



Randy Leonard, Commissioner
David G. Shaff, Administrator

1120 SW 5th Avenue, Room 600
Portland, Oregon 97204-1926
Information: 503-823-7404
www.portlandonline.com/water



An Equal Opportunity Employer

January 3, 2012

Gail R. Shibley, JD, Administrator
Oregon Health Authority
Office of Environmental Public Health
Drinking Water Program
800 NE Oregon St, Suite 640
Portland, OR 97232

Subject: Notice of Intent to Grant the Portland Water Bureau a Variance to the Surface Water Treatment Requirements of the Long Term 2 Enhanced Surface Water Treatment Rule

Dear Ms. Shibley:

The Portland Water Bureau (PWB) is pleased with the Oregon Health Authority's (OHA) recent announcement that it intends to grant a variance to the City exempting it from the surface water treatment requirements of the Long Term 2 Enhanced Surface Water Treatment Rule (LT2). As documented in Portland's variance request, PWB believes the nature of the Bull Run raw water source and the ongoing stewardship thereof, when considered in combination with the results of rigorous water quality monitoring, clearly indicate that treatment for *Cryptosporidium* is not necessary to protect public health.

PWB has closely reviewed OHA's proposed conditions to establish monitoring protocols and notification requirements. PWB offers comments in Attachment A for your consideration. These comments are intended to help achieve effective and practical implementation of the variance conditions. PWB has also identified what it believes to be factual errors in the draft variance findings and offers recommended corrections in Attachment B. Finally, since OHA has informed PWB of comments on the Notice of Intent submitted by the Environmental Protection Agency, PWB provides a review and response to these comments in Attachment C.

OHA's decision marks the beginning of an unprecedented regulatory compliance process. Portland recognizes and supports the purpose of OHA's proposed conditions to establish monitoring protocols, notification requirements and ensure ongoing protection of the Bull Run watershed as a drinking water source. As it has for over two decades, the City anticipates working closely with OHA to ensure ongoing public health protection for Portland's drinking water customers as it collects and transmits relevant monitoring data and watershed information.

Thank you for your agency's efforts to date on this matter. Please do not hesitate to contact me with any questions or follow-up.

Sincerely,

David G. Shaff, Administrator
Portland Water Bureau

Enclosure

Attachment A

Portland Water Bureau Comments on Oregon Health Authority Notice of Intent

GENERAL COMMENTS

For reasons discussed below the Portland Water Bureau (PWB) recommends that the draft monitoring conditions be slightly modified to improve their effectiveness.

PWB also believes that PWB, Oregon Health Authority (OHA), and the Multnomah County Health Department (MCHD) must closely coordinate their responses in the event *Cryptosporidium* is detected during regulatory monitoring. Therefore, PWB plans to work directly with OHA and MCHD to develop and refine protocols for incident response and public notification. This effort can build on the work conducted by PWB and MCHD during the yearlong variance sampling effort.

PWB will develop and implement a monitoring plan that conforms to OHA's final variance conditions. Additionally PWB will seek to conduct additional monitoring and research to provide relevant public health information regarding any *Cryptosporidium* that may be detected during the variance monitoring program. PWB strongly believes that the variance should be administered for the purpose of ensuring ongoing public health of Portland's drinking water customers and that several factors should inform any future decision regarding the variance. As described in Portland's Variance Request these include confirmation of positive samples, *Cryptosporidium* genotyping analysis, additional monitoring data from locations upstream of the raw water intake, additional wildlife research and scat monitoring data, and disease surveillance results within the Portland drinking water service area.

SPECIFIC COMMENTS

PWB offers the following specific comments on OHA's Notice of Intent (NOI).

Comment 1

RE: Proposed Order 1.(a)A.

OHA NOI Language

All current protections for the Bull Run Management Unit must remain in place.

PWB Proposed Substitute Language

All current City of Portland legal protections for the Bull Run Watershed Management Unit must remain in place. The City must also work with the State of Oregon, the United States Department of Agriculture Forest Service and the United States Department of Interior Bureau of Land Management to maintain the protections for the unit that fall outside of the City's jurisdiction.

Explanation

PWB proposes the substitute language for two reasons:

1) As described in PWB's September 9, 2011 response to OHA's follow-up questions regarding the variance request document, the Bull Run Watershed Management Unit (BRWMU) is currently protected by layers of overlapping federal, state and local laws, policies, agreements and administrative plans. The City of Portland cannot dictate or guarantee the maintenance of federal or state legal, regulatory or administrative protections. As written, the NOI language could lead to a violation of the variance conditions and a loss of the variance due to actions by state and federal government agencies outside of the City's control.

2) The City may wish to modify its administrative policies to achieve other stewardship objectives that would not diminish overall protections against *Cryptosporidium*. The language proposed by PWB obligates the City to maintain City Code Section 21.36, as is, in order to maintain the variance. City Code Section 21.36 imposes the same tree-cutting restrictions in effect for federal lands within the BRWMU on City-owned land within and adjacent to it. In addition, the code imposes specific land use restrictions and public reporting notifications on the City. These protections are for broader purposes and are not focused on *Cryptosporidium* only. OHA's language could also be interpreted as restricting the City's ability to impose new and more rigorous administrative stewardship controls, in contract specifications or standard operating protocols that are for the purpose of improving protections against *Cryptosporidium*.

Comment 2

RE: Proposed Order 1.(a)C.

OHA NOI Language

Any human sewage (e.g. portable toilets) must be contained and must be kept at least 200 feet from any water body.

PWB Proposed Substitute Language

Any human sewage within the Bull Run water supply drainage must be contained within portable toilets or permanent sanitary facilities. In addition, contained human sewage must be kept at least 200 feet from any water body within the water supply drainage sharing a surface water connection with the Bull Run reservoirs, except when being transported for disposal outside the watershed.

Explanation

PWB supports a restriction on the location of sanitary facilities to keep them safely away from water bodies that could carry microbial contaminants to the water supply intake. As written, the NOI language is overly restrictive in that it could be interpreted to prohibit the necessary transport of portable sanitary facilities through the water supply drainage on the Bull Run road network that comes within 200 feet of the reservoirs and other water bodies. Additionally, the language would prevent the location of portable facilities at the Bull Run Lake parking area.

Proper sanitary facilities are necessary for the safety and hygiene of authorized staff and contractors of the PWB and its federal land management partners as well as for authorized visitors of these agencies on supervised tours. These facilities help protect the Bull Run raw water source from fecal contaminants. As documented in PWB's September 9, 2011 response to OHA-DWP, portable toilets

are located in three areas within the water supply drainage: Bear Creek House, Powerhouse 1, and the Bull Run Lake parking area during summer months. The facilities at Bear Creek House are located more than 200 feet from the nearest water body. The facilities at Powerhouse 1 and the Bull Run Lake parking area are located roughly 70 feet from Reservoir 1 and 100 feet from Bull Run Lake, respectively. PWB plans to relocate the portable toilet located at Powerhouse 1 to comply with the 200-foot buffer from the reservoir. No portion of the Bull Run Lake parking area is at least 200 feet away from the lake; however, as documented in Portland's Sampling Plan and Study (p.57), there is no surface water connection between Bull Run Lake and the Bull Run River. The lack of a surface water connection for transmitting microbial contamination was the reason this location was not selected for upstream water quality monitoring during the yearlong sampling conducted in support of the variance request.

Comment 3

RE: Proposed Order 1.(b)A.

OHA NOI Language

The PWB must conduct routine monitoring for *Cryptosporidium*. The monitoring must consist of at least two 50L samples each week, and analyzing the samples for *Cryptosporidium* using method 1623 from a laboratory approved by the EPA to utilize this method.

PWB Proposed Substitute Language

Whenever the Bull Run source is being used for drinking water, the PWB must conduct routine monitoring for *Cryptosporidium* at its raw water intake. The monitoring each week must consist of at least two 50-L samples, or alternatively five 10-L samples in lieu of any 50-L sample. An EPA-approved laboratory, using EPA Method 1623 or an approved modification, must analyze these samples.

Explanation

With the proposed substitute language PWB seeks to make three recommendations:

1. Monitoring should be required only when the Bull Run source is being used to supply drinking water.

PWB proposes that routine monitoring for *Cryptosporidium* at the raw water intake be required only when the Bull Run system is being used to serve water to the public. This would make *Cryptosporidium* monitoring consistent with fecal coliform and turbidity monitoring under the Surface Water Treatment Rule. See Oregon Administrative Rules 333-061-0036(5)(a)(A) and (B). PWB has a secondary groundwater supply and sometimes shuts down the Bull Run supply (e.g., during turbidity events). There is no reason to monitor the Bull Run supply when its water is not being served to customers.

2. OHA should allow samples to be collected in five 10-L volumes as an alternative to one 50-L volume.

EPA Method 1623 allows for analysis of either 10-L or 50-L sample volumes. Therefore, PWB should be allowed to substitute five 10-L samples for a 50-L sample.

In addition, the use of 10-L samples will allow PWB to use the ASI/PWB Precoat method that was developed to improve matrix spike recoveries during the seasonal period (mid-July to mid-November) when Bull Run raw water has been shown to interfere with oocyst recoveries. This method involves precoating Envirochek HV filters with a milk solution and eluting the filters with a modified elution solution. The ASI/PWB Precoat Method has only been validated for 10-L volumes of raw water. During the seasonal period when *Cryptosporidium* matrix spike recoveries for Bull Run raw water decrease, Portland collects and analyses five 10-L samples and anticipates continuing to use this method to ensure that high quality data supports the variance.

3. OHA, in consultation with EPA, should approve modifications that meet the performance-based criteria of EPA Method 1623.

PWB understands that EPA is in the process of considering revisions to EPA Method 1623 that have been shown to improve *Cryptosporidium* recovery for certain source water matrices, including the addition of sodium hexametaphosphate prior to elution. PWB is prepared to use a revised version of Method 1623 once a rule change has been made, but does not foresee that the addition of sodium hexametaphosphate will resolve the seasonal matrix effect in Bull Run water. PWB anticipates using the ASI/PWB Precoat modification in addition to any new requirements of the next version of EPA Method 1623 since the precoat modification has been demonstrated to improve recoveries during the seasonal matrix effect.

PWB is committed to achieving high data quality and plans to continue to study the seasonal matrix issues in Bull Run source water. In the future, PWB may develop and validate additional method modifications that demonstrate equivalent or superior results compared to EPA Method 1623 as written. PWB plans to submit the results of any future method modification validations to OHA for approval before using a new modification in its ongoing variance monitoring program. We note that Method 1623 is a performance-based method that allows modifications if specified criteria are met and that EPA encouraged the use of improvements to Method 1623 in its comments to OHA.

Comment 4

RE: Proposed Order 1.(b)C.

OHA NOI Language

Increased monitoring must consist of collecting at least four 50 liter samples weekly. Analysis of the samples for *Cryptosporidium* using method 1623 must be done by a laboratory approved by the EPA to utilize this method.

PWB Proposed Substitute Language

Increased monitoring must consist of collecting weekly at least four 50-L samples, or alternatively five 10-L samples in lieu of any 50-L sample. An EPA-approved

laboratory using EPA Method 1623, or an approved modification must analyze these samples.

Explanation

Same Explanation as for Comment 3.

Comment 5

RE: Proposed Order 1.(b)D.

OHA NOI Language

If, while on increased monitoring, another sample detects a presence of *Cryptosporidium*, OHA may revoke the variance. Revocation of the variance will include a schedule for the PWB to install treatment required by LT2.

PWB Proposed Substitute Language

If, during increased monitoring, another sample tests positive for *Cryptosporidium*, OHA may revoke the variance. Prior to revocation, OHA will allow PWB to provide relevant supplemental information to inform OHA's decision. Revocation of the variance will include a schedule for the PWB to install treatment required by LT2.

Explanation

PWB recommends that OHA consider relevant and available information before making a decision to revoke the variance.

OHA proposes a regulatory compliance framework that relies heavily on analytical results from EPA Method 1623. Method 1623, while adequate for monitoring the occurrence of oocysts in raw water, has significant limitations as a tool for characterizing risk to public health. Method 1623 does not identify the species of *Cryptosporidium*, cannot determine the host species of origin, nor can it determine the viability or infectivity of detected oocysts. With Method 1623 there is also a potential for false positives caused by interfering organisms that have no relevance to public health.

PWB believes that relevant supplemental information will provide a more accurate representation of the level of risk if *Cryptosporidium* is detected at the raw water intake, and will improve the ability of PWB and OHA to assess the ongoing basis for a variance. Currently, two types of supplemental analyses—explained in detail below—can produce information relevant to the public health and regulatory assessment of *Cryptosporidium* detected at the Bull Run raw water intake using EPA Method 1623. As described in Section 6 of Portland's Variance Request, PWB believes maintaining and augmenting other monitoring and research programs including upstream monitoring, wildlife research, and disease surveillance within the Portland drinking water service area will provide other information relevant to any future decision regarding Portland's variance.

Visual Confirmation

In the immunofluorescent assay microscopy step of Method 1623, the analyst identifies objects on a microscopic slide that have features such as shape, color, and size that are specific to the genus *Cryptosporidium*. The benefits of immunomagnetic separation and antibodies specific for *Cryptosporidium* oocysts

have greatly enhanced the detection of oocysts against a cluttered background. Nonetheless, there are some organisms that are very close in size and staining characteristics to oocysts that may be incorrectly attributed as *Cryptosporidium*. Confirmation of oocysts by a second EPA-approved laboratory and genotyping analysis would decrease the likelihood of a false positive result.

Genotyping

The vast majority of human *Cryptosporidium* infections are caused by the two species *C. hominis* and *C. parvum*. The primary carriers for these two species are human and domesticated animal sources that are not of major concern in the Bull Run watershed. In a scenario in which *Cryptosporidium* is detected at the Bull Run raw water intake, the likely source would be wildlife that do not typically carry human pathogenic species. Most *Cryptosporidium* species that have been reported from wildlife are host-adapted and are not considered to be a public health risk. The use of a genotyping tool like the one recommended in the Water Research Foundation and EPA sponsored project, *Development and Standardization of a Cryptosporidium Genotyping Tool for Water Samples*, would provide supplementary information to Method 1623 that would greatly improve the quality of the monitoring data gathered for assessing risk and evaluating the nature of the raw Bull Run source water.

Comment 6

RE: Proposed Order 1.(b)E.

OHA NOI Language

The PWB must continue increased monitoring until the running annual average drops below 0.000075 oocysts/L. When this average is below 0.000075 oocysts/L, the PWB may resume routine monitoring.

PWB Proposed Substitute Language

The PWB must continue increased monitoring until the running annual average drops below 0.000075 oocysts/L. When this average is below 0.000075 oocysts/L the PWB may resume routine monitoring. Alternatively, PWB may resume routine monitoring before the running annual average drops below 0.000075 oocysts/L if OHA determines that additional relevant supplemental information demonstrates no public health concern.

Explanation

PWB supports an increase in monitoring if, during routine monitoring, any one sample tests positive for *Cryptosporidium* (as stated in Proposed Order 1.(b)B.). Increased monitoring may help to characterize the extent and nature of an occurrence of *Cryptosporidium*. However, as already discussed in Comment 5, Method 1623 is subject to false positives and cannot by itself adequately characterize the public health significance of any detected oocysts. Therefore, PWB is proposing that OHA: 1) consider additional relevant supplemental information for any positive sample that may trigger increased monitoring; and 2) allow PWB to return to routine monitoring if OHA determines that the weight of evidence suggests that the positive detection by Method 1623 does not represent a public health concern.

If *Cryptosporidium* is detected at the raw water intake, PWB plans to increase its monitoring, and at the same time will send the positive slide to a second independent EPA-approved laboratory for a visual confirmation of the original results. All confirmation results will be shared with OHA as relevant supplemental information. Samples confirmed by an independent laboratory as positive will be sent to a qualified laboratory for genotyping. All genotyping results will also be shared with OHA. This supplemental information is intended to inform OHA's decision about whether or not PWB can return to routine monitoring.

Comment 7

RE: Proposed Order 1.(d)

OHA NOI Language

The PWB must timely notify OHA of any circumstances that may impact any of the above conditions, including but not limited to land management decisions, environmental events or structural changes within or adjacent to the Unit.

PWB Proposed Substitute Language

The PWB must notify OHA in a timely manner of any circumstances the PWB is aware of that may affect any of the above conditions, including but not limited to land management decisions, environmental events or structural changes within or adjacent to the Bull Run Watershed Management Unit.

Explanation

PWB supports timely notification to OHA. The NOI language suggests that Portland would be responsible for reporting to OHA all circumstances described in the section and that the variance could possibly be revoked for a failure to do so even if the City was unaware of a particular circumstance. PWB's proposed substitute language seeks to clarify that PWB can only identify and communicate to OHA information, facts or substantial changes about which it is aware. For example, the City has no direct control over or authority to obtain information about private land holdings adjacent to the unit.

Comment 8

RE: Proposed Order 1.(e)

OHA NOI Language

The PWB must notify OHA within 24 hours of any laboratory results that include any *Cryptosporidium* detections.

PWB Proposed Substitute Language

The PWB must notify OHA within 24 hours of receiving information from the analyzing laboratory of any laboratory results that include any *Cryptosporidium* detections from the raw water intake.

Explanation

PWB's proposed language seeks to clarify that notification within 24 hours apply to results from the raw water intake only. Detections of *Cryptosporidium* from other watershed locations or matrices are not representative of the quality of the water

being served to customers and do not automatically represent a public health concern. PWB proposes that results from locations other than at the raw water intake be shared with OHA pursuant to the direction provided in Proposed Order 1(d).

Comment 9

RE: Proposed Order 2.

OHA NOI Language

This variance is valid for a period of ten (10) years, beginning on the date the Final Order is issued.

PWB Proposed Substitute Language

This variance is valid for a period of ten (10) years, beginning on the date the Final Order is issued. The requirements of the variance conditions begin on April 1, 2012.

Explanation

The NOI language suggests that the monitoring and other required conditions of the variance would become mandatory on the date the Final Order is issued, which OHA has indicated will be January 31, 2012. PWB's proposed substitute language seeks to clarify that the variance conditions would become mandatory regulatory compliance activities as of April 1, 2012 – the deadline established for compliance with the surface water treatment requirements in the Long Term 2 Enhanced Surface Water Treatment Rule.

Attachment B

Portland Water Bureau Requested Corrections to Oregon Health Authority Notice of Intent

Requested Correction 1

RE: OHA Introduction Item #17 and Finding of Facts #35

In both introduction item #17 (p. 4-5) and finding of facts #35 (p. 11), OHA states that in on-going PWB sampling conducted since the variance request was submitted, one *Cryptosporidium* oocyst from fecal material of a bobcat was detected. OHA references page 3 of PWB's September 2011 responses to OHA's questions as the source of this information.

PWB seeks to clarify that the stated concentration for the one bobcat sample that tested positive for *Cryptosporidium* is not correct and that there was no mention of the concentration for this sample in PWB's responses to OHA's questions submitted on September 9, 2011.

At the time that PWB submitted the responses to OHA's questions, PWB had not yet received a final report on the positive bobcat sample from Analytical Services, Inc. (ASI), its contract laboratory. Therefore, PWB did not include a reference to the concentration of oocysts found in the sample in its response to OHA's questions. Since then, PWB has received a final report from ASI on the results from genotyping and other analyses performed on this sample and the salient findings are summarized below.

- Scat sample #390, classified to be from a bobcat, was analyzed by ASI using immunofluorescent antibody testing after immunomagnetic separation.
- The sample contained approximately 6,900 *Cryptosporidium* oocysts per gram of fecal material.
- The sample tested positive for *Cryptosporidium* by polymerase chain reaction (PCR), indicating a wildlife-associated *Cryptosporidium* genotype or species not known to be human pathogenic.
- Based on DNA sequencing of three loci, the oocysts appear to be from a not previously reported wildlife-associated genotype or species.
- Cell culture and immunosuppressed mice infectivity trials resulted in no detectable infections.
- Dr. George Di Giovanni concluded: "Based on our current knowledge of *Cryptosporidium*, this isolate likely poses little to no threat to human health."

Requested Correction 2

RE: Finding of Facts #22

In finding of facts #22 (p. 8), OHA states that a massive outbreak in 1992 affected an estimated 400,000 persons in Milwaukee, Wisconsin. The Milwaukee outbreak referenced by OHA occurred in 1993.

Requested Correction 3
RE: Finding of Facts #28

In finding of facts #28 (p. 10), OHA states that two of 87 samples analyzed by cell culture-PCR method in the study by LeChevalier et al. (2003) were found to have a presence of *Cryptosporidium*. In this study 89 Bull Run water samples were analyzed by cell culture PCR, two of which tested positive for *Cryptosporidium* (Table 3, page 975).

Requested Correction 4
RE: Finding of Facts #30

In finding of facts #30 (p. 10), OHA states that *Cryptosporidium* recovery rates were not reported to OHA for the period of December 2002 and November 2004. PWB seeks to clarify that the recovery rates for the samples collected at the intake between December 2002 and November 2004 were provided to OHA in PWB's responses to OHA's questions submitted on September 9, 2011, page 9. The *Cryptosporidium* recovery for 12/17/2002 was 20%, and the recovery for 6/15/2004 was 57%.

Requested Correction 5
RE: Finding of Facts #34

In finding of facts #34 (p. 10), OHA states that recovery data for wildlife fecal samples collected in support of PWB's variance request were not provided to OHA. PWB seeks to clarify that mean scat recovery data were summarized by species in Portland's Request for a Variance in Appendix E, Item 1, Table 6 and Figure 2, pages E-18 and E-19.

Requested Correction 6
RE: Finding of Facts #39

In finding of facts #39 (p. 10), OHA states that the 1977 federal Bull Run Act (P.L. 95-200) had the effect of prohibiting the cutting of trees on federal land within the Bull Run Watershed Management Unit (BRWMU). PWB seeks to clarify that while this legislation did establish the BRWMU and specify the management objective for the unit as the production of "pure clear raw potable water" for the Portland metropolitan area, it did not have the effect of restricting tree cutting. The section of the legislation that is referenced in footnote 43 on page 11, and which contains language establishing tree-cutting restrictions on federal lands within the unit, was not part of the original 1977 law. This section was added to the law in 1996, and later amended in 2001, with the respective passage of the Oregon Resources Conservation and Little Sandy acts.

Attachment C

**Portland Water Bureau Comments on Environmental Protection Agency
Recommendations Submitted to the Oregon Health Authority on December 22, 2011**

On December 29th, 2011, the Oregon Health Authority (OHA) shared comments it had received to date on the Notice of Intent with the Portland Water Bureau (PWB). Included in the comments was a December 22nd, 2011 letter from Michael Bussell, Director of the Office of Water and Watersheds for the Environmental Protection Agency Region 10 (EPA) that contains four recommendations on the NOI.

The following is PWB's review and response to each of EPA's recommendations. In the case of EPA's first comment, PWB is suggesting new language in OHA's final order to clarify this issue. For EPA's second and fourth comments, PWB believes that modified language it has suggested in Attachment A, Comment 3 for Proposed Order 1.(b)A addresses these issues. For EPA's third comment, PWB believes that no modifications to the variance conditions language are necessary due to existing provisions within the federal Safe Drinking Water Act and Oregon Administrative Rules that adequately address the issue.

**Comment 1
RE: Quality Assurance and Monitoring**

EPA Recommendation

EPA recommends that matrix spike sampling and analysis be conducted at least monthly for the term of the variance.

PWB Comment

PWB supports the use of monthly matrix spike sampling and analysis to ensure the quality of the data generated by the variance monitoring program. PWB agrees that matrix spike analysis is necessary to inform laboratory decisions to improve standard operating procedures and to assure high data quality. Matrix spike analysis at an adequate frequency will also be a very important tool to detect the seasonal change in Bull Run water that interferes with oocyst recovery and to adopt method modifications that overcome this effect within an appropriate timeframe.

PWB Proposed New Language for Final Order

While conducting regulatory monitoring for *Cryptosporidium* per OHA's conditions, PWB shall collect and analyze matrix spike samples at least once per month.

**Comment 2
RE: Sample Volume**

EPA Recommendation

EPA recommends that any variance condition include the flexibility for Portland Water Bureau to collect source water samples in either 10 or 50 liter volumes.

PWB Comment

PWB supports the use of 10-L or 50-L sample volumes to meet the monitoring requirements of the variance. As stated by EPA, Method 1623 specifically allows for analysis of either 10-L or 50-L volumes. Furthermore, as explained in PWB's comments and proposed substitute language in regards to the Proposed Order 1.(b)A. (Attachment A, Comment 3), the ASI/PWB Precoat Method employed by PWB to improve performance during the seasonal period when the Bull Run raw water interferes with Method 1623 oocyst recovery has been validated for use with 10-L samples. PWB anticipates continuing to use the ASI/PWB Precoat Method during the seasonal matrix effect to ensure high quality data.

Comment 3

RE: Public Notification

EPA Recommendation

EPA encourages OHA to consider a public notification requirement for any oocyst detections.

PWB Comment

PWB does not believe a blanket requirement for public notification in the case of any detection of *Cryptosporidium* should be required. A random and minor detection of *Cryptosporidium* would not necessarily constitute a threat to public health and a premature notification could lead to unnecessary public fear and reaction. PWB understands, however, the importance of public notifications in which public health is at risk. As described in PWB's general comments in Attachment A, PWB plans to closely coordinate with OHA and the Multnomah County Health Department to develop and refine protocols for incident response and public notification in the event of a detection.

Additionally, PWB believes that a public notice requirement in the Final Order is unnecessary because the notice provisions of the Safe Drinking Water Act, 42 USC § 300g-3(c)(2)(C), and the existing Oregon Administrative Rules on Public Notice, OAR 333-061-0042, adequately describe OHA's authority to require public notification for a variety of situations, including those which present the potential for serious adverse effects on human health. Alternatively, if OHA concludes that the Order should contain a specified public notice requirement, PWB would suggest language that reaffirms the existing notice provisions, with a condition stated as follows: "Portland's operation under this variance is conditioned upon and subject to its obligation to issue public notices as directed by OHA pursuant to OAR 333-061-0042."

Comment 4

RE: Use of Improved Detection and Monitoring Methods

EPA Recommendation

Any variance granted by OHA should clarify that sampling must use the EPA-Approved Method which applies at the time samples are taken. In addition, any variance by OHA should encourage Portland Water Bureau to make use of improvements to Method 1623 as they become available.

PWB Comment

PWB supports EPA's recommendations, but also believes that any decision regarding the use of existing, modified, or new methods should be evaluated in terms of the benefits to the quality of data and information that will be available for assessing the continuation of a variance. As has been shown by EPA's and PWB's experiences, different surface waters may have characteristics that impact the performance of a specific method. Therefore, PWB has offered proposed substitute language in regards to the Proposed Order 1.(b)A. (Attachment A, Comment 3) that allows PWB the flexibility to adopt approved modifications to Method 1623 that have been shown to produce equivalent or superior results for the Bull Run matrix.

PWB has demonstrated its commitment to generating the highest quality data possible when it developed a modification to Method 1623 (ASI/PWB Precoat Method) to overcome seasonal low oocyst recoveries from the Bull Run matrix. PWB seeks to ensure that the language in the Final Order will not prevent PWB from continuing to use the precoat modification or to incorporate any performance improving modifications that are developed as PWB continues to study the Bull Run matrix effect.

PWB would also like to clarify that the use of an EPA-Approved Method for monitoring the occurrence of oocysts in the Bull Run source water should not prevent OHA from using information derived from other methods (e.g. genotyping analysis) to evaluate the broader question of whether the conditions in the Bull Run watershed continue to support public health.