



DATE: January 16, 2020

WQ 0.10.14.4

TO: Oregon Health Authority, Drinking Water Services

**SUBJECT: Monthly Report for December 2019
Bilateral Compliance Agreement
Intake *Cryptosporidium* Results
PWS # 4100657**

To Whom It May Concern:

Enclosed are results of laboratory analyses for *Cryptosporidium* from the Bull Run raw water intake for December. Monitoring for *Cryptosporidium* at the Bull Run intake is done to comply with the interim measures of the Bilateral Compliance Agreement (Oregon Health Authority, December 18, 2017).

Analyses for *Cryptosporidium* and *Giardia* were performed by the PWB Laboratory (see attached report). Also attached are copies of the monthly turbidity and raw coliform reports previously submitted to OHA in compliance with the SWTR. Results for the reporting month are summarized below:

***Cryptosporidium*, *Giardia*, Turbidity and Fecal Coliforms Data Summary for the Reporting Month**

<i>Cryptosporidium</i> and <i>Giardia</i> Field Samples				<i>Cryptosporidium</i> Recoveries		Fecal Coliforms	Turbidity
No. of Samples	Total Volume (L)	Total No. <i>Cryptosporidium</i> Oocysts	Total No. <i>Giardia</i> Cysts	No. of Matrix Spikes	Average Matrix Spike Recovery (%)	Highest Count (CFU/100 mL)	Highest Reading (NTU)
19	950	5	0	1	69.4	2	0.49

If you have any questions regarding these results, please contact me at 503-823-6135.

Sincerely,



Ann Levy
Senior Environmental Program Manager

Transmitted: Four pages (including this transmittal memo) emailed to dwp.dmce@state.or.us on this date.



Portland Water Bureau Laboratory
2010 N Interstate Ave, Portland, OR 97227

***Cryptosporidium* and *Giardia* Laboratory Analysis Report**

<u>Water System Information</u>				<u>Sample Information</u>			
PWS ID:	OR4100657			Collection Month & Year:	Dec. 2019		
PWS Name:	Portland Water Bureau 1900 N Interstate Avenue Portland, Oregon 97227			Report Date:	January 9, 2020		
County:	Multnomah			Monitoring Regime:	Bilateral Compliance Agreement		
				Source Water:	Bull Run Intake - WTP-A		

PWB Sample ID	Loc ID	Sample Collection Date	Sample Type	Sample Volume Filtered (L)	Analysis Method	<i>Cryptosporidium</i>			<i>Giardia</i>		
						No. of Oocysts Spiked	No. of Oocysts Counted	Oocyst Matrix Spike Recovery (%)	No. of Cysts Spiked	No. of Cysts Counted	Cyst Matrix Spike Recovery (%)
BC31741	Intake 2PIS	12/1/2019	Field	50	1623.1	0	1		0.0	0	
BC31742	Intake 2PIS	12/2/2019	Field	50	1623.1	0	0		0.0	0	
BC31743	Intake 2PIS	12/3/2019	Field	50	1623.1	0	0		0.0	0	
BC31744	Intake 2PIS	12/4/2019	Field	50	1623.1	0	1		0.0	0	
BC31889	Intake 2PIS	12/8/2019	Field	50	1623.1	0	1		0.0	0	
BC31890	Intake 2PIS	12/9/2019	Field	50	1623.1	0	1		0.0	0	
BC31891	Intake 2PIS	12/10/2019	Field	50	1623.1	0	0		0.0	0	
BC31892	Intake 2PIS	12/10/2019	MS	51	1623.1	98	68	69.4	100	81	81.0
BC31893	Intake 2PIS	12/11/2019	Field	50	1623.1	0	0		0.0	0	
BC32236	Intake 2PIS	12/15/2019	Field	50	1623.1	0	0		0.0	0	
BC32237	Intake 2PIS	12/16/2019	Field	50	1623.1	0	1		0.0	0	
BC32238	Intake 2PIS	12/17/2019	Field	50	1623.1	0	0		0.0	0	
BC32239	Intake 2PIS	12/18/2019	Field	50	1623.1	0	0		0.0	0	
BC32492	Intake 2PIS	12/22/2019	Field	50	1623.1	0	0		0.0	0	
BC32493	Intake 2PIS	12/23/2019	Field	50	1623.1	0	0		0.0	0	
BC32494	Intake 2PIS	12/24/2019	Field	50	1623.1	0	0		0.0	0	
BC32495	Intake 2PIS	12/25/2019	Field	50	1623.1	0	0		0.0	0	
BC32584	Intake 2PIS	12/29/2019	Field	50	1623.1	0	0		0.0	0	
BC32585	Intake 2PIS	12/30/2019	Field	50	1623.1	0	0		0.0	0	
BC32586	Intake 2PIS	12/31/2019	Field	50	1623.1	0	0		0.0	0	

Unless otherwise noted, all data were generated in accordance with EPA Method 1623/1623.1 and 100% of the filtered volume was examined for each sample.

Reviewed by: Mark Fong

Date Reviewed: 01/10/2020

OHA - Drinking Water Services - Turbidity Monitoring Report Form

County: **Multnomah**

Slow Sand, Membrane, Diatomaceous Earth Filtration, or Unfiltered Systems

Portland Water Bureau

ID #: OR 4100657

WTP-A

Month/Year: 12/2019

DAY	12 AM (NTU)	4 AM (NTU)	8 AM (NTU)	NOON (NTU)	4 PM (NTU)	8 PM (NTU)	Highest Reading (NTU)
1	0.29	0.30	0.28	0.28	0.30	0.29	0.30
2	0.29	0.29	0.29	0.29	0.28	0.28	0.29
3	0.28	0.28	0.29	0.29	0.29	0.29	0.29
4	0.28	0.28	0.28	0.28	0.28	0.29	0.29
5	0.28	0.28	0.28	0.49	0.35	0.29	0.49
6	0.28	0.27	0.27	0.27	0.27	0.27	0.28
7	0.27	0.27	0.27	0.27	0.27	0.27	0.27
8	0.28	0.28	0.28	0.27	0.28	0.27	0.28
9	0.27	0.27	0.27	0.27	0.26	0.27	0.27
10	0.25	0.25	0.26	0.26	0.25	0.25	0.26
11	0.27	0.26	0.25	0.25	0.27	0.28	0.28
12	0.28	0.25	0.27	0.25	0.27	0.27	0.28
13	0.28	0.28	0.27	0.25	0.25	0.28	0.28
14	0.25	0.27	0.25	0.27	0.27	0.26	0.27
15	0.25	0.26	0.28	0.28	0.28	0.27	0.28
16	0.28	0.27	0.25	0.26	0.26	0.25	0.28
17	0.25	0.25	0.25	0.25	0.26	0.25	0.26
18	0.25	0.25	0.25	0.24	0.25	0.26	0.26
19	0.25	0.26	0.25	0.24	0.26	0.25	0.26
20	0.24	0.24	0.24	0.24	0.24	0.24	0.24
21	0.24	0.25	0.24	0.24	0.24	0.25	0.25
22	0.24	0.25	0.24	0.25	0.25	0.24	0.25
23	0.24	0.23	0.24	0.24	0.24	0.23	0.24
24	0.24	0.23	0.23	0.24	0.25	0.26	0.26
25	0.25	0.25	0.25	0.26	0.24	0.26	0.26
26	0.24	0.24	0.24	0.24	0.24	0.24	0.24
27	0.25	0.24	0.24	0.24	0.24	0.24	0.25
28	0.24	0.25	0.25	0.25	0.24	0.24	0.25
29	0.24	0.23	0.23	0.24	0.24	0.25	0.25
30	0.24	0.25	0.23	0.24	0.23	0.23	0.25
31	0.23	0.23	0.23	0.22	0.23	0.23	0.23

Slow Sand/Membrane/DE Filtration/Unfiltered			Monthly summary	
95% of daily turbidity readings ≤ 1 NTU? ¹	N/A	CT's met everyday?	Chlorine residual at entry point always ≥ 0.2 mg/L?	Chlorine residual measured in 95% of distribution samples?
All daily turbidity readings ≤ 5 NTU?	Yes		Yes	Yes

¹Filtered systems only

Signature: 
 Anna Vosa, P.E.

Date: 1/7/20

OHA Drinking Water Services - Raw Coliform Data (Unfiltered)

Portland Water Bureau

ID#: OR 4100657

Month/Year: 12/2019

Date	Fecal Coliform (CFU/100mL)	Comments
12/1/2019	<1	
12/2/2019	2	
12/3/2019	1	
12/4/2019	1	
12/5/2019	1	
12/6/2019	1	
12/7/2019	<1	
12/8/2019	<1	
12/9/2019	1	
12/10/2019	<1	
12/11/2019	1	
12/12/2019	2	
12/13/2019	<1	
12/14/2019	<1	
12/15/2019	1	
12/16/2019	2	
12/17/2019	2	
12/18/2019	1	
12/19/2019	2	
12/20/2019	1	
12/21/2019	2	
12/22/2019	1	
12/23/2019	<1	
12/24/2019	1	
12/25/2019	<1	
12/26/2019	<1	
12/27/2019	1	
12/28/2019	<1	
12/29/2019	1	
12/30/2019	1	
12/31/2019	<1	

Note: Fecal Coliform sampled at active Headworks Raw Water Intake (either 2P or 2PIS)

Six Month Summary:

# of Samples For Fecal Coliform:	183
# of Samples > 20 CFU/100mL:	0
Percent:	0.0%