system at the Alexander County MSWLF facility in general accordance with the proposal submitted in the monitoring plan included as part of the Transition Plan. **However, the monitoring system upgrade must meet the following conditions:**

Past sampling data indicates evidence of some contamination in well MW-1. This well is not located in an area that is representative of background ground-water quality for the facility. Therefore another upgradient background monitoring well needs to be established that will provide data of ground-water quality that has not been affected by landfilling or other associated activities on the site.

None of the existing monitoring wells are to be abandoned or dropped from the detection monitoring system without written authorization from the Solid Waste Section.

New monitoring wells should generally be installed about 100 to 150 feet from the waste boundary.

The monitoring wells are to be constructed according to the specifications in the North Carolina Well Construction Standards (15A NCAC 2C .0108).

The monitoring wells are to be constructed according to the specifications in the "North Carolina Water Quality Monitoring Guidance Document For Solid Waste Facilities" as illustrated by the Typical Monitoring Well Schematic" diagram enclosed.

The monitoring wells are to be placed in the approved locations in areas free of garbage, refuse, or debris, and in areas not subject to flooding.

The monitoring wells are to be drilled to a depth, and the screens placed at vertical locations, that will ensure that future drought conditions, which may lower the water table, will not render the monitoring system ineffective.

Generally shallow monitoring wells shall be installed with a 15 foot screen, with the top of the screen set just above the seasonal high water table, unless hydrogeologic conditions justify changes in this design.

The sand pack should extend no more than 2 feet above the screen and no more than 1 foot below the screen. A bentonite seal of at least 1.0 foot should be installed above the screened interval. The bentonite shall be allowed adequate time to hydrate prior to grouting up the annular space of the well above the bentonite seal.

Monitoring wells shall be thoroughly developed after construction in order to reduce suspended solids, flush out the well, and re-establish equilibrium with the aquifer.

In addition to the water quality analytical data, the initial baseline sampling report must include for each monitoring well the following information: a Well Completion Record, Well Schematic Diagram, boring log, hydraulic conductivity value, porosity value, effective porosity value, and the direction and rate of groundwater flow. **This initial baseline sampling report must be received in the Solid Waste Section office on or before October 9, 1994.** The technical review and determination of adequacy of the Transition Plan Water Quality Monitoring Plan will not be completed until after the initial baseline sampling document has been received and reviewed by the Solid Waste Section.

The water quality sampling and analysis for the baseline sampling must be done according to the directives in the June 24, 1994, memorandum from the Solid Waste Section to MSWLF owners and operators. If you have any questions or comments regarding this conditional interim authorization to install monitoring wells as necessary to upgrade the monitoring system at the Alexander County Landfill, please contact the Solid Waste Section at (919) 733-0692.

Sincerely,
Bobby Lutfy
Bobby Lutfy, Hydrogeologist
Solid Waste Section

cc: Sherri Hoyt
Anthony Foster
Municipal Engineering

TYPICAL MONITORING WELL SCHEMATIC

