UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
OREGON OPERATIONS OFFICE
805 SW Broadway, Suite 500
Portland, Oregon 97205

February 9, 2010

Mr. Robert Wyatt
Northwest Natural & Chairman, Lower Willamette Group
220 Northwest Second Avenue
Portland, Oregon 97209

Re: Portland Harbor Superfund Site; Administrative Order on Consent for Remedial Investigation and Feasibility Study; Docket No. CERCLA-10-2001-0240 – LWG Response to EPA Preliminary Comments on Baseline Human Health and Ecological Risk Assessments

Dear Mr. Wyatt:

This letter is in response to the Lower Willamette Group's (LWG) February 5, 2010 letter regarding EPA's preliminary comments on the Baseline Human Health and Ecological Risk Assessments. EPA provided these 10 directed comments on December 23, 2009 to be incorporated into the draft risk assessments for the purpose of preparing a draft Feasibility Study (FS) for the Portland Harbor Superfund site. On January 6, 2010 and again on January 20, 2010, EPA granted extensions to the original 14 day deadline for initiating dispute resolution under the terms of the Administrative Order on Consent between EPA and the LWG for performing a remedial investigation and feasibility study (RI/FS) at the Portland Harbor Site.

In the LWG's January 20, 2010 letter, the LWG objected to 8 of EPA's 10 directed comments. EPA agreed to an extension of the dispute deadline to allow time for further discussion of our differences. On February 2, 2010 and again on February 4, 2010, EPA and the LWG engaged in further discussion of the EPA directed comments. The attached table summarizes EPA's response to the LWG's understanding of the resolution of the directed comments as described in your February 5, 2010 letter.

In general, EPA agrees with the LWG's understanding of how the directed comments have been resolved with the following clarifications:

1) All chemicals with a hazard quotient greater than or equal to 1.0 based on the lines of evidence presented in the problem formulation must be identified as COCs on a site-wide and AOPC basis and carried into the FS.

2) The AOPCs as depicted in EPA's June 23, 2009 letter are approximate and may be refined based on the draft FS.

3) The draft FS must include the chemicals present in near bottom surface water samples above Region 6 tap water PRGs and/or SDWA MCLs when assessing contaminant mobility during the evaluation of remedial action alternatives in the draft FS for the Portland Harbor site, and must demonstrate that depth integrated samples in areas where near bottom samples exceed Region 6 tap water PRGs and/or SDWA MCLs will meet the threshold criteria of protectiveness and compliance with ARARs.

Please acknowledge your acceptance of the comment clarifications presented in the attached Table 1 within 10 days following receipt of this letter. If you have any questions regarding this matter, please contact Chip Humphrey at (503) 326-2678 or Eric Blischke (503) 326-4006. All legal inquiries should be directed to Lori Cora at (206) 553-1115.

Sincerely,

Chip Humphrey
Eric Blischke
Remedial Project Managers

cc: Greg Ulirsch, ATSDR
Rob Neely, NOAA
Ted Buerger, US Fish and Wildlife Service
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Michael Karnosh, Confederated Tribes of Grand Ronde
Tom Downey, Confederated Tribes of Siletz
Audie Huber, Confederated Tribes of Umatilla
Brian Cunninghame, Confederated Tribes of Warm Springs
Erin Madden, Nez Perce Tribe
Rose Longoria, Confederated Tribes of Yakama Nation.

TABLE 1
Comment and Resolution Summary
EPA Preliminary Comments on the Baseline Human Health and Ecological Risk Assessments

December 23, 2009 EPA Comment	February 5, 2010 LWG Response	EPA Resolution
1. Use the Logistic Regression Model for the development of site specific SQGs. These SQGs should be used in conjunction with generic SQGs and SQGs generated based on the logistic regression model to identify areas of sediment contamination for evaluation in the draft FS.	We understand that EPA is withdrawing the comment. The LWG understands that NOAA may continue work on development of the LRM model. The scope of NOAA work currently funded by the LWG will not be modified because of this continuing work.	EPA agrees to withdraw this comment. EPA, in conjunction with NOAA, will continue to work on development of the logistic regression model (LRM) under the current funding arrangement.
2. Retain the Transition Zone Water LOE as a measure of benthic risk. This information may be used in the assessment of groundwater upwelling and the evaluation of CDFs, CADs and sediment caps in the draft FS.	We understand that Comment #2 will result only in the modification of the area designated "AOPC 8" for evaluation in the feasibility study as generally depicted on the attached Figure 1. On this basis, the LWG will not dispute the comment.	Based on information reviewed to date, only the spatial depiction of AOPC 8 will require adjustment based on this comment for evaluation in the draft FS based on the TZW LOE. However, all TZW COPCs with a hazard quotient greater than or equal to 1.0 as identified in Table 6-28 of the draft ecological risk assessment must be identified as COCs on a site-wide and AOPC basis and carried into the FS. As further analysis of the data and other information is incorporated into the FS, the AOPCs as depicted in EPA's June 23, 2009 letter may be refined based on the draft FS.

December 23, 2009 EPA Comment	February 5, 2010 LWG Response	EPA Resolution
3. Benthic risks should be determined based on both level 2 and level 3 effects identified from the sediment toxicity tests performed at the site. This information should be used to identify areas of sediment contamination for evaluation in the draft FS.	We understand that Comment #3 will result only in the modification of the area designated "AOPC 19" for evaluation in the feasibility study as generally depicted on Figure 1. On this basis, the LWG will not dispute the comment.	Based on information reviewed to date, only the spatial depiction of AOPC 19 will require adjustment based on this comment for evaluation in the draft FS based on the evaluation of empirical toxicity results. Specifically in this instance, the Hyalella biomass endpoint based on the EPA 2009 reference envelope. EPA notes that the AOPCs as depicted in EPA's June 23, 2009 letter are approximate and may be refined based on the draft FS.
4. All COCs with hazard quotients greater than or equal to 1 must be identified as potentially posing unacceptable risk. This information will be used to identify areas of sediment contamination for evaluation in the draft FS.	We understand that Comment #4 will result only in the modification of the area designated "AOPC 4" for evaluation in the feasibility study as generally depicted on Figure 1. On this basis, the LWG will not dispute the comment.	Based on information reviewed to date, only the spatial depiction of AOPCs 4 will require adjustment based on this comment for evaluation in the draft FS based on the results of the baseline ecological risk assessment. However, chemicals with a hazard quotient greater than or equal to 1.0 based on the lines of evidence presented in the problem formulation must be identified as COCs on a site-wide and AOPC basis and carried into the FS. EPA notes that the AOPCs as depicted in EPA's June 23, 2009 letter are approximate and may be refined based on the draft FS.

December 23, 2009 EPA Comment	February 5, 2010 LWG Response	EPA Resolution
5. Generic SQGs that meet the reliability analysis requirements must be included in the assessment of benthic risk. This information will be used to identify areas of sediment contamination for evaluation in the draft FS.	We understand that Comment #5 will result in no changes to the designated AOPCs for evaluation in the Feasibility Study.	Based on information reviewed to date, only the spatial depiction of AOPCs 4, 8 and 19 will require adjustment for evaluation in the draft FS based on the results of the baseline ecological risk assessment. However, chemicals with a hazard quotient greater than or equal to 1.0 based on the lines of evidence presented in the problem formulation must be identified as COCs on a site-wide and AOPC basis and carried into the FS. EPA notes that the AOPCs as depicted in EPA's June 23, 2009 letter are approximate and may be refined based on the draft FS.
6. All chemicals presented in Table 11-2 should be included as COCs. PRGs should be developed for these chemicals unless it is not possible to relate the measurement endpoint to a sediment concentration.	The LWG did not object to this comment is its January 20, 2010 letter.	No EPA response required.

December 23, 2009 EPA Comment	February 5, 2010 LWG Response	EPA Resolution
7. All chemicals identified as posing unacceptable risks from lines of evidence EPA directed LWG to use, but which were eliminated by inappropriate LWG risk management decisions prior to the completion of risk characterization, must also be incorporated in Table 11-2 of the BERA	Given that the comment addresses the contents of BERA Table 11-2, the LWG understands that EPA agrees that Comment #7 does not pertain to the FS. The LWG understands that if an HQ>1 is identified, then that chemical will be evaluated in the FS.	EPA agrees revision of Table 11-2 only pertains to revision of the draft baseline ecological risk assessment as long as all chemicals with a hazard quotient greater than or equal to 1.0 based on the lines of evidence presented in the problem formulation are identified as COCs on a site-wide and AOPC basis and carried into the FS. EPA notes that the AOPCs as depicted in EPA's June 23, 2009 letter are approximate and may be refined based on the draft FS.
8. Table 11-2 must either amended, or split into multiple tables, so that it provides information on both which lines of evidence any given chemical poses unacceptable risks, and the magnitude of the identified risks. As currently structured, Table 11-2 provides little more than an incomplete list of chemicals identified as posing unacceptable risks to one or more receptors, and provides no information on the magnitude of risks.	Given that the comment addresses the contents of BERA Table 11-2, the LWG understands that EPA agrees that Comment #8 does not pertain to the FS. The LWG understands that if an HQ>1 is identified, then that chemical will be evaluated in the FS.	EPA agrees revision of Table 11-2 only pertains to revision of the draft baseline ecological risk assessment as long as all chemicals with a hazard quotient greater than or equal to 1.0 based on the lines of evidence presented in the problem formulation are identified as COCs on a site-wide and AOPC basis and carried into the FS. EPA notes that the AOPCs as depicted in EPA's June 23, 2009 letter are approximate and may be refined based on the draft FS.
9. The dietary risk evaluation must be recalculated and the COCs and PRGs adjusted accordingly for use in the draft FS.	The LWG did not object to this comment is its January 20, 2010 letter.	No EPA response required.
10. Chemicals present in surface water and transition zone water evaluated above the relevant a human health water quality criteria (i.e., SDWA MCLs and CWA	The LWG understands that EPA will allow using these criteria in the FS in other evaluations in addition to those specifically mentioned in EPA's December 18, 2009	EPA acknowledges EPA Comments 251 and 253 on the Comprehensive Round 2 Site Characterization and Data Gaps Report.[i]

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AWQCs) should be carried forward into the Portland Harbor FS and used for the development of PRGs.	comments on the FS process. On this basis, the LWG will carry these criteria forward into the FS. The comment, which is presented as a comment on the BHHRA, directs the LWG to perform the evaluation for chemicals "evaluated above the relevant human health water quality criteria." Neither the comment nor any of the detailed text supporting the comment requires the comparison of data to ARARs on a point-by-point basis as proposed by some participants in the February 2 meeting. In fact, the comment is consistent with the LWG's understanding that ARARs are to be evaluated in the FS consistent with their evaluation in the BHRRA, as stated in our October 7, 2009 letter to EPA accepting EPA's August 7, 2009 RAO directive. For example, our letter notes that "in our recent discussions, EPA affirmed that the evaluation in the FS should use the methodologies in the risk assessment (again assuming no treatment, but where vertically integrated samples were evaluated against MCLs) as a guide to the evaluation against MCLs in the FS. Other comparative methodologies could be discussed in the evaluation of uncertainty." EPA has not responded to our October 7, 2009 letter, and, prior to the comments made at the February 2 meeting, the LWG	As a result, EPA agrees that the ARARs evaluation of surface water and the drinking water pathway should be performed consistent with EPA comments 251 and 253. However, EPA notes that near bottom surface water samples collected at the Portland Harbor site contain chemicals exceeding Region 6 tap water PRGs and/or SDWA MCLs but are not present above these thresholds in depth integrated samples. These chemicals include dioxin, certain carcinogenic PAHs, certain volatile organic compounds and perchlorate. Because depth integrated samples were not collected at these locations, the risk assessment must discuss the uncertainty associated with the exclusion of this data in the baseline human health risk assessment. In addition, the draft FS must include an assessment of the chemicals present in near bottom surface water samples above Region 6 tap water PRGs and/or SDWA MCLs when assessing contaminant mobility during the evaluation of remedial action alternatives in the draft FS for the Portland Harbor site. The FS must demonstrate that depth integrated samples in areas where near bottom samples exceed Region 6 tap water PRGs and/or SDWA MCLs will

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	had no reason to believe that EPA had a different view.	meet the threshold criteria of protectiveness and compliance with ARARs consistent with the risk assessment exposure assumptions. Near bottom surface water samples should be screened against SDWA MCLs and Region 6 tap water PRGs in the risk assessment to support these evaluations. For the evaluation of groundwater at the site, EPA requires the evaluation of groundwater data (including the transition zone) against fish consumption AWQCs (17.5 g/day) and SDWA MCLs.

[i] EPA Comments 251 and 253 state in part:

Comment 251: Willamette River surface water should be considered a potential future drinking water source. For assessing surface water (SW) as a drinking water source, surface water should be screened against MCLs and EPA Region 6 tapwater PRGs using max values from each sampling site using only integrated water data. The COPCs selected should be evaluated for a drinking water scenario for trespassers, workers, and residents, and for inadvertent ingestion from swimming for recreational users. Vertically integrated and transect surface water data should be used; near bottom samples should not be included. A site-wide average concentration should be generated.

Comment 253: SW as a Drinking Water Source – Scenarios that evaluate the risk from drinking surface water for workers and residents should be added to the CSM and to the RI baseline HHRA. These evaluations can be done using integrated SW samples to identify COPCs. Region 6 screening levels should be used in place of the tap water PRGs from Region 9 (for non-cancer screening levels assume an HI= 0.1).