Update on Superfund HQ Sediment Remediation Activities

Stephen Ells
Sediments Team Leader

General Meeting of Federal Remediation Technologies Roundtable
June 5, 2008
CSTAG – Contaminated Sediments Technical Advisory Group

• “monitor the progress of and provide advice regarding a small number of large, complex, or controversial contaminated sediment Superfund sites.”

• 10 EPA regional staff, 2 ORD, 2 HQ, 2 from Army Corps

• Have visited 13 sites; more to come

• Reviews at:
  http://www.epa.gov/superfund/health/conmedia/sediment/cstag_sites.htm
CSTAG Sites

- Ashland/Northern States Power Lakefront
- Kalamazoo River
- Housatonic River
- Palos Verdes Shelf
- Portland Harbor
- Lower Duwamish River
- Kanawha River
- Centredale Manor
- Pearl Harbor Naval Complex
- Anniston PCB Site
- Nyanza River
- Upper Columbia River
- Lower Passaic River
SAMS – Superfund Assessment and Monitoring Sheets

• Using Fish Tissue Data to Monitor Remedy Effectiveness - July, 2008
• Calculating and Using Surface-Weighted Area Concentrations (SWACs) to Characterize Sediment Contamination - EPA
EPA-Sponsored Corps Documents

• Technical Considerations for Environmental Dredging of Contaminated Sediments
• How to Evaluate Erosion of Caps
• How to Evaluate Contaminant Flux into Cap Isolation Layer
• Technical Considerations for Capping Contaminated Sediments
1. Communicate programmatic needs in assessing and remediating contaminated sediment in order to focus research efforts to address the most important common questions,

2. Exchange ideas about recent, ongoing and planned contaminated sediment research across federal agencies in order to reduce unnecessary duplication of efforts,

3. Communicate and document existing areas of inter-agency collaboration,

4. Identify areas and projects for active collaboration, and discuss potential mechanisms for executing collaborative projects, including field demonstrations,

5. Develop joint initiatives to implement research projects and leverage funding across agencies,

6. Establish a mechanism to share preliminary research findings among all federal programs,

7. Establish a mechanism to facilitate technology transfer of completed products and tools,

8. Establish a procedure for convening future meetings.
ORD Research Questions

• What is best framework for F & T modeling to compare remedial alternatives?
• How effective are alternative technologies vs. sediment dredging?
• What are the critical tissue residues to use when screening bioaccumulatives?
• How develop better tools to characterize sediments?
• How identify remedial options that minimize risks to fish and benthos?
Superfund Sediment Resource Center - SSRC

- Virtual center to provide responses to RPMs on site-specific technical issues
- Up to 40 hours/request; completed in 30 days
- Access to Corps staff as well as consultants, ORD scientists, academicians
- 20 requests: sediment stability, modeling, remedial design, risk assessment
Other Activities

• Re-doing the modeling effort at New Bedford Harbor SF Site
• Support of research on effectiveness of dredging at Ashtabula river
• Support for use of artificial samplers (SPME, SPMD, PEDs) at sites
• Coordination with state organizations and other technical groups