

PMF Work Group call summary
Zoom Meeting – 11/03/2020

Attendees:

Mike Hermanson – Spokane County
Dave Dilks – LimnoTech
Brandee Era-Miller – Ecology
Joel Breems – Avista
Lisa Rodenburg – Rutgers University/consultant
Mike Anderson – City of Coeur d’Alene
Lisa Dally Wilson – SRSP
Jeff Donovan – City of Spokane
Amy Sumner – Spokane County

Call purpose:

Discuss the scope of work for additional PMF analysis and conducting a holistic analysis of PMF and MLR results to further understanding of PCB sources and pathways within the Spokane River Watershed.

Call summary:

The group first discussed Task 1 (Additional PMF Analysis) of the draft scope of work. The scope includes a PMF analysis of biofilm data. Brandee Era-Miller indicated that there are 52 biofilm samples. Dr. Rodenburg inquired whether samples from the SPMDs or CLAMs could be included with the biofilm samples since biofilm appears to work as a passive sampler in much the same way as SPMDs or CLAMs. The group discussed issues with using data from the CLAM, such as the location the samples were collected from (at the tribal boundary) and sample contamination in some samples. It was determined that the CLAM samples should be left out of the PMF project altogether. When the SPMD samples results are available Dr. Rodenburg will evaluate the results and determine if it is appropriate to include them with the biofilm samples.

The group then discussed the potential to include groundwater data from the GE site with groundwater data from the Kaiser site to conduct a PMF. The intent would be to allow PMF analysis of the GE site groundwater data, which to date has only been done with MLR. PMF analysis of the GE site data could be used to determine the % composition of the samples by factor. Dr. Rodenburg said she recalled that the MLR data indicated that the samples from the GE Site were predominately from one Aroclor, and that MLR analysis can provide a quantitative estimate of the % of the sample that the particular Aroclor represents. She will look at the MLR analysis for the GE site data and determine if the MLR analysis provides a quantitative estimate or if a PMF analysis of the combined groundwater data sets (GE and Kaiser) would provide additional quantitative data regarding the composition of the groundwater at the GE site.

The group then discussed Task 2 (Holistic Analysis of PMF and MLR Data). The group supported the analyses proposed in the scope and added conducting a mass balance of factors with the surface water data. Different approaches to evaluating the impact of varying river flows on PCB concentrations and

what that indicates about sources was also discussed. There may not be enough data from high river flows to assess this.

There was a discussion of the inclusion of fish tissue data. It was noted that at the previous Tech Track Work Group meeting, Ecology and EPA requested additional discussion of the inclusion of PMF analysis of fish tissue data. Mike Hermanson noted that it may not have been understood that the PMF analysis of existing fish tissue had already been completed and the inclusion in the scope of work just referred to evaluating the already complete PMF of fish tissue in conjunction with the PMF results from other environmental compartments. The group agreed to leave the fish tissue component of the scope and it can be discussed at the full SRRTTF meeting. It was noted that PMF assessment of fish tissue along with other compartments can help in geographically identifying sources.

The group also discussed conducting a PMF analysis of the 1-year old rainbow trout currently being collected. There will be 30 samples, which is not enough to conduct a PMF analysis. The group discussed combining the samples with some existing fish tissue data to allow for a full PMF analysis. There was discussion about whether the data from carp collected in Long Lake should be included, and it was agreed that those samples could be removed from the analysis. The group agreed to include a PMF analysis of a subset of existing fish tissue data along with the data from the 1-year old rainbow trout in the scope of work.

Results from the influent and effluent samples from NPDES permittees will also be integrated into holistic analysis

At the conclusion of the call Dr. Rodenburg suggested that a monthly meeting of the PMF workgroup while she works on the project would allow her to share preliminary results of her analysis and receive input and direction based on the groups knowledge of the data and Spokane River system. The group agreed with that approach.

Next Steps:

Mike Hermanson will incorporate the changes to the scope of work discussed and agreed to at the meeting and will provide it for distribution to the SRRTTF for consideration at the next meeting.