HIGHLIGHTS

National Risk Management Research Laboratory
Ground Water and Ecosystems Restoration Division
Robert S. Kerr Environmental Research Center
Status Report for the week of June 2, 2014

TECHNICAL ASSISTANCE

Technical Assistance Region I: On May 14, 2014, Dr. Eva Davis (GWERD) provided technical review comments to RPM Cheryl Sprague on the "90% Pre-Final Thermal Design Report – Phase 1," for the Beede Waste Oil Superfund Site in Plaistow, New Hampshire. The Draft Operations & Maintenance (O&M) Plan, Draft Demonstration of Compliance (DCP), and Draft Construction Quality Assurance Project Plan (CQAPP) were also reviewed. In general, the documents are complete and well written, and incorporate the comments made on the 60% Design. However, there are concerns on how the determination will be made to shut down the thermal system, and the monitoring that will be done to support this decision. The actual amount of contaminant mass in the treatment area, and the rate at which it can be recovered, are critical to estimating the operational timeframe, but are also very difficult to estimate up front. Performance monitoring is critical in order to have the data to support the fact that the remedial goals have been met or that the system has reached the point of diminishing returns. During pressure cycling, more frequent vapor samples may be very helpful to document the rapid increases and decreases in vapor phase concentrations that are created by these changes in subsurface pressures. Also, ambient air sampling plans should be included. A critical part of the design is a thermal oxidizer for the destruction of the contaminant vapors that are generated during the thermal remediation. However, the design should include a backup for the thermal oxidizer in case of the need to shut it down for maintenance and/or repairs.
(14-R01-007) (E. Davis (GWERD) 580-436-8548)

Technical Assistance Region IX: On May 16, 2014, Dr. Milovan Beljin (Dynamac Corporation), under the direction of Dr. Randall Ross and Mr. Steven Acree (GWERD), provided technical review comments to RPM David Seter on the Groundwater Flow Model for Yerington Mine Site, Yerington, Nevada. In general, the model development reflects the procedures outlined in the work plan. The uncertainty regarding a groundwater flow model is often evaluated by sensitivity analysis, modifying model parameters and then evaluating the calibration statistics. It is recommended that the model report include a more conventional sensitivity analysis. The uncertainty analysis should identify the parameters that are the most crucial to the flow model and no data gaps were identified. Also, considering that the modeling evaluation has not been completed yet (i.e., the solute transport model), it is premature to conclude that any further investigations would yield limited additional information. For the purposes of this groundwater model, it is recommended that the conceptual model be re-evaluated and refined during the solute transport modeling. It is also recommended that the calibration of the model should be periodically refined whenever significant new data become available.
(14-R09-004) (R. Ross (GWERD) 580-436-8611) (S. Acree (GWERD) 580-436-8609)

Technical Assistance Region IX: On May 28, 2014, Mr. Steven Acree (GWERD) and Dr. Robert Ford (LRPCD) provided technical review comments to RPM David Seter on the Technical Memorandum: Site-Wide Groundwater Monitoring Optimization, for Yerington Mine Site, Yerington, Nevada. Based on the results of monitoring performed to date, the document proposes to reduce the frequency for manual water level measurements from monthly to quarterly and the frequency of dissolved nitrate analyses from quarterly to a semiannual basis for wells installed prior to the *Additional Monitor Well Work Plan*. Wells installed under the *Additional Monitor Well Work Plan* would continue to be monitored at the current frequency to establish an adequate monitoring history. In addition, the memorandum proposes to redeploy pressure transducers to wells in areas where hydrology is less well characterized. Given the available data, these proposals appear to be appropriate and warranted.
(14-R09-004) (S. Acree (GWERD) 580-436-8609) (R. Ford (LRPCD) 513-569-7501)

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