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 26, 2014

TECHNICAL ASSISTANCE

Technical Assistance Region VI: On May 1, 2014, Dr. Bruce Pivetz and Dr. Daniel Pope (Dynamac Corporation), under the direction of Dr. David Burden (GWERD), provided technical review comments to RPM Mike Hebert for the "Plan Development to Evaluate the Impacts of the Ground-Water/Surface Water Interactions on Contaminant Migration at the Oklahoma Refining Company Superfund Site, Cyril, Oklahoma." Previous Site investigations have provided extensive information on contaminant concentrations in ground water, soil, surface water, and sediments. This information has indicated where contaminants are found and where they exceed the relevant standards. However, there has apparently been no estimation of the mass flux of contaminants in either ground water or surface water. It is necessary to determine the magnitude, rate, and significance of adverse impacts on Gladys Creek, and to evaluate what actions need to be taken regarding those impacts. The strategy to conduct this effort consists of identification of all major routes of ground-water discharge into Gladys Creek, quantification of ground-water discharge, measurement of surface water discharge, estimation of the contaminant mass flux in the surface water and ground water, and hydrological evaluations of the Gladys Creek watershed.
(14-R06-001) (D. Burden (GWERD) 580-436-8606)

Technical Assistance Region I: On May 5, 2014, Dr. Randall Ross (GWERD) provided technical review comments to RPM Darryl Luce for the "Hydraulic Gradient Analysis of the Sylvester (Gilson Road) Superfund Site Containment System, Nashua, New Hampshire." The primary objective of these data collection and analysis efforts was to evaluate whether the hydrologic conditions within the physical containment system have changed over time, possibly indicating changes to the integrity of the cap and slurry wall. The data obtained do not indicate major changes in the hydrologic behavior of groundwater within the containment system. As identified during the early phases of active site remediation, it appears that groundwater is continuing to enter the containment system from the upgradient portion of the site and exit the containment system from the downgradient portion of the site. In addition to analysis of the available data and their implications regarding the effectiveness of the containment system, recommendations regarding the further uses of these data and improvements to both the overall assessment of the containment system performance and the long-term monitoring program were provided.
(14-R01-006) (R. Ross (GWERD) 580-436-8611)

Technical Assistance Region V: On May 8, 2014, Dr. Bruce Pivetz and Dr. Daniel Pope (Dynamac Corporation), under the direction of Dr. David Burden (GWERD), provided technical review comments to RPM Leah Evison on the *Draft In-Situ Chemical Oxidation and Enhanced Reductive Dechlorination Design Report Baytown Ground Water Contamination Site SR84, Baytown Township, Minnesota* (the Draft Design Report), dated April 10, 2014. This technical review was focused on the technical adequacy of the design of the In-Situ Chemical Oxidation (ISCO) and Enhanced Reductive Dechlorination (ERD) treatments, and on its presentation in the Draft Design Report. The Draft Design Report contains specifications for conducting ISCO at the Site. However, there are potential problems with the assumptions, methods, and results of the various calculations used to develop specifications. The general approach is reasonable and technically adequate; however, it is recommended that all the specific assumptions, calculation methods, and results be re-checked, and recomputed if necessary prior to moving forward with the remediation. The potential problems occur in parameter values used in, or resulting from, the equations in the Draft Design Report. In general, the discussion of ERD system design in the Draft Design Report is insufficiently specific and detailed.
(14-R05-003) (D. Burden (GWERD) 580-436-8606)

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