

**Enclosure: Terminal 4 Early Action Project – Abatement Measures Proposal Review**

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<b>GENERAL COMMENTS</b>				
1.		4	Table 1	The Port proposes an aggressive schedule. EPA encourages the Port to proactively coordinate with NOAA/NMFS regarding ESA consultation and mitigation for the proposed work.
2.				While EPA agrees that there are potentially substantial public benefits to combining the operational and contractual components, there are authority issues between the Corps of Engineers' maintenance dredging permit program and EPA's CERCLA program for remediation which complicate the Proposal. EPA proposes that the proposed maintenance dredging and abatement measure be performed under EPA CERCLA authority rather than Corp of Engineers authority. Coordination by the Port and EPA with the Corps will be required to implement the project in this manner. Additional coordination with NMFS (as noted above) will also be required.
<b>SPECIFIC COMMENTS</b>				
1.		8	2.1.2.2	Please provide the dredging area and proposed dredging elevations and sediment chemistry data for the T4 maintenance dredging scheduled in 2008 for the entire proposed maintenance dredge prism including the area beyond the harbor line. . Please note any overlap/coordination between the maintenance dredging area and abatement measures area. Please clarify the extent to which the maintenance dredging will encounter contaminated sediments and explain how these sediments will be handled, and how (generally) the maintenance dredging impacts the Slip 3 Phase I and Phase II dredging proposed for the T4 early action.
2.		8	2.1.2.2	
3.		Figure 6	2.1.2.2	EPA has a number of data analysis questions that need to be resolved in order to agree that the specific areas identified by the Port are acceptable: <ul style="list-style-type: none"> <li>a. In general, the sizes of the various PEC exceedance ratio zones are not well justified, and appear to be drawn in a manner that indicates a bias toward showing less extensive contamination versus a more conservative interpretation. Examples include: <ul style="list-style-type: none"> <li>i. Why does the green band not connect between HC-S-16 and HC-S-24?</li> <li>ii. How was the edge of the brown area around HC-S-24 determined?</li> <li>iii. How was the edge of the brown area around HC-S-38 and T4-B414-01 determined?</li> </ul> </li> </ul>

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4.		9	2.1.2.2	<p>b. Figure 6. For future deliverables, the phrase “enrichment ratio” should be replaced with “exceedance ratio” for consistency between the figures and the text.</p> <p>EPA generally concurs that the Port’s proposal to remove sediment in areas exceeding 20x PEC, down to elevations to remove contamination exceeding 10x PEC is acceptable.</p> <p>The dredging abatement measure appears acceptable in concept; however, dredging elevations are currently unspecified. EPA recognizes that four additional cores will be collected to refine dredge depths and develop plans and specifications. EPA recommends that additional surface grabs/cores are needed to refine the dredge areas at Pier 5 and Berth 414.</p> <p>EPA will need to review these data and the subsequent dredge design to determine whether the sediment cleanup objectives are actually met. EPA is concerned that structural stability concerns for the sheet-pile wall and timber pinch-pile bulkhead (as identified in the second bullet on page 9 that indicate contamination exceeding 10x PEC levels will not be chased below -46-foot elevation) will later, during abatement design, substantially reduce the apparent benefit of the proposed abatement measures.</p> <p>Based on supplemental information provided by the Port on 11/14/07, EPA understands the Port plans to dredge at least several feet deep throughout most of the area indicated as the “potential dredge abatement area”, and understands that the -46 ft elevation concern for structural stability applies only within about 50 ft of the sheet pile/pinch pile walls. EPA is concerned that this leaves a strip approximately 20 feet wide running the length of the abatement area in which no dredging will be completed. Please collect several samples in this area during the upcoming sampling event to confirm that the area has contamination less than 10x PEC levels, or alter the proposed dredge prism to provide risk abatement within this zone.</p> <p>EPA will require that the Port address, during abatement measures design, the feasibility, implementability, and cost issues of achieving the final design dredge elevations (generally shown as -50 to -53 feet in the 60 Percent Design Analysis Report) by overexcavation and backfilling against the sheet-pile wall to address stability concerns, in lieu of leaving substantial contamination exceeding the 10x PEC criterion in place or only covered with a thin sand cap.</p>

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5.		8	2.1.2.3.	EPA understands that the Port's statement "the design must consider and avoid the potential for the future phase II removal action work to compromise the integrity of this remedial measure once constructed." Is provided in reference to the Port's desire to avoid dredging extensively during Phase I so as to then eliminate and/or substantially reduce the need for the Port to construct a CDF as part of the Phase II T4 early action. EPA understands the Port acknowledges the Phase I dredging is not anticipated to provide a final removal action in any area. EPA understands the BEBRA area cap and the Wheeler Bay shoreline stabilization work are intended to be final actions.
6.		9	2.1.2.3	The Port identified a small area at the head of Slip 3 in front of the timber bulkhead where sediment removal will be constrained by stability concerns. The stability concern has been a topic much discussed in review of the 60 Percent Design Submittal. The Port proposes the area will be capped during Phase II of the removal action. Given the size of the area in question, it is unclear why at least a temporary cap as is proposed along the sheet-pile wall shouldn't be placed immediately. How much more (if any) material would need to be removed in Phase II before a permanent cap could be placed?
7.		9	2.1.2.3	How thick is the "temporary sand cover" proposed to be? Please elaborate on the decision framework for determining whether a temporary sand cap will be placed. EPA recommends the Port collect post-dredging surface sediment grab samples.
8.		10	2.1.2.3	In subsequent submittals, EPA expects the Port to propose a suitable upland landfill to which the material will be transported and disposed, as well as identify transportation logistics (i.e., the transportation and disposal plan).
9.		10	2.1.2.3	In addition to the design standards listed, the performance standards listed at the top of page 8 should be considered in the design and listed here: 1) minimizing movement of contaminated sediment material to unintended areas, 2) minimizing dredging residuals and recontamination of adjacent sediments.
10.		13	2.2.2.2	Please clarify the basis for the proposed base cap Type 3 material organoclay ratio (10%), by weight. What is the rationale for this ratio, and how does it relate to the 1% by weight ratio used in the BEBRA.
11.		14 and 15	2.2.3	Sediment excavated near the toe of the BEBRA will likely be contaminated with petroleum and may result in petroleum sheens on the water. At a minimum, containment and sorbent booms should be deployed around the construction area. The Port's WQMP will need to describe in-water sediment and sheen containment measures.
12.		15	2.24	Interim monitoring of the cap (between Phases I and II) should occur more frequently than every 2 years, particularly the first monitoring event.
13.		16	2.3	The Port is proposing to place a substantial quantity of riprap for Wheeler Bay shoreline stabilization. NMFS would prefer more removal and less rock. As part of the ESA consultation, NMFS anticipates that mitigation would be required for all the rock.

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14.		19	2.3.3	The proposed work will require compliance with the substantive requirements of a 1200-C construction permit (General stormwater permit).
15.		21	3	<p>EPA will prepare a WQMCCP for the abatement measures construction. The Port must prepare a water quality monitoring plan (WQMP) for all abatement measure activities, to be submitted to EPA for approval. This WQMP should be consistent with the protocols and requirements of short-term water quality monitoring per prior T4 design submittals and consistent with directed comments from EPA’s review of the 60% design submittal.</p> <p>Although the Wheeler Bay shoreline stabilization abatement measures are anticipated to occur in the dry season, weather conditions (e.g., precipitation) can result in returns to the river. The water quality monitoring plan should address this contingency. At least visual monitoring, to assure that construction BMPs are effective, should be conducted and documented.</p> <p>The last sentences of both Section 3.1 and Section 3.2 should be amended to include: “and/or additional BMPs imposed.”</p>
16.		21	3	EPA concurs with the water quality monitoring points of compliance provided that appropriate fish exclusion measures for Slip 3 are implemented (i.e., fish diversion curtain near Berth 414).
17.		21	Table 2	Please clarify, given the duration of the various work elements, the expected water quality monitoring regimes. How soon would changing to the Tier II regime be possible given favorable results and the proposed sampling collection times and laboratory turnaround times?