United States Environmental Protection Agency Research and Development (481) Solid Waste and Emergency Response (5102G) EPA/542/F-99/031 November 1999

Sediments Remediation Action Team



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The Sediments Remediation Action Team was established in March 1996. It is one of the five current Action Teams under the Remediation Technologies Development Forum (RTDF). The RTDF was created by the U.S. Environmental Protection Agency (EPA) in 1992 to foster collaboration between the public and private sectors in finding innovative solutions to mutual hazardous waste problems. The Sediments Remediation Action Team includes representatives from industry, government, and academia who share an interest in developing alternatives for remediating contaminated sediments.

The Problem of Concern

Contaminated sediments, both in freshwater and marine systems, are a significant issue in the United States and abroad. Remediation of sediments is often complex and is usually compounded by the presence of more than one contaminant at a site. Sediments often contain polycyclic aromatic hydrocarbons (PAHs) and metals. Many traditional remediation techniques, such as dredging and subsequent off-site treatment, are not cost-effective, and proper assessment, which is critical for implementation of a remediation strategy, also may be difficult and costly.

The Action Team's Mission

The mission of the Sediments Remediation Action Team is to develop costeffective, on-site technologies to remediate contaminated sediments and enable recovery of biological systems. The Action Team is exploring a number of potential focus areas, including:

- > Developing in situ remediation approaches
- > Evaluating on-site, *ex situ* remediation technologies
- Examining the applicability of existing soil remediation techniques to sediments
- > Understanding the mechanisms and rates of natural attenuation
- Enhancing or developing procedures for evaluating the need for and success of remedial activities

Accomplishments

The Action Team has developed subgroups to focus on the following three areas of interest:

• Assessment—This area includes the measurement and evaluation of hazard, stress, and exposure resulting from sediment-associated contaminants. Information required for the human and ecological risk

assessment paradigms includes (but is not limited to) toxicity, transport, and the ability of the sediment (biotic and abiotic) to naturally attenuate the contaminants.

- *In Situ* Capping—*In situ* capping as a remediation alternative involves placement or broadcasting of a covering or cap of clean isolating material (e.g., sediment, sand, gravel, geotextiles, etc.) over a deposit of contaminated sediment to isolate it physically and chemically from the aquatic environment.
- *In Situ* **Treatment**—A number of *in situ* remediation technologies are under consideration by the subgroup, including natural attenuation, phytoremediation, introduction of chemical additives to enhance the natural processes, reactive disposal approaches, and electrokinetics. The subgroup is most interested in passive technologies that will remediate the contaminants without significantly increasing the stress on the ecology.

The Action Team's Plans

The efforts of the three subgroups will be coordinated to create a cohesive research team. The Action Team is identifying sites at which a cooperative field effort may be pursued. Team members are evaluating the resources, experience, and facilities they can make available to carry out a field effort.

Action Team Members

The Action Team includes representatives from government, industry, and academic organizations, such as the following:



Georgia Department of Natural Resources National Oceanic and Atmospheric Administration (NOAA) U.S. Army U.S. Environmental Protection Agency U.S. Navy



Industry

Alcoa Battelle BBL, Inc. Boeing Chemical Land Holdings, Inc. Dow Chemical Company DuPont Company Exxon General Motors General Electric National Council for the Paper Industry for Air and Stream Improvement PPG Quantitative Environmental Analysis, LLC Reichhold, Inc. Rohm and Haas



Louisiana State University Tufts University of Illinois



Would You Like More Information?

For more information about the Sediments Remediation Action Team, please contact the Team Co-chairs:

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For more information on the RTDF or other Action Teams, please visit the RTDF World Wide Web site at www.rtdf.org or contact:

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