



HIGHLIGHTS

**National Risk Management Research Laboratory
Ground Water and Ecosystems Restoration Division
Robert S. Kerr Environmental Research Center
Status Report for the week of January 19, 2015**

TECHNICAL ASSISTANCE

Technical Assistance Region II: On December 8, 2014, Dr. Scott Huling (GWERD) provided technical review comments to RPM Sin-Kie Tjho, and Region 2 Hydrogeologist, Sharissa Singh, on the “Pilot Test Workplan, AOC 1 – Fluoroproducts Area, DuPont Chambers Works, Deepwater, New Jersey.” This draft pilot study workplan proposes to use an emerging technology that has had limited application and documentation. Based on technical deficiencies, unclear treatment objectives, and ambiguous ISCO design details, the feasibility of proposed remedial activities is questionable. There are risks and uncertainties associated with the proposed ISCO activities in terms of contaminant fate and transport, the ability to assess treatment performance, the impact of releasing large quantities of chlorofluorocarbon greenhouse gases and VOCs. The proposed design appears to involve a DNAPL mobilization strategy to be deployed in the DNAPL source area. The lack of hydraulic control of ground water contaminants from the source area and the potential for volatile emissions are unacceptable. Proof of concept demonstration of this emerging technology has not been provided, and limited data and information will be provided in proposed pilot scale activities that can differentiate between degradation and non-degradation loss mechanisms. It is recommended that the feasibility of other DNAPL removal technologies be further investigated, including thermal remediation.

(15-R02-001)

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Technical Assistance Region II: On December 10, 2014, Dr. Ralph Ludwig provided technical review comments to RPM Lorenzo Thantu on the “AVX Corporation Feasibility Study Report for the Olean Well Field Superfund Site, Olean, New York.” The technical review included the subject report and other available documentation pertinent to evaluation of the hydraulic containment and permeable reactive barrier (PRB) alternatives for the AVX Corporation property associated with the Olean Well Field Superfund Site in Olean, New York. While both alternatives appear to be technically sound and appropriate options for treatment of groundwater in the till unit, the trench-based hydraulic containment alternative with above-ground treatment appears to be the better and more reliable choice. This is primarily because there are some contaminants that have been released on the AVX property (or that are otherwise present on the AVX property) that are not amenable to treatment with a ZVI-based permeable reactive barrier — this being the type of PRB being proposed for implementation at the site under the PRB alternative. Other issues include some uncertainty with regard to the longevity of a PRB and the fact that a PRB would be less amenable to alteration/modification should the contaminant plume geometry or direction change over time. The significantly higher costs of the hydraulic containment alternative including the need for an above-ground treatment system that will need to be maintained and secured for decades, however, would be strong factors in favor of the PRB alternative were it not for the presence of the ZVI non-treatable contaminants on site.

(15-R02-002)

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Technical Assistance Region V: On December 11, 2014, Dr. David Burden (GWERD), and Dr. Daniel Pope (CSS-Dynamac) provided Donald Heller, Region 5, a summary of the conference call on the PM Environmental Response to Comments on the *Enhanced Reductive Dechlorination (ERD) Pilot Scale Study Workplan, August 28, 2014 Demmer Properties* for the Demmer Properties, LLC/Former Motor Wheel Facility, Lansing, Michigan. The vadose and saturated subsurface zones at the Site are contaminated with contaminants including the chlorinated alkenes trichloroethene, 1, 2-dichloroethene, and vinyl chloride. The Workplan provided a proposed approach to a pilot-scale study of ERD as part of the remediation effort for the Site. A pilot study for the Site is appropriate, with some additional clarification of the proposed approach. Enhancement of the proposed monitoring system - including the three additional monitoring wells proposed in the Response, and one additional monitoring well located on the west end of the E transect, downgradient of the PSMW-C4 monitoring well – would be desirable to reduce uncertainty (e.g., about changes in geochemistry, rates of degradation, etc.).

(15-RC05-002)

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