Table 1. Use of Whole Body versus Fillet for the Redband Trout PCB Trend Study

Whole	Fillet
More reproducible over time	More comparable to our Human Health Criteria which is based on "edible (fillet) tissue"
Most commonly used for trend studies*	Comparable to more of the historical fish tissue data which is based on fillets.
Can be used for future food web studies	Harder to reproduce over time as there are differences in filleting techniques
Higher concentrations in whole body compared to fillet is better for trend analysis when concentrations decrease over time	
Disconnected from our Human Health Criteria which is based on "edible (fillet) tissue"	

*See quote below from Exponent Study

Other pertinent information:

- Based on the size and weight of the targeted Redband Trout, there should be enough tissue for PCB congener analysis with fillets and certainly whole body.
- For trend detection it is probably best to stick with 5 fish in a composite (Ecology has occasionally used 3, 4, or 5 fish in a composite if not enough fish could be collected)
- Shifts in a specific species population (more or less fish) can affect contaminant concentrations, which is good to keep in mind for trend analysis.

Because bioaccumulation potential and PTS concentrations vary across tissue types, FCMPs whose primary concern is detection of chemical trends generally sample whole fish. For example, EPA and DFO monitoring programs sample whole lake trout, and Indiana samples whole creek chubs (Stahl 1997). Although the rationale for this is unstated, analyzing concentrations in whole fish may avoid losses of precision associated with variability in filleting. On the other hand, many FCMPs try to gather information on trends and potential exposure to human consumers, for which fillets and skinless fillets are more appropriate. Those that do sample fillets have tried to standardize preparation of their fillets and skinless fillets. For

example, Ontario Ministry of the Environment (MOE) samples skinless fillets, Michigan samples un-trimmed fillets with and without skins, and New York State samples an untrimmed "standard fillet." As the filleting/trimming methods may change over time, data from different tissue types should not be combined unless some method is used to translate concentrations in one tissue type to another. For example, some analysts combine whole and fillet data by lipid normalizing, others have applied average conversion factors (e.g., Stow and Carpenter 1994a; Jackson and Schindler 1996). Amrhein et al. (1999) produced species-specific predictive equations for converting fillet and whole fish concentrations for Lake Michigan salmonids because the ratio of hydrophobic PTS differed across species.