

Active Management of Superfund Remedies

Kirby Biggs, Linda Fiedler. Ed Gilbert, Matt Jefferson, and **Carlos Pachon** (USEPA, Superfund)

Background/Objectives: For over 20 years the USEPA Superfund Program has been evaluating site operations and identifying opportunities to more actively and effectively manage remedies. A consistent finding is that valuable new information often becomes available during remedy implementation. In addition to informing on remedy performance the data provide additional information on site conditions. As a result, it is helpful to review data considering progress towards remedial action objectives (RAOs) specified in the site decision documents; performance objectives specified during design; overall remedial strategy; current conditions relative to original design assumptions; and the monitoring program. This review may take place during routine site management, and always as a part of a remedy optimization process. USEPA has been conducting remedial system evaluations (RSEs) under its Optimization Initiative at Superfund sites since 1997. EPA often actively adjusts remedies in response to reviews, changes that range from minor alterations to remedy operation to full Record of Decision Amendments, at times with the selection of a supplemental technologies.

Approach/Activities: Site-specific RSEs result in a report that summarizes the site data reviewed and resulting recommendations for consideration by the site team. EPA subsequently collects information on the implementation status of the recommendations, and periodically summarizes the nature of the recommendations and their implementation status across all sites with an RSE. In these reports, EPA analyzes the tools and techniques included in optimization recommendations and the beneficial outcomes achieved by implementing them. Tools and outcomes include improvements to the conceptual site model, streamlined or improved monitoring, improved system engineering, and a change in the remedial approach.

Results/Lessons Learned: In a recent report on the implementation of optimization recommendations, EPA found that almost two-thirds of the recommendations made at optimization evaluations have been implemented, including 31 projects that had a change in the remedial approach. Changes in remedial approach include adding or changing remedies to better address remaining contamination or newly identified areas of contamination. In this presentation we will present the types of remedial changes that have resulted from optimization recommendations and highlight several projects to better understand how these changes in remedial approach fit into the larger picture of managing complex sites. We also will provide insights on common tools and techniques used during RSEs to identify potential improvements to site cleanups.