Hudson River
PCBs SUPERFUND SITE
Region 2: NJ, NY, PR, VI • 290 Broadway, New York, NY 10007

Engineering Performance Standards

Dredging Resuspension

May 2003

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Highlights: This fact sheet - one of four that have been developed to assist the public in the review of the draft engineering performance standards - describes the objectives and intended use of the resuspension standard for the Hudson River PCBs Superfund site. These standards have been released to the public for review and comment.

Development of Performance Standards

Engineering performance standards are technical requirements that help to ensure that the cleanup meets the objectives for protecting people's health and the environment established in the February 2002 Record of Decision (ROD) for the site. They were developed to make sure that dredging is done safely and stays on schedule. The ROD requires the development of performance standards for dredging-related resuspension, dredging residuals and dredging productivity. The standards will be used to measure the progress of the dredging and its effect on the river system.

Overview of Dredging Resuspension

The resuspension standard is designed to protect water intakes down river of dredging operations and to limit the down river transport of PCB-contaminated dredged material. This will promote the recovery of the river ecosystem after dredging. The resuspension standard addresses PCB releases during dredging in three ways:

- By monitoring the PCB concentrations in the water and evaluating the levels using federal drinking water standards in order to protect downstream water intakes,
- By monitoring and controlling the amount of PCBs moving down river to limit impacts on fish and the river ecosystem, and
- By monitoring the levels of suspended sediment as dredging occurs.

Modeling for Effects of Resuspension

The February 2002 ROD does not specify the applicable water quality thresholds for this standard. Consequently, EPA used extensive modeling, environmental dredging case study data, and federal and state water quality standards to develop a series of tiered action levels for the standard. The modeling showed that allowable resuspension rates during dredging should result in negligible impacts to fish and wildlife.

Computer models were used to simulate PCB concentrations in water, sediment and fish tissue that could result from dredging resuspension. The modeling efforts examined the impact of allowing dredging operations to proceed at various action levels specified in the resuspension standard. The conclusion was that operating at low resuspension rates resulted in negligible impacts on PCB levels in fish tissue. Higher resuspension rates could increase fish tissue concentrations during dredging, but these were not found to be significant after dredging was completed.

Using Historical Information

Water quality data from 1996 on showed that resuspension occurs daily throughout the river and increases based on seasonal changes. This data is being used to distinguish between the pre-dredging levels of PCBs and sediment in the water and those expected due to resuspension during dredging.

Resuspension During Dredging

The performance standard for dredging resuspension sets a resuspension level of 500 parts per trillion (ppt) - the EPA drinking standard under the Safe Drinking Water Act. In addition, EPA has established action levels, which provide an early warning for PCB resuspention. If exceeded, they require preventive actions and engineering improvements before the drinking water standard is exceeded. The three-tiered actions levels - evaluation, concern and control require increasing levels of scrutiny. When action levels are exceeded, the resuspension standard calls for the implementation of both monitoring and engineering contingencies. The intent of the monitoring contingency, which includes an increase in the frequency of sampling and more rapid turn-around of analytical data from the established sampling locations, is to provide additional data to better characterize the developing changes and trends in water quality and its response to the dredging project. Engineering contingencies include engineering evaluations, which are required when a concern level is exceeded, and engineering solutions, implemented when a control level is exceeded. Examples of engineering contingencies include the examination of boat traffic patterns, the evaluation of sediment pipelines for leaks, the installation of silt barriers, and the possible cessation of operations for exceedances of the control level.

Dredging operations must stop temporarily if the resuspension standard of 500 ppt is exceeded during two consecutive days of dredging. The resuspension standard also calls for the notification of public water suppliers when PCB concentrations at a down river monitoring station are expected to exceed 350 ppt (70 percent of the 500 ppt resuspension standard).

Public Review

The draft engineering performance standards are subject to a 30-day public comment period beginning May 14 and ending June 13, 2003. A detailed description of the draft standards and supporting technical information can be found in the ***Draft Engineering Performance Standards - Public Review Copy***, which has been released for public review and comment. These documents and fact sheets on the performance standards are available at information repositories located in Glens Falls, Ft. Edward (Hudson River Field Office), Saratoga Springs, Albany, Poughkeepsie, and New York City. Electronic versions can be found on the EPA project Web site. Copies are also available in print and on CD-ROM, by calling the Hudson River Field Office.

The public can submit comments electronically during the public comment period via EPA's Web site at *www.epa.gov/hudson*. A special database has been established to streamline the comment process. To enhance access to this Web-based tool, EPA will make laptop computers available at public sessions and will continue to provide public access to a computer at EPA's Hudson River Field Office. Comments may also be submitted in writing. Written comments should be sent to **Alison A. Hess, EPA Region 2, 290 Broadway, New York, New York 10007-1866**.

Public Education Sessions

EPA will host two sets of public sessions on the draft engineering performance standards. The first set, designed to provide an overview of the engineering performance standards, will be held on May 21 and 22, 2003:

Wednesday, May 21
Ft. Edward Fire House
116 Broadway, Fort Edward, NY
6:00 - 9:00 pm,
Presentation at 6:30 pm

Thursday, May 22
Best Western Hotel
2170 South Road
Poughkeepsie, NY
6:00 - 9:00 pm,
Presentation at 6:30 pm

Public Forums

The second set of sessions will be forums designed to present the draft engineering performance standards for public review and comment. They will be held on June 2 and 3, 2003:

Monday, June 2
Queensbury Hotel
88 Ridge Street
Glens Falls, NY
2:00 pm – 4:00 pm/6:00 pm – 9:00 pm
Presentations at 2:30 pm and 6:30 pm

Tuesday, June 3
Sage College of Albany, Kahl Center
140 New Scotland Avenue
Albany, NY
2:00 pm – 4:00 pm/6:00 pm – 9:00 pm
Presentations at 2:30 pm and 6:30 pm

For More Information

Visit, call, or write to the Hudson River Field Office at the address below or log on to **www.epa.gov/hudson.**

EPA Contacts

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The Field Office hours are Monday – Friday 8:00 am – 4:30 pm, with evening hours by appointment.

David Kluesner,
Community Involvement Coordinator

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New York, NY 10007
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EPA Superfund Ombudsman
EPA Region 2 has designated an ombudsman as a point-of-contact for community concerns and questions about the federal Superfund program in New York, New Jersey, Puerto Rico, and the U.S. Virgin Islands. To support this effort, the Agency has established a 24-hour, toll-free number that the public can call to request information, express concerns, or register complaints about Superfund. The ombudsman for EPA's Region 2 office is: George H. Zachos, U.S. EPA, Region 2, 2890 Woodbridge Avenue MS-211, Edison, New Jersey 08837, (732) 321-6621,Toll-free (888) 283-7626.

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