West Lake Update

November 7, 2014

EPABegins Review of Isolation Barrier Alternatives Assessment

EPA Region 7 recently received the isolation barrier alternatives report from the Potentially Responsible Parties (PRPs), and has begun to review its contents. This report provides preliminary analysis of the possible isolation barrier alignments, including analysis of bird control issues associated with each alignment.

In keeping with EPA's August 13, 2014, letter to the Missouri Attorney General, copies of the report have been provided to the U.S. Army Corps of Engineers (USACE) and the St. Louis Airport Authority for their review and evaluation concurrently with EPA. Each agency plays an important role in this effort given the technical complexities of the construction project and the public safety concerns related to bird strikes.

The objective of the proposed isolation barrier is to prevent potential impacts that could occur if a subsurface smoldering event (SSE) were to come into contact with the buried radiologically impacted material (RIM) in Operable Unit 1 (OU-1) of the West Lake Landfill Superfund Site. Each evaluation looks at a number of factors, including waste excavation and relocation volume estimates, preliminary design and construction schedules, potential for odor release, potential to attract birds, potential risks associated with each alternative, and potential advantages and disadvantages of each alternative.

A total of five alternatives were assessed, including a "no action" alternative to provide a baseline assessment. Not including the "no action" alternative, the report details four potential alternatives, listed in the report as Options 1-4:

Option 1 - Installation of an inert barrier located along the northern boundary of the North Quarry area of the Bridgeton Landfill/ southern boundary of Area 1;

Option 2 - Excavation of an air gap (open trench) barrier down through the bottom of the waste materials in the northern portion of the North Quarry area of the Bridgeton Landfill;

Option 3 - Installation of an inert barrier located within the northern portion of the North Quarry area of the Bridgeton Landfill, south of the currently identified known occurrences of RIM;

Option 4 - Installation of a heat extraction barrier located along the southern portion of Area 1/northern portion of the North Quarry area of the Bridgeton Landfill.

The report provides an analysis of each option, including potential advantages and disadvantages. A comparative summary of the alternatives and conclusions is also included in the report.

The report is currently under review and evaluation by various offices within EPA, as well as by our partners at the USACE and the St. Louis Airport Authority. If, after a robust engineering review and analysis, no additional information is necessary to complete the analysis of the preliminary alternative assessments, EPA may then select one of the options and direct the PRPs to further develop construction design plans.

EPA Region 7 appreciates and supports the work of the Missouri Department of Natural Resources (MDNR) and the State of Missouri, through its legal orders, in directing Republic Services to monitor and contain the SSE in the Bridgeton Landfill portion of the West Lake Landfill Site. The additional temperature data and corrective action assessment recently required by the MDNR will support both the state's efforts to monitor the SSE, as well as EPA and USACE efforts to evaluate barrier alternatives. EPA is in regular communication with MDNR about the department's efforts to closely monitor the SSE. In partnership with these organizations, EPA is working diligently to develop a solution to address concerns about the potential for a subsurface smoldering event (SSE) coming into contact with the radiologically impacted material (RIM) in the West Lake Landfill.

The Isolation Barrier Alternatives Assessment report is currently available on EPA Region 7's West Lake Landfill website: www.epa.gov/region7/cleanup/west_lake_landfill

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