



Megan C. McCulloch
Phone: (313) 465-7444
Fax: (313) 465-7445
mmcculloch@honigman.com

Steven C. Nadeau
Coordinating Director
Phone: (313) 465-7492
Fax: (313) 465-7493
snadeau@honigman.com

Via E-mail & U.S. Mail

June 13, 2013

Ms. Allison Hiltner
Remedial Project Manager
United States Environmental Protection Agency
USEPA Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101
Mail Code: ECL-111
ldpc@resolv.org

Re: Sediment Management Work Group's Comments on the Proposed Plan for the Lower Duwamish Waterway Superfund Site

Dear Ms. Hiltner,

The Sediment Management Work Group ("SMWG")¹ is an ad hoc group of industry and government parties actively involved in the evaluation and management of contaminated sediments on a nationwide basis. The SMWG has long advocated a national policy addressing contaminated sediment issues that is founded on sound science and risk-based evaluation of contaminated sediment management options. The SMWG recognizes that the management of sites involving contaminated sediments frequently involves unique and complex scientific and technical issues, including assessment methodologies and evaluation of risk and risk reduction options. As an active participant in the national discussions on sediment management issues, the SMWG welcomes the opportunity to offer observations and comments on the Proposed Plan for the Lower Duwamish Waterway Superfund Site ("Site").

The SMWG's review of the Proposed Plan has identified a number of critical areas where the Proposed Plan does not comport with the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") (42 U.S.C. §9601 *et seq.*), the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") (40 CFR Part 300), the *11 Risk Management Principles for Contaminated Sediment Sites* (U.S. EPA 2002)² and the

¹ See Exhibit "A" for a list of its Members.

² United States Environmental Protection Agency. 2002. Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites. OSWER Directive 9285.6-08.

Contaminated Sediment Remediation Guidance for Hazardous Waste Sites (U.S. EPA 2005)³ (“Guidance”). In particular, the Proposed Plan does not follow the Guidance’s risk management framework for selecting a risk-reduction focused remedy nor does it comply with the NCP’s requirement that remedies have a proportionality between the effectiveness of each remedial alternative and their respective cost. Specifically, there are other remedial alternatives described in the Final Feasibility Study, such as Alternative 3C, that are predicted to be similarly protective within similar time frames, but which minimize short term risks by shortening the construction period and which cost significantly less than the Proposed Plan. Thus, the Proposed Plan should be withdrawn, and a new remedy selected based on the NCP, the 11 Risk Management Principles, and the Guidance.

The comments below offer more discussion of the significant issues with the Proposed Plan. The remedy proposed for the Lower Duwamish Waterway Superfund Site is significantly inconsistent with U.S. EPA’s national policy, as embodied in the Guidance and the NCP.

I. The Proposed Plan Deviates From U.S. EPA’s National Contaminated Sediment Policy And It Is Not Consistent With CERCLA Or The NCP.

In December 2005, U.S. EPA issued the Contaminated Sediment Remediation Guidance for Hazardous Waste Sites. This Guidance embodies national policy on contaminated sediment and should be followed at all contaminated sediment sites (Guidance, p. 7-1). Its focus is on selecting remedies that will **control sources and achieve long-term protection while minimizing short-term impacts and being cost-effective** (Guidance, p. 7-17). The Guidance further emphasizes the importance of focusing on risk reduction, not simply assuming that mass removal equates to risk reduction. The Guidance provides a risk management decision-making framework to assist with selecting remedies that reduce human health and ecological risks effectively (Guidance, p. 7-1).

Contrary to U.S. EPA’s national contaminated sediment policy, which is focused on reducing risks associated with contaminated sediment sites, the Proposed Plan appears to be focused on mass removal over risk reduction. Although Alternatives 3 through 6 are all expected to achieve approximately the **same level of long-term risk reduction** for both human health and ecological receptors by varying the amount of dredging, capping, enhanced monitored natural recovery (EMNR), and monitored natural recovery (MNR), the Proposed Plan (Alternative 5C Plus) compared to Alternative 3C selects **300,000 cy of additional dredging** (790,000 cy versus 490,000 cy), **4 additional years of construction** (7 years versus 3 years), and **\$105 million in additional costs** (\$305 million versus \$200 million; i.e., **over 50% more**) to potentially achieve the remedial action objectives one year sooner than Alternative 3C (17 years versus 18 years). Thus, mass removal rather than risk reduction appears to be the focus of the Proposed Plan.

Moreover, the additional mass removal (300,000 cy), which does not have additional long-term risk reduction benefits, has **additional short-term risks**. The Proposed Plan, which

³ United States Environmental Protection Agency. 2005. Contaminated Sediment Remediation Guidance for Hazardous Waste Sites. OSWER 9355.0-85.

has an additional 300,000 cy of dredging compared to Alternative 3C, will take 4 additional years of construction. During the extended construction period, constituents of concern (“COCs”) will be released into the water column attached to particulates and in dissolved phase form (Bridges et al. 2008)⁴. These types of releases have been documented to lead to increased concentrations of COCs in fish tissue during construction and typically for a few years after construction. Increased concentrations of COCs in fish tissue will result in greater risk to consumers of fish thereby leading to additional short-term risks for at least an additional 4 years. This is not inconsequential.

The cost of the additional mass removal without additional long-term benefits while posing increased short-term risks also **fails to comply both CERCLA and the NCP**, which require that remedies be cost-effective (42 U.S.C. §9621(a); 40 CFR §300.430(f)(1)(ii)(D)): “Each remedial action selected shall be cost-effective” (40 CFR §300.430(f)(1)(ii)(D)). Cost-effectiveness is defined as “costs are proportional to its overall effectiveness.” (40 CFR §300.430(f)(1)(ii)(D)). Pursuant to the U.S. EPA’s 1999 guidance, *A Guide to Preparing Proposed Plans, Records of Decision, and Other Remedy Selection Documents*,⁵ “cost-effectiveness is concerned with the reasonableness of the relationship between the effectiveness afforded by each alternative and its costs compared to other available options.” Moreover, “if the difference in effectiveness is small but the difference in cost is very large, a proportional relationship between the alternatives does not exist” (Preamble to NCP).⁶ These proportionality requirements were reiterated by U.S. EPA in the Guidance. The Proposed Plan violates the NCP’s cost-effectiveness requirement because its costs (\$305 million) are not proportionate to its anticipated effectiveness (similar long-term effectiveness to Alternative 3C, but costing over 50% more).

This lack of cost-effectiveness is a completely unnecessary **waste of resources**, for both the governments (taxpayers) and the businesses who will be asked to implement and pay for the remedy. These entities should not be burdened with the unnecessary expenditure of an additional \$105 million to achieve similar results to those predicted to be achieved under Alternative 3C. Moreover, these entities have duties to their taxpayers or their shareholders, respectively, to avoid wasting resources, and they should not be put in the position of trying to determine how to avoid breaching their duties while responsibly addressing legacy impacts to the Lower Duwamish Waterway.

II. U.S. EPA Should Waive The Natural Background ARAR Because Sediment Will Equilibrate To Levels Above Natural Background.

The Proposed Plan identifies the State of Washington’s Model Toxics Control Act (“MTCA”) as an ARAR. Where risk-based cleanup levels are below natural background, “the

⁴ Bridges, T.S., S. Ells, D. Hayes, D. Mount, S. Nadeau, M. Palermo, C. Patmont, and P. Schroeder. 2008. *The 4Rs of Environmental Dredging: Resuspension, Release, Residual, and Risk*. United States Army Corps of Engineers, Engineer Research and Development Center. ERDC/EL TR-08-4.

⁵ United States Environmental Protection Agency. 1999. *A Guide to Preparing Proposed Plans, Records of Decision, and Other Remedy Selection Documents*. OSWER 9200.1-23P. EPA 540-R-98-031.

⁶ United States Environmental Protection Agency. 55 Federal Register 8728. March 8, 1990.

cleanup level shall be established at a concentration equal to the practical quantitation limit or natural background concentration, whichever is higher.” WAC 173-340-700(6)(d). In the Feasibility Study it is demonstrated that the sediment will equilibrate to concentrations above natural background due to the Site’s location in an urban/industrial waterway. For example, natural background of PCBs in Washington State sediment has been defined as 2 µg/kg. In contrast, sediment entering the Lower Duwamish Waterway from upstream is likely to result in a surficial concentration of PCBs in the Lower Duwamish Waterway of 39 – 43 µg/kg, which is above natural background – the concentration at which the remediation goal has been set.

Moreover, it is disingenuous for the Proposed Plan to imply that the ARAR will be attained at some point in the future, and therefore, should not be waived at this time: “It is the intent of the Preferred Alternative to ... attain ARARs, although some ARARs may not be achieved for many years” (Proposed Plan, p. 95). With the upstream load of PCBs in addition to loads of PCBs from lateral inputs and atmospheric deposition, it is not realistic to imply that the natural background ARAR for PCBs in sediment will be achieved either now or in the future. The Proposed Plan appears to rely on some future technology that has yet to be developed in stating that ARARs may be achieved in the future: “Model results are based on current Site conditions, and do not take into account potential future advances in technologies for addressing contamination in urban waterways” (Proposed Plan, p. 95). This reliance on possible future technological developments is inappropriate. **Technical impracticability waiver determinations are to be based on current technology**, not potential future developments (Preamble to NCP, 53 Federal Register 51439, December 21, 1988).

Moreover, there is recent Region 10 precedent for proposing a technical impracticability ARAR waiver due to the on-going urban/industrial influences in Elliott Bay. With respect to the Ambient Water Quality Criteria (“AWQC”) ARAR for the Lockheed Martin West Seattle Superfund Site, U.S. EPA proposed a technical impracticability waiver because the site’s surface water “will continue to be impacted by the flow of surface water in Elliott Bay and the Lower Duwamish Waterway,” which are urban/industrial waterways (Region 10’s Response to NRRB Recommendations for Lockheed West Seattle Superfund Site). At this Site, due to the continued urban/industrial influence, including upstream and lateral loads of COCs, the Proposed Plan will not result in meeting the natural background ARAR for sediment. Thus, the limitations of what can be achieved at the Site due to its location should be recognized and, appropriately, **a technical impracticability waiver should be proposed and approved for the natural background ARAR for sediment**. This ARAR waiver would be consistent with U.S. EPA’s 2002 policy, *Role of Background in the CERCLA Cleanup Program*,⁷ which notes that “the CERCLA program normally does not set cleanup levels below anthropogenic background concentrations” for reasons that include “cost-effectiveness, technical practicability, and the potential for recontamination of remediated areas.”

⁷ United States Environmental Protection Agency. 2002. Role of Background in the CERCLA Cleanup Program. OSWER 9285.6-07P.

III. Ambient Water Quality Criteria Should Not Be Used As PRGs For Surface Water.

At sediment sites, AWQC may be identified as ARARs (Guidance, p. 3-8). The context in which AWQC are typically used as ARARs at sediment sites, however, differs significantly from the context in which they are proposed as PRGs in the Proposed Plan. Typically, **AWQC “may be potential ARARs for surface water when water is discharged** from dewatering or treatment areas or as effluent from confined disposal facilities (CDFs)” (Guidance, p. 3-8). Applying AWQC as ARARs for the discharge of water to surface water is very different than applying AWQC as PRGs. It is **wholly inappropriate to apply AWQC as PRGs** for the sediment remediation because surface water is not a medium that is being directly addressed by the Proposed Plan. Rather, it is hoped that by remediating sediment, the surface water quality will improve.

Sediment remediation alone will not achieve AWQC because concentrations of **COCs in surface water at the Site are influenced by more than just sediment**, such as on-going releases, inflowing water from the Green/Duwamish river system, direct discharges to the Lower Duwamish Waterway, and aerial deposition. For example, PCB concentrations in surface water from the Green River (originating in a mostly forested portion of the watershed) upstream of the Lower Duwamish Waterway are higher than the surface water ARAR used to establish the PRG. Cleaning up the sediment, therefore, will not result in the achievement of the inappropriately derived surface water PRG. Thus, **to the extent AWQC are identified as ARARs, they should be waived as technically impracticable**. Other programs, such as the Clean Water Act, may be used to directly address desired improvements in surface water quality.

IV. U.S. EPA Should Not Request That Responsible Parties Sign A Legally Enforceable Agreement To Perform A Technically Impossible Remedy.

The potentially responsible parties (“PRPs”) **should not be requested to sign a legally enforceable agreement to perform a technically impossible remedy**. The Proposed Plan puts forth just such a remedy. It is impossible to achieve the PRGs set forth in the Proposed Plan because they are inappropriately based on natural background, which cannot be achieved in an urban industrial waterway (e.g., the PRG for PCBs in sediment is 2 µg/kg, which is at least 20 times lower than anticipated final surficial concentrations taking into account upstream, lateral, and aerial inputs of PCBs), and it uses AWQC as a surface water PRG (e.g., the upstream concentrations of PCBs are higher than the AWQC for PCBs). Sediment remediation cannot achieve either natural background concentrations in sediment or AWQC in surface water given the Site’s location in an urban industrial waterway with numerous inputs of COCs. It is **wholly unreasonable to request that the PRPs consent to a legally enforceable obligation that is impossible to meet**.

V. Conclusion.

The Guidance and the NCP provide a scientifically sound, risk-based approach to addressing contaminated sediment sites. Sediment sites present challenging problems, but following the policy and procedures in the Guidance is necessary to assure that the selected remedy will reduce risk and be cost-effective. The Proposed Plan for the Lower Duwamish Waterway Superfund Site deviates from the NCP and the Guidance in several critical ways,

including not following the Guidance's risk management framework for selecting a risk-reduction focused remedy and failing to comply with the NCP's requirement that remedies be cost-effective. As a consequence, the **Proposed Plan selects an alternative that is not focused on risk reduction, is not cost-effective, and costs 50% more than an alternative that would provide similar long-term protection and effectiveness as the selected alternative.**

Moreover, the surface sediment is virtually certain to equilibrate to concentrations of COCs greater than the proposed PRGs, as they are being set at natural background within an urban waterway with upstream and lateral inputs exceeding natural background. The **natural background ARARs should be waived as technically impracticable.** Additionally, it is **wholly inappropriate to apply AWQC as a PRG.** Surface water is influenced by more than just sediment, and upstream inputs to the Site exceed AWQC. Sediment remediation, therefore, will not achieve the surface water PRG. Thus, to the extent **AWQC are identified as ARARs, they should be waived as technically impracticable.**

Finally, given the impossibility of achieving the remedial goals set forth in the Proposed Plan, it is wholly unreasonable to request the PRPs to consent to legally enforceable obligations that are impossible to meet.

Due to the four significant issues discussed above, the Proposed Plan should be withdrawn and a new remedy should be selected.

The SMWG would be pleased to answer any questions about its comments on the Proposed Plan for the Lower Duwamish Waterway Superfund Site. For further information, please feel free to contact the SMWG's Coordinating Director, Steven C. Nadeau, c/o Honigman Miller Schwartz and Cohn LLP, 2290 First National Building, 660 Woodward Avenue, Detroit, MI 48226, (313) 465-7492, snadeau@honigman.com.

Respectfully submitted,

By: Steven C. Nadeau

Steven C. Nadeau, Coordinating Director
Sediment Management Work Group

- c. Dennis McLerran, U.S. EPA Region 10 Administrator
Richard Albright, Director, Region 10 Office of Environmental Cleanup
Robert Perciasepe, U.S. EPA Acting Administrator and Deputy Administrator
Mathy Stanislaus, Assistant Administrator, OSWER
Barry Breen, Principal Deputy Assistant Administrator, OSWER
James Woolford, Director, OSRTI

Barnes Johnson, Deputy Director, OSRTI
Rebecca Clark, Director, OSRTI Assessment and Remediation Division
Stephen Ells, OSRTI

2013 GENERAL MEMBERS (29)



Atlantic Richfield
(a BP company)



Beazer East, Inc.



Shell Oil
Company



Glenn Springs
Holdings, Inc.



U.S. Steel Group



we energies.™

