

The Status of Cleanups at Tier 1 Superfund Sediment Sites

Betsy Southerland, EPA

Despite all the uncertainties associated with sediment sites, the Superfund Program has been and will continue to select remedies to cleanup contaminated sediment sites. From a program management perspective it is important to understand the following:

- the types of sites and contaminants that are presenting the greatest risks
- the types of sites that are costing the most to cleanup
- the types of remedies that appear to be the most effective in long-term risk reduction
- the site conditions or contaminants that appear to be recalcitrant to cleanup
- the level of residual risk that can be typically achieved by different remedies

To help address these questions, the Superfund has developed a small data base to capture important information on all Tier 1 sediment sites. The 2002 OSWER Directive “Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites” defined Tier 1 sites as those sites where a remedy will address more than 10,000 yd³ or five acres of contaminated sediment.

The following is a partial listing of the types of data that are being collecting. As some sites have many Operable Units (OUs) or have different remedies for different parts of the site, this type of information is being collected for each action that meets the Tier 1 criteria. These data mainly comes from the RODs, completion reports and five-year reviews, and discussions with the RPMs.

- Areal extent of contamination within the waterbody
- Waterbody type and current and future uses
- Baseline concentrations of key contaminants in sediment, water, and biota
- Human health and ecological risks and exposure pathways driving the need for cleanup
- Fishing consumption advisory information
- Remedial Action Objectives (RAOs) and sediment cleanup levels or action levels
- Full description of sediment remedy selected
- Estimated and actual cleanup costs
- Post-remedy monitoring data; e.g., sediment and biota concentrations

Although the analysis is not complete, some preliminary findings from the review will be presented. This full evaluation of this information will allow Superfund to perform several types of analysis concerning the effectiveness of different remedy types and will be used to identify technical and policy issues that may need to be addressed in additional guidance