



January 10, 2023

Kevin Montague  
Tigard-Tualatin School District  
6960 SW Sandburg Street  
Tigard, OR 97233

Via email: shawn@srcandp.com  
Shawn Christensen, SR Consulting + Projects, LLCus

Regarding: Lead in Drinking Water Sampling  
Deer Creek Elementary  
16155 SW 131st Avenue  
Tigard, Oregon 97224  
PBS Project 27482.000 Phase 0005

Dear Mr. Montague:

On December 7, 2022, PBS Engineering and Environmental Inc. (PBS) performed drinking water sampling at Deer Creek Elementary School located at 16155 SW 131st Avenue in Tigard, Oregon. The testing was requested by Tigard-Tualatin School District to meet requirements from the Oregon Department of Education (ODE) and Oregon Health Authority (OHA) to conduct water testing for lead in school drinking water systems.

#### **BACKGROUND AND SAMPLING PROCEDURE**

Oregon Administrative Rule (OAR) 333-061-0400 *Reducing Lead in School Drinking Water* required school districts to conduct initial testing for lead from each qualifying tap prior to June 30, 2020. This deadline was extended due to the COVID-19 pandemic.

The sampling methodology followed the protocol described in Section 4 of the Environmental Protection Agency (EPA) document *3Ts for Reducing Lead in Drinking Water in Schools and Childcare Facilities, October 2018* (3Ts) and guidelines established by OHA and ODE. Following these guidelines, PBS assigned identification numbers and collected first draw samples from each test location. First draw samples consisted of the first 250 milliliters (mL) of water drawn from a fixture after the water has been sitting stagnant for 8 to 18 hours. The 3Ts' sampling protocol is designed to maximize the likelihood that the highest concentrations of lead in water used for consumption are identified. Because 250 mL samples are relatively small and thus undiluted, the action level set by the EPA for lead is 15 parts per billion (ppb).

The water sampling process was supervised by an Oregon Health Authority certified lead risk assessor. The samples were delivered under chain of custody to Apex Laboratories in Tigard, Oregon, for lead analysis.

#### **FINDINGS**

First draw samples were collected from 77 fixtures and delivered under chain of custody to Apex Laboratories in Tigard, Oregon, for lead analysis using EPA Method 200.8 ICPMS. The following table lists the results of the analysis.

**Table 1: Main Building**

Sample ID*	Sample Location	Fixture Type	Sample Type	Sample Results (ppb)*
22422400-001KF22A	Kitchen; South Dishwashing Sink	Kitchen Faucet	First	0.658
22422400-002KF22A	Kitchen; West Dishwashing Sink	Kitchen Faucet	First	0.818
22422400-008DW22A	Lobby; Left Fountain	Drinking Fountain	First	ND
22422400-009DW22A	Lobby; Right Fountain	Drinking Fountain	First	ND
22422400-010WB22A	Lobby	Water Bottle Filler	First	ND
22422400-011CF22A	Music Room	Classroom Faucet	First	13.3
22422400-012DW22A	Classroom 21	Drinking Fountain	First	0.352
22422400-013CF22A	Classroom 21	Classroom Faucet	First	3.92
22422400-014DW22A	Classroom 22	Drinking Fountain	First	0.341
22422400-015CF22A	Classroom 22	Classroom Faucet	First	5.40
22422400-016DW22A	Classroom 23	Drinking Fountain	First	0.645
22422400-017CF22A	Classroom 23	Classroom Faucet	First	8.33
22422400-018CF22A	Classroom 24	Classroom Faucet	First	8.82
22422400-019DW22A	Classroom 24	Drinking Fountain	First	0.633
22422400-020CF22A	Classroom 25	Classroom Faucet	First	5.38
22422400-021DW22A	Classroom 25	Drinking Fountain	First	0.623
22422400-022CF22A	Classroom 26	Classroom Faucet	First	12.7
22422400-023DW22A	Classroom 26	Drinking Fountain	First	ND
22422400-024DW22A	Southwest Classroom Pod	Drinking Fountain	First	0.753
22422400-025CF22A	Southwest Classroom Pod	Classroom Faucet	First	6.55
22422400-028DW22A	West Hallway	Drinking Fountain	First	0.248
22422400-032DW22A	Classroom 15	Drinking Fountain	First	ND
22422400-033CF22A	Classroom 15	Classroom Faucet	First	2.41
22422400-034DW22A	Classroom 16	Drinking Fountain	First	0.493
22422400-035CF22A	Classroom 16	Classroom Faucet	First	6.56
22422400-036DW22A	Classroom 17	Drinking Fountain	First	0.346
22422400-037CF22A	Classroom 17	Classroom Faucet	First	5.74
22422400-038CF22A	Classroom 18	Classroom Faucet	First	6.73
22422400-039DW22A	Classroom 18	Drinking Fountain	First	ND
22422400-040CF22A	Classroom 19	Classroom Faucet	First	11.1
22422400-041DW22A	Classroom 19	Drinking Fountain	First	0.595
22422400-042CF22A	Classroom 20	Classroom Faucet	First	5.65
22422400-043DW22A	Classroom 20	Drinking Fountain	First	ND
22422400-044DW22A	Northwest Classroom Pod	Drinking Fountain	First	1.58
22422400-045CF22A	Northwest Classroom Pod	Classroom Faucet	First	13.5
22422400-046DW22A	Center Hallway; Left Fountain	Drinking Fountain	First	0.259
22422400-047DW22A	Center Hallway; Right Fountain	Drinking Fountain	First	ND
22422400-048WB22A	Center Hallway	Water Bottle Filler	First	ND
22422400-049CF22A	Library	Classroom Faucet	First	10.6

Sample ID*	Sample Location	Fixture Type	Sample Type	Sample Results (ppb)*
22422400-050NS22A	Health Room	Nurse's Sink	First	2.73
22422400-051SF22A	Staff Lounge	Staff Faucet	First	0.305
22422400-052WB22A	Staff Lounge	Drinking Fountain	First	ND
22422400-054CF22A	Staff Work Room	Classroom Faucet	First	9.34
22422400-055DW22A	Staff Work Room	Drinking Fountain	First	ND
22422400-057DW22A	Special Education	Drinking Fountain	First	0.798
22422400-058CF22A	Special Education	Classroom Faucet	First	3.83
22422400-059DW22A	Classroom 12	Drinking Fountain	First	0.321
22422400-060CF22A	Classroom 12	Classroom Faucet	First	2.36
22422400-061DW22A	Classroom 11	Drinking Fountain	First	0.648
22422400-062CF22A	Classroom 11	Classroom Faucet	First	4.54
22422400-063DW22A	Classroom 10	Drinking Fountain	First	0.545
22422400-064CF22A	Classroom 10	Classroom Faucet	First	5.18
22422400-065DW22A	Classroom 9	Drinking Fountain	First	6.07
22422400-066CF22A	Classroom 9	Classroom Faucet	First	ND
22422400-067CF22A	Classroom 8	Classroom Faucet	First	0.805
22422400-068DW22A	Classroom 8	Drinking Fountain	First	0.697
22422400-069CF22A	Classroom 7	Classroom Faucet	First	3.36
22422400-070DW22A	Classroom 7	Drinking Fountain	First	ND
22422400-071CF22A	Southeast Classroom Pod	Classroom Faucet	First	9.15
22422400-072DW22A	Southeast Classroom Pod	Drinking Fountain	First	ND
22422400-073DW22A	East Hallway; Left Fountain	Drinking Fountain	First	ND
22422400-074DW22A	East Hallway; Right Fountain	Drinking Fountain	First	ND
22422400-075WB22A	East Hallway	Water Bottle Filler	First	ND
22422400-081DW22A	Classroom 6	Drinking Fountain	First	0.534
22422400-082CF22A	Classroom 6	Classroom Faucet	First	5.10
22422400-083DW22A	Classroom 5	Drinking Fountain	First	0.546
22422400-084CF22A	Classroom 5	Classroom Faucet	First	7.51
22422400-085DW22A	Classroom 4	Drinking Fountain	First	0.257
22422400-086CF22A	Classroom 4	Classroom Faucet	First	2.46
22422400-087CF22A	Classroom 3	Classroom Faucet	First	5.41
22422400-088DW22A	Classroom 3	Drinking Fountain	First	0.252
22422400-089CF22A	Classroom 2	Classroom Faucet	First	3.70
22422400-090DW22A	Classroom 2	Drinking Fountain	First	ND
22422400-091CF22A	Classroom 1	Classroom Faucet	First	6.07
22422400-092DW22A	Classroom 1	Drinking Fountain	First	0.544
22422400-093DW22A	Northeast Classroom Pod	Drinking Fountain	First	0.896
22422400-094CF22A	Northeast Classroom Pod	Classroom Faucet	First	8.61

ND = no lead detected

ppb = parts per billion

*Samples above the action level of 15 ppb are shown in **bold***

All samples were below the action level of 15 parts per billion (ppb).

Please refer to the attached laboratory analytical report for additional details. The laboratory analytical results are reported in micrograms per liter (µg/L), a unit of measure that is equivalent to ppb.

## **REIMBURSEMENT**

The Tigard-Tualatin School District is eligible for reimbursement from the State of Oregon for the cost of laboratory analytical testing and shipping, but not consultant fees. This is done by completing the ODE's reimbursement template spreadsheet for each facility and submitting the information to ODE. PBS is available to assist with filing for reimbursement upon request.

## **ONGOING TESTING**

According to OAR 333-061-0400, school districts are required to complete ongoing testing at least once every six years, starting from July 1, 2020. Taps are exempt from ongoing testing if the tap was installed after January 4, 2014, and meets the lead-free standard of no more than 0.25% lead by weight and the piping feeding the tap is a material other than copper or was installed after January 4, 2014; the solder and flux meets the leadfree standard of no more than 0.2% lead; and was tested during initial testing and results were less than 1 ppb lead.

Please feel free to contact me at 503.417.7603 or rich@pbsusa.com with any questions or comments.

Sincerely,

Rich Dufresne  
Senior Project Manager  
PBS Engineering and Environmental Inc.

Attachments: Laboratory Results  
Chain-of-Custody Form  
Lead Risk Assessor Certification

The information contained in this document is proprietary and shall not be duplicated, used, or disclosed in whole or in part to other parties without the permission of PBS.



ANALYTICAL REPORT

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

Wednesday, December 21, 2022

Rich Dufresne  
PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239

RE: A2L0323 - Tigard-Tualatin SD - Deer Creek/27482.000

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2L0323, which was received by the laboratory on 12/7/2022 at 1:35:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [jwoodcock@apex-labs.com](mailto:jwoodcock@apex-labs.com), or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

---

**Cooler Receipt Information**

(See Cooler Receipt Form for details)

Cooler #1	16.4 degC
-----------	-----------

---

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

---



---

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Jason Woodcock, Project Manager

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062**PBS Engineering and Environmental**4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**Project Number: **Deer Creek/27482.000**Project Manager: **Rich Dufresne****Report ID:****A2L0323 - 12 21 22 1605****ANALYTICAL REPORT FOR SAMPLES****SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
22422400-001KF22A	A2L0323-01	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-002KF22A	A2L0323-02	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-008DW22A	A2L0323-03	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-009DW22A	A2L0323-04	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-010WB22A	A2L0323-05	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-011CF22A	A2L0323-06	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-012DW22A	A2L0323-07	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-013CF22A	A2L0323-08	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-014DW22A	A2L0323-09	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-015CF22A	A2L0323-10	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-016DW22A	A2L0323-11	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-017CF22A	A2L0323-12	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-018CF22A	A2L0323-13	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-019DW22A	A2L0323-14	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-020CF22A	A2L0323-15	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-021DW22A	A2L0323-16	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-022CF22A	A2L0323-17	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-023DW22A	A2L0323-18	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-024DW22A	A2L0323-19	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-025CF22A	A2L0323-20	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-028DW22A	A2L0323-21	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-032DW22A	A2L0323-22	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-033CF22A	A2L0323-23	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-034DW22A	A2L0323-24	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-035CF22A	A2L0323-25	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-036DW22A	A2L0323-26	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-037CF22A	A2L0323-27	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-038CF22A	A2L0323-28	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-039DW22A	A2L0323-29	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-040CF22A	A2L0323-30	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-041DW22A	A2L0323-31	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-042CF22A	A2L0323-32	Drinking Water	12/07/22 00:00	12/07/22 13:35

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jason Woodcock, Project Manager

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062**PBS Engineering and Environmental**4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**Project Number: **Deer Creek/27482.000**Project Manager: **Rich Dufresne****Report ID:****A2L0323 - 12 21 22 1605****ANALYTICAL REPORT FOR SAMPLES****SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
22422400-043DW22A	A2L0323-33	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-044DW22A	A2L0323-34	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-045CF22A	A2L0323-35	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-046DW22A	A2L0323-36	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-047DW22A	A2L0323-37	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-048WB22A	A2L0323-38	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-049CF22A	A2L0323-39	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-050NS22A	A2L0323-40	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-051SF22A	A2L0323-41	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-052WB22A	A2L0323-42	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-054CF22A	A2L0323-43	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-055DW22A	A2L0323-44	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-057DW22A	A2L0323-45	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-058CF22A	A2L0323-46	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-059DW22A	A2L0323-47	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-060CF22A	A2L0323-48	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-061DW22A	A2L0323-49	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-062CF22A	A2L0323-50	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-063DW22A	A2L0323-51	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-064CF22A	A2L0323-52	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-065DW22A	A2L0323-53	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-066CF22A	A2L0323-54	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-067CF22A	A2L0323-55	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-068DW22A	A2L0323-56	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-069CF22A	A2L0323-57	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-070DW22A	A2L0323-58	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-071CF22A	A2L0323-59	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-072DW22A	A2L0323-60	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-073DW22A	A2L0323-61	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-074DW22A	A2L0323-62	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-075WB22A	A2L0323-63	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-081DW22A	A2L0323-64	Drinking Water	12/07/22 00:00	12/07/22 13:35

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jason Woodcock, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

PBS Engineering and Environmental

4412 S Corbett Ave  
Portland, OR 97239

Project: Tigard-Tualatin SD

Project Number: Deer Creek/27482.000  
Project Manager: Rich Dufresne

Report ID:

A2L0323 - 12 21 22 1605

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
22422400-082CF22A	A2L0323-65	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-083DW22A	A2L0323-66	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-084CF22A	A2L0323-67	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-085DW22A	A2L0323-68	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-086CF22A	A2L0323-69	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-087CF22A	A2L0323-70	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-088DW22A	A2L0323-71	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-089CF22A	A2L0323-72	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-090DW22A	A2L0323-73	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-091CF22A	A2L0323-74	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-092DW22A	A2L0323-75	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-093DW22A	A2L0323-76	Drinking Water	12/07/22 00:00	12/07/22 13:35
22422400-094CF22A	A2L0323-77	Drinking Water	12/07/22 00:00	12/07/22 13:35

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jason Woodcock, Project Manager





## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239Project: Tigard-Tualatin SD  
Project Number: Deer Creek/27482.000  
Project Manager: Rich Dufresne**Report ID:**  
**A2L0323 - 12 21 22 1605**

## ANALYTICAL SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
<b>22422400-001KF22A (A2L0323-01) Matrix: Drinking Water</b>								
Batch: 22L0379								
Lead	0.658	---	0.200	ug/L	1	12/12/22 16:24	EPA 200.8	
<b>22422400-002KF22A (A2L0323-02) Matrix: Drinking Water</b>								
Batch: 22L0397								
Lead	0.818	---	0.200	ug/L	1	12/12/22 16:39	EPA 200.8	
<b>22422400-008DW22A (A2L0323-03) Matrix: Drinking Water</b>								
Batch: 22L0397								
Lead	ND	---	0.200	ug/L	1	12/12/22 16:58	EPA 200.8	
<b>22422400-009DW22A (A2L0323-04) Matrix: Drinking Water</b>								
Batch: 22L0397								
Lead	ND	---	0.200	ug/L	1	12/12/22 17:01	EPA 200.8	
<b>22422400-010WB22A (A2L0323-05) Matrix: Drinking Water</b>								
Batch: 22L0397								
Lead	ND	---	0.200	ug/L	1	12/12/22 17:05	EPA 200.8	
<b>22422400-011CF22A (A2L0323-06) Matrix: Drinking Water</b>								
Batch: 22L0397								
Lead	13.3	---	0.200	ug/L	1	12/12/22 17:08	EPA 200.8	
<b>22422400-012DW22A (A2L0323-07) Matrix: Drinking Water</b>								
Batch: 22L0397								
Lead	0.352	---	0.200	ug/L	1	12/12/22 17:12	EPA 200.8	
<b>22422400-013CF22A (A2L0323-08) Matrix: Drinking Water</b>								
Batch: 22L0397								
Lead	3.95	---	0.200	ug/L	1	12/12/22 17:15	EPA 200.8	
<b>22422400-014DW22A (A2L0323-09) Matrix: Drinking Water</b>								
Batch: 22L0397								
Lead	0.341	---	0.200	ug/L	1	12/12/22 17:19	EPA 200.8	
<b>22422400-015CF22A (A2L0323-10) Matrix: Drinking Water</b>								

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239Project: Tigard-Tualatin SD  
Project Number: Deer Creek/27482.000  
Project Manager: Rich Dufresne**Report ID:**  
**A2L0323 - 12 21 22 1605**

## ANALYTICAL SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
22422400-015CF22A (A2L0323-10)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	5.40	---	0.200	ug/L	1	12/12/22 17:23	EPA 200.8	
22422400-016DW22A (A2L0323-11)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	0.645	---	0.200	ug/L	1	12/12/22 17:27	EPA 200.8	
22422400-017CF22A (A2L0323-12)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	8.33	---	0.200	ug/L	1	12/12/22 17:30	EPA 200.8	
22422400-018CF22A (A2L0323-13)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	8.82	---	0.200	ug/L	1	12/12/22 17:51	EPA 200.8	
22422400-019DW22A (A2L0323-14)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	0.633	---	0.200	ug/L	1	12/12/22 17:55	EPA 200.8	
22422400-020CF22A (A2L0323-15)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	5.38	---	0.200	ug/L	1	12/12/22 17:59	EPA 200.8	
22422400-021DW22A (A2L0323-16)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	0.623	---	0.200	ug/L	1	12/12/22 18:03	EPA 200.8	
22422400-022CF22A (A2L0323-17)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	12.7	---	0.200	ug/L	1	12/12/22 18:06	EPA 200.8	
22422400-023DW22A (A2L0323-18)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	ND	---	0.200	ug/L	1	12/12/22 18:10	EPA 200.8	
22422400-024DW22A (A2L0323-19)				Matrix: Drinking Water				

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239Project: Tigard-Tualatin SD  
Project Number: Deer Creek/27482.000  
Project Manager: Rich Dufresne**Report ID:**  
**A2L0323 - 12 21 22 1605**

## ANALYTICAL SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
22422400-024DW22A (A2L0323-19)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	0.753	---	0.200	ug/L	1	12/12/22 18:14	EPA 200.8	
22422400-025CF22A (A2L0323-20)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	6.55	---	0.200	ug/L	1	12/12/22 18:17	EPA 200.8	
22422400-028DW22A (A2L0323-21)				Matrix: Drinking Water				
Batch: 22L0397								
Lead	0.248	---	0.200	ug/L	1	12/12/22 18:21	EPA 200.8	
22422400-032DW22A (A2L0323-22)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	ND	---	0.200	ug/L	1	12/12/22 18:44	EPA 200.8	
22422400-033CF22A (A2L0323-23)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	2.41	---	0.200	ug/L	1	12/12/22 18:55	EPA 200.8	
22422400-034DW22A (A2L0323-24)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	0.493	---	0.200	ug/L	1	12/12/22 18:59	EPA 200.8	
22422400-035CF22A (A2L0323-25)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	6.56	---	0.200	ug/L	1	12/12/22 19:02	EPA 200.8	
22422400-036DW22A (A2L0323-26)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	0.346	---	0.200	ug/L	1	12/12/22 19:06	EPA 200.8	
22422400-037CF22A (A2L0323-27)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	5.74	---	0.200	ug/L	1	12/12/22 19:10	EPA 200.8	
22422400-038CF22A (A2L0323-28)				Matrix: Drinking Water				

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062**PBS Engineering and Environmental**  
4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**  
Project Number: **Deer Creek/27482.000**  
Project Manager: **Rich Dufresne****Report ID:**  
**A2L0323 - 12 21 22 1605****ANALYTICAL SAMPLE RESULTS****Total Metals in Drinking Water by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
22422400-038CF22A (A2L0323-28)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	6.73	---	0.200	ug/L	1	12/12/22 19:26	EPA 200.8	
22422400-039DW22A (A2L0323-29)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	ND	---	0.200	ug/L	1	12/12/22 19:30	EPA 200.8	
22422400-040CF22A (A2L0323-30)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	11.1	---	0.200	ug/L	1	12/12/22 19:34	EPA 200.8	
22422400-041DW22A (A2L0323-31)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	0.595	---	0.200	ug/L	1	12/12/22 19:38	EPA 200.8	
22422400-042CF22A (A2L0323-32)				Matrix: Drinking Water				
Batch: 22L0470								
Lead	5.65	---	0.222	ug/L	1	12/14/22 16:03	EPA 200.8	DW-D
22422400-043DW22A (A2L0323-33)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	ND	---	0.200	ug/L	1	12/12/22 19:41	EPA 200.8	
22422400-044DW22A (A2L0323-34)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	1.58	---	0.200	ug/L	1	12/12/22 19:44	EPA 200.8	
22422400-045CF22A (A2L0323-35)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	13.5	---	0.200	ug/L	1	12/12/22 19:48	EPA 200.8	
22422400-046DW22A (A2L0323-36)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	0.259	---	0.200	ug/L	1	12/12/22 19:53	EPA 200.8	
22422400-047DW22A (A2L0323-37)				Matrix: Drinking Water				

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239Project: Tigard-Tualatin SD  
Project Number: Deer Creek/27482.000  
Project Manager: Rich Dufresne**Report ID:**  
A2L0323 - 12 21 22 1605

## ANALYTICAL SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
22422400-047DW22A (A2L0323-37)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	ND	---	0.200	ug/L	1	12/12/22 19:56	EPA 200.8	
22422400-048WB22A (A2L0323-38)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	ND	---	0.200	ug/L	1	12/12/22 19:59	EPA 200.8	
22422400-049CF22A (A2L0323-39)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	10.6	---	0.200	ug/L	1	12/12/22 20:11	EPA 200.8	
22422400-050NS22A (A2L0323-40)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	2.73	---	0.200	ug/L	1	12/12/22 20:15	EPA 200.8	
22422400-051SF22A (A2L0323-41)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	0.305	---	0.200	ug/L	1	12/12/22 20:19	EPA 200.8	
22422400-052WB22A (A2L0323-42)				Matrix: Drinking Water				
Batch: 22L0398								
Lead	ND	---	0.200	ug/L	1	12/12/22 20:22	EPA 200.8	
22422400-054CF22A (A2L0323-43)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	9.34	---	0.200	ug/L	1	12/12/22 20:37	EPA 200.8	
22422400-055DW22A (A2L0323-44RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	ND	---	0.200	ug/L	1	12/13/22 14:00	EPA 200.8	
22422400-057DW22A (A2L0323-45RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	0.798	---	0.200	ug/L	1	12/13/22 14:03	EPA 200.8	
22422400-058CF22A (A2L0323-46RE1)				Matrix: Drinking Water				

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062**PBS Engineering and Environmental**  
4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**  
Project Number: **Deer Creek/27482.000**  
Project Manager: **Rich Dufresne****Report ID:**  
**A2L0323 - 12 21 22 1605****ANALYTICAL SAMPLE RESULTS****Total Metals in Drinking Water by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
22422400-058CF22A (A2L0323-46RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	3.83	---	0.200	ug/L	1	12/13/22 14:07	EPA 200.8	
22422400-059DW22A (A2L0323-47RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	0.321	---	0.200	ug/L	1	12/13/22 14:11	EPA 200.8	
22422400-060CF22A (A2L0323-48RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	2.36	---	0.200	ug/L	1	12/13/22 14:14	EPA 200.8	
22422400-061DW22A (A2L0323-49RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	0.648	---	0.200	ug/L	1	12/13/22 14:18	EPA 200.8	
22422400-062CF22A (A2L0323-50RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	4.54	---	0.200	ug/L	1	12/13/22 14:21	EPA 200.8	
22422400-063DW22A (A2L0323-51RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	0.545	---	0.200	ug/L	1	12/13/22 14:25	EPA 200.8	
22422400-064CF22A (A2L0323-52RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	5.18	---	0.200	ug/L	1	12/13/22 14:29	EPA 200.8	
22422400-065DW22A (A2L0323-53RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	6.07	---	0.200	ug/L	1	12/13/22 14:33	EPA 200.8	
22422400-066CF22A (A2L0323-54RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	ND	---	0.200	ug/L	1	12/13/22 14:44	EPA 200.8	
22422400-067CF22A (A2L0323-55)				Matrix: Drinking Water				

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062**PBS Engineering and Environmental**  
4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**  
Project Number: **Deer Creek/27482.000**  
Project Manager: **Rich Dufresne****Report ID:**  
**A2L0323 - 12 21 22 1605****ANALYTICAL SAMPLE RESULTS****Total Metals in Drinking Water by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
22422400-067CF22A (A2L0323-55)				Matrix: Drinking Water				
Batch: 22L0470								
Lead	0.805	---	0.222	ug/L	1	12/14/22 16:19	EPA 200.8	DW-D
22422400-068DW22A (A2L0323-56RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	0.697	---	0.200	ug/L	1	12/13/22 14:48	EPA 200.8	
22422400-069CF22A (A2L0323-57RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	3.36	---	0.200	ug/L	1	12/13/22 14:51	EPA 200.8	
22422400-070DW22A (A2L0323-58RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	ND	---	0.200	ug/L	1	12/13/22 14:55	EPA 200.8	
22422400-071CF22A (A2L0323-59RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	9.15	---	0.200	ug/L	1	12/13/22 14:58	EPA 200.8	
22422400-072DW22A (A2L0323-60RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	ND	---	0.200	ug/L	1	12/13/22 15:03	EPA 200.8	
22422400-073DW22A (A2L0323-61RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	ND	---	0.200	ug/L	1	12/13/22 15:06	EPA 200.8	
22422400-074DW22A (A2L0323-62RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	ND	---	0.200	ug/L	1	12/13/22 15:09	EPA 200.8	
22422400-075WB22A (A2L0323-63RE1)				Matrix: Drinking Water				
Batch: 22L0414								
Lead	ND	---	0.200	ug/L	1	12/13/22 15:12	EPA 200.8	
22422400-081DW22A (A2L0323-64RE1)				Matrix: Drinking Water				

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239Project: Tigard-Tualatin SD  
Project Number: Deer Creek/27482.000  
Project Manager: Rich Dufresne**Report ID:**  
A2L0323 - 12 21 22 1605

## ANALYTICAL SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
22422400-081DW22A (A2L0323-64RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	0.534	---	0.200	ug/L	1	12/13/22 15:35	EPA 200.8	
22422400-082CF22A (A2L0323-65RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	5.10	---	0.200	ug/L	1	12/13/22 15:46	EPA 200.8	
22422400-083DW22A (A2L0323-66RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	0.546	---	0.200	ug/L	1	12/13/22 15:50	EPA 200.8	
22422400-084CF22A (A2L0323-67RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	7.51	---	0.200	ug/L	1	12/13/22 15:53	EPA 200.8	
22422400-085DW22A (A2L0323-68RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	0.257	---	0.200	ug/L	1	12/13/22 15:57	EPA 200.8	
22422400-086CF22A (A2L0323-69RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	2.46	---	0.200	ug/L	1	12/13/22 16:00	EPA 200.8	
22422400-087CF22A (A2L0323-70RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	5.41	---	0.200	ug/L	1	12/13/22 16:12	EPA 200.8	
22422400-088DW22A (A2L0323-71RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	0.252	---	0.200	ug/L	1	12/13/22 16:16	EPA 200.8	
22422400-089CF22A (A2L0323-72RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	3.70	---	0.200	ug/L	1	12/13/22 16:20	EPA 200.8	
22422400-090DW22A (A2L0323-73RE1)				Matrix: Drinking Water				

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*





## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323

ORELAP ID: OR100062

**PBS Engineering and Environmental**4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**Project Number: **Deer Creek/27482.000**Project Manager: **Rich Dufresne****Report ID:****A2L0323 - 12 21 22 1605**

## ANALYTICAL SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
22422400-090DW22A (A2L0323-73RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	ND	---	0.200	ug/L	1	12/13/22 16:24	EPA 200.8	
22422400-091CF22A (A2L0323-74RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	6.07	---	0.200	ug/L	1	12/13/22 16:27	EPA 200.8	
22422400-092DW22A (A2L0323-75RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	0.544	---	0.200	ug/L	1	12/13/22 16:31	EPA 200.8	
22422400-093DW22A (A2L0323-76RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	0.896	---	0.200	ug/L	1	12/13/22 16:34	EPA 200.8	
22422400-094CF22A (A2L0323-77RE1)				Matrix: Drinking Water				
Batch: 22L0416								
Lead	8.61	---	0.200	ug/L	1	12/13/22 16:38	EPA 200.8	

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239Project: Tigard-Tualatin SD  
Project Number: Deer Creek/27482.000  
Project Manager: Rich DufresneReport ID:  
A2L0323 - 12 21 22 1605

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0379 - EPA 200.8 Direct Analysis							Drinking Water					
Blank (22L0379-BLK1)		Prepared: 12/12/22 08:23		Analyzed: 12/12/22 14:39								
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22L0379-BS1)		Prepared: 12/12/22 08:23		Analyzed: 12/12/22 14:42								
<u>EPA 200.8</u>												
Lead	15.5	---	0.201	ug/L	1	15.0	---	103	85 - 115%	---	---	
Matrix Spike (22L0379-MS2)		Prepared: 12/12/22 08:23		Analyzed: 12/12/22 16:28								
<u>QC Source Sample: 22422400-001KF22A (A2L0323-01)</u>												
<u>EPA 200.8</u>												
Lead	16.7	---	0.201	ug/L	1	15.0	0.658	107	70 - 130%	---	---	
Batch 22L0397 - EPA 200.8 Direct Analysis							Drinking Water					
Blank (22L0397-BLK1)		Prepared: 12/12/22 11:26		Analyzed: 12/12/22 16:32								
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22L0397-BS1)		Prepared: 12/12/22 11:26		Analyzed: 12/12/22 16:35								
<u>EPA 200.8</u>												
Lead	16.2	---	0.201	ug/L	1	15.0	---	108	85 - 115%	---	---	
Duplicate (22L0397-DUP1)		Prepared: 12/12/22 11:26		Analyzed: 12/12/22 16:42								
<u>QC Source Sample: 22422400-002KF22A (A2L0323-02)</u>												
<u>EPA 200.8</u>												
Lead	0.806	---	0.200	ug/L	1	---	0.818	---	---	2	20%	
Matrix Spike (22L0397-MS1)		Prepared: 12/12/22 11:26		Analyzed: 12/12/22 16:46								
<u>QC Source Sample: 22422400-002KF22A (A2L0323-02)</u>												
<u>EPA 200.8</u>												
Lead	16.9	---	0.201	ug/L	1	15.0	0.818	107	70 - 130%	---	---	
Matrix Spike (22L0397-MS2)		Prepared: 12/12/22 11:26		Analyzed: 12/12/22 18:24								
<u>QC Source Sample: 22422400-028DW22A (A2L0323-21)</u>												

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jason Woodcock, Project Manager



ANALYTICAL REPORT

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

**PBS Engineering and Environmental**

4412 S Corbett Ave  
Portland, OR 97239

Project: **Tigard-Tualatin SD**

Project Number: **Deer Creek/27482.000**

Project Manager: **Rich Dufresne**

**Report ID:**

**A2L0323 - 12 21 22 1605**

**QUALITY CONTROL (QC) SAMPLE RESULTS**

**Total Metals in Drinking Water by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0397 - EPA 200.8 Direct Analysis							Drinking Water					
Matrix Spike (22L0397-MS2)		Prepared: 12/12/22 11:26   Analyzed: 12/12/22 18:24										
QC Source Sample: 22422400-028DW22A (A2L0323-21)												
EPA 200.8												
Lead	16.6	---	0.201	ug/L	1	15.0	0.248	109	70 - 130%	---	---	

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239Project: Tigard-Tualatin SD  
Project Number: Deer Creek/27482.000  
Project Manager: Rich Dufresne**Report ID:**  
**A2L0323 - 12 21 22 1605**

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0398 - EPA 200.8 Direct Analysis							Drinking Water					
Blank (22L0398-BLK1)		Prepared: 12/12/22 11:28			Analyzed: 12/12/22 18:36							
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22L0398-BS1)		Prepared: 12/12/22 11:28			Analyzed: 12/12/22 18:40							
EPA 200.8												
Lead	16.3	---	0.201	ug/L	1	15.0	---	108	85 - 115%	---	---	
Duplicate (22L0398-DUP1)		Prepared: 12/12/22 11:28			Analyzed: 12/12/22 18:47							
QC Source Sample: 22422400-032DW22A (A2L0323-22)												
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	0.175	---	---	***	20%	
Matrix Spike (22L0398-MS1)		Prepared: 12/12/22 11:28			Analyzed: 12/12/22 18:51							
QC Source Sample: 22422400-032DW22A (A2L0323-22)												
EPA 200.8												
Lead	16.4	---	0.201	ug/L	1	15.0	0.175	108	70 - 130%	---	---	
Matrix Spike (22L0398-MS2)		Prepared: 12/12/22 11:28			Analyzed: 12/12/22 20:26							
QC Source Sample: 22422400-052WB22A (A2L0323-42)												
EPA 200.8												
Lead	16.5	---	0.201	ug/L	1	15.0	0.106	109	70 - 130%	---	---	

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323

ORELAP ID: OR100062

**PBS Engineering and Environmental**4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**Project Number: **Deer Creek/27482.000**Project Manager: **Rich Dufresne****Report ID:****A2L0323 - 12 21 22 1605**

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0414 - EPA 200.8 Direct Analysis							Drinking Water					
Blank (22L0414-BLK1)		Prepared: 12/12/22 14:45		Analyzed: 12/12/22 20:30								
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22L0414-BS1)		Prepared: 12/12/22 14:45		Analyzed: 12/12/22 20:33								
EPA 200.8												
Lead	16.6	---	0.201	ug/L	1	15.0	---	111	85 - 115%	---	---	
Duplicate (22L0414-DUP1)		Prepared: 12/12/22 14:45		Analyzed: 12/12/22 20:41								
QC Source Sample: 22422400-054CF22A (A2L0323-43)												
EPA 200.8												
Lead	9.33	---	0.200	ug/L	1	---	9.34	---	---	0.03	20%	
Matrix Spike (22L0414-MS1)		Prepared: 12/12/22 14:45		Analyzed: 12/12/22 20:45								
QC Source Sample: 22422400-054CF22A (A2L0323-43)												
EPA 200.8												
Lead	25.7	---	0.201	ug/L	1	15.0	9.34	109	70 - 130%	---	---	
Matrix Spike (22L0414-MS3)		Prepared: 12/12/22 14:45		Analyzed: 12/13/22 15:16								
QC Source Sample: 22422400-075WB22A (A2L0323-63RE1)												
EPA 200.8												
Lead	15.9	---	0.201	ug/L	1	15.0	ND	106	70 - 130%	---	---	

Apex Laboratories

Jason Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062PBS Engineering and Environmental  
4412 S Corbett Ave  
Portland, OR 97239Project: Tigard-Tualatin SD  
Project Number: Deer Creek/27482.000  
Project Manager: Rich DufresneReport ID:  
A2L0323 - 12 21 22 1605

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0416 - EPA 200.8 Direct Analysis							Drinking Water					
Blank (22L0416-BLK2)		Prepared: 12/12/22 14:48 Analyzed: 12/13/22 15:28										
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22L0416-BS2)		Prepared: 12/12/22 14:48 Analyzed: 12/13/22 15:31										
<u>EPA 200.8</u>												
Lead	16.3	---	0.201	ug/L	1	15.0	---	109	85 - 115%	---	---	
Duplicate (22L0416-DUP2)		Prepared: 12/12/22 14:48 Analyzed: 12/13/22 15:38										
<u>QC Source Sample: 22422400-081DW22A (A2L0323-64RE1)</u>												
<u>EPA 200.8</u>												
Lead	0.465	---	0.200	ug/L	1	---	0.534	---	---	14	20%	
Matrix Spike (22L0416-MS3)		Prepared: 12/12/22 14:48 Analyzed: 12/13/22 15:42										
<u>QC Source Sample: 22422400-081DW22A (A2L0323-64RE1)</u>												
<u>EPA 200.8</u>												
Lead	16.7	---	0.201	ug/L	1	15.0	0.534	108	70 - 130%	---	---	

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

**PBS Engineering and Environmental**  
4412 S Corbett Ave  
Portland, OR 97239

Project: **Tigard-Tualatin SD**  
Project Number: **Deer Creek/27482.000**  
Project Manager: **Rich Dufresne**

**Report ID:**  
**A2L0323 - 12 21 22 1605**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals in Drinking Water by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22L0470 - EPA 3015A						Drinking Water						
Blank (22L0470-BLK1)		Prepared: 12/13/22 14:32   Analyzed: 12/14/22 14:29										
EPA 200.8												
Lead	ND	---	0.222	ug/L	1	---	---	---	---	---	---	
LCS (22L0470-BS1)		Prepared: 12/13/22 14:32   Analyzed: 12/14/22 14:34										
EPA 200.8												
Lead	16.7	---	0.222	ug/L	1	16.7	---	100	85 - 115%	---	---	

Apex Laboratories

Jason Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323

ORELAP ID: OR100062

**PBS Engineering and Environmental**4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**Project Number: **Deer Creek/27482.000**Project Manager: **Rich Dufresne****Report ID:****A2L0323 - 12 21 22 1605****SAMPLE PREPARATION INFORMATION****Total Metals in Drinking Water by EPA 200.8 (ICPMS)****Prep: EPA 200.8 Direct Analysis**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b><u>Batch: 22L0379</u></b>							
A2L0323-01	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 08:23	10mL/10mL	10mL/10mL	1.00
<b><u>Batch: 22L0397</u></b>							
A2L0323-02	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-03	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-04	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-05	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-06	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-07	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-08	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-09	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-10	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-11	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-12	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-13	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-14	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-15	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-16	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-17	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-18	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-19	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-20	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
A2L0323-21	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:26	10mL/10mL	10mL/10mL	1.00
<b><u>Batch: 22L0398</u></b>							
A2L0323-22	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-23	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-24	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-25	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-26	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-27	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-28	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-29	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-30	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-31	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-33	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-34	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jason Woodcock, Project Manager

Page 20 of 31



**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323

ORELAP ID: OR100062

**PBS Engineering and Environmental**4412 S Corbett Ave  
Portland, OR 97239Project: **Tigard-Tualatin SD**Project Number: **Deer Creek/27482.000**Project Manager: **Rich Dufresne****Report ID:****A2L0323 - 12 21 22 1605****SAMPLE PREPARATION INFORMATION****Total Metals in Drinking Water by EPA 200.8 (ICPMS)****Prep: EPA 200.8 Direct Analysis**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A2L0323-35	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-36	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-37	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-38	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-39	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-40	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-41	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00
A2L0323-42	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 11:28	10mL/10mL	10mL/10mL	1.00

**Batch: 22L0414**

A2L0323-43	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-44RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-45RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-46RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-47RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-48RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-49RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-50RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-51RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-52RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-53RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-54RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-56RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-57RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-58RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-59RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-60RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-61RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-62RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00
A2L0323-63RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:45	10mL/10mL	10mL/10mL	1.00

**Batch: 22L0416**

A2L0323-64RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-65RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-66RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-67RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-68RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-69RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jason Woodcock, Project Manager

**ANALYTICAL REPORT****Apex Laboratories, LLC****6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062****PBS Engineering and Environmental****4412 S Corbett Ave  
Portland, OR 97239**Project: **Tigard-Tualatin SD**Project Number: **Deer Creek/27482.000**Project Manager: **Rich Dufresne****Report ID:****A2L0323 - 12 21 22 1605****SAMPLE PREPARATION INFORMATION****Total Metals in Drinking Water by EPA 200.8 (ICPMS)****Prep: EPA 200.8 Direct Analysis**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A2L0323-70RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-71RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-72RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-73RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-74RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-75RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-76RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00
A2L0323-77RE1	Drinking Water	EPA 200.8	12/07/22 00:00	12/12/22 14:48	10mL/10mL	10mL/10mL	1.00

**Prep: EPA 3015A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b><u>Batch: 22L0470</u></b>							
A2L0323-32	Drinking Water	EPA 200.8	12/07/22 00:00	12/13/22 14:32	45mL/50mL	10mL/10mL	1.11
A2L0323-55	Drinking Water	EPA 200.8	12/07/22 00:00	12/13/22 14:32	45mL/50mL	10mL/10mL	1.11

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jason Woodcock, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

PBS Engineering and Environmental

4412 S Corbett Ave  
Portland, OR 97239

Project: Tigard-Tualatin SD

Project Number: **Deer Creek/27482.000**

Project Manager: **Rich Dufresne**

Report ID:

**A2L0323 - 12 21 22 1605**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

**DW-D** Turbidity greater than 1 NTU. Sample was digested per EPA Method 200.8.

Apex Laboratories

A handwritten signature in black ink, appearing to read "J. Woodcock".

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jason Woodcock, Project Manager



## ANALYTICAL REPORT

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

**PBS Engineering and Environmental**

4412 S Corbett Ave  
Portland, OR 97239

Project: **Tigard-Tualatin SD**

Project Number: **Deer Creek/27482.000**

Project Manager: **Rich Dufresne**

**Report ID:**

**A2L0323 - 12 21 22 1605**

### REPORTING NOTES AND CONVENTIONS:

**Abbreviations:**

DET Analyte DETECTED at or above the detection or reporting limit.  
ND Analyte NOT DETECTED at or above the detection or reporting limit.  
NR Result Not Reported.  
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

**Detection Limits: Limit of Detection (LOD)**

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).  
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

**Reporting Limits: Limit of Quantitation (LOQ)**

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

**Reporting Conventions:**

Basis: Results for soil samples are generally reported on a 100% dry weight basis.  
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.  
  
"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")  
See Percent Solids section for details of dry weight analysis.  
  
"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.  
  
" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

**QC Source:**

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

**Miscellaneous Notes:**

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.  
  
" \*\*\* " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

**Blanks:**

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).  
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.  
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.  
For further details, please request a copy of this document.

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jason Woodcock, Project Manager



## ANALYTICAL REPORT

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

**PBS Engineering and Environmental**

4412 S Corbett Ave  
Portland, OR 97239

Project: **Tigard-Tualatin SD**

Project Number: **Deer Creek/27482.000**

Project Manager: **Rich Dufresne**

**Report ID:**

**A2L0323 - 12 21 22 1605**

### REPORTING NOTES AND CONVENTIONS (Cont.):

**Blanks (Cont.):**

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

**Preparation Notes:**

**Mixed Matrix Samples:**

**Water Samples:**

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

**Soil and Sediment Samples:**

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

**Sampling and Preservation Notes:**

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jason Woodcock, Project Manager



## ANALYTICAL REPORT

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street  
Tigard, OR 97223  
503-718-2323  
ORELAP ID: OR100062

**PBS Engineering and Environmental**  
4412 S Corbett Ave  
Portland, OR 97239

Project: **Tigard-Tualatin SD**  
Project Number: **Deer Creek/27482.000**  
Project Manager: **Rich Dufresne**

**Report ID:**  
**A2L0323 - 12 21 22 1605**

### LABORATORY ACCREDITATION INFORMATION

**ORELAP Certification ID: OR100062 (Primary Accreditation)**

**EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

#### **Apex Laboratories**

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
--------	----------	--------	---------	--------	---------------

All reported analytes are included in Apex Laboratories' current ORELAP scope.

#### **Secondary Accreditations**

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

#### **Subcontract Laboratory Accreditations**

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.  
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

#### **Field Testing Parameters**

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Jason Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

PBS Engineering and Environmental

4412 S Corbett Ave  
Portland, OR 97239

Project: Tigard-Tualatin SD

Project Number: Deer Creek/27482.000

Project Manager: Rich Dufresne

Report ID:

A2L0323 - 12 21 22 1605



A2L0323

## LEAD IN DRINKING WATER CHAIN OF CUSTODY

Project Name: Tualatin SD - Deer Creek Project No: 27482.000 Phase: 0001 Task:

Samples submitted undamaged to lab by: Name/Sign: Ellie D. [Signature] Date: 12-7-22 Time: 10:00  
(Inspector)

Samples received by lab undamaged: Name/Sign: Andy MacP [Signature] Date: 12/27/22 Time: 1335  
(Lab)

Lab: APEX Turnaround time (check one): ☐ 5 days ☒ 10 days  
(specify)

Send Results to: Rich Dufresne, Ellie Dick

SAMPLE #	DATE	BUILDING	ROOM	DESCRIPTION
22422400 - 001KF22A	12-7-22	MAIN	KITCHEN	SOUTH DISH SINK
22422400 - 002KF22A			KITCHEN	WEST DISH SINK
22422400 - 003DW22A			LOBBY	LEFT
22422400 - 009DW22A			" ↓ "	RIGHT
22422400 - 010WB22A			" ↓ "	
22422400 - 011CF22A			MUS	
22422400 - 012DW22A			CR21	
22422400 - 013CF22A			CR21	
22422400 - 014DW22A			CR22	
22422400 - 015CF22A			CR22	
22422400 - 016DW22A			CR23	
22422400 - 017CF22A			CR23	
22422400 - 018CF22A			CR24	
22422400 - 019DW22A			CR24	
22422400 - 020CF22A			CR25	
22422400 - 021DW22A			CR25	
22422400 - 022CF22A			CR26	
22422400 - 023DW22A			CR26	
22422400 - 024DW22A			SW POD	
22422400 - 025CF22A			SW POD	
22422400 - 028DW22A			W. HALL	
22422400 - 032DW22A			CR 15	
22422400 - 033CF22A			CR 15	
22422400 - 034DW22A			CR 16	
22422400 - 035CF22A	↓	↓	CR 16	

Apex Laboratories



Jason Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PBS Engineering and Environmental

4412 S Corbett Ave

Portland, OR 97239

Project: Tigard-Tualatin SD

Project Number: Deer Creek/27482.000

Project Manager: Rich Dufresne

Report ID:

A2L0323 - 12 21 22 1605

A2L0323



### LEAD IN DRINKING WATER CHAIN OF CUSTODY

Project Name: Tualatin SD - Deer Creek Project No: 27482.000 Phase: 0001 Task:

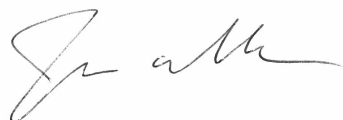
Samples submitted undamaged to lab by: Name/Sign: Ellie D. / [Signature] Date: 12.7.22 Time: 10:00  
(Inspector)

Samples received by lab undamaged: Name/Sign: Andy Mariposa / [Signature] Date: 12/07/22 Time: 13:35  
(Lab)

Lab: APEX (specify) Turnaround time (check one): ☐ 5 days ☒ 10 days

Send Results to: Rich Dufresne, Ellie Dick

SAMPLE #	DATE	BUILDING	ROOM	DESCRIPTION
22422400 - 036DW22A	12.7.22	MAIN	CR 17	
22422400 - 037CF22A			CR 17	
22422400 - 038CF22A			CR 18	
22422400 - 039DW22A			CR 18	
22422400 - 040CF22A			CR 19	
22422400 - 041DW22A			CR 19	
22422400 - 042CF22A			CR 20	
22422400 - 043DW22A			CR 20	
22422400 - 044DW22A			NW POD	
22422400 - 045CF22A			NW POD	
22422400 - 046DW22A			CTR HALL	LEFT
22422400 - 047DW22A			CTR HALL	RIGHT
22422400 - 048WB22A			CTR HALL	FILL
22422400 - 049CF22A			LIB	
22422400 - 050NS22A			HEALTH	
22422400 - 051SF22A			STAFF LOUNGE	
22422400 - 052WB22A			STAFF LOUNGE	
22422400 - 054CF22A			STAFF WRK RM.	
22422400 - 055DW22A			STAFF WRK RM.	
22422400 - 057DW22A			SP. ED.	
22422400 - 058CF22A			SP. ED.	
22422400 - 059DW22A			CR 12	
22422400 - 060CF22A			CR 12	
22422400 - 061DW22A			CR 11	
22422400 - 062CF22A			CR 11	





PBS Engineering and Environmental

4412 S Corbett Ave

Portland, OR 97239

Project: Tigard-Tualatin SD

Project Number: Deer Creek/27482.000

Project Manager: Rich Dufresne

Report ID:

A2L0323 - 12 21 22 1605



## LEAD IN DRINKING WATER CHAIN OF CUSTODY

Project Name Tualatin SD - Deer Creek Project No: 27482.000 Phase:0001 Task:

Samples submitted undamaged to lab by: Name/Sign: Ellie D. / [Signature] Date: 12-7-22 Time: 10:00

Samples received by lab undamaged: Name/Sign: Andy Mariposa / [Signature] Date: 12/6/22 Time: 1335

Lab APEX (specify) Turnaround time (check one): ☐ 5 days ☒ 10 days

Send Results to: Rich Dufresne, Ellie Dick

SAMPLE #	DATE	BUILDING	ROOM	DESCRIPTION
22422400 - 063DW22A	12-7-22	MAIN	CR 10	
22422400 - 064CF22A			CR 10	
22422400 - 065DW22A			CR 9	
22422400 - 066CF22A			CR 9	
22422400 - 067CF22A			CR 8	
22422400 - 068DW22A			CR 8	
22422400 - 069CF22A			CR 7	
22422400 - 070DW22A			CR 7	
22422400 - 071CF22A			SE POD	
22422400 - 072DW22A			SE POD	
22422400 - 073DW22A			E. HALL	LEFT
22422400 - 074DW22A			E. HALL	RIGHT
22422400 - 075WB22A			E. HALL	
22422400 - 081DW22A			CR 6	
22422400 - 082CF22A			CR 6	
22422400 - 083DW22A			CR 5	
22422400 - 084CF22A			CR 5	
22422400 - 085DW22A			CR 4	
22422400 - 086CF22A			CR 4	
22422400 - 087CF22A			CR 3	
22422400 - 088DW22A			CR 3	
22422400 - 089CF22A			CR 2	
22422400 - 090DW22A			CR 2	
22422400 - 091CF22A			CR 1	
22422400 - 092DW22A	✓	✓	CR 1	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jason Woodcock, Project Manager





## ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

PBS Engineering and Environmental

4412 S Corbett Ave

Portland, OR 97239

Project: Tigard-Tualatin SD

Project Number: Deer Creek/27482.000

Project Manager: Rich Dufresne

Report ID:

A2L0323 - 12 21 22 1605

## APEX LABS COOLER RECEIPT FORM

Client: PBS Element WO#: A2 60323

Project/Project #: Tualatin SD - Deer Creek / 27482.000

## Delivery Info:

Date/time received: 12/07/22 @ 1335 By: AJM

Delivered by: Apex ☒ Client ☐ ESS ☐ FedEx ☐ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other

Cooler Inspection Date/time inspected: 12/07/22 @ 1425 By: AJM

Chain of Custody included? Yes ☒ No ☐ Custody seals? Yes ☐ No ☒Signed/dated by client? Yes ☒ No ☐Signed/dated by Apex? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	16.4						
Received on ice? (Y/N)	N						
Temp. blanks? (Y/N)	N						
Ice type: (Gel/Real/Other)	None						
Condition (In/Out)	Out						

Cooler out of temp? (Y/N) Possible reason why: Drinking Water

Green dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐

Sample Inspection: Date/time inspected: 12-8-22 @ 1630 By: DJS

All samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☐ No ☒ Comments: Container IDs missing prefix 22422400

and suffix 22A. No Time or Date on containers

COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments:

Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☒ No ☐ NA ☐

Comments:

## Additional information:

Labeled by:

Witness:

Cooler Inspected by:

Form Y-003 R-00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jason Woodcock, Project Manager

State of Oregon  
Oregon Health Authority

**Richard A. Dufresne**

is certified by the Oregon Health Authority to conduct Lead-Based Paint Activities

**Risk Assessor**

Certification Number:	1268--Indv--R
Issuance Date:	7/30/2020
Expiration Date:	7/30/2023



Oregon  
**Health**  
Authority