



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

November 15, 2007

Reply to
Attn of: ECL-115

Tom Imeson, Director
Public Affairs
Port of Portland
121 NW Everett
P.O. Box 3529
Portland, OR 97209

Re: August 22, 2007 Request for Realignment of T4 Removal Schedule; Resolution of 60% Design Disputed Comments; Administrative Order on Consent for Removal Action (AOC), Docket No. 10-2004-0009.

Dear Mr. Imeson:

EPA has reviewed the Port of Portland's (the Port) request for a delay of removal action implementation. As referenced in your August 22 [request](#), this delay may afford more information from the Harborwide RI/FS process to ensure the Terminal 4 confined disposal facility design incorporates actual leachability data from harborwide sediments, and is designed consistently with Harborwide performance standards. EPA agrees to extend the schedule for implementation of the T4 removal action, with the following requirements:

- The Port shall continue design work, with the 100% design of the May 11, 2006 Action Memorandum completed by the third quarter of 2009 or before, or as otherwise approved by EPA in the schedule referenced below;
- The Port shall work with the LWG to gather necessary disposal option data is collected for the RI/FS.
- The Port shall ensure Slip 1 CDF data needs are obtained either through the Harborwide RI/FS and/or through this removal action;
- Acceptance of EPA's November 9, 2007 spreadsheet with resolutions of the 60% Design disputed comments;
- The Port shall implement an abatement action to reduce risks present at the T4 site during the 2008 fish window or as otherwise approved by EPA in the schedule referenced below, and with the Port's acceptance of the attached comments on the Port's October 25, 2007 [proposal](#) which were discussed with Port representatives on November 6, 2007;

- The Port shall deliver a comprehensive schedule for this deferral agreement including, but not limited to, the abatement work, and the selected removal action design and construction, for EPA review and approval within 20 days of this letter, based on the attached general schedule deadlines; and
- Upon request by EPA, the Port shall provide data necessary to evaluate the effectiveness of the abatement action taken and, if determined necessary by EPA, provide additional abatement measures pending completion of the May 2005 Action Memorandum .

EPA may revoke its agreement to the realigned schedule at any time if the above requirements are not met. In addition, if at any time EPA or the Port receives new information that may lead EPA to re-evaluate this realigned schedule or the May 2005 Action Memorandum, EPA may require a reassessment of alternatives for the Terminal 4 removal action area, including a revised EE/CA for public review.

If you have any questions on this extension, do not hesitate to contact me at (206) 553-7216, or Sean Sheldrake of my staff at (206) 553-1220.

Sincerely,

Deborah J. Yamamoto, Unit Manager
Site Cleanup Unit 2
Office of Environmental Cleanup

Enclosure

cc: Anne Summers, Port of Portland
Krista Koehl, Port of Portland
Sean Sheldrake, EPA
Lori Cora, EPA

Comment No.	Page No.	Document	Section No.	Directed Comment	Comment Category	Comment	Port's Specific Concern with Comment (1)	Description of Solution
24		DAR		Yes	1	Design the CDF to achieve confinement of all hazardous substances disposed of in the facility through the groundwater pathway so that the CDF does not contribute any discharge and/or release of contaminants above applicable and relevant and appropriate requirements under federal or state law for surface water in the lower Willamette River. To meet this design criteria, the CDF shall be designed such that the quality of groundwater exiting the CDF will meet USEPA's national recommended chronic water quality criteria for both aquatic organisms and fish consumption by humans (17.5 g/day), Oregon water quality criteria, Region 9 PRGs, and relevant, promulgated drinking water criteria (otherwise known as Maximum Contaminant Levels). The LTMRP shall include monitoring for this design standard. If the existing design cannot meet performance standards in pore water of the exterior of the berm, the Port shall evaluate design changes that would meet the performance standards for the CDF at the compliance point. The Port shall report conceptual design and cost information of at least two approaches that would meet the performance standards that have been approved by EPA for complete analysis. Design changes could include reactive barrier technologies. Examples of barrier technologies could include an organoclay mat on the inside of the berm, an appetite layer, or some combination of these or other treatment material.	<ol style="list-style-type: none"> 1. "Groundwater exiting the CDF" 2. Use of Region 9 PRGs as standards for design and monitoring 3. Comment refers to the OMMP/LTMRP 4. Preserving spatial/temporal averaging/scale that is associated with application of water quality standards pending outcome through harborwide RI/FS; also note potential issue with detection levels. 	<p>1. Definition: The Port and EPA understand that "groundwater exiting the CDF" is intended to mean "one foot into the berm as measured from the berm face," consistent with the other EPA statements throughout the comments, for example:</p> <ol style="list-style-type: none"> a) "porewater of the exterior of the berm" (directed comment #24) b) "porewater" (directed comment #133) c) "in the face of the berm" (directed comment #138) d) "berm porewater (1 foot into berm face)" (EPA Table 1) e) "water/sediment interface (twelve inches inside berm)" (EPA Position Paper for T4). <p>The fundamental intent is that the CDF design analyses and monitoring methods consider the quality of groundwater within the berm before dilution with surface water from the river. Detection limit and long-term monitoring and compliance issues remain to be resolved.</p> <p>2. Criteria--PRGs: Region 6 Tapwater PRGs replace Region 9 Tapwater PRGs. These PRGs are not ARARs; they may be used for a limited list of chemicals as a "To Be Considered" after the following factors have been evaluated:</p> <ul style="list-style-type: none"> • Is there a promulgated MCL for a compound? if not, use the PRG as a TBC; • Are other applicable water quality standards for a compound lower than the PRGs? If not, use the PRG as a TBC; and • If a site specific risk-based standard for ingestion is developed as part of the RI/FS and selected in the Record of Decision, the ROD standard would be applied. <p>3. OMMP/LTMRP: The long-term operation, maintenance and monitoring plan (OMMP) for the CDF is not due to be submitted until after the design is complete. EPA and the Port agree that the Port has the right to dispute comments and directions that EPA may make or give regarding the OMMP/LTMRP.</p> <p>4. RI/FS & Application of Water Quality Standards: EPA and the Port agree that the Port reserves the right to engage in further discussions related to incorporating appropriate temporal/spatial averaging/scales in applying certain water quality standards as part of the harbor-wide RI/FS process, and that the outcome of these discussions will then be applied to T4, as appropriate. The Port and EPA also agree that currently available laboratory quantification limits and their ability to achieve all standards (especially human health criteria) is an issue that needs to be resolved as part of the 100% Design, OMMP/LTMRP and QAPP.</p> <p>5. The Port accepts the performance standards specified in Comment 24 (Federal and State Water Quality Standards, MCLs) for design and function of the CDF except (1) as otherwise addressed in this written resolution, and (2) if specific CDF performance standards are updated or replaced by the harbor-wide Record of Decision.</p>

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67.	48	DAR	5.1.1	Yes	1	Language in this section makes it unclear what the performance standards for CDF performance are – the language only refers to “CDF design performance standards are...” Language shall be changed to reflect that the performance standards are for design and facility monitoring purposes as well. Include the following, “The CDF will be designed and will be required to meet performance standards outlined here throughout its life, except as updated/replaced through the Harbor wide ROD process.”	<ol style="list-style-type: none"> 1. Same issues as above for Comment 24 2. Reference to "facility monitoring throughout its life" 	Same proposed solutions as for comment #24 above. Port agrees with the phrase “except as updated/replaced through the Harborwide ROD process.”
87.	81	DAR	6	Yes	1	It needs to be made clear that cap pore water monitoring needs to meet chronic water quality criteria, at a minimum, pending promulgation of the Harborwide ROD requirements that may supersede these requirements for monitoring long-term cap effectiveness both in terms of sediment concentration and porewater	<ol style="list-style-type: none"> 1. Clarification needed as to what criteria are being required for cap design and function, and relationship to OMMP. 	The applicable criteria for design and function of the T4 cap is chronic water quality criteria in the porewater in sediment that supports an active benthic zone. The harbor-wide process may develop cap performance criteria which, if different, would then apply to T-4. The long-term monitoring will be addressed as part of the OMMP/LTMRP EPA and the Port agree that the Port has the right to dispute comments and directions that EPA may make or give regarding the OMMP/LTMRP..
96		DAR	7 – General	Yes	1	WQ conditions defined in this section are not consistent with conditions defined in the WQMCCP (as clarified in Table 1, attached). Review the entire section for compliance with the WQMCCP, and include specific references to sections of the WQMCCP. Please be specific regarding any deviations from the WQMCCP to identify specific issues that remain to be resolved. EPA has prepared a summary (see attached Table 1) to clarify the monitoring to be performed for the CDF (berm and weir). EPA will update the WQMCCP to reflect the requirements in Table 1 (attached). Reference elsewhere in these comments to the WQMCCP shall be understood to include Table 1 requirements.	<ol style="list-style-type: none"> 1. Weir discharge point of compliance at the end of pipe 2. COCs for weir discharge and ponded water seepage through the berm--all applicable T4 COCs > PEC, including pthalates, plus PCBs, DDT, and copper 3. Criteria includes Region 9 PRGs for dormant period and long-term monitoring and long-term monitoring points of compliance 4. Clarification as to how the dormant period monitoring specifics will be addressed 	<ol style="list-style-type: none"> 1. Weir Discharge Point of Compliance: EPA requested additional information from the Port related to the water quality of potential weir discharge. To this end, the Port prepared and submitted a "Weir Discharge Evaluation Work Plan" to EPA on June 8, 2007, and EPA has provided comments. This evaluation process will determine if and how a mixing zone would apply. The weir discharge evaluation will be completed as part of the 100% design of the berm, because berm design may have impacts on weir discharge assumptions. For example, treatment layers on the berm face have the potential to affect berm permeability, which in turn affects weir discharge (i.e. volumes and duration). Conversely, berm design changes that improve the quality of water discharged over the berm may be feasible. Please provide a schedule for completing work on the Weir Discharge Evaluation. 2. COCs: The COCs will be derived from PEC exceedances at depths within the sediments that are likely to be disturbed by the EA construction activities, plus copper and additional parameters as identified and agreed to by EPA and the Port. Regarding the CDF COCs, in the April 20, 2007 IDR Meeting Summary, EPA clarified that for the long-term monitoring, footnote 3 in Table 1 is a list of potential COCs to be considered in long-term monitoring, depending upon what is ultimately disposed of in the CDF, not a fixed list of non-negotiable monitoring analytes. 3. Criteria and Points of Compliance: EPA and the Port agree that relevant resolution of issues from Comment #24 apply to this issue.

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								<p>4. Dormant Period Monitoring: Relevant resolution of compliance criteria issues from Comment #24 apply to the dormant period monitoring, and the monitoring details will be resolved at a later date, potentially as part of the OMMP/LTMRP or as part of an interim monitoring plan.</p>
130.	104	DAR	7.1.2.1	Yes	1	Water quality criteria should be consistent with criteria defined in the WQMCCP as clarified by comments herein and Table 1 (attached), and the text should provide specific references (section/subsection) to the WQMCCP.	1. Same issues as above for Comments 24 and 96	EPA and the Port agree that relevant resolution of compliance criteria in Comment 24 apply to this issue.
133.	105	DAR	7.1.2.2	Yes	1	The compliance point will not be out in the river, rather in pore water to limit the dilution/mixing of the river itself. EPA will provide specific text to the Port for inclusion in the 100% DAR regarding this issue. See also attached Table 1.	1. Same issues as above for Comments 24 and 96.	EPA and the Port agree that relevant resolution of compliance criteria in Comment 24 apply to this issue.

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226.	11	DAR	Appendix B, Section 3.1.1.4	Yes	1	The 4-day period should apply as after 4 days for the duration of the project. Otherwise, this requirement will cause an incentive for short-duration high volume discharges to avoid triggering chronic criteria.	<ol style="list-style-type: none"> 1. The Port agrees with the concept presented in the comment in that we do not want to create an incentive for short duration high volume discharges in order to avoid triggering chronic criteria. However we are concerned that over a several week period there could be multiple short-term exceedances of chronic criteria that cumulatively add up to more than 4 days. If some of these periods are reasonably short (less than 96 hours) and separated by several days, then a cumulative 96 hour exceedance will not be reflective of a typical chronic exposure nor consistent with the intent of State water quality regulations. 2. Inconsistent with EPA's Table 1 (Summary of T4 CDF Water Quality Monitoring Requirements). 	<p>Use of Chronic Criteria: As indicated in Table 1, acute criteria will be used to evaluate compliance, and chronic criteria will be used to guide the implementation of low-cost practical BMPs during construction activities. However, this does not preclude engineering controls/treatment from being considered during design.</p> <p>Given this resolution, comment 226 is no longer applicable.</p>
384.		DAR	Appendix D, 5.2	Yes	1	Lab turn around times. As specified by EPA in the draft WQMCCP, lab turnaround times are from the time of sample collection to delivery to EPA. Samples that take longer than 72 hours from collection to verbal or electronic delivery to EPA will be considered out of compliance with this requirement.	<ol style="list-style-type: none"> 1. 72-hour TAT from the <i>time of sample collection</i> to EPA. A 72-hour TAT from the time of sample collection is effectively a 48 hour TAT for the analytical lab. The shortest TAT that any reputable analytical laboratory has indicated they can provide is a 72-hour TAT from the <i>time they receive the sample</i>. This TAT is based on the assumption that there are no issues or problems related to the sample matrix, concentration, interferences, instrumentation, etc. Issues such as these commonly arise. A 72-hour TAT from the <i>time of sample collection</i> would be a challenge for any analytical laboratory despite the best advance planning, coordination, and management. Given the fact that missing a TAT may result in fines that the analytical laboratory may be responsible for, it is possible that no reputable laboratories would agree to accept the project. Conversely, while there may be an analytical laboratory that agrees to accept the project under these terms, the Port may still not have the confidence that the analytical laboratory will be able to meet the required TAT. 	<ol style="list-style-type: none"> 1. For the abatement action, the Port and EPA will have further discussions to establish a reasonable and appropriate TAT. The Port proposes a 72 hour TAT from the time the lab receives the sample. The Port will provide a memo to EPA that documents the basis for the 72-hour proposed TAT for EPA's consideration. The Port has generated a TAT memo and EPA has reviewed and commented on it. Final protocols for lab turn around times will be resolved through EPA's approval of the TAT memo. The Port will work with the lab and EPA to establish a practical means to provide interim information to EPA to assist EPA with field management decisions during construction. 2. For subsequent removal action work, the appropriate TAT will be negotiated based on currently commercially available labs and techniques. The Port will consider the costs/benefits of using an on-site versus off-site laboratory.
1		Draft Mitigation Plan		Yes	2a	b. Before EPA can approve the Mitigation Plan that includes any project where a third-party will be responsible for the construction and long-term operation and maintenance, a final agreement between EPA, the Port, and the third party must be reached.	<ol style="list-style-type: none"> 1. Final agreement needs to be reached between EPA, the Port, and the third party before EPA can approve the Mitigation Plan. 	The Port and EPA agree to defer resolution of mitigation comments until a final mitigation project has been defined for the re-aligned project.

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1		Draft Mitigation Plan		Yes	2a	c. Also, the timing of when the Ramsey refugia project is constructed and completed, in relation to when the habitat is lost will be a factor in how much mitigation is sufficient to compensate for lost habitat. The Port's schedule for dredging and filling at T4 is within the next year or two, when will the city complete construction of the refugia?		The Port and EPA agree to defer resolution of mitigation comments until a final mitigation project has been defined for the re-aligned project.
1		Draft Mitigation Plan		Yes	2a	d. The final mitigation plan design needs to be included as an element of the 100% DAR, and must include complete plans and specifications for construction.		The Port and EPA agree to defer resolution of mitigation comments until a final mitigation project has been defined for the re-aligned project.
11		Draft Mitigation Plan		Yes	2a	PERFORMANCE MEASURES: Ending performance standards at year 5 is unacceptable. The Port shall propose performance standards that are in force throughout the habitat mitigation project lifetime, i.e. maximum invasive species percent cover that applies regardless of the monitoring year. Maximum invasive percent cover performance standards shall be developed. Minimum percent cover shall be specified for native species. A full list of quantitative performance standards are listed in the Action Memo. At a minimum, annual monitoring over the first five years and every five years thereafter shall occur. EPA will re-Evaluate the monitoring schedule periodically.	1. Mandatory monitoring for the lifetime of the project with no opportunity to end the monitoring if performance standards are consistently being achieved.	The Port and EPA agree to defer resolution of mitigation comments until a final mitigation project has been defined for the re-aligned project.
12		Draft Mitigation Plan	Section 5.4.2.2	Yes	1	Include the following language in the text, "After absence of fish over 3 consecutive seasons EPA may require corrective actions to be taken."	1. Performance standard based on fish presence.	The Port and EPA agree to defer resolution of mitigation comments until a final mitigation project has been defined for the re-aligned project.

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16	8	SACM	Section 3.2.1	Yes	2a	Treatment methods that destroy or remove contaminants from sediments may be acceptable; however, treatment methods that immobilize contaminants are not acceptable. Please revise the text accordingly.	1. The limitation presented in this comment is premature until the Harbor-wide process is further evolved.	The Port and EPA agree that the Harbor-wide process is the appropriate venue for determining acceptable treatment methods.
31		SACM	3.4.2.2	Yes		<p>The text asserts that fish consumption criteria (i.e., fish consumption AWQC) "should be applied to conditions in the receiving water in consideration of the spatial and temporal scales of interest". The text also says 1) the "bioaccumulation-based discharge criteria would be temporally averaged over a 70-year human lifetime"..., and 2) that fish consumption criteria would be achieved 10 cm above the face of the berm..., and 3) "achieving chronic water quality criteria at the point of groundwater release from the CDF will be implicitly protective of bioaccumulation exposures in the receiving water".</p> <p>To date, there is not general agreement for the Portland Harbor project that "spatial & temporal scales of interest" approach is reasonable and defensible. Retaining this approach in the T4 document potential establishes a precedence for the broader Portland Harbor project, which is premature at this time. Additionally, the approach may not be fully protective of benthic receptors. EPA has provided Table 1 attached to the DAR to clarify applicable requirements for the CDF discharge.</p> <p>This comment applies to Section 7.1.2.2 as well.</p>	1. Need to preserve issue of spatial/temporal averaging pending outcome through harborwide RI/FS.	EPA and the Port agree this issue is resolved through relevant components of the resolution reached on comment #24.
32		SACM	Section 3.4.2.3.	Yes	1	Shall be completely rewritten. EPA directed the Port to use tap water PRGs, MCLs, and other levels as performance standards. This section is not written consistent with that directed comment and it is not relevant whether ICs will limit the use of groundwater in the area of the CDF. EPA will provide specific text to the Port for inclusion in the 100% DAR regarding this issue.	1. Use of Region 9 PRGs (see comment #24)	EPA and the Port agree this issue is resolved through relevant components of the resolution reached on comment #24.

Notes:

(1) The Port and EPA have been engaged in an Informal Dispute Resolution (IDR) process since January 2007 related to EPA's directed comments on the Port's 60% Design Submittal. Through the IDR, some comments required further clarification and information, while others required a discussion to resolve disagreements between the Port and EPA. Through the IDR process, the Port and EPA were able to resolve a majority of the directed comments. This table represents the remaining directed comments that were not resolved through the IDR process.

(2) The resolutions in the table are specific to the T4 Removal Action, do not represent positions of the Lower Willamette Group. ,

(3) The Port has made a recommendation to EPA to realign the T4 Removal Action schedule with the harbor-wide Remedial Investigation/Feasibility Study (RI/FS) before completing the T4 Design (Letter to EPA from Port, August 22, 2007). Information from the RI/FS could then be incorporated into the T4 design, and vice versa. The Port's recommended path forward would also be a means to settle the current Informal Dispute Resolution (IDR) process. This table provides the Port's specific concerns with the 60% Design directed comments, based on the assumption that EPA accepts the Port's recommendation to realign the T4 project with the harbor-wide process. If EPA does not accept the Port's recommendation, the Port reserves its rights to re-evaluate its position on the directed comments.

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

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GENERAL COMMENTS				
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.
SPECIFIC COMMENTS				
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"> 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"> i. Why does the green band not connect between HC-S-16 and HC-S-24? ii. How was the edge of the brown area around HC-S-24 determined? iii. How was the edge of the brown area around HC-S-38 and T4-B414-01 determined?

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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?

RE-ALIGNMENT SCHEDULE

Item	Date
Port's Submittal of Harbor-wide Issue Resolution/Data Needs	October 5, 2007
Port's Abatement Measures Proposal	October 25, 2007
EPA Review and Comment on Abatement Measures Proposal	November 15, 2007
NMFS/ESA Abatement Measures Consultation	November 2007 – March 2008
Final Approval of Abatement Measures	November 30, 2007
100% Design of Abatement Measures Submitted	March 2008
Agency Completes Review of 100% Abatement Design	April 2008
Harbor-wide RI/FS Data Collection	June 2008
Abatement Measures Implementation	August 2008
Harbor-wide Issue Resolution	December 2008
Harbor-wide Feasibility Study	December 2009
100% CDF Design Submitted	December 2009
CDF Construction Initiated	December 2010 ^a

^a Tentative date based on current understanding of harbor-wide RI/FS and ROD schedule.

- The Port shall deliver a comprehensive schedule for this deferral agreement including, but not limited to, the abatement work, and the selected removal action design and construction, for EPA review and approval within 20 days of this letter, based on the attached general schedule deadlines; and
- Upon request by EPA, the Port shall provide data necessary to evaluate the effectiveness of the abatement action taken and, if determined necessary by EPA, provide additional abatement measures pending completion of the May 2005 Action Memorandum .

EPA may revoke its agreement to the realigned schedule at any time if the above requirements are not met. In addition, if at any time EPA or the Port receives new information that may lead EPA to re-evaluate this realigned schedule or the May 2005 Action Memorandum, EPA may require a reassessment of alternatives for the Terminal 4 removal action area, including a revised EE/CA for public review.

If you have any questions on this extension, do not hesitate to contact me at (206) 553-7216, or Sean Sheldrake of my staff at (206) 553-1220.

Sincerely,



Deborah J. Yamamoto, Unit Manager
Site Cleanup Unit 2
Office of Environmental Cleanup

Enclosure

cc: Anne Summers, Port of Portland
Krista Koehl, Port of Portland
Sean Sheldrake, EPA
Lori Cora, EPA