

N G Kaul, Director
USEPA Hudson River Field Office
421 Lower Main Street
Hudson Falls, NY 12839

**Re: Peer Review Panel Questions
Engineering Performance
Standards**

July 24, 2003

Dear Mr. Kaul:

The Saratoga County Environmental Management Council requests that the following questions be provided to the Engineering Performance Standards Peer Review Panel for their consideration and response:

- Does the occurrence of near-field PCB resuspension rates similar to those recorded in the Fox River (2.2% @ .25 mile) have the potential of causing significant levels of PCB sediment recontamination immediately downriver of hotspot remediation sites that may negatively affect local fish populations or prevent EPA from meeting their 1 PPM Tri+ PCB residual goal? Section 2.2.2 of Draft Performance Standard for Dredging Resuspension dismisses the significance of the abovementioned resuspension rate recorded at the Fox River suggesting “that much greater separation between source and sampling location is needed in order to correctly represent dredging-related losses.” Please discuss the validity of EPA’s monitoring rationale in this instance and any potential cumulative impacts of near-field PCB resuspension rates on the order of 2.2% in meeting EPA’s projected remediation goals for this project.
- Does the Peer Review Panel feel it is appropriate for EPA to use a turbidity: total suspended solids (TSS): resuspended PCB correlation which has never been validated as a “surrogate” method of estimating real time PCB resuspension during the remediation project. Please discuss. How should EPA address the concern of assuring that a “surrogate” PCB resuspension monitoring method is valid and truly representative of “actual” PCB resuspension conditions in the river during remediation activities?
- HartCrowser (HC), an engineering firm retained by Saratoga County to review the Draft Engineering Performance Standards has questioned some of the basic premises of EPA’s resuspension sensitivity analysis. These concerns include the validity of the analyses in Attachment A due to the highly variable manner in which TSS and water column PCBs are grouped by parameter and sampling stations. HC notes, “To

be valid, such groupings should be based on a hypothesis of an underlying physical phenomenon that can be supported by statistical analysis of the data.” In the absence of such a hypothesis put forth by EPA, (which should be applicable to all sampling stations), please comment upon the validity of EPA’s TSS/PCB correlations as presented.

- HC also notes that the sensitivity analysis assumes that the mass of PCBs likely to be released from dredging is the result of spillage and equipment handling and is independent of river flow. As a result, the PCB concentration in the water column will be inversely proportional to flow (i.e., lower flows will result in higher concentrations of PCB). This assumption seems to ignore the fact that higher flow rates with their associated increased water velocities could increase sediment and resultant PCB releases during dredging. Although low flow periods may increase water-borne PCB concentrations, evoking EPA’s response that May and June are identified as “the problematic times of the year during the dredging season wherein extra care will need to be taken to maintain minimal releases from the dredge to avoid exceedance of the Total PCB concentration resuspension criteria”, HC notes the concern may be misplaced. Although the **PCB concentration** criteria may be in jeopardy during these low flow periods, a greater loss of **PCB mass**, however, may occur during dredging operations conducted under higher flow conditions at other times of the year. The Peer Review Panel is requested to discuss and comment on these items and the overall general suitability of the PCB resuspension analysis as discussed in Section 2.2.4 of the ***Draft Engineering Performance Standard for Dredging Resuspension***.
- The USEPA 2002 Record of Decision (ROD) states that the selected remedy includes the “removal of all PCB-contaminated sediments within areas targeted for remediation, with an anticipated residual of approximately 1 mg/kg Tri+ PCBs (prior to backfilling)”. A review of ***Volume 4, Appendix: Case Studies of Environmental Dredging Projects*** yielded 10 cases that provided useful information relative to the Draft Standards. None of the 10 cases were successful in meeting a 1 PPM residual PCB concentration and only 1 case achieved the production rate required by the Draft Standard for Dredging Productivity and this case had no residual requirement (its only stated requirement was the removal of 90 % of PCBs, a much easier task than achieving a 1 PPM residual) and no useful information on resuspension. It is noted that all 10 cases used some form of containment indicating the likelihood containment will be required in the Hudson River, further impeding attempts to increase productivity.

The Peer Review Panel is requested to review Volume 4 and the Residual Performance Standard and provide recommendations to EPA on how to proceed in Phase 2, if Phase 1 results or information from the design work shows that the ROD’s PCB residual standard target of 1 PPM cannot be met. Should EPA choose to increase the residual standard to make it achievable, should re-modeling occur and should EPA re-evaluate whether or not its preferred alternative is likely to achieve lower PCB levels in fish sooner than the Monitored Natural Attenuation (MNA) alternative with upstream source control ?

Thank you for the opportunity to submit these questions to EPA’s Engineering Performance Standards Peer Review Panel for their consideration.

Sincerely,

Peter M. Balet
Chairman

cc Paul Lilac, Chr. Saratoga County PCB Dredging Committee
Robert Stokes, Chr., Saratoga County Board of Supervisors
SCEMC Members