UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

DATE: December 8, 2010

FROM: Donald A. Heller, CAPM
CAS 1, Remediation and Reuse Branch

TO: Jacob Hassan
Municipal and Industrial Materials Section, Materials Management Branch

SUBJECT: Geological /Hydrogeological Review of September 2010 Groundwater Evaluation of Mallard North Landfill, Hanover Park, IL

Overall, I feel that the consultants have done a thorough job of characterizing the geology and ground water flow at this facility.

Although dissolved methane concentrations within and at the perimeter of the landfill have exceeded the 1,200 ug/L advisory level, off-site concentrations appear to be well below this criterion.

I note that all of these findings are based upon one initial round of ground water sampling and water table elevation measurements. The report recommends three more quarters of monitoring, after which the consultants will evaluate the need for an on-going monitoring program.

I agree that at least three more quarterly monitoring events should be run, and I recommend that sampling for methane continue on an on-going basis, even if it is annual or semiannual. The Mallard North Landfill is located very close to residences and a grade school, and the facility is actively generating methane which must be continually burned off. Vigilant monitoring for this gas must continue near the school and residential area. The owners of the landfill could evaluate a more aggressive methane collection system and additional flare stations within the landfill, which may reduce concentrations of the dissolved gas at the perimeters of the facility.

I note that the initial ground water characterization shows that the water table mirrors the topography and slopes toward the West Branch DuPage River along each bank. This appears to isolate the Greenbrook School from ground water flow migrating from the landfill. I also note that elevated dissolved methane concentrations have been detected along the southeastern margin of the facility. I recommend that a potentiometric study be conducted in this area during high-water conditions at the river, to determine if ground water from the facility could flow toward the school when an elevated river surface could “flatten” the gradient.

Please contact me at (312) 353-1248 if I can be of additional help.