

FINAL DRAFT Notes

Portland Conference Call Friday – September 26, 2008 (9:30am to 10:30am)

Attendees:

Ann Richter, Portland Water Bureau – Environmental/ Technical

Yone Akagi, Manager, Regulatory Compliance Section

Edward Campbell, Resource Protection and Planning Director

Carrie Miller -Manager, Cryptosporidium Laboratory Approval Program for LT2
(Cincinnati, OH)

Michael Finn – EPA Headquarters,

Stephanie Harris - EPA R10, works with crypto and giardia, lab audits

Marie Jennings, R10, Drinking Water Unit Manager

Background: EPA received a letter from the Portland Water Bureau towards the end of July seeking a variance from LT2 treatment requirements and expressed interest in filtering higher volumes of water (50-500 liters) to reach the goal of a minimum of 13,500 liters filtered over the course of one year. Since there is flexibility in the monitoring and detection methods available; the City would be willing to work with EPA to determine which high volume filters and detection methods are appropriate for this type of high volume sampling.

Additionally, the Bureau submitted data from December 2002 through November 2004 which was grandfathered. Portland has continued to collect and analyze 50 liters of water monthly for crypto. Can these samples count towards meeting the volume requirement for the variance?

Action Items

Who	What	Timeframe	
Portland Bureau	<ul style="list-style-type: none">• Chose a lab to work with on study design, after researching the issue• Choose a filter• Submit Design to EPA for review		
EPA –R10 – EPA-HQ’s	<ul style="list-style-type: none">• Marie Jennings will provide details of variance process• Mike Finn will check on ability/timeframe of grandfathered data to be used• Stephanie Harris will serve as Regional contact for lab/method questions		

Evaluation of High Volume Samples:

Method 1623 is a performance based method. There are provisions in the method for performing variation with in the sample volumes. So high volume sampling can be done but certain criteria has to be met.

Tier 1 validation is only intended for use by a single lab. Although, Portland has not chosen a lab yet; the city intends to use only one lab that has been approved for LT2.

EPA pointed out that the lab has to do extra work to validate a high volume. The City has been using the Clancy lab in Vermont for the last 8 years. This lab did the grandfathered data. EPA noted that this lab is very familiar with the validation and the process that needs to be done.

Currently, Portland is looking at Envirochek HV for high volume filters. The top pressure is 100 psi 2 liters/min – rate of flow. Tested at 60 PSI and had a starting flow rate of 4 liters/min. The conservative way is 2 Liters /min. Portland tested 60 PSI and 4 liters/min with spiked samples just to see how much you could put through before it clogged. Their turbidity is usually less than 1 U (.3 to .5NTU range). It's a surface water reservoir system and the water is collected as it comes out of the dam and flows into the Headworks facility. During the spring the highest turbidity that the City has seen has been between 1 and 2 NTU under normal circumstances. EPA suggested that under these circumstances the City could try the high volume filtering. What you need to do is laid out in the method.

EPA has approved the “Portable Continuous Flow Centrifuge (Haemonetics). It could be a possibility and it could be put in the field and you would have it right there. You don't have clogging because it spins and separates particles based on their specific gravity.

The City needs to select a filter that can be used with method1623. However, none of these filters have been tested at a high volume. We can't get around the testing/validating process. The City asked if one has to spike the entire 300 liters to do the matrix spike. EPA suggested that the City come up with a study design and submit it for EPA to review. (It is allowed with the 50 liter samples and put into LT2 for logistics.) Is this how tier 1 validation is usually done? EPA responded no one has done something this extraordinary. . . . The problem with what you are proposing -- with an Envirochek filter is that you have to run this much water through it; may get collapsing and things will bypass the filter.

EPA Region 10 offered to help with questions. The City needs to : 1) choose lab, 2) choose filter, 3) and work with laboratory and come up with a design --- (Design a study to test the efficacy of a filter to collect a larger volume using Portland's source water.) It's incumbent upon the lab and the utility to prove to EPA that this alternative method works. (For additional details see pages 14-15 of Method 1623.)

High volumes stress the filter. May want to do more samples at less volume; i.e., 100 liters. EPA suggested that the City pick a volume and stick with it; because that's where your QA/QC will be done. Or if you pick 300 liters – need to stick with it. A. What if we could get 300 liters through one week and could only get 200 liters through that next week? EPA noted the City would need to put that in their proposal and need to have the region agree to this. Need a contingency in the plan. Need your lab to work with you on contingencies.

City discussed problem with Clancy laboratory being in Vermont: Logistically, tough to send 300 L samples there. Could start there to get information on research that has been performed. Research has been performed in CA, CO, etc. EPA offered to help. (LabCore is close and in Seattle.) See Lab list on the website. American Water is in Illinois. Scientific Methods have done a lot of publishing and they have this centrifuge that can be used in the field. Can spike it in the field and ship it that way.

How long would validation take once Portland got a design and how long would it take EPA to review it? The better the design, the easier it is to approve. Asking labs for examples of their work could help with timeframe. Ask labs that work with a portable centrifuge; spike in the field; lots of variables to get into study design. Portland has been sending 50L samples to Clancy's in Vermont. Could construct something on site.

....

Use of Grandfathered data and other sampling data to meet volume requirement

Grandfathered data had to be 2 years worth of data that met the criteria. Portland submitted data from December 2002 to November 2004 and it was accepted by EPA. The City also has data that has not been grandfathered (12/04 – present). Can it be used? Mike Finn, EPA HQ's will assist with answering these questions.

Portland can start to move forward with testing doing this process. Portland can move forward with monitoring as we are figuring things out.

The City is proposing to collect 1 year's worth of data in order to receive a variance. Marie Jennings will provide information on next steps for the variance process and will work with Mike Finn.