Maul Foster Alongi

Thank you for putting together this clear and concise report. It is recognized significant effort has gone into this work which will ultimately support more cost-effective and faster site cleanup. A couple comments are provided for consideration:

- Section 4.8. Step 3. Assign "0" and "1" codes for non-detect, detect values. The text discusses the data preparation steps for the ProUCL calculations. The text states when doing point averaging for a well, where all results are non-detect, that "If the result was all non-detect, then half the detection limit was used." The text also states that where the point-averaged data was comprised of all non-detect values, then it was then assigned a "0" code in ProUCL. Please clarify if the point averaged non-detect data were calculated using one-half the detection limit, or if the average was based on the full results. ProUCL guidance states that for a variable with non-detect observations, the (full) numerical values of the associated detection limits (for less than values) should be entered in the appropriate column associated with that variable. Therefore, calculating the average at one-half the detection limit and entering a "0" code would bias results low.
- Table 2. Based on review of the summary statistics for the seven regions, it appears the data for the SW Washington region are much more variable (high standard deviation/variance) and much more non-detect (71 percent), when compared to other regions. This is also the only region where the mean result (9.3 ppb) was higher than the calculated natural background value (4.9 ppb), and where the difference between the calculated parametric (7.5 ppb) and non-parametric (4.9 ppb) UTLs was greater than 2 ppb. Did Ecology conduct sensitivity analysis on a subset of these data (e.g., evaluate more recent data only, if these show fewer non-detects due to improved detection limits) or other evaluations to determine what factors influence the difference between the parametric and non-parametric results? The fact that the lowest natural background concentration state-wide was determined for this region is surprising, since Figure 1 shows there are large areas of high arsenic background concentrations in this region when compared to other parts of the state. Additional discussion for the SW Washington dataset would be helpful to support 4.9 ppb as representative of natural background for the region.
- Section 8. The text states "Ecology should develop an implementation memo to provide guidance on how to use data from this study to make site-specific decisions and demonstrate the appropriate use of background levels as targets for cleanup." Has Ecology determined if and when an implementation memo will be issued? Such a memo could help clarify 1) do regional natural background values (where higher) supersede the MTCA A criterion, 2) can site-specific natural background determinations supersede regional background values, and 3) include a simple state-wide map that shows which regional values apply where (including at sites not within a region evaluated [e.g., in Chelan County], and sites located in areas where two regions appear to overlap [e.g., in Snohomish County, see Figure 3]).

Thanks again for putting this important document out for comment and use.