Port of Seattle

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August 6, 2019

Chris Hladick
Regional Administrator, EPA Region 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101

Re: East Waterway Operable Unit of the Harbor Island Superfund Site

Dear Chris:

Thank you for meeting with representatives of the Port of Seattle ("Port"), City of Seattle ("City"), and King County ("County") on May 29 to discuss EPA's proposed approach to defining a "final" remedy for the East Waterway Operable Unit of the Harbor Island Superfund Site ("East Waterway"). We appreciate receiving EPA staff's June 20 written follow-up statement detailing staff's preferred approach. This letter is submitted on behalf of the Port in response to that correspondence, and a more detailed reaction to EPA's written statement is attached.

Our outreach to you concerning the importance of choosing a workable final remedy is motivated solely by a desire to move the East Waterway cleanup forward quickly and effectively. We are not asking for a decrease in the protectiveness of the remedy or a special favor of some kind. Rather, our outreach to you is based on our concern that the approach Region 10 Superfund staff appear determined to take will result in an unworkable remedy that is misleading to the public.

The Port has worked cooperatively and successfully with EPA on a number of Superfund sites since the early 1990s, including creative and groundbreaking work on the Pacific Sound Resources Site and the upland portion of the Harbor Island Site (both of which received national recognition). In contrast to those efforts, the Port's work with EPA on the East Waterway, which began in 1996 and included the active participation of the City and County beginning in 2006, has been bogged down by years of studies and evaluations. The one advantage gained by those many years of evaluations is that we now have an especially detailed understanding of the East Waterway and how various remedy options would likely perform. We chose to reach out to you when we learned that your staff is set on proceeding as if those years of analysis may have come to wildly inaccurate conclusions. Our hope is that you can assist in shifting EPA's approach to one that allows us to move forward openly and expeditiously with a truly final remedy for the East Waterway.

At our meeting on May 29, Cami Grandinetti, Regional Cleanup Branch Manager, assured us that EPA recognized the critical importance of having a final remedy. She indicated that EPA would address this by determining a "regional background" concentration for PCBs, which would then be substituted for the natural background cleanup level after the ROD was issued. Because the regional background concentration might eventually be met, EPA staff indicated we should not be concerned that the East Waterway remedy would be viewed as a failure when the remedy did not accomplish what is clearly not possible – achieving and maintaining a "natural background" PCB concentration in a highly urban/industrial waterway. At the meeting, EPA agreed to provide a written explanation for how the approach laid out by Ms. Grandinetti would work in practice.

We appreciated receiving EPA's written explanation on June 20, but were disappointed to see that, rather than describing the new approach Ms. Grandinetti laid out, it describes precisely the same

approach we have heard for years from EPA staff. This approach is not acceptable because it misleads the public and essentially guarantees that the remedy will be viewed as a failure because natural background standards will not be met – even after spending hundreds of millions of dollars in (primarily) public funds to perform the most aggressive cleanup possible, transforming the East Waterway into one of the cleanest urban waterways in the United States. Further, we would be provided with no assurance that additional work would not be required in the future when the cleanup does not accomplish the impossible task of achieving a natural background PCB concentration in East Waterway sediments.

The remedy approach described in EPA's June 20 correspondence is especially unfortunate because it will perpetuate EPA Superfund program involvement with the East Waterway well into the middle of this century and beyond, diverting staff and agency resources away from other more productive efforts. This perpetual Superfund involvement is contrary to the core remedial goals of the CERCLA program, as well as several of the policy recommendations developed by EPA's 2017 Superfund Task Force. It is also perplexing in light of EPA's recognition that further reductions in sediment concentrations following completion of active remediation will be accomplished through natural recovery and source control actions that will occur entirely under other regulatory authorities, including especially the federal and state Clean Water Act and Washington's Model Toxics Control Act.

The remedy that will be performed, and the degree of human health and environmental protection that will ultimately be achieved by the East Waterway cleanup, ***will be the same*** whether or not the Superfund program remains engaged for decades following completion of active cleanup and a performance monitoring period which will ensure that the remedial action levels that must immediately be meet upon completion of the active remedy are indeed met. Because ongoing Superfund involvement will not change the effectiveness of the remedy, including a waiver of standards that are clearly unachievable in the East Waterway's Proposed Plan and ROD will not decrease the protectiveness of the remedy, and will allow EPA Superfund staff to focus on other higher priority sites that still need to be cleaned up. And contrary to statements made in both the May 29 meeting and EPA's June 20 correspondence, EPA is not required to spend years determining an alternative cleanup level before it can waive a standard that it already knows cannot practicably be achieved. In fact, EPA has frequently waived ARARs without providing an alternative cleanup level, including Region 10's waiver of a water quality ARAR in its 2013 ROD for the Lockheed West sediment site in Seattle.

Including a waiver of standards that cannot be achieved in the East Waterway ROD is the only practical approach we see to streamline the CERCLA process, without reducing environmental protection, at a site that has already been the subject of over 30 years of investigations and evaluations. A waiver would allow completion of CERCLA involvement much more quickly, is transparent to the public, and is a better use of EPA resources by letting staff focus on more pressing needs once remediation is complete. It would also allow us to work with EPA to further expedite remediation of the East Waterway in ways that will not be possible if the ROD fails to provide certainty concerning the ultimate remedy scope. We would welcome the opportunity to explore those options with EPA, which could result in completing cleanup of the East Waterway without the kind of delays that have plagued Superfund megasites generally, and the East

Waterway in particular. However, absent a waiver of unachievable standards, it will not be prudent for us as the stewards of public funds to make the kind of up-front commitments required to creatively expedite the East Waterway cleanup.

We would appreciate your personal review of the issues raised in this letter and the attached document providing more detailed responses to EPA's June 20 correspondence. We remain committed to an effective and expeditious cleanup of the East Waterway, but have been frustrated by EPA's insistence on decades of frequently-unnecessary study and process. The approach EPA is currently determined to take will result in additional delay and unproductive effort, and will ultimately result in the East Waterway unnecessarily remaining an active site on the National Priorities List for generations to come. We can do better, and would appreciate the opportunity to work with EPA toward achieving that goal. Thank you for your consideration of our concerns.

Very truly yours,

Elizabeth Leavitt
Senior Director, Environment and Sustainability
Port of Seattle

Attachment

cc: Richard Mednick, EPA Office of Regional Counsel
Shawn Blocker, EPA Region 10
Ravi Sanga, EPA Region 10
Elizabeth Black, Port of Seattle
Kristie Elliott, King County Prosecuting Attorney's Office
Tad Shimazu, Seattle City Attorney's Office
Jeff Stern, King County Department of Natural Resources
Debra Williston, King County Department of Natural Resources
Pete Rude, Seattle Public Utilities

August 6, 2019

PORT OF SEATTLE RESPONSE TO:

STATEMENT BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OF SEDIMENT MANAGEMENT STANDARDS AND THE EAST WATERWAY OPERABLE UNIT AS DISCUSSED ON MAY 29, 2019 WITH THE PORT OF SEATTLE, CITY OF SEATTLE, AND KING COUNTY

EPA's June 20, 2019 *Statement by the United States Environmental Protection Agency of Sediment Management Standards and the East Waterway Operable Unit as Discussed on May 29, 2019 with the Port of Seattle, City of Seattle, and King County* (EPA Statement) documents EPA's position on how Washington's Sediment Management Standards (SMS) should be incorporated into the Proposed Plan and ROD for the East Waterway Operable Unit (East Waterway) of the Harbor Island Superfund Site. Because the Port believes that an accurate presentation of considerations underpinning EPA's East Waterway remedy decision is crucial to the success of the cleanup, this memorandum provides clarifications concerning several assertions in the EPA Statement that are inconsistent with the SMS or contrary to analyses in the EPA-approved East Waterway Final Feasibility Study (FS). In addition, this memorandum describes the problems caused by relying on unachievable cleanup standards and the rationale for including a technical impracticability waiver of those standards in the East Waterway Proposed Plan and ROD.

1. CLARIFICATION OF FS ANALYSES

The Port began working with EPA on Superfund investigations of the East Waterway in 1996. Beginning in 2006, the Port teamed with the City of Seattle and King County (referred to as the East Waterway Group or EWG) to work with EPA to complete the East Waterway's Supplemental Remedial Investigation (the SRI) and complete the site FS. Over the course of the EWG's 13 years of working collaboratively with EPA on the SRI and FS, scientists and engineers from EWG and EPA have worked together to develop a detailed understanding of the site conditions (which are described in the East Waterway Final Remedial Investigation approved by EPA in 2014) and develop and evaluate the alternative cleanup approaches for the East Waterway that are included in the Final FS (approved in June, 2019). In multiple places, the EPA Statement conspicuously ignores or distorts basic information that is presented in the FS, or inaccurately describes SMS requirements. This section seeks to clarify those misleading or inaccurate elements of the EPA statement. Excerpts from EPA's statement are provided below in italics, followed by the Port's clarification.

EPA Statement:
For the East Waterway Operable Unit (East Waterway) of the Harbor Island Superfund Site, the PRGs and anticipated CULs are currently based on the SCO which for PCBs is the natural background level of 2 ppb, as prescribed by SMS. This is the level of PCBs in sediments that must be attained at the completion of the remedial action. The RAL for PCBs in the sediments of the East Waterway is likely to be set at 192 ppb based on the SMS-numerical criteria for preventing benthic toxicity.

Port Clarifications:
While the statement may be attempting to simplify the SMS process for selecting CULs, it does so at the expense of accuracy. The statement that the SCO of 2 ppb PCBs "must be attained at the completion of the remedial action" is incorrect under both CERCLA and the SMS. Under CERCLA, cleanup levels that cannot practicably be met can be waived. The phrase "must be attained" is also inconsistent with the SMS, because the SMS include mechanisms for managing sites that have not attained or may not attain the CULs.[1] These include the ability to adjust cleanup levels (WAC 173-204-560(2)(a)(ii)) and the designation of "Sediment Recovery Zones" (WAC 173-204-590). Rather than

[1] The EPA Statement also implies that the chosen remedy must meet all CULs following active remediation; however, consistent with the SMS, the phrase "remedial action" includes both "active cleanup actions," such as dredging and capping, and "passive cleanup actions," such as natural recovery (Washington Administrative Code 173-204-500(5)(b)).

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being an absolute requirement that must be met following implementation of the remedy, the natural background level for PCBs is the goal for remediation.

Also, although the RAL for PCBs is set at the SMS criterion designed to prevent benthic toxicity, which itself is an ARAR, the FS evaluated an alternative RAL to see if choosing a lower value would improve remedy performance and provide greater reductions in human health risks. The FS concluded that a RAL set at the SMS benthic toxicity value would also reduce risks to human health for seafood consumption by reducing site-wide sediment concentrations, consistent with remedial action objective (RAO) 1 (see FS Section 6.2.2). However, the FS also concluded that choosing a lower PCB RAL would provide no further reductions in human health risks. The PCB RAL was thus chosen as both a value that would provide protection to site benthos *and* as the value that would provide the greatest practicable reduction to human health risk.[2] FS Figure 6-2 summarizes the RAL analysis, showing that the PCBs RAL of 192 ppb[3] achieves a site-wide spatially-weighted average concentration close to the best-estimate of the PCB concentration of incoming sediment (46 ppb). As shown on the figure, no RAL is expected to meet, or even come close to, the PRG of 2 ppb.

The EPA Statement's discussion of RALs appears to be rooted in an incorrect assumption that the SMS provide a process for determining RALs at sediment cleanup sites ("SMS may also be used to establish [RALs] which provide the basis for defining areas of a site that require remedial action."). However, the concept of remedial action levels is not included in Washington's SMS and that term does not appear anywhere in the SMS regulations. The remedial action level concept has instead been imported from other NPL sites, including soil/groundwater sites, where RALs are often used as values that must be met at individual locations so that a lower concentration CUL can be met as an average concentration across a larger area. *See* Guidance on Surface Soil Cleanup at Hazardous Waste Sites: Implementing Cleanup Levels, EPA 9355.0-91, May, 2004 (Draft), The term "RAL" is correctly used in the East Waterway SRI/FS as providing concentrations that active remediation must meet on a point-by-point basis. However, the FS does not provide the accompanying analysis that is frequently performed to demonstrate that a CUL that applies as an average concentration across the site will be achieved if active cleanup is performed to meet a particular RAL on a point-by-point basis. Because the PCB CUL for the East Waterway is unachievable no matter what RAL is chosen, no such statistical analysis would be possible.

Finally, the EPA Statement incorrectly identifies the PCB PRG (and likely CUL) of 2 ppb as being "prescribed by the SMS." Although use of a natural background concentration as a PCB CUL is prescribed by the SMS in the circumstances presented by the East Waterway, the value of 2 ppb is not. EPA rejected Ecology's statistical method for the calculation of natural background concentrations and instead required a method that produces a lower value. The 2 ppb value was thus not prescribed by the SMS and is in fact a marginally lower concentration than would be used at Washington State sites where SMS requirements are implemented in accordance with Ecology guidance.[4]

EPA Statement:
Following active cleanup, the remedial action will continue with a combination of ENR and source control.

Port Clarification:
ENR (enhanced natural recovery) is considered an active remedial technology and therefore could not follow "active cleanup." EPA may be referring to placement of a clean sand cover following dredging, but this is referred to as "residuals management cover" in the Final FS, and is part of "active cleanup." Following active cleanup,

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[2] Note that a similar exercise was performed for the Lower Duwamish FS, with PCB RALs ranging from 100 ppb to over 2,000 ppb being considered in the first drafts of that document before EPA settled on a RAL of 12 mg/kg OC, which is equivalent to the SMS benthic protection value.
[3] The SMS values for PCBs are given as organic carbon normalized concentrations, and the PCB RAL used in the FS is actually 12 mg/kg OC. The 192 ppb value used in the EPA statement is based on a conversion of the PCB RAL to a dry weight concentration using an average TOC value for the East Waterway.
[4] The value calculated using Ecology's method would be 3.5 ppb, which is no more attainable than the EPA's value of 2 ppb.

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remediation will continue with natural processes (i.e., sedimentation). EPA may have meant "MNR" (monitored natural recovery) instead of ENR; however, "site-wide monitoring and natural recovery" is the term consistent with the FS. Based on the FS approach, source control measures will continue after active sediment remediation under federal and state Clean Water Act requirements and Model Toxics Control Act requirements.

EPA Statement:
Once these steps are complete, it is presently expected that the remedial action will achieve the SCO of 2 ppb for PCBs. There is modeling which suggests that the SCO for PCBs may not be achieved at the completion of the remedial action. If the modeling turns out to be correct, the CUL that is established at the SCO could be adjusted upward to as high as the CSL which would be based on a regional background level. In the alternative, if it is not technically possible to achieve the CSL or doing so would result in a net adverse environmental impact, or if there is no regional background level established for PCBs, there would be a basis for a waiver of the SMS requirements.

Port Clarification:
The only supportable expectation that can be drawn from the EPA-approved Final FS is that the remedy will not achieve the PCB SCO. The factors that make achieving the SCO impossible are identified and discussed in detail in the FS, including the inability to effectively remove all contaminated sediments from significant portions of the East Waterway, the presence of dredging residuals following remedy implementation, low sedimentation rates, a high degree of mixing, and PCB concentrations in incoming sediments that will remain far higher than 2 ppb for the foreseeable future. The extensive FS modeling that was performed at EPA's direction confirms, rather than suggests, that the SCO *cannot* be achieved. EPA can point to no contrary evidence following 13 years of detailed review and analysis under EPA's oversight. In contrast, multiple FS analyses support the conclusion that the remedy will not achieve the Puget Sound natural background PCB concentration determined by EPA to be 2 ppb:

- ***RAL selection:*** The above-cited analysis performed to assist in RAL selection (shown on FS Figure 6-2) (cited above) demonstrates that remediation will result in concentrations well over an order of magnitude greater than the SCO (about 25 times greater than the PRG/SCO).
- ***Long-term modeling:*** The box model developed for the FS indicates a best estimate of 57 ppb, in the long term. The EPA-approved FS includes a bounding analysis designed to quantify the absolutely lowest and absolutely highest possible concentrations that could result from the remediation of the East Waterway and subsequent upstream cleanup and source control measures, with the outer bounds in either direction being extremely unlikely to occur due to the extreme assumptions used for those model runs. The results of the bounding model runs ranged from approximately 13 to 146 ppb (6 to 73 times the SCO; Appendix J, Figure 5b). The primary factor influencing long-term concentrations is the PCB concentration in incoming sediment from upstream. [5] The sensitivity and bounding analysis was developed to include an extremely wide range of values to fully capture potential model uncertainties. The SCO of 2 ppb for PCBs is not within that wide range.
- ***Appendix A technical possibility evaluation:*** Appendix A, Part 4.1, examines the technical possibility of achieving the SCO based on several lines of evidence, including evaluations of a hypothetical maximum removal scenario, concentrations of incoming sediment from upstream, concentrations in other cleanup sites in the East Waterway area, and sediment concentrations in adjacent Elliott Bay. In particular, the

[5] The lower bound modeling run included assumptions of highly successful upstream source control measures. Although source control is important, there are inherent limits to its effectiveness. For example, the 185,000 tons of sediments that come into the upstream Duwamish Waterway on average every year have an average PCB concentration well in excess of 2 ppb, with additional PCB contamination being added by the Duwamish site before a portion of those combined sediments ultimately deposit in the East Waterway. In order to effect a dramatic change to such a huge volume of incoming sediments, upstream source control efforts in the Green River watershed would have to identify and then control massive high concentration sources. Following much review, including work done for the Duwamish FS, no such huge PCB sources have been identified. This dynamic alone makes lower bound model run assumptions of extraordinarily successful upstream source control efforts highly unlikely to occur. And even if those highly favorable assumptions proved accurate, the result would still not be East Waterway PCB concentrations that meet the natural background CUL.

hypothetical maximum removal scenario was developed in 2015 in collaboration with EPA to address comments on the Draft FS concerning the lowest concentrations that could possibly be achieved following active remediation in the East Waterway. Substantial infrastructure is present within the East Waterway, which limits dredging underneath and immediately adjacent to those structures. When considering the most aggressive technologies to achieve the lowest concentration at the completion of construction, such as dredging everywhere possible, multiple re-dredge passes, and placement of clean sediments throughout the East Waterway following dredging, the post-construction concentration was still estimated to be 57 ug/kg for PCBs, nearly 30 times the EPA-calculated natural background level.

All of these analyses were developed in collaboration with EPA, based on the best available science and experience from other sediment cleanup sites. These robust and detailed FS analyses confirm the common-sense conclusion that it is not possible to transform sediments at the bottom of an active shipping waterway in the heart of a major city (and downstream of a Superfund site and major industrial area) to be chemically indistinguishable from sediments in the most pristine areas of Puget Sound. They also provide more than enough technical evidence to demonstrate that it is infeasible to achieve the PCB CUL of 2 ppb.

EPA Statement:
Source control is ongoing in the watershed above the EWOU but until the source control work is at or near completion, it will not be possible to calculate a regional background level for PCBs. Absent that level, adjusting the SCO to the CSL would not effectively raise the CUL for PCBs. Additionally, although modeling suggests it may not be possible to achieve the natural background level, there is insufficient information to demonstrate with certainty that the SCO will be technically impossible to achieve at the completion of the remedial action. Absent that demonstration, there is no justification under SMS for raising the CUL to the CSL for PCBs. Similarly, there is insufficient justification for a waiver of the SMS ARAR. It is worth noting that even if there were presently a basis for a waiver of SMS, which there is not, the time it would take to develop an alternative cleanup level for PCBs would a remedial action decision and cleanup for the EWOU.

Port Clarification:
The Port understands a timely cleanup cannot wait for a determination of regional background; however, the FS contains sufficient information to support waiving the SCO in the East Waterway ROD. The FS document consists of more than 1,300 pages of technical analysis, has taken more than 6 years to complete, and was reviewed by EPA in four drafts. The technical possibility of achieving the SCO is addressed in at least three analyses (listed above and in Appendix A, Part 4.1). The FS considered aggressive and highly effective source control scenarios to fully capture the potential range of uncertainty in model predictions (hence the wide range of outcomes of the sensitivity analysis [from 13 to 146 ppb, as noted above]). In reality, it would be hard to imagine an FS that more thoroughly documents the impracticability of meeting an ARAR. And when that ARAR appears unachievable from a common sense perspective as well (because it would require erasing all traces of legacy contamination and new contaminant inputs from a deep shipping waterway adjacent to a major city situated at the downstream end of the largest industrial area in the Northwest) there is no justification for asserting that the ARAR might be met by the chosen remedial action.

In addition, EPA is not required to spend years determining an alternative CUL before it can waive a standard it already knows cannot be achieved. CERCLA authorizes the waiver of state standards that cannot practicably be achieved without requiring that an alternative standard first be developed. EPA Region 10 has made use of that authority, including in its 2013 ROD for the Lockheed West sediment site in Seattle (waiver of arsenic water quality standard). For the East Waterway, undertaking the substantial effort that EPA would require to determine an alternative cleanup level (based either on regional background under the SMS or anthropogenic background under CERCLA) would add no value to the cleanup, as final sediment concentrations will be influenced solely by work done under other programs once active remediation of the East Waterway is complete. Determining an alternative cleanup level would thus be a meaningless exercise, in addition to one that is not mandated by legal requirements.

2. WAIVING UNACHIEVABLE NATURAL BACKGROUND-BASED CULS WILL EXPEDITE

CLEANUP OF THE EAST WATERWAY, PROVIDE PUBLIC TRANSPARENCY, AND PROVIDE CERTAINTY FOR PUBLIC ENTITIES

An accurate representation of the Final FS and SMS requirements is crucial for communicating clearly to the public and making an informed determination in the ROD. The following section discusses issues raised by the inclusion of an unattainable CUL in the ROD, and describes the rationale for a technical impracticability (TI) waiver for those ARARs under Section 121(d)(4) of CERCLA, 42 U.S.C. § 9621(d)(4)(C).

The Port, City and County are poised to clean up the East Waterway to very low average concentrations (anticipated to be around 50 ppb in the long term for PCBs) by dredging between 800,000 and 1,000,000 cy of sediment over almost a decade, at an estimated cost in excess of $250 million. Unlike the Lower Duwamish site, the viable FS remedy alternatives all involve use of active remedial technologies across the great majority of the site, rather than relying on monitoring and natural recovery for large areas. In comparison to the Lower Duwamish Waterway site, the East Waterway is deeper, has less sediment deposition from upstream, is subject to far more large vessel traffic and mixing from propwash, and is not likely to recovery as quickly as the LDW over time. Transforming the East Waterway into one of the cleanest urban waterways in the country by applying active remediation technologies to the great majority of the site should be viewed as a highly successful outcome of the CERCLA process. However, as described above, all lines of evidence indicate that remediation of the East Waterway will not, and cannot, result in achieving a natural background-based CUL for PCBs. EPA's guidance (EPA 2005)[6] encourages the type of technical possibility analysis included in Appendix A of the Final FS and warns against setting unachievable CULs:

> *It is especially important to consider both background levels of contamination and what has been achieved at similar sites elsewhere, so that achievable cleanup levels are developed. (Page 2-17).*

Including a natural background-based CUL in the East Waterway ROD will create unrealistic performance expectations. The public will view the cleanup as a failure, and the future EPA Region 10 staff who will be deciding, decades from now,[7] whether to waive that standard may do so as well. In reality, the East Waterway is poised to be transformed into one of the cleanest urban waterways in the country, with sediment concentrations far lower than have been achieved at any other NPL site. That accomplishment should not be made to look like a failure because the impossible is not accomplished.

The ROD should include a TI waiver of unachievable natural background cleanup standards to expedite the cleanup, achieve CERCLA's fundamental purpose, comport with recommendations of EPA's 2017 Superfund Task Force, and provide transparency to the public and certainty for public entities.

A TI waiver or unachievable standards would achieve CERCLA's fundamental purpose.
The CERCLA program is fundamentally *remedial*, not regulatory. The program was intended to expeditiously address legacy contamination problems at the highest priority sites in the nation, not to become a perpetual regulatory overlay in addition to the Clean Water Act, RCRA and other "command and control" federal and state regulatory programs intended to apply in perpetuity. A TI waiver and final remedy for the East Waterway could allow the cleanup to happen sooner, and would free up EPA Superfund staff to address other sites, rather than staying actively engaged on the East Waterway for decades following completion of the cleanup. Under the current paradigm, EPA's staff will be devoting time, attention and resources to the East Waterway natural background based CULs for the next 40 - 50 years, at a minimum. However, once active remediation of the East Waterway is complete

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[6] EPA, 2005. *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites*. Office of Solid Waste and Emergency Response. U.S. Environmental Protection Agency, Washington, D.C. EPA-540-R-05-012, OSWER 9355.0-85. December 2005.

[7] Because natural recovery does not occur as quickly in the East Waterway as the Lower Duwamish, concentrations will drop very slowly following completion of active remediation. Duwamish site modeling showed concentrations declining steeply and then leveling out about 30-40 years following active remedy implementation. East Waterway modeling showed a much slower, more linear decline following completion of active measures, meaning even more decades will have passed before concentrations equilibrate close to incoming sediment values.

(including attaining and maintaining all RALs), a CERCLA overlay beyond regular 5-year reviews is unnecessary and adds no value. If unattainable CULs are established in the ROD, following active cleanup, Superfund staff will continue to be dedicated to the East Waterway site, performing an oversight role focused on determining why the site is not achieving natural background. This role is entirely duplicative of responsibilities already vested in the federal and state Clean Water Act and state MTCA programs, and would be inconsistent with EPA guidance (EPA 2005)[2] emphasizing the importance of other authorities in setting achievable objectives:

> *When developing RAOs, project managers should evaluate whether the RAO is achievable by remediation of the site or if it requires additional actions outside the control of the project manager. For example, complete biota recovery may depend on the cleanup of sources that are regulated under other authorities. The project manager may discuss these other actions in the ROD and explain how the site remediation is expected to contribute to meeting area-wide goals outside the scope of the site, such as goals related to watershed concerns, but RAOs should reflect objectives that are achievable from the site cleanup (Page 2-15).*

A TI waiver of unachievable standards aligns with EPA Superfund Task Force recommendations.
EPA's Superfund Task Force was convened to develop recommendations that would streamline the CERCLA process and improve its effectiveness. The length of time it has taken to address Superfund megasites, including sediment sites, has been a major agency concern that multiple Task Force recommendations were designed to address. Including a TI waiver in the East Waterway ROD would comport with those recommendations. Specifically:

- Recommendation No. 1: "Target NPL Sites That Are Not Showing Sufficient Progress Towards Site Cleanup and Completion" through "find[ing] obstacles to completion and address[ing] them." The natural background PCB CUL stands as a barrier to completion of the East Waterway cleanup. Removing it through a TI waiver will not lessen the degree of cleanup or environmental protection but will move site completion ahead by decades.
- Recommendation No. 2: "Develop strategies … to move sites towards NPL deletion." Without a waiver of the PCB CUL, NPL deletion for the East Waterway will not be possible. Reliance on the approach currently favored by EPA, which involves waiting to evaluate a potential ARAR waiver until source control is "complete" and East Waterway concentrations have leveled out at a final equilibrium concentration, is unlikely to allow that to happen until the Harbor Island site is approaching the 100th anniversary of its listing on the NPL.
- Recommendation No. 13: "Identify opportunities to utilize various [other] federal and state authorities…." All of the East Waterway source control work that will occur following completion of active remediation will be performed under non-CERCLA authorities such as the Clean Water Act and Washington's state cleanup law. A TI waiver would confirm and recognize the roles that EPA already intends for those other authorities.
- Recommendation No. 19: "Reduce overlap and duplication" by clarifying "roles and responsibilities" of "federal agencies, states, and tribes." A TI waiver would reduce overlap and duplication without changing the remedy that will be performed or decreasing the degree of environmental protection that will be achieved.
- Recommendation No. 20: "Identify opportunities to engage independent third parties to oversee certain aspects of PRP lead cleanups" including "existing state programs." Including a TI waiver of unachievable standards would ensure that the source control aspect of the East Waterway cleanup was overseen by other programs, including multiple State of Washington programs. Without a TI waiver, a Superfund overlay that adds no substantive requirements will remain in place for decades.

A TI waiver of unachievable standards provides public transparency.
An expeditious, successful East Waterway cleanup must be based on an objective assessment of what can be achieved that is transparently shared with the public. Despite a public expenditure of hundreds of millions of dollars that will transform the EWW into one of the cleanest urban waterways in the country, natural background for PCBs will not be met. A ROD that retains natural background PCB CULs and other unachievable standards, and implies that they could be met, is extremely misleading to the public. Transparency with the public requires recognition of

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the results of all FS analyses, and the common-sense reality that sediments in a water body at the heart of the largest metropolitan area in the Pacific Northwest will never be chemically equivalent to the most pristine areas of Puget Sound.

A TI waiver of unachievable standards will provide certainty for public entities.
An unachievable CUL creates uncertainty among implementing parties. Public entities have the responsibility to use public funds in ways that benefit the public, and these entities cannot justify an approach that leaves the door open to costly perpetual cleanup. Further, without a TI waiver of unachievable standards, reaching agreements between the implementing parties (likely the Port, City and County) and other PRPs for funding of cleanup implementation will be difficult. As is typical at cleanup sites, PRPs who are not implementing the remedy will want to cash out of their obligations. However, they will be reluctant to pay a large premium to cover the uncertainties created by unachievable standards and the possibility that EPA will not waive those standards in the future and will instead require additional work. This will leave the implementing public entities with the choice of either taking on those risks with little compensation, or engaging in costly and uncertain litigation with other PRPs. These remedy implementation issues are entirely avoidable.

3. CONCLUSION

The Port shares the goal of expediting East Waterway remediation. Including unachievable cleanup standards in the East Waterway ROD will do the opposite, as well as be misleading to the public. A TI waiver of unachievable standards will not change the ultimate cleanup that is performed in any way (i.e., areas, volumes, and risk reduction achieved), and it will allow public entity PRPs to commit to implementing the remedy with a reasonable degree of certainty concerning the full range of responsibilities they are taking on. A TI waiver will reduce regulatory overlap with other federal and state programs in the years following completion of active remedial measures, result in a much more efficient CERCLA process, and move the site towards NPL deletion decades sooner.

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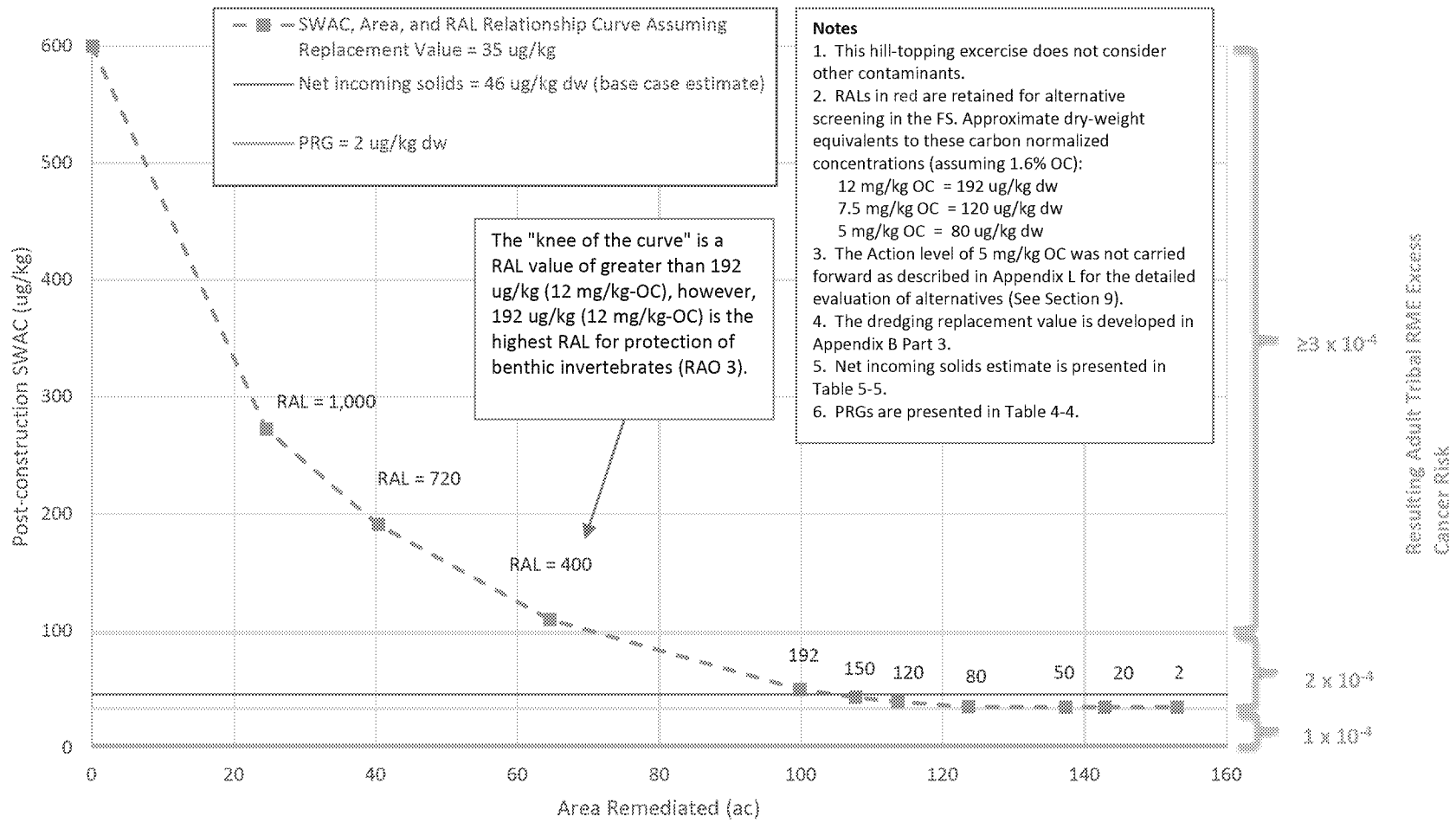

ANCHOR QEA

Figure 6-2
PCBs RALs, Remediation Area, and Resulting Post-construction SWACs
Feasibility Study
East Waterway Study Area

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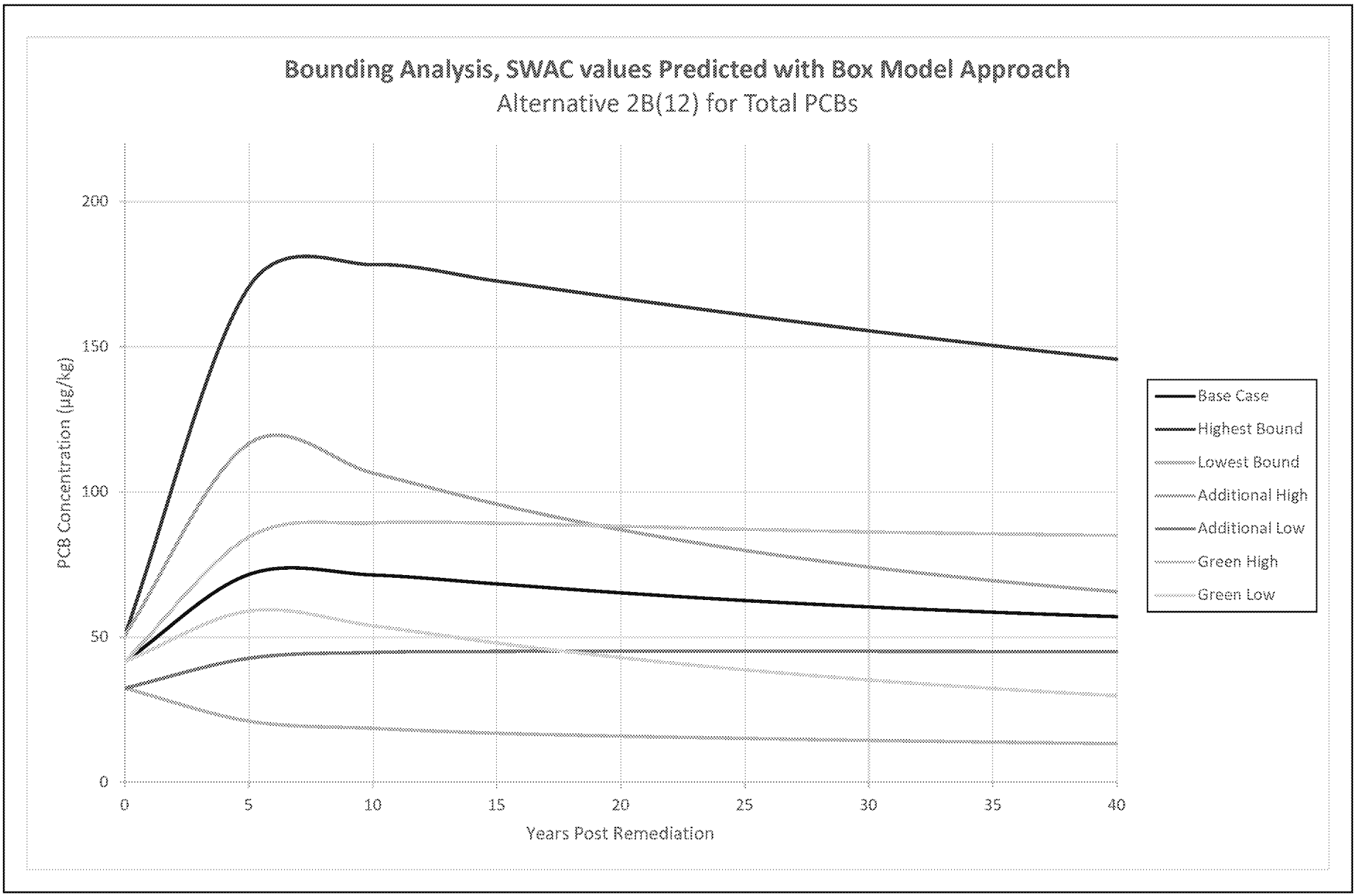

Figure 5b
Bounding Analysis, SWAC Values Predicted with Box Model Approach, Alternative 2B(12)
Feasibility Study - Appendix J
East Waterway Study Area