



HIGHLIGHTS

**National Risk Management Research Laboratory
Ground Water and Ecosystems Restoration Division
Robert S. Kerr Environmental Research Center
Status Report for the week of April 6, 2015**

TECHNICAL ASSISTANCE

Technical Assistance Region I: On March 16, 2015, Dr. Richard Wilkin (GWERD), provided technical review comments to Gerardo Millán-Ramos on “DRAFT Annual Monitoring and Demonstration of Compliance Report for 2014; Somersworth Sanitary Landfill Superfund Site, Somersworth, New Hampshire,” dated February 20, 2015. The comments focus on the performance of the granular iron chemical treatment wall (CTW). It is recommended that the report include some additional explanation describing results of monitoring well sampling results. Overall, the data analysis indicates that the CTW performance meets the compliance requirement at most of the compliance monitoring locations and over most of the sampling rounds. There seem to be spurious detections that show up at some locations, and the reason(s) as to why these detections occur remains unclear. It would be helpful if the report were to specifically call out the locations where detections >ICL have been noted and list possible causes and possible ways of identifying the cause(s). It is also recommended that a specific figure be constructed to show the important trends that lead to conclusions stated in the report.

(15-R01-006)

(R. Wilkin (GWERD) 580-436-8874)

Technical Assistance Region X: On March 18, 2015, Dr. Scott Huling (GWERD), provided technical review comments to Dean Yasuda, Washington State Department of Ecology, on “Persulfate In-Situ Chemical Oxidation Bench Test Work Plan GE 220 South Dawson St. Facility (Draft).” In general, the proposed testing will provide useful information regarding the technical feasibility of In-Situ Chemical Oxidation (ISCO) at the site. In the Study Design and Procedures, it was reported that iron activation was selected as the most appropriate activator. It was proposed that iron will be added to select vials as ferrous sulfate and will be chelated with citric acid to enhance the iron solubility in the vial. The results from these tests may provide some insight regarding what may occur at field scale under similar conditions. Since this test will involve a complete mix test condition, the role of citrate may not fully represent the extent to which it plays a role in Fe transport assuming the citrate-Fe complex is eventually injected into saturated porous media. Other recommendations include an alternate, easier method be considered to measure persulfate anion that the use of ascorbic acid be considered to preserve samples prior to CVOC analysis.

(15-R10-002)

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Technical Assistance Region III: On March 19, 2015, Dr. Eva Davis (GWERD) provided technical review comments to RPM Rashmi Mathur on the “Draft-Final 35% Remedial Design for Electrical Resistance Heating (ERH) of Groundwater at the Property Disposal Office (PDO) Area Oil Burn Pit (OBP), PDO Operable Unit 4, at the Letterkenny Army Depot in Chambersburg, Pennsylvania. There are several concerns with the expectations of the Technical Evaluation Group (TEG) laid out in this document. First, while it should be a goal for the TEG to reach consensus on the technical issues pertaining to the thermal remediation, it cannot be guaranteed that a consensus will be reached on all issues. It would be more appropriate to ask the TEG for recommendations on various issues. If the TEG’s recommendations are accepted, then the TEG would endorse the system as being – in their opinion - adequate to determine changes in groundwater quality related to the operation of the remediation system. In addition, the TEG should have input on the monitoring network and the sampling frequency to demonstrate that these operational goals are met. There are three thermal remediation technologies that are commonly used today, and there is considerable overlap in the applicability of these technologies. For this site, Thermal Conductive Heating (TCH) may be a better technical fit if the resistivity of the bedrock is not compatible with ERH. Generally, a 35% Design for a thermal remediation system is conceptual in nature, and lays out the Basis of Design for a thermal vendor. This document does not provide a Basis of Design, but provides very specific design details that would likely have the effect of eliminating some vendors from bidding on the project. It is recommended that, in order to increase the number of bids received and to obtain the best price for the remediation, the detailed design information in this 35% Design be taken out.

(15-R03-001)

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