



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Dexter R. Matthews

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

July 26, 2012

Mr. Tim Rogers
Solid Waste Director
460 B South Landfill Road
Dudley, North Carolina 28333

RE: Corrective Action Evaluation Report (CAER)
Wayne County Active C&D over closed MSWLF
Dudley, NC 28333 Permit #96-01
Document ID No. 16967

Dear Mr. Rogers:

The Solid Waste Section has completed a review of the May 10, 2011 Corrective Action Evaluation Report (CAER), Document ID No. (DIN) 13923, and the results of two subsequent groundwater sampling events submitted on behalf of Wayne County by Municipal Engineering Services Company for the Wayne County active C&D over closed MSW Landfill located in Dudley, NC. The CAER also included a proposed revised Groundwater and Surface Water Sampling and Analysis Plan.

The CAER was submitted pursuant to the County's Corrective Action Plan (CAP) approved by the Solid Waste Section on October 23, 2009. The approved corrective action program consists of Monitored Natural Attenuation (MNA) coupled with an active gas collection and control system, institutional controls, and capping for source control. The groundwater constituents of concern (COC) identified in the Assessment of Corrective Measures report and in the CAP are: chlorobenzene, p-dichlorobenzene and mercury.

The MNA baseline was established by completing four consecutive semiannual sampling events conducted 08/06/2009, 02/16/2010, 08/12/2010, and 02/08/2011. Two additional semi-annual groundwater sampling events were conducted in August 2011 and February 2012 after the CAER was completed. During the February 2011 CAER sampling event, chlorobenzene and p-dichlorobenzene were detected in groundwater monitoring wells MW-2 and MW-8 at levels below the NC 2L groundwater standards. Benzene was detected in MW-2 above the 2L standard of 1.0 ug/L at 2.8 ug/L.

During the August 2011 groundwater sampling event, benzene was detected in MW-2 at 2.5 ug/L and arsenic was detected at 11.9 ug/L. Chromium was detected at 22 ug/L in MW-7 and vanadium was detected above the 2L standard in wells MW-1, MW-2, MW-5, MW-6, and MW-7. In February 2012, benzene was detected in MW-2 at 2.4 ug/L, and vanadium was detected above the 2L standard in wells MW-1, MW-3, and MW-5.

The baseline MNA sampling and Biochlor modeling results reported in the CAER indicate there is adequate evidence of natural attenuation occurring in the groundwater at the landfill site. The laboratory analyses of groundwater samples collected from MW-2 illustrate a trend of decreasing concentrations of benzene over time. The detection of vanadium in multiple wells across the landfill during the last two semi-annual sampling events was not reported during the sampling events conducted for the CAER. Further investigation into the recent yet widespread detection of vanadium in wells across the site will be required.

Wayne County's request to sample wells MW-1, MW-2, and MW-8 annually for the following MNA parameters is approved: alkalinity, sulfate, sulfide, TOC, COD, Iron, Chloride, Nitrate, Temperature, ORP, DO, pH, Specific Conductance, and turbidity. The following MNA parameters are approved to be collected biennially, or once every two years: Hydrogen, Volatile Fatty Acids, Methane, Ethane and ethene, and BOD. Please submit a revised Groundwater and Surface Water Sampling and Analysis Plan to reflect the above changes for sampling of MNA parameters. After the next semi-annual groundwater sampling event is conducted, please prepare a plan to further investigate the presence of vanadium in wells at the landfill site.

If you have any questions regarding this letter, please contact me at (919) 707-8254 or by email at Christine.ritter @ncdenr.gov.

Sincerely,



Christine Ritter
Hydrogeologist
Solid Waste Section

cc: Mark Poindexter, DWM
Dennis Shackelford, DWM
Wes Hare, DWM
Jonathan Pfohl, Municipal Engineering Services Company