



Trustee Comments for the Hudson River Phase 1 Engineering Performance Standard Peer Review Panel

Presented 2/17/10 by Lisa Rosman, NOAA's Office of Response and Restoration, Assessment and Restoration Division

NOAA is one of three trustees working on behalf of the public to protect and restore natural resources injured by the release of PCBs into the Hudson River. The Trustees have worked collaboratively for many years with EPA to maximize the benefits of the remedy.

The Trustees commend EPA for taking this first step toward remediating the Hudson River and removing almost 20 tons of PCBs. We agree with many of EPA's findings and recommendations, and would like to invite the panel to address a few issues that the Trustees feel may improve compliance with the Engineering Performance Standards (EPS).

1. Results of the remedial design sampling demonstrate that PCB contamination in surface sediment is higher, more widespread, and closer to the surface than anticipated in the ROD. PCBs in the sediments are not being buried and are not declining at the rates predicted.

In fact, River Section 2 is as contaminated as River Section 1. However, the cleanup triggers for the surface in River Sections 2 and 3, are approximately 75-90 ppm total PCBs, 3 times higher than for River Section 1. Our analysis indicates that average PCB concentration in the top 2 inches of the sediment after dredging will be approximately five times higher for River Section 2 and River Section 3 than the models predicted.
http://www.darrp.noaa.gov/northeast/hudson/pdf/Battelle09_Field_NatRecovery_508.pdf

The potential implication of this for the Performance Standards is illustrated in the Northumberland Pool (Reach 6), where approximately 60 acres are targeted for Phase 2 removal. However, more than 30 acres outside of the dredge footprint exceed 50 ppm total PCBs in the surface sediment, mostly immediately adjacent to design removal areas.

This scenario of highly contaminated surface sediments not targeted for remediation but adjacent to the dredge footprint may contribute to failures to meet the EPS in Phase 2 due

to disturbance during remedial activity and from potential slumping of these adjacent sediments into dredged areas.

The Trustees urge the panel to consider this scenario in applying the lessons learned from Phase 1 in the Thompson Island Pool to River Section 2 and River Section 3 in Phase 2 and make suggestions for how to mitigate for it.

2. EPA has highlighted that the significant underestimation of the depth of contamination (DoC) contributed to exceedances of the Engineering Performance Standards. EPA notes that DoC was underestimated due to several factors including incomplete cores, sediment PCB heterogeneity for complete and incomplete cores, interpolation methods, how uncertainty was dealt with, and the presence of wood debris. For example, the interpolation approach used the median value and the actual depth of contamination was approximately 1.5 x deeper than the design depth and the maximum deviation was about 4 ft or deeper in all 10 Certification Units (CUs). Even where complete cores dominated a CU, depth of contamination was significantly underestimated. While the Trustees support EPA's use of post-dredging cores to confirm DOC and overcuts to reduce resuspension and residual issues, the Trustees suggest that the peer review panel also consider whether additional efforts during the design phase to better characterize and delineate the DOC could further reduce the likelihood of non-compliance with the EPS during Phase 2 remediation.

The same issues of incomplete cores, median interpolation method, sediment PCB heterogeneity, and uncertainty may also affect the accuracy of the horizontal characterization of PCBs. The Trustees therefore suggest that the peer review panel consider recommendations to improve the horizontal characterization and delineation of PCB contamination as another important way to improve compliance with the Engineering Performance Standards.

3. PCB oil was observed at a greater frequency than was anticipated prior to implementation of Phase 1 remediation. The Trustees are interested in the panel's recommendations to control sheens and oil release that contribute to exceedances of the Engineering Performance Standards.

4. Finally, the Productivity Standard should be secondary to Resuspension and Residuals Standard to ensure adequate resources/personnel available to control any unexpected releases of oil, minimize the length of time individual CUs remain open, and minimize the amount of capping.