PORT OF PORTLAND
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June 22, 2016

Dennis McLerran, Administrator
Environmental Protection Agency, Region 10
1200 6th Avenue
Seattle, WA 98101

Dear Dennis:

The Port of Portland (Port) welcomes the arrival of a significant milestone in the cleanup of Portland Harbor—the Environmental Protection Agency's (EPA's) release of its Proposed Plan and Draft Final Feasibility Study (FS). This milestone represents years of hard work by EPA, the Oregon Department of Environmental Quality, the Port, and other members of the Lower Willamette Group (LWG), who signed on to help EPA study the risks posed by contamination in the Harbor and develop options for cleanup.

The Port is committed to a cleanup of Portland Harbor that protects the health of Portlanders and our environment and to finding the most cost-effective way to achieve it. After studying the river, and doing our own early cleanup work, we are ready for the next step.

However, we are concerned that EPA's approach to the FS does not provide an appropriate foundation for selection of a protective, cost-effective and implementable remedy. The Port has expressed its concerns through LWG comments to EPA, LWG comments to the National Remedy Review Board, and during various meetings with EPA.

The FS is intended to provide a strong analytic foundation for remedy selection. Laws, regulations, and EPA guidance require the FS to provide credible, quantitative information and analysis about the relative effectiveness and cost of different options for meeting cleanup goals. Those cleanup goals must be achievable and correspond to a realistic assessment of risk at the site. The Port urges EPA to find a way to work through the following key areas of concern with the FS:

- **Weighing the Trade-Offs**. Cleanup cost estimates in the FS are unfairly optimistic, and there is no credible, quantitative explanation of how EPA's preferred cleanup option reaches cleanup targets in a substantially shorter time than more cost-effective cleanup options. As a result, the FS does not accurately represent or adequately inform the public about the true costs and benefits of different cleanup options. Rigorous attention to cost-benefit trade-offs is crucial at a time when the City and region are facing many critical affordability issues.

- **Setting Realistic Goals**. The FS portrays the risks from contamination in Portland Harbor as more significant than the approved risk assessments and sets cleanup goals that a sediment-only remedy cannot achieve at the site. This urban waterway is subject to ongoing watershed sources of pollution that a Superfund sediment cleanup cannot address. EPA should set cleanup levels that are technically practicable based on site-

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specific considerations and that can be achieved by the sediment remedy in a reasonable time frame.

- **Retaining Flexibility.** The FS appears to lack the flexibility to accommodate significant remedy adjustments and design choices that may be appropriate after additional, necessary data gathering and analysis. Flexibility is particularly important given the uncertainty in EPA's analysis of remedy effectiveness and achievability. Rather than prescriptively requiring a more aggressive remedy up front, EPA should be open to phased, adaptive approaches that may be able to achieve the same cleanup targets more cost-effectively through careful attention to site-specific conditions.

These key shortcomings, described in more detail in a brief attachment to this letter, make the FS deficient as a basis for remedy selection. The FS also falls short in its vision for remedy implementation. It does not provide a breakdown of remedy costs by subareas of the Harbor, and it barely hints at a willingness to divide the site into separate administrative units to facilitate cleanup, closure and settlement.

EPA did not change its approach when the LWG identified these concerns in detailed technical comments during the FS development process. The Port, as a member of the LWG, stands behind the work performed by the LWG pursuant to the Administrative Settlement Agreement and Order on Consent and continues to share many of the key concerns with the FS expressed in a dispute to be filed by other members of the LWG today.

In comments on the Proposed Plan, the Port intends to offer a detailed explanation of its most important concerns and constructive paths forward to cleanup. The Port expects that EPA will give careful consideration to all significant issues raised, both through dispute and comments.

Portland deserves a cleanup approach that transparently defines cleanup costs and the public health and environmental benefits to be achieved. EPA has the chance to adjust the FS, improve the flexibility of the remedy decision, and provide a vision for cleanup that allows timely execution of agreements to implement remedial actions to protect the health of Portlanders and our environment.

Sincerely,

Curtis Robinhold
Deputy Executive Director

cc: Cami Grandinetti, EPA Region 10
Jim Woolford, EPA HQ

Attachment

Attachment

Port of Portland June 22, 2016 Letter to Dennis McLerran, Administrator, EPA Region 10
Key Issues with EPA Draft Final Feasibility Study

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the National Contingency Plan (NCP), and EPA guidance contain requirements for carrying out site Feasibility Studies. EPA's Draft Final Feasibility Study (FS) does not satisfy certain key requirements. Areas of concern, which will be described more fully in Proposed Plan comments, include the following:

1. Inadequate analysis of long-term effectiveness, short-term effectiveness, cost and implementability, leading to incomplete evaluation of alternatives

EPA's FS does not quantify or inaccurately quantifies long-term effectiveness, short-term effectiveness, cost, and implementability—four of the nine criteria that the NCP requires EPA to consider when weighing cleanup alternatives.[1] As a result, it is very difficult to identify a link between costs of the remedial actions and the likely public health and environmental risk benefit to be achieved. Key examples and consequences include:

- Time to achieve goals. The FS does not evaluate how long it will take alternatives to achieve cleanup levels after dredging and capping are completed.[2] Thus, EPA provides no credible explanation of how its proposed remedy achieves risk reduction or attains cleanup goals in a substantially shorter time than other alternatives. Without a reasonable, quantitative basis to compare time frames in which cleanup goals will be attained, trade-offs cannot be evaluated as required under the NCP.
- Effectiveness of enhanced natural recovery. EPA correctly identifies enhanced natural recovery (ENR) as an appropriate technology for the unique conditions within Swan Island Lagoon.[3] Yet, in a reversal from EPA's prior drafts, it appears that EPA's Draft Final FS does not attempt to measure *any* quantitative effect of ENR on reducing risk.[4] A quantitative evaluation of risk reduction from ENR would demonstrate that there is an equally protective, more cost-effective cleanup approach available for Swan Island.
- Inaccurate cost estimates. The FS uses overly optimistic, inaccurate cost estimates. For example, EPA's assumptions for contingency factor, project management and design, and discount rate are skewed low. EPA guidance recommends a contingency factor of 20 to 45 percent; EPA chose 20 percent, the lowest number in the range, despite Portland Harbor's complexities.[5] EPA selected lower percentages than its guidance recommends for project and construction management and remedial design.[6] Further, EPA used a discount rate of 7 percent, which is out of step with the 2.3 percent used

[1] 40 C.F.R. § 300.430(e)(9)(iii)(C),(E)-(G).
[2] *See* Portland Harbor Feasibility Study, U.S. Environmental Protection Agency and CDM Smith (2016) (hereafter, "FS"), Sec. 4.1.2.
[3] FS, Sec. 3.5.1 and Appendix D6.
[4] *See id.* and FS, Appendix J.
[5] *See* FS Appendix G, Attachment A, pages 8-9 and Table CS-E, page 3; *Developing and Documenting Cost Estimates During the Feasibility Study* (EPA 2000), section 5.4 and Exhibit 5-6.
[6] *Id.*

recently in EPA Region 10.[7] The consequence is to skew cost estimates low and make highly dredging-intensive remedies appear more cost-effective relative to other alternatives.

- Optimistic implementation assumptions. The FS makes a number of aggressive assumptions as to how the cleanup will be implemented. For example, EPA optimistically assumes dredging and capping can occur 24 hours per day, 6 days per week, and predicts higher dredging production rates than have been observed with similar sediment cleanup actions in the Willamette and Columbia Rivers. As a result, the FS greatly underestimates implementation time, which in turn leads to inaccurate costs and distorted short- and long-term effectiveness analyses that favor alternatives with more capping and dredging.

2. **Sets goals that are unachievable in an urban waterway, inconsistent with the baseline risk assessments, and not based on appropriate risk management principles**

EPA's contaminants of concern, preliminary remediation goals, and remedial action objectives (RAOs) are inconsistent in a number of ways with its baseline risk assessments. Additionally, EPA has not followed a clear risk management framework, which means the proposed RAOs are not likely to be achieved by a sediment remedy in a reasonable time frame. Key examples and consequences include:

- Unachievable goals. EPA's guidance recommends that cleanup objectives "should reflect objectives that are achievable from the site cleanup."[8] However, EPA sets cleanup goals for Portland Harbor based on an inaccurate assessment of what a sediment cleanup can achieve, given that upstream flow continues to carry contaminated sediments into the Harbor. EPA should use a reasonable range for background concentrations and equilibrium values, and should use site-specific achievability for each Sediment Decision Unit instead of a Harbor-wide average to set cleanup goals.
- Inconsistency with risk assessments. EPA's FS reflects two major inconsistencies with its previously approved risk assessments for Portland Harbor.
    - Baseline Risk. EPA apparently used a different method for estimating baseline risk for the FS compared to the baseline risk assessments.[9] As a result, risk estimates for some parts of the river are much higher than what is presented in the approved risk assessments. This last-minute change may have a number of significant implications, including for designating areas that EPA treats as "principal threat waste."
    - Benthic risk. EPA also changed its approach to analyzing risk to benthic organisms. The FS arbitrarily concludes that alternatives do not meet its interim risk target unless they remediate 50 percent of the area indicated in EPA's new benthic risk maps. This leads to an inadequately supported conclusion that Alternatives B and D may not be protective.[10]

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[7] *See* FS Appendix G, Attachment A, pages 9-10; Final Feasibility Study, Lower Duwamish Waterway Group (October 31, 2012), Appendix I, page I-5.

[8] Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, §2.4.1 (OSWER 9355.0-85, December 2005) ("EPA 2005")

[9] *See* FS, Appendices I and J.

[10] *See* FS, pages ES-15, 4-8, 4-88-4-89, 4-98.

- Lack of risk management perspective. EPA does not follow its recommended risk management approaches.[11] EPA has consistently overestimated Harbor-wide risk and required cleanup that does not meaningfully reduce risk. In addition, EPA does not analyze the likelihood of exposures actually occurring, based on site-specific conditions.
- Inappropriate principal threat waste designation. EPA has designated principal threat waste (PTW) over large geographic areas with relatively low concentrations of contaminants. According to the NCP and EPA guidance, PTW is highly toxic or highly mobile waste *that cannot be reliably contained.*[12] The FS fails to explain how sediments in these large areas are highly mobile or highly toxic *and* cannot be reliably contained. For example, PCB concentrations of 200 part per billion (ppb) can be reliably contained; in fact, EPA analysis in the FS shows that PCBs can be reliably contained at any concentrations occurring in Portland Harbor.[13] In addition, the "highly toxic" designation is intended to be measured based on direct exposure, not the indirect exposure pathway for PCBs that EPA identifies.[14] Overall, EPA's approach to PTW at Portland Harbor is significantly out of step with EPA's approach at many other sediment sites.[15]

3. **Lack of flexibility to accommodate equally protective, more cost-effective site-specific remedy design**

EPA can do more to accommodate site-specific remedy selection and design to generate equally protective, more cost-effective results.

- Iterative, risk-based approaches. EPA's FS expresses little flexibility to accommodate different approaches to cleanup, considering site-specific conditions and risk management opportunities. EPA should evaluate adaptive management and contingent remedies, which are an appropriate response to the significant uncertainty in EPA's analysis of remedy effectiveness and achievability. These approaches can bring down initial barriers to cleanup and reach equally protective performance goals. They are supported by EPA guidance, but not considered in EPA's FS and Proposed Plan for Portland Harbor.[16]

- Flexible decision trees. EPA further restricts cleanup design with prescriptive decision trees. By applying the same decision trees to environments across the Harbor, EPA does not allow for meaningful comparison of the performance of various technologies based on particular site conditions. Setting prescriptive requirements in the FS will prevent later evaluation of the most appropriate technology assignments and configurations for remedial design at specific sites within the Harbor. If EPA continues using decision trees in the FS, it should incorporate criteria more suited to remedial design.

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[11] *See, e.g.*, EPA 2005, § 7.1.

[12] A Guide to Principal Threat and Low Level Wastes. Office of Solid Waste and Emergency Response. Superfund Publication 9380.03-06FS. Washington, D.C. November 1991. ("EPA 1991")

[13] FS, Table 3.2-2.

[14] *See* EPA 1991.

[15] *See* Letter from Lower Willamette Group to Amy Legare (Chair, National Remedy Review Board), October 19, 2015, Table 4.

[16] EPA 2005, Section 3: "[P]roject managers should keep in mind that flexibility is frequently important in the feasibility study process at sediment sites. Iterative or adaptive approaches to site management are likely to be appropriate at these sites."

Statement by Curtis Robinhold, Port of Portland deputy executive director, regarding initial response to the EPA Proposed Plan for the cleanup of the Portland Harbor Superfund site…

Today we sent a letter to U.S. Environmental Protection Agency Region 10 Administrator Dennis McLerran about EPA's recently released Feasibility Study and Proposed Plan to clean up the Portland Harbor Superfund site. The letter represents our initial response to the plan and the underlying Feasibility Study upon which the plan is built, and highlights our fundamental concerns with EPA's approach. We intend to submit more extensive comments later in the 60 day public comment period.

We are committed to a cleanup of Portland Harbor that protects the health of Portlanders and our environment, and to finding the most cost-effective way to achieve it. After studying the river, and doing our own early cleanup work, we are ready for the next step.

In our letter, we ask EPA for a pathway to get the cleanup moving forward. We make three main points about EPA's analysis and resulting plan:

(1) The plan does not adequately inform Portlanders about the true costs and benefits of different cleanup options. While we were intrigued by the more than $600 million drop in the cost of EPA's preferred remedy, a closer look left us perplexed. Costs dropped, but there was little actual change in the plan for cleanup. We are concerned that EPA's costs are overly optimistic, meaning the public is not informed about the true higher anticipated cost of the cleanup or the benefits that different cleanup alternatives would achieve. The cost to clean up Portland Harbor is significant at a time when our city and region are facing many critical affordability issues.

(2) Cleanup goals should be realistic. The Portland Harbor Superfund site is very large, covering 10 miles of the Lower Willamette River. It is the home to Oregon's largest seaport, directly employing 30,000 people, in addition to being a home for wildlife and recreation. EPA sets its cleanup targets for the entire site, rather than recognizing that the risks aren't the same across all 10 miles. Cleanup goals should be more site-specific, so we ensure they are actually effective and achievable in an urban waterway.

(3) EPA should empower us with the flexibility to get cleanup moving forward. We have been very active in addressing the legacy contamination in Portland Harbor and believe we can implement cleanups that will reach EPA's pollution reduction targets and do it in a cost-effective way. In order to do that, EPA must provide us the flexibility to pursue other, equally protective approaches at our key sites within the Harbor.

We have repeatedly expressed these key concerns to EPA, and urge EPA to find a way to work through these issues in making its final cleanup decision. We urge Portlanders to also share these thoughts with EPA during the public comment period.

Under an agreement reached with EPA in January, we are entitled to file a formal dispute about our concerns with the Feasibility Study. We chose instead to address our concerns in the letter rather than invoking legal dispute.