



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

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July 28, 2006

Reply to
Attn Of: ECL-111

MEMORANDUM

SUBJECT: Region 10 Response to CSTAG Recommendations on the Lower Duwamish Waterway Superfund site

FROM: Allison Hiltner, Remedial Project Manager
Region 10

TO: Steve Ells and Leah Evison
Co-chairs, Contaminated Sediments Technical Advisory Group

The Lower Duwamish Waterway project team appreciates the opportunity to work with the Contaminated Sediment Technical Advisory Group (CSTAG). The comments and recommendations provided by the CSTAG will assist the team in addressing the 11 sediment management principles for contaminated sediment Superfund sites at this site. Our response to CSTAG's April 3, 2006 recommendations are provided below. We will continue to consider these recommendations as we move forward with the Remedial Investigation (RI), Feasibility Study (FS), and cleanup decision-making for the site.

1. *CSTAG recommends that the site team ensure that source control efforts are adequately documented including documentation of post-removal monitoring for the early actions.*

Region 10 agrees and is working with the Washington Department of Ecology (Ecology) on their documentation process for source control activities. All early actions will include post-cleanup monitoring to track the success of the remedy and associated source control.

2. *CSTAG supports the allocation of additional resources to the source control efforts.*

Region 10 agrees. Ecology recently completed the hiring process to fill three new positions to work on Lower Duwamish Waterway source control. New staff started work this month.

3. *CSTAG recommends that the RCRA project manager for the Boeing Plant 2 area prepare a memorandum to document how OSWER's Directive 92,85.6-08,*



Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites, has been considered in management of that area.

The RCRA project Manager for the Boeing Plant 2 sediment remediation project is planning to prepare a memo discussing how the cleanup complies with the 11 sediment management principles when he prepares the "Statement of Basis" for the cleanup, in fall 2006.

4. *CSTAG commends the site team's efforts in community outreach, but recommends that the site team consider hosting an additional public information session regarding residuals, resuspension, and contamination outside the project area that are common during sediment remediation, and that the session include descriptions of possible mitigation measures that may be employed.*

Region 10 has and will continue to hold many information sessions for the community on various technical aspects of the RI/FS and early actions. Slip 4 will be the first early action to be implemented since the site was placed on the NPL (cleanup will be done in the 2007/2008 dredging season), and for this early action we are planning an information session on capping in September 2006 and on dredging in early 2007. We will likely get into the issues mentioned in the comment at the dredging meeting.

5. *CSTAG recommends that the site team evaluate the area south of the Jorgensen early action and its potential for recontaminating adjacent removal actions planned in the area. CSTAG recommends that, to the extent possible, the site team ensure that the early actions planned will be protective over the long-term in light of localized sediment transport (i.e., areas of relatively high contamination outside of the removal area have the potential to recontaminate removal areas).*

Surface and subsurface sediments in the area south of Jorgensen Forge are contaminated with PCBs and other contaminants, but at a much lower level than at Boeing Plant 2 and the northern portion of Jorgensen Forge. We agree there is some risk of recontamination if the area south of Jorgensen Forge is remediated after completion of a cleanup at Jorgensen Forge and Boeing Plant 2. Conversely, due to tidal hydrodynamics, there is also a risk of contaminating upstream cleanups if the more highly contaminated Plant 2/Jorgensen area were to be dredged subsequent to upstream cleanups. We believe there would be greater harm to the environment if we waited several years to address the areas with the highest levels of contamination until all lesser contaminated areas upstream are addressed. Protection of nearby remediated or uncontaminated area will be an important consideration in designing remedies for all areas of the Lower Duwamish Waterway.

6. *CSTAG recognizes that capping or thin layer placement may be necessary as part of the final remedy at this site and if so, CSTAG recommends that the site team consider use of uncontaminated dredged material from the Corps navigational dredging program as a potential material source.*

Region 10 will consider this as we develop the Feasibility Study and proposed cleanup plan for this site.

7. *CSTAG recommends that the site team consider using a toxicity identification evaluation (TIE) to determine whether phthalates are the source of the observed toxicity at the storm drains and combined sewer overflows (e.g., Duwamish/Diagonal). We recommend consulting Kay Ho at ORD's National Health and Environmental Effects Lab in Narragansett regarding TIE.*

The subject of phthalate recontamination has received much attention at Ecology and groups working on controlling recontamination to sediment cleanup sites, such as the Lower Duwamish Waterway Source Control Work Group. Region 10 has passed the TIE recommendation on to these groups for consideration. Before a TIE approach could be pursued at this site, Ecology would need to consider how TIE results would be used in the context of their Sediment Management Standards regulatory framework.

8. *CSTAG recommends that the site team consider the results from the ongoing foodchain model sensitivity study to decide what level of accuracy is required for the PCB fate and transport model currently being developed. CSTAG also recommends that the site team evaluate how uncertainty in the results of the PCB fate and transport modeling and food chain modeling affects remedy decisions.*

Currently, the Environmental Fluid Dynamics Code (EFDC) model is being used at this site in two contexts: 1) King County is performing a limited modeling effort to estimate PCB flux from the sediments to the water column, and provide an average PCB water concentration term for the food web model, and 2) a hydrodynamic model has been developed, which we are using to evaluate the potential for scour during high flow events. We recently invited Dr. Earl Hayter of EPA and Dr. Joe Gailani of the Corps of Engineers to meet with the EPA, Ecology and Lower Duwamish Waterway Group (LDWG) project teams to discuss whether the EFDC modeling effort should be expanded to include a sediment transport model, and have reached agreement with LDWG that this will be done. We agree that considering the level of accuracy needed for the food web model (using a sensitivity analysis) and other FS applications will be an important consideration in determining the level of accuracy needed in the EFDC models.