

Memo

To: Jeff Schatz, Project Manager

From: Madi Novak, Project Peer

Date: January 31, 2019

Subject: PCBs in Upstream Sediment, Boise St Helens/White Paper (ECSI No. 14)



This memorandum documents the evaluation I conducted to interpret PCB data collected upstream of the Boise St Helens/White Paper (Boise) Site for potential use as a background-based cleanup level (CL).

Data

I used the PCB data assembled by AECOM on behalf of OfficeMax and presented in *Table 4 - Sediment Natural Background and Regional Ambient Levels* in the *Feasibility Study Approach Technical Memorandum*.

The assemblage of data available to develop a background-based cleanup level are suboptimal for the following reasons.

- The results represent a mix of incremental sampling methodology (ISM) and discrete sampling methods,
- Total PCB concentrations are calculated from a mix of Aroclor and congener analysis,
- Some of the PCB Aroclor concentrations have the potential to be inflated due to analytical interference with pesticides known to be in the area, and
- The samples were collected from areas with a wide range of organic carbon concentrations, none of which are similar to site conditions.

Nevertheless, I evaluated the data to determine whether a sufficiently robust background level could be generated for purposes of establishing remedial action objectives.

Analysis and Result

I calculated the mean upriver PCB concentration for all data, and adjusted the dry-weight background values to reflect the differences between the mean organic carbon content of surface sediments upstream and Mill Areas 1, 2, and 3, where the CL will be applied. The OC-equivalent dry-weight background value based on the mean of all available data is 11 µg/kg. When an outlier test is performed, and the outlier concentration of 32 µg/kg is removed from the data set, the resulting OC-equivalent dry-weight background value is 7 µg/kg.

Conclusion

Background conditions in the range of 7 to 11 µg/kg are generally in the range of background conditions at other sites in the Northwest, and therefore appear to be reasonable values for use as CLs.