



Mingus Mapps, Commissioner
 Gabriel Solmer, Director



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

DATE: October 13, 2021

WQ 0.10.14.4

TO: Oregon Health Authority, Drinking Water Services

**SUBJECT: Monthly Report for September 2021
 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 September. 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 and Analytical Services, Inc. (see attached reports). 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)
16	405.7	0	0	2	68.2	6	0.75

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

Sincerely,

Ann Levy
 Environmental Manager

Transmitted: Six 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

Water System Information				Sample Information			
PWS ID:	OR4100657			Collection Month & Year:	Sep. 2021		
PWS Name:	Portland Water Bureau 1900 N Interstate Avenue Portland, Oregon 97227			Report Date:	October 5, 2021		
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	Cryptosporidium			Giardia		
						No. of Oocysts Spiked	No. of Oocysts Counted	Oocyst Matrix Spike Recovery (%)	No. of Cysts Spiked	No. of Cysts Counted	Cyst Matrix Spike Recovery (%)
BC62083	Intake 2PIS	9/5/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62084	Intake 2PIS	9/5/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62085	Intake 2PIS	9/7/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62086	Intake 2PIS	9/7/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62087	Intake 2PIS	9/7/2021	MS	25	DAMM PWBL-SOP-61 3	99	77	77.8	99	74	74.7
BC62304	Intake 2PIS	9/12/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62305	Intake 2PIS	9/12/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62306	Intake 2PIS	9/14/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62307	Intake 2PIS	9/14/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62889	Intake 2PIS	9/26/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62890	Intake 2PIS	9/26/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62891	Intake 2PIS	9/28/2021	Field	25	DAMM PWBL-SOP-61 3	0	0		0	0	
BC62892	Intake 2PIS	9/28/2021	Field	25	DAMM PWBL-SOP-61 3	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 Marsha Farooqui

Date Reviewed: 10/06/2021



Microbiological Testing, Research & Consulting
 130 Allen Brook Ln., Williston VT 05495

Cryptosporidium and Giardia Laboratory Analysis Report

<u>Water System Information</u>				<u>Sample Information</u>			
PWS ID:	OR4100657			Collection Month & Year:	September 2021		
PWS Name:	Portland Water Bureau 1900 N Interstate Avenue Portland, Oregon 97227			Report Date:	October 5, 2021		
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	Cryptosporidium			Giardia		
						No. of Oocysts Spiked	No. of Oocysts Counted	Oocyst Matrix Spike Recovery (%)	No. of Cysts Spiked	No. of Cysts Counted	Cyst Matrix Spike Recovery (%)
BC62632	Intake 2PIS	9/19/2021	Field	26.6	1623 DAMM	0	0		0	0	
BC62633	Intake 2PIS	9/19/2021	Field	26.3	1623 DAMM	0	0		0	0	
BC62634	Intake 2PIS	9/20/2021	Field	26.3	1623 DAMM	0	0		0	0	
BC62635	Intake 2PIS	9/20/2021	Field	26.4	1623 DAMM	0	0		0	0	
BC62636	Intake 2PIS	9/20/2021	MS	26.5	1623 DAMM	99	58	58.6	99	60	60.6

Unless otherwise noted, samples were analyzed using Method 1623-DAMM (based on PWBL-SOP-61) . ASI filtered the entire volume for each sample, exceeding the 25L for Method 1623-DAMM by 1.26 - 1.62L. 100% of the filtered sample was examined.

Reviewed by PSuenden

Date Reviewed: October 5, 2021

ANALYTICAL SERVICES, INC. (ASI)

Microbiological Testing, Research and Consulting

130 Allen Brook Lane, Williston, VT 05495-9301 USA
800.723.4432 / 802.878.5138
www.analyticalservices.com

08 OCT 2021

Portland Water Bureau
Ana Child
1900 N. Interstate Ave.
Portland, OR 97227

Subject: LT2BCA Intake Monitoring Compliance/ASI #67799 - Addendum

Dear Ana,

This addendum to Analytical Services, Inc. (ASI) Report #67799 dated on 22 SEP 2021 is issued to document a nonconformance regarding the analytical sample volume.

Nonconformance: ASI filtered the entire volume for each sample submitted, thereby mistakenly exceeding the 25L for Method 1623-DAMM by 1.26 - 1.62 Liters. The matrix spike volume was 26.5L and the results show good recovery of *Cryptosporidium* and *Giardia* at the higher volume.

We apologize for the error and any confusion that may have resulted.

If you have any questions or need additional information, please contact me at any time.

Sincerely,

ANALYTICAL SERVICES, INC.



Paul S. Warden

Vice President and Director of Operations

800.723.4432 x15

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: 09/2021

DAY	12 AM (NTU)	4 AM (NTU)	8 AM (NTU)	NOON (NTU)	4 PM (NTU)	8 PM (NTU)	Highest Reading (NTU)
1	0.52	0.53	0.54	0.48	0.50	0.49	0.54
2	0.53	0.53	0.53	0.50	0.53	0.50	0.53
3	0.54	0.55	0.53	0.50	0.49	0.51	0.55
4	0.54	0.52	0.50	0.51	0.50	0.51	0.54
5	0.54	0.54	0.53	0.50	0.50	0.49	0.54
6	0.50	0.50	0.50	0.48	0.50	0.50	0.50
7	0.53	0.55	0.54	0.53	0.53	0.53	0.55
8	0.55	0.54	0.55	0.53	0.53	0.53	0.55
9	0.54	0.56	0.55	0.50	0.53	0.52	0.56
10	0.54	0.54	0.53	0.50	0.51	0.53	0.54
11	0.55	0.54	0.53	0.50	0.50	0.54	0.55
12	0.55	0.54	0.55	0.53	0.53	0.53	0.55
13	0.55	0.56	0.55	0.54	0.53	0.55	0.56
14	0.57	0.57	0.57	0.53	0.51	0.54	0.57
15	0.56	0.55	0.55	0.53	0.54	0.55	0.56
16	0.56	0.57	0.56	0.51	0.49	0.50	0.57
17	0.55	0.48	0.48	0.45	0.47	0.49	0.55
18	0.52	0.53	0.57	0.53	0.59	0.55	0.59
19	0.58	0.56	0.56	0.51	0.51	0.53	0.58
20	0.57	0.56	0.55	0.52	0.51	0.57	0.57
21	0.57	0.55	0.57	0.53	0.50	0.56	0.57
22	0.61	0.61	0.65	0.67	0.69	0.70	0.70
23	0.72	0.72	0.71	0.67	0.67	0.71	0.72
24	0.70	0.70	0.68	0.62	0.57	0.60	0.70
25	0.62	0.62	0.75	0.65	0.65	0.65	0.75
26	0.69	0.71	0.75	0.67	0.65	0.66	0.75
27	0.67	0.67	0.69	0.66	0.65	0.64	0.69
28	0.66	0.66	0.72	0.65	0.65	0.64	0.72
29	0.65	0.65	0.63	0.61	0.65	0.66	0.66
30	0.65	0.66	0.65	0.65	0.69	0.66	0.69

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	Yes

¹Filtered systems only

Signature: Anna Vosa
Anna Vosa, P.E.

Date: 10/7/21

OHA Drinking Water Services - Raw Coliform Data (Unfiltered)

Portland Water Bureau

ID#: OR 4100657

Month/Year: 09/2021

Date	Fecal Coliform (CFU/100mL)	Comments
9/1/2021	1	
9/2/2021	<1	
9/3/2021	1	
9/4/2021	1	
9/5/2021	<1	
9/6/2021	<1	
9/7/2021	<1	
9/8/2021	1	
9/9/2021	2	
9/10/2021	<1	
9/11/2021	<1	
9/12/2021	<1	
9/13/2021	1	
9/14/2021	1	
9/15/2021	1	
9/16/2021	<1	
9/17/2021	<1	
9/18/2021	3	
9/19/2021	<1	
9/20/2021	<1	
9/21/2021	3	
9/22/2021	6	
9/23/2021	4	
9/24/2021	4	
9/25/2021	2	
9/26/2021	2	
9/27/2021	1	
9/28/2021	1	
9/29/2021	2	
9/30/2021	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%