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Waste Management

Mr. Bobby Lutfy, Hydrogeologist
North Carolina Department of Environment
and Natural Resources
Division of Solid Waste Management
Solid Waste Section
P. O. Box 27687
Raleigh, North Carolina 27611-7687

Re: Supplemental Revisions to Revised Ground-Water Monitoring Plan
Winston-Salem Construction and Demolition Landfill (#34-12)
Forsyth County, North Carolina
HDR Project No. 00162-525-018

Dear Mr. Lutfy:

HDR Engineering, Inc. of the Carolinas (HDR) is hereby submitting, on behalf of the City of Winston-Salem Utilities Division, the following document to be incorporated into the existing Revised Ground-Water Monitoring Plan (RGWMP), revised July 2003.

A dedicated, low-flow, bladder sampling pump will be installed in each of the 13 compliance monitoring wells (MW-1R through MW-5R and MW-7 through MW-14). The pumps, which are lab tested and certified for purity by QED Environmental Systems, are fully stainless steel and Teflon in construction. The tubing connecting the pump to the surface is Teflon-lined polyethylene. The dedicated pumps will be utilized for groundwater sampling at the landfill as follows: Prior to groundwater quality sampling, each well will be pumped using the dedicated sampling pumps. The dedicated pumps (installed with the bladder positioned within the screened interval) will be pumped at such a rate that minimal drawdown (less than one foot) will occur in the well. This is usually between 100 and 500 milliliters per minute (ml/min).

Once the drawdown has stabilized, the flow cell meter will be connected to the water discharge outlet to record field measurements [pH, temperature, specific conductance, dissolved oxygen (DO), salinity, and oxidation reduction potential (ORP)] to determine when a representative sample can be collected. These measurements will be obtained from a field-calibrated instrument in accordance with the manufacturers' specifications and industry standards. The flow cell meter will log the geochemical changes of the purge water and signal when they become stabilized. At that time, water quality samples will be collected from the monitoring wells directly from the pump's dedicated water discharge tube under low-flow conditions.

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If you have any questions or comments concerning the information summarized in this letter, please do not hesitate to contact me at (704) 338-6777.

Sincerely,

For CR

Chris Randazzo
Project Geologist

CR/jvd

cc: Edward Gibson, City of Winston-Salem
Larry Rose, NCDENR Solid Waste Section
Tim Jewett, NCDENR Solid Waste Section
Brock Turner, Forsyth County Health Department