



North Carolina Department of Environment and Natural Resources

Division of Waste Management

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Secretary

May 5, 2010

Mr. Stephen King  
Haywood County Solid Waste Director  
278 Recycle Road  
Clyde, North Carolina 28721

Subject: Replacement of Groundwater Wells, Surface Water Sampling Station, and Landfill Gas Monitoring Well  
White Oak MSW Landfill  
Haywood County  
Permit 44-07  
Doc ID 10520

Dear Mr. King:

The Solid Waste Section (SWS) reviewed a request to replace existing wells depicted in the Environmental Monitoring Plan for the White Oak Municipal Solid Waste Landfill (MSW). McGill Associates, P.A (McGill) submitted the request, which has been filed in the SWS database as Doc ID 10501. McGill addressed two (2) groundwater monitoring wells, MW-3 and MW-3D, and one (1) landfill gas monitoring well, LFG-4, that reportedly had been covered with fill material during construction associated with Phase 3. After reviewing the request, the SWS determined that other components of the Environmental Monitoring Plan should be replaced.

Two (2) additional wells and one (1) sampling station also require replacement. According to the January 2010 semi-annual sampling report (Doc ID 9919), the groundwater monitoring well, MW-9, is "covered with fill soil" and the groundwater monitoring well, MW-4A, is "damaged" enough to prevent sampling. In addition, the SWS determined that the surface water sampling station, SW-2, is also covered by the fill McGill mentioned in its request. The wells and sampling station are part of the water quality monitoring plan described in the Environmental Monitoring Report for the site (Doc ID 5808) approved in April, 2009.

Although a landfill gas monitoring plan has not been submitted, the SWS approves replacement of LFG-4 and any other existing landfill gas monitoring well damaged during construction associated with Phase 3. Please note that landfill monitoring gas plans are now reviewed by the SWS hydrogeologists and some standards for the landfill gas monitoring have changed. The well depth should extend to the seasonal high groundwater elevation. The screened interval should span most of the unsaturated zone while still allowing for proper well construction. Well joints should be connected with threaded couplings in lieu of slip couplings, screwed couplings, or glued couplings. The well should be fitted with a cap equipped with a

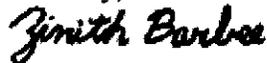
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stopcock valve that controls gas flow. The cap should also be equipped a barbed connection that fits the instrument used for sampling. A detail of the landfill gas monitoring well should also be submitted. The SWS understands that a landfill gas monitoring plan for the site is forthcoming.

In summary, replaced should be MW-3, MW-3D, MW-4A, MW-9, SW-2, and LFG-4. The groundwater monitoring wells, surface water sampling station, and landfill gas monitoring well can be located near their original locations. They should be given new identification numbers or some variation of their original identification to distinguish them from the wells they replaced. The surface water sampling station can retain its original identification. A Professional Geologist should be on site during installation of the wells. Upon completion of well installation, boring logs and well construction records for each well should be submitted to the SWS. A scaled topographic map showing the location and identification of new, existing, and abandoned wells should be submitted. All well installation should be in accordance to applicable standards specified in Regulation 15A NCAC 2C.

If you have any questions, I can be reached at 919-508-8401 or at [zinith.barbee@ncdenr.gov](mailto:zinith.barbee@ncdenr.gov).

Sincerely,



Zinith Barbee  
Hydrogeologist  
Solid Waste Section

cc: Ed Mussler      Solid Waste Section  
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Dave Pasko      McGill Associates, P.A.  
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