



HIGHLIGHTS

**National Risk Management Research Laboratory
Ground Water and Ecosystems Restoration Division
Robert S. Kerr Environmental Research Center
Status Report for the week of May 4, 2015**

TECHNICAL ASSISTANCE

Technical Assistance Region I: On April 1, 2015, Mr. Steven Acree (GWERD), and Dr. Bruce Pivetz (Dynamac Corp.), provided technical review comments to RPM Joseph LeMay on the “Deeper Bedrock Investigation Work Plan, New England Plastics (NEP) Subsite, Wells G&H Superfund Site.” The investigation proposed in the Work Plan for identification of transmissive features in existing deeper bedrock wells and for characterization of water quality in those zones appears to be sound in technical aspects and should satisfy the characterization objectives. No additional studies appear to be necessary to satisfy the characterization objectives. In general, the phased approach proposed in the Work Plan appears appropriate, in that it will provide time for analysis and review of the geophysical data collected from the wells, and identification of key fracture zones prior to collection of groundwater samples from those fracture zones. However, it does mean that there will be two mobilizations to the site (one for geophysical logging and the second for sample collection). Thus, timely analysis and review of the data and selection of proposed key fracture zones will be necessary to have all work completed in one field season.

(15-R01-005)

(S. Acree (GWERD) 580-436-8609)

Technical Assistance Region V: On April 4, 2015, Dr. Randall Ross (GWERD), Drs. Daniel Pope and Milovan Beljin (Dynamac Corp.), provided technical review comments to RPM Lolita Hill on the “Monitored Natural Attenuation (MNA) Pilot Test Work Plan, Chem-Dyne Superfund Site, Hamilton, Ohio.” MNA has been widely used at chlorinated solvents sites since the 1990s, and has been shown to be capable of making substantial contributions to meeting remedial goals for such sites. The general outlines of the degradative processes of major importance for control of the chlorinated solvents and their daughter products are well established, and numerous tools for their characterization and evaluation have been developed. However, because MNA is not in itself an active, engineered remedial approach, it is generally understood that MNA may require more intensive site characterization and monitoring than other remedial approaches. Further, MNA is not viewed as a viable remedial option for areas impacted by residual source material, which may be present in the vicinity of MW-15, as indicated by persistent elevated VOC concentrations. It is important to choose carefully the data set to be used in a trend analysis. For the MNA evaluation of contaminant trends, it is important to use only data taken during the MNA evaluation period, so that the analysis considers only the trends occurring while the MNA evaluation is being conducted, and confounding influences are minimized. It is important to obtain a complete hydrologic data set during the MNA evaluation because the proposed termination of the extraction system will change the groundwater flow regime at the Site, and because seasonal changes in groundwater flow may occur. The Workplan indicates that the current extraction system. However, given that the extraction system is pumping at relatively small rates from a highly productive aquifer, it is not clear that stopping the extraction system would make any significant change related to enhancing biotic degradation.

(15-R05-001)

(R. Ross (GWERD) 580-436-8611)

Technical Assistance Region X: On April 22, 2015, Dr. Scott Huling (GWERD), provided technical review comments to Kira Lynch (Superfund Technical Liaison) regarding various documents involving the potential use of in-situ chemical oxidation (ISCO) at the Occidental Chemical site in Tacoma, Washington. In-situ chemical oxidation (ISCO) in the heavily industrialized and contaminated marine environment at the Occidental Chemical facility presents several potential technical challenges. Technical issues include oxidant toxicity to marine life, the impact of tidal influences and subsurface utilities on oxidant transport, the impact of large quantities of DNAPL, the potential need for a pump and treat system in conjunction with a deep barrier wall, oxidant selection, the upwelling discharge of oxidant residuals, and the potential use of a combined remedy approach.

(15-R10-001)

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