

Technical Review of the Mound Site

Summary

by **EHS TECHNOLOGY GROUP, LLC**

Reference Document: PRS 76 Action Memo/EE/CA for Removal Action of Volatile Organic Compound (VOC) Contaminated Soils, November 2004, Public Review Draft.

Purpose: The purpose of this document is to document and allow public comment on the proposed Removal Action at PRS 76.

Assessment of Review: PRS 76 is the site of former Warehouse 9 which was built as part of the original Mound facility in 1947. This structure was originally used to store cement. Later, it was used to ship and receive drummed radioactive materials and it served as the central point of waste shipments until December 1954. In 1955, the warehouse and/or its platform were used for unloading drums for the planned thorium refinery. The warehouse was removed in 1962, and since 1969 this area has been an asphalt covered parking lot.

Technical Analysis: Sampling results for the PRS 76 area revealed that concentrations of radionuclides were below the risk-based cleanup objectives and therefore, were not included in this Action Memo. However, during the sampling event unanticipated elevated levels of VOC contamination were found. There are no records which would indicate operations that would have utilized or disposed of VOCs in the area. From the sampling, the highest levels of VOCs were found in the vadose zone soils (soils above the water table). VOCs detected in these soils include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2, dichloroethene (DCE), and vinyl chloride. The highest VOC soils concentrations were 260,000 ppb for PCE, 25,000 ppb for TCE, 2900 ppb for DCE and 1,300 ppb for VC. Subsequent drilling and sampling of the soil cores showed very low levels of VOCs and therefore suggest that the contamination is fairly restricted to the original sampling area. All soil samples analyzed during this effort showed VOC concentrations in the low ppb range, well below the derived Soil Screening Levels (SSLs). This sampling was used to develop a model for the subsurface soil VOC contaminant distribution in the PRS 76 area. The model predicted that leaching of VOCs into the groundwater could be a potential problem. As a result, the Core team recommended Removal Action for this PRS. As part of this Action Memo, other alternative technologies were investigated; however, soils removal was found to be the preferred alternative.

As always, coordination between CH2M Hill, the cleanup contractor at the Mound site, and Miamisburg Mound Community Improvement Corp. (MMCIC - the developer of the site) will result in the return of these areas to that proposed in the Mound Comprehensive Reuse Plan.

Substantive Comments: EHS concurs with the proposed Removal Action for PRS 87 soils. Coordination between CH2M Hill, the DOE and MMCIC is important to ensure that the PRS 87 site is left in a condition consistent with the Mound Reuse Plan.

EHS, along with MMCIC, will monitor the progress of the removal action. Notification of the Verification Sampling and Analysis Plan and the On-Scene Coordinator Report for this site would be appreciated.

If EHS's understandings are correct, no specific response to the above comment is necessary, and we understand that these comments will be included in the OSC report.