

Technical Work Group Update (March 25, 2015)

LimnoTech Scope of Work

Current contract being amended to cover the following:

Completion of the Synoptic Survey Report

- Document impacts of wet weather loading that occurred during sampling event
- Finalize mass balance analysis using estimated Green Street Gaging Station flows
- Update mass balance analysis relative to additional Nine Mile Dam flow data
- Conduct sensitivity analysis of groundwater flow assumptions concerning the impact of losing reaches on downstream gaining reaches
- Provide data summary sheets for each sampling location

Phase 3 Preliminary High Level Scoping Assessment

- Approaches for identification of the unknown groundwater loading in the Barker Road Gage to Trent Avenue Bridge Gage segment identified during the synoptic survey sampling
- Approaches for locating and quantify wet weather impacts on PCB loadings to the river
- An assessment of the potential of gaining/losing reaches between Trent Avenue Bridge Gage and the Spokane Gage based on updated mass balance information from Green Street Gage flow assumptions

Current estimated schedule is an April timeframe for the synoptic survey report work and May for the high level scoping document. Estimated additional cost is ~\$40,000 to \$45,000.

Wet Weather Sampling

On the basis that some form of high volume sampling will be required for sampling wet weather efforts, some additional investigations/inquiries were made with respect to the Gravity PUF sampler and the CLAM.

The first follow-up, which was related to the Gravity PUF sampler, was with Richard Grace of AXYS in response to an e-mail from him about PCB contamination from the use of silicon tubing in sampling devices. (see attached notes).

The second follow-up was related to the CLAM based on information shared by Eco9logy related to a finding from an outside laboratory of potential PCB contamination coming from the media housing of the CLAM. (see attached notes).

Based upon these follow-ups, it would appear that once LimnoTech provides some direction on wet weather sampling system needs for quantifying impacts, a rigorous effort to sort out potential sampler contamination issues will be needed before proceeding.

High Volume Sampling Follow-up Notes

Gravity High Volume Sampler

In following up on an e-mail from Richard Grace at AXYS, he pointed out that in going through the PUF portion of the Gravity samples from the Spokane River work last summer he noticed what appears to be contamination that has a silicon tubing signature. He pointed out that the co-elutions, PCB 44/47/65 and PCB 45/51, are associated with contamination from standard grade and to a lesser extent medical grade silicon tubing. He also mentioned that Greg Cavallo had run into this issue for compositing samplers that use silicon tubing in the peristaltic pumps. (See attached information from Cavallo).

Richard referred me to the five PUF fraction samples (not both fractions) and the lab blank that they ran on the Spokane River samples (one at the outlet of Lake Coeur d'Alene and the other below Nine Mile Dam) last August.

pg/sample	PCB 44/47/65 + PCB 45/51	Total PCB	Percentage
Sample #1	18,529	23,574	78.6%
Sample #2	15,282	43,465	35.2%
Sample #3	3,017	4,100	73.6%
Sample #4	13,322	18,215	73.1%
Sample #5	8,153	32,296	25.2%
Lab Blank	2.3	85	2.7%

I also followed up with Greg Cavallo and he provided some information related to a study on equipment rinsates blanks that shows the differences between standard silicon tubing and medical grade silicon tubing when used in a composite sampler.

pg/L	Total PCB	PCB 44	PCB 45
Standard	203	96	57
Medical Grade	69	7	2

Grace and Cavallo both recommended that whatever system that we plan to use for high volume sampling that we put the sampler components through laboratory "proofing" so we know if we will see equipment contamination.

Ecology EAP CLAM Work

In order to better understand what work Ecology's EAP was planning relative to sampling with the CLAM, I spoke with Dale Norton and Brandee Era-Miller. I asked about what investigation work they might be contemplating based on what had been described as PCB contamination coming from the CLAM housing based on some data from Pacific Rim Laboratory work. It appears that no rigorous "proofing" of the CLAM components along the lines of those detailed by AXYS for the CLAM is planned. The current approach appears to be to field test the CLAM at a permanent monitoring location on the Spokane River as well as testing on the Yakama River.