



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

August 30, 2010

Mr. Anson B. Johnson III  
Project Coordinator  
Muskego Site Groundwater Remediation Group  
720 E. Butterfield Road, 4<sup>th</sup> Floor  
Lombard, Illinois 60148

Re: Muskego Sanitary Landfill Site  
Expanded Groundwater Monitoring Report

EPA Region 5 Records Ctr.



374276

Dear Mr. Johnson:

This letter is in reference to the Expanded Groundwater Monitoring Report, Rev. 1, submitted to the U.S. Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources (WDNR) in November 2007.

EPA, in consultation with the WDNR, approves the MSGRG's Expanded Groundwater Monitoring Report (Report) with the following modifications:

- 1) While the data provided in the Report are accurate and of good quality, some of the conclusions reached in the Report appear to be premature and/or overstated. For example, the Report appears to claim that there is no plume of contamination extending beyond the landfill boundary. The Report also attributes significance and impact to the west groundwater valley. Those statements are not fully supported by the existing data and should be disregarded pending further investigation. The next step of the process will be to further characterize the plume in order to determine whether natural attenuation of contamination is occurring.
- 2) Further expansion and evaluation of the groundwater monitoring network is needed to determine whether Monitored Natural Attenuation (MNA) reduces contaminant levels in groundwater beyond the landfill boundary, and development of contingent measures is needed if MNA does not reduce contaminant levels. Based on the data included in the Report and in other Site groundwater monitoring, it appears that MNA may be an appropriate groundwater remedy. Historical monitoring beyond the landfill boundary has shown consistent detections of low levels of vinyl chloride, which commonly degrades from chlorinated volatile organic compounds in the groundwater and soil conditions which are present in the vicinity of the landfill.

- 3) Further information is needed to fully delineate the nature and extent of groundwater contamination and to identify potential receptors. Matters requiring further clarification through supplemental sampling and evaluation include: the hydrostratigraphy and the southern extent of the Upper and Lower Sand Units; hydraulic gradients and groundwater velocities; changes in flow directions (including in the areas of the municipal well); contaminant detection levels and data trends; the relation between the capture zone at the landfill and the monitored area beyond the landfill boundary; the potential for public health concerns; and hydraulic connections between the Upper and Lower Sand Units. This additional information will be gathered as part of ongoing Site monitoring efforts and as part of a further evaluation of monitored natural attenuation. This will also lead to refinement of the conceptual site model.
- 4) While the Report asserts that there may be other sources contributing to the plume, it does not provide any data to link any other source to the contamination at the Site. This assertion does not have any impact on the determination that the plume is the result of releases from the landfill areas and that releases from the landfill area have extended beyond the landfill property boundary.

Sincerely,



Jeff Gore  
Remedial Project Manager

cc: James Delwiche, WDNR  
Thomas Krueger, U.S. EPA