

Limited Lead in Drinking Water Assessment

**Longview Public Schools
Longview, Washington
Columbia Heights Elementary School**



Assessment Date(s): February 21, 2022

Report Date: March 17, 2022

Prepared for: Jason Reetz, Facilities Manager
Longview Public Schools

Facility Owner/Operator: Longview Public Schools



Prepared By:
Sterling Technologies, LLC
317 NE 144th Street
Vancouver, WA 98685



Limited Lead in Drinking Water Assessment

Introduction

Sterling Technologies (Sterling) has recently completed a limited lead in drinking water screening of the Columbia Heights Elementary School, Longview School District, located at 2820 Parkview Drive, Longview, Washington. The purpose of the investigation was to identify the levels of lead in the various sources of drinking water throughout the school. Sample locations included drinking water fountains, classroom sink water faucets, restroom sink water faucets, and kitchen sink water faucets.

Background

The school district may be considered a water supply system from a water distribution perspective and may need to comply with the federal guidelines for water monitoring as specified in the Lead & Copper Rule (*Federal Register: June 30, 1994, Part 5. 40 CFR Parts 141 and 142; Drinking Water; Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper*) and be compelled to monitor the drinking water within the district on an ongoing basis after an effective treatment approach is implemented (56FR 26460 – Lead Copper Rule). Within 30 days of learning the lead level results, all water systems (schools in this case) must provide individual lead tap results to the people who receive water from the sites that were sampled, *regardless of whether the results exceed the Lead Action Level*, as required by 40 CFR 141.85(d).

Results Summary

Water samples were collected from 71 drinking water sources at the school.

69 samples were found to NOT contain elevated lead levels (below 15 ppb).

2 samples were found to contain elevated lead levels (above 15 ppb)

Sampling

The samples were collected by EPA accredited inspectors provided by Sterling. Samples included representative amounts of water. The lead in drinking water samples were analyzed by Apex Laboratories by EPA Method 200.8. The sampling guidelines followed were based on the federal school standard with emphasis on the Lead Copper Rule for sampling sites chosen.

Report continued on the next page...



Assessment Results

Analytical Results: Lead in Drinking Water

Item	Sample ID.	Location	Result (µ/L)
1	CH-101-F1	Classroom #101, Sink Faucet #1	0.727
2	CH-101-F2	Classroom #101, Sink Faucet #2	2.31
3	CH-101-WF	Classroom #101, Drinking Fountain	0.320
4	CH-102-F	Classroom #102, Sink Faucet	0.896
5	CH-102-WF	Classroom #102, Drinking Fountain	3.06
6	CH-201-B-F	Classroom #102, Boys Restroom, Sink Faucet	ND
7	CH-102-G-F	Classroom #102, Girls Restroom, Sink Faucet	ND
8	CH-103-F	Classroom #103, Sink Faucet	0.908
9	CH-103-WF	Classroom #102, Drinking Fountain	2.62
10	CH-104-F	Classroom #104, Sink Faucet	0.719
11	CH-104-WF	Classroom #104, Drinking Fountain	1.12
12	CH-104-B-S	Classroom #104, Restroom, South, Sink Faucet	11.1
13	CH-104-B-N	Classroom #104, Restroom, North, Sink Faucet	0.883
14	CH-106-F-1	Classroom #106, Sink Faucet #1	1.00
15	CH-106-F-2	Classroom #106, Sink Faucet #2	0.341
16	CH-106-DW-1	Classroom #106, Drinking Fountain #1	2.41
17	CH-106-DW-2	Classroom #106, Drinking Fountain #2	2.15
18	CH-107-F	Classroom #107, Sink Faucet	5.37
19	CH-107-DW	Classroom #107, Drinking Fountain	7.06
20	CH-107-B-F	Classroom #107, Boys Restroom, Sink Faucet	0.697
21	CH-107-B-F	Classroom #107, Girls Restroom, Sink Faucet	ND
22	CH-108-F	Classroom #108, Sink Faucet	1.37
23	CH-108-DW	Classroom #108, Drinking Fountain	1.92
24	CH-109-F	Classroom #109, Sink Faucet	0.433
25	CH-109-DW	Classroom #109, Drinking Fountain	1.26
26	CH-109-RR-N-F	Classroom #109, Restroom, North, Sink Faucet	1.33
27	CH-109-RR-S-F	Classroom #109, Restroom, South, Sink Faucet	1.61
28	CH-110-F	Classroom #110, Sink Faucet	3.84
29	CH-110-WF	Classroom #110, Drinking Fountain	32.5
30	CH-111-F	Classroom #111, Sink Faucet	0.398
31	CH-111-DW	Classroom #111, Drinking Fountain	6.90
32	CH-111-B-F	Classroom #111, Boys Restroom, Sink Faucet	0.936

ND = Non-Detect

Analytical Results continued on the next page...



Analytical Results: Lead in Drinking Water (continued)

Item	Sample ID.	Location	Result (µ/L)
33	CH-111-G-F	Classroom #111, Girls Restroom, Sink Faucet	1.22
34	CH-112-F	Classroom #112, Sink Faucet	1.14
35	CH-112-DW	Classroom #112, Drinking Fountain	145
36	CH-113-F	Classroom #113, Sink Faucet	0.546
37	CH-113-DW	Classroom #113, Drinking Fountain	5.34
38	CH-113-B-F	Classroom #113, Boys Restroom, Sink Faucet	0.905
39	CH-113-G-F	Classroom #113, Girls Restroom, Sink Faucet	0.794
40	CH-114-F	Classroom #114, Sink Faucet	0.667
41	CH-114-F	Classroom #114, Drinking Fountain	0.703
42	CH-115-F	Classroom #115, Sink Faucet	1.54
43	CH-115-F	Classroom #115, Drinking Fountain	0.279
44	CH-115-B-F	Classroom #115, Boys Restroom, Sink Faucet	0.826
45	CH-115-G-F	Classroom #115, Girls Restroom, Sink Faucet	0.330
46	CH-116-F	Classroom #116, Sink Faucet	0.289
47	CH-116-WF	Classroom #116, Drinking Fountain	0.995
48	CH-116-RR-F1	Classroom #116, Restroom, Sink Faucet #1	0.204
49	CH-116-RR-F2	Classroom #116, Restroom, Sink Faucet #2	0.372
50	CH-117-F	Classroom #117, Sink Faucet	ND
51	CH-117-DW	Classroom #117, Drinking Fountain	1.57
52	CH-118-F	Classroom #118, Sink Faucet	0.512
53	CH-118-WF	Classroom #118, Drinking Fountain	0.576
54	CH-119-F	Classroom #119, Sink Faucet	1.11
55	CH-119-F-B	Classroom #119, Sink Faucet, Back	5.58
56	CH-119-WF	Classroom #119, Drinking Fountain	0.577
57	CH-120-WF	Classroom #120, Sink Faucet	0.442
58	CH-120-WF	Classroom #120, Drinking Fountain	3.19
59	CH-TL-F1	Teacher's Lounge, Sink Faucet	1.25
60	CH-H-F	Health Area, Sink Faucet	0.535
61	CH-118-WF	Health Area, Drinking Fountain	1.89
62	CH-118-WF	Health Area, Restroom, Sink Faucet	0.519
63	CH-SRR-F	Staff Restroom, Sink Faucet	2.30
64	CH-L-RR-F	Library, Restroom, Sink Faucet	0.301
65	CH-K-F1	Kitchen, Sink Faucet #1	1.09

ND = Non-Detect

Analytical Results continued on the next page...



Analytical Results: Lead in Drinking Water (continued)

Item	Sample ID.	Location	Result (µ/L)
66	CH-K-F2	Kitchen, Sink Faucet #2	0.484
67	CH-G-B-F1	Gym, Boys Restroom, Sink Faucet #1	1.02
68	CH-G-B-F2	Gym, Boys Restroom, Sink Faucet #2	0.968
69	CH-G-G-F1	Gym, Girls Restroom, Sink Faucet #1	1.33
70	CH-G-G-F2	Gym, Girls Restroom, Sink Faucet #2	1.50
71	CH-G-DW	Gym, Drinking Fountain	5.48

ND = Non-Detect

As highlighted () in the above table, the lab results for 2 of the 71 drinking water samples collected were found to be at or above the 15 ppb action level for lead in drinking water. The remaining 69 drinking water samples were found to be below the 15 ppb action level.

Note: Drinking water sources with lead levels above an approximate background level of 2.0 ppb have also been highlighted ().

Conclusions and Recommendations

Two locations were noted to have an elevated lead in drinking water, the classroom #110, drinking fountain, and the classroom #112, drinking fountain. No elevated lead in drinking water levels were noted in the other locations sampled, and the results were below the lead in drinking water EPA standard under the Safe Drinking Water Act of 15 parts per billion. Fifteen drinking water locations did have residual lead levels above a background level of 2.0 ppb.

It is our recommendation that the Longview School District consider the installation of a combination drinking fountain and motion sensor water filling system using an ANSI 53 certified filter by the National Science Foundation (NSF). The Elkay EZH20 is a popular fixture and is advertised online for about \$1,500 per unit. Note that fixtures with refrigeration jump in price to around \$4,000. These systems have proven effective for the removal of lead particulates with our other school district clients.

Given the age of the Columbia Heights Elementary School plumbing systems (built in 1959 (Additions: 1967, Modernizations: 1960, 1976), and the residual levels of lead noted in the drinking water sources throughout, Sterling recommends that the district consider replacement of all the water fountains at the property with fixtures that include a suitable lead filtration system. As the existing drinking water fountains do not have an electrical source, a mechanical system would be preferable. With the mechanical fixtures, required filter changes are noted on a counter that is based on the volume of water passed through the filter.

The district might also consider instituting an administrative policy that only those drinking water sources that include a lead filtration system be used for drinking water; discourage use of unfiltered water sources (e.g., classroom sink water faucets).

Report continued on next page...



Limitations

This report is for the exclusive use of the client, applies only to the specific subject property detailed above, and shall not be relied upon by any other party without the prior written consent of the undersigned.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices in this area at the time this report was prepared. No other hazardous materials/wastes were investigated. No other conditions, expressed or implied, should be understood.

Recordkeeping

Additional copies of this report are available from Sterling Technologies upon request. Unless otherwise requested, samples will be retained for a period of 30 days, after which they will be discarded. If you have any questions about these results or would like additional information, please feel free to call our office.

Sterling Technologies thanks you for this opportunity to be of service.

Sincerely,



Thomas Nadermann, M.S., Principal
AHERA Inspector #155212, Lead Risk Assessor #0493



Appendix A

Inspector's Certification

DRAFT



STATE OF WASHINGTON

Department of Commerce
Lead-Based Paint Abatement Program

Thomas Heinrich Nadermann

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Risk Assessor*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
0493	02/08/2021	10/22/2023

STATE OF WASHINGTON

Department of Commerce
Lead-Based Paint Abatement Program

Edwin L Wilson

*Has fulfilled the certification requirements of
WAC 365-230
and has been certified to conduct lead-based
paint activities as a
Risk Assessor*

<u>Certification #</u>	<u>Issuance Date</u>	<u>Expiration Date</u>
8040	08/26/2021	07/22/2024



Appendix B

Field Data

Laboratory Results

DRAFT



A2B0932Apex Labs Cooler Receipt Summary ReportSterling Technologies LLC (Thomas Nadermann)

Project: Drinking Water - 2022

Project #: Columbia Heights Elementary

Received: 02/23/22 11:22

A2B0932

Apex PM: Darrell Auvil (DAuvil@apex-labs.com) (Phone: 503-718-2323)

One Cooler received at 11.4 deg C: (Temperature OK)

Samples:

A2B0932-01	Drinking Water	<u>CH-101-F1</u>	02/21/22 00:00
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Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

A2B0932-02	Drinking Water	<u>CH-101-F2</u>	02/21/22 00:00
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Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

A2B0932-03	Drinking Water	<u>CH-101-WF</u>	02/21/22 00:00
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Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

A2B0932-04	Drinking Water	<u>CH-102-F</u>	02/21/22 00:00
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Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

A2B0932-05	Drinking Water	<u>CH-102-DW</u>	02/21/22 00:00
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Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

A2B0932-06	Drinking Water	<u>CH-102-B-F</u>	02/21/22 00:00
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Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

A2B0932-07	Drinking Water	<u>CH-102-G-F</u>	02/21/22 00:00
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Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

Apex Labs Cooler Receipt Summary Report

Sterling Technologies LLC (Thomas Nadermann)

Project: Drinking Water - 2022

Project #: Columbia Heights Elementary

Received: 02/23/22 11:22

A2B0932

A2B0932-08		Drinking Water	CH-103-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-09		Drinking Water	CH-103-WF		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-10		Drinking Water	CH-104-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-11		Drinking Water	CH-104-DW		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-12		Drinking Water	CH-104-B-S		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-13		Drinking Water	CH-104-B-N		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-14		Drinking Water	CH-106-F-1		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-15		Drinking Water	CH-106-F-2		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-16		Drinking Water	CH-106-DW-1		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-17		Drinking Water	CH-106-DW-2		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

Apex Labs Cooler Receipt Summary Report

Sterling Technologies LLC (Thomas Nadermann)

Project: Drinking Water - 2022

Project #: Columbia Heights Elementary

Received: 02/23/22 11:22

A2B0932

A2B0932-18		Drinking Water	CH-107-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-19		Drinking Water	CH-107-DW		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-20		Drinking Water	CH-107-B-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-21		Drinking Water	CH-107-G-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-22		Drinking Water	CH-108-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-23		Drinking Water	CH-108-DW		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-24		Drinking Water	CH-109-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-25		Drinking Water	CH-109-DW		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-26		Drinking Water	CH-109-RR-N-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-27		Drinking Water	CH-109-RR-S-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

Apex Labs Cooler Receipt Summary Report

Sterling Technologies LLC (Thomas Nadermann)

Project: Drinking Water - 2022

Project #: Columbia Heights Elementary

Received: 02/23/22 11:22

A2B0932

A2B0932-28	Drinking Water	<u>CH-110-F</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-29	Drinking Water	<u>CH-110-WF</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-30	Drinking Water	<u>CH-111-F</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-31	Drinking Water	<u>CH-111-DW</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-32	Drinking Water	<u>CH-111-B-F</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-33	Drinking Water	<u>CH-111-G-F</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-34	Drinking Water	<u>CH-112-F</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-35	Drinking Water	<u>CH-112-DW</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-36	Drinking Water	<u>CH-113-F</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-37	Drinking Water	<u>CH-113-DW</u>	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	

Apex Labs Cooler Receipt Summary Report

Sterling Technologies LLC (Thomas Nadermann)

Project: Drinking Water - 2022

Project #: Columbia Heights Elementary

Received: 02/23/22 11:22

A2B0932

A2B0932-38		Drinking Water	CH-113-BF		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-39		Drinking Water	CH-113-GF		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-40		Drinking Water	CH-114-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-41		Drinking Water	CH-114-WF		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-42		Drinking Water	CH-115-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-43		Drinking Water	CH-115-DW		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-44		Drinking Water	CH-115-B-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-45		Drinking Water	CH-115-G-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-46		Drinking Water	CH-116-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022
A2B0932-47		Drinking Water	CH-116-WF		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

Apex Labs Cooler Receipt Summary Report

Sterling Technologies LLC (Thomas Nadermann)

Project: Drinking Water - 2022

Project #: Columbia Heights Elementary

Received: 02/23/22 11:22

A2B0932

A2B0932-48		Drinking Water		CH-116-RR-F-1		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-49		Drinking Water		CH-116-RR-F-2		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-50		Drinking Water		CH-117-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-51		Drinking Water		CH-117-DW		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-52		Drinking Water		CH-118-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-53		Drinking Water		CH-118-WF		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-54		Drinking Water		CH-119-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-55		Drinking Water		CH-119-F-B		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-56		Drinking Water		CH-119-WF		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-57		Drinking Water		CH-120-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	

Apex Labs Cooler Receipt Summary Report

Sterling Technologies LLC (Thomas Nadermann)

Project: Drinking Water - 2022

Project #: Columbia Heights Elementary

Received: 02/23/22 11:22

A2B0932

A2B0932-58		Drinking Water		CH-120-WF		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-59		Drinking Water		CH-TL-FL		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-60		Drinking Water		CH-H-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-61		Drinking Water		CH-H-DW		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-62		Drinking Water		CH-H-RR-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-63		Drinking Water		CH-SRR-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-64		Drinking Water		CH-L-RR-F		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-65		Drinking Water		CH-K-F1		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-66		Drinking Water		CH-K-F2		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	
A2B0932-67		Drinking Water		CH-G-B-F1		02/21/22 00:00	
Analysis		TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total		10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	

Apex Labs Cooler Receipt Summary Report

Sterling Technologies LLC (Thomas Nadermann)**Project:** Drinking Water - 2022**Project #:** Columbia Heights Elementary**Received:** 02/23/22 11:22

A2B0932

A2B0932-68 **Drinking Water** **CH-G-B-F2** **02/21/22 00:00**

Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

A2B0932-69 **Drinking Water** **CH-G-G-F1** **02/21/22 00:00**

Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

A2B0932-70 **Drinking Water** **CH-G-G-F2** **02/21/22 00:00**

Analysis	TAT	Due	Hold1	Hold1 Type	Expires
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022

Apex Labs Cooler Receipt Summary Report

A2B0932-71	Drinking Water	CH-G-DW	02/21/22 00:00			
Analysis	TAT	Due	Hold1	Hold1 Type	Expires	
Pb (Lead) - 200.8 - Total	10	3/9/2022	180	Sampled to Analyzed (Day)	8/20/2022	

Chain of Custody

Field Sampling Log

A2B0932

Sterling Technologies, LLC
 Providing technical consulting support to the
 environmental and manufacturing industries
 317 NE 144th Street Vancouver, WA 98685
 360.576.6331

Project Name:

Site Location:

Date:

Project Contact:

Test Drinking Water for Lead
 Columbia Heights Elementary
 Feb 21, 2022
 T. Nadermann

Pg 1 of 6

Turnaround Time:

Normal: ☒Other: ☐

Sample ID	Location/Description	Analysis	Comments
CH-101-F1	Glass - 101 - Sink Faucet - #1	Lead	EPA Method 200.8
" - 101-F2	" - " - " - #2		
CH-101-WF	" - " - Water Fountain		
CH-102-F	" - 102 - Sink Faucet		
CH-102-DW	" - " - Water Fountain		
" - " - B-F	" - " - Boys Rest Rm Sink		
" - " - G-F	" - " - Girls Rest Rm - "		
" - 103-F	" - 103 - Sink Faucet		
" - " - WF	" - " - Water Fountain		
" - 104-F	" - 104 - Sink Faucet		
" - 104-DW	" - " - Water Fountain		
" - " - B.S	" - " - Rest Room - South		
" - " - B.N	" - " - " - North		

Sampled by:

T. Nadermann
 E. Wilson

Date:

Feb 23, 2022

M. B. ... K. Smith
 11/22
 2-23-22

Chain of Custody

Field Sampling Log

A260932
Sterling Technologies, LLC
Providing technical consulting support to the
environmental and manufacturing industries
317 NE 144th Street Vancouver, WA 98685
360.576.6331

Test Drinking Water for Lead
Columbia Heights Elementary
Feb 21, 2022
T. Nadlermann

pg 2 of 6

Project Name:
Site Location:
Date:
Project Contact:

Turnaround Time:

Normal: X

Other:

Sample ID	Location/Description	Analysis	Comments
CH-106-F-1	Class - 106 - Sink Faucet - #1	Lead	EPA Method 200.8
" - " - F-2	" - 106 " - #2		
" - " - DW-1	" - " - Water Fountain - #1		
" - " - DW-2	" - " - " - #2		
" - 107-F	" - 107 - Sink Faucet		
" - 107-DW	" - " - Water Fountain		
" - " - B-F	" - " - Boy's Rest Rm - Sink Faucet		
" - " - G-F	" - " - Girl's Rest Rm - " "		
" - 108-F	" - 108 - Sink Faucet		
" - 108-DW	" - " - Water Fountain		
" - 109-F	" - 109 - Sink Faucet		
" - 109-DW	" - " - Water Fountain		
" - 109-RR-N-F	" - " - North Rest Rm - Sink Faucet		

Sampled by:

T. Nadlermann
E. Wilson

Date: Feb 23, 2022

1/22
2-23-22

M. Kachuk

Chain of Custody

Field Sampling Log

Sterling Technologies, LLC

Providing technical consulting support to the
environmental and manufacturing industries317 NE 144th Street Vancouver, WA 98685
360.576.6331

Pg 3 of 6

Project Name:

Site Location:

Date:

Project Contact:

Turnaround Time:

Normal:

Other:

Test Drinking Water for Lead

Columbia Heights Elementary

Feb 21, 2022

T. Nadermann

Sample ID	Location/Description	Analysis	Comments
CH-109-RR-S-F	Class - 109 - South RestRm - Sink Faucet	Lead	EPA Method 200.8
CH-110-F	" - 110 - Sink Faucet		
CH-110-WF	" - " - Water Fountain		
" - 111-F	" - 111 - Sink Faucet		
" - " - DW	" - " - Water Fountain		
" - " - B-F	" - " - RestRm - Sink Faucet		
" - " - G-F	" - " - RestRm - " "		
" - 112-F	" - 112 - Sink Faucet		
" - " - DW	" - " - Water Fountain		
" - 113-F	" - 113 - Sink Faucet		
" - 113-DW	" - " - Water Fountain		
" - 113-BF	" - " - RestRm - Sink Faucet		
" - " - GF	" - " - RestRm - " "		

Sampled by:

T. Nadermann
E. Wilson

Date:

Feb 21, 2022

1123

2-23-22

M. Kuchuk

Chain of Custody

Field Sampling Log



Sterling Technologies, LLC

Providing technical consulting support to the
environmental and manufacturing industries

317 NE 144th Street Vancouver, WA 98685
360.576.6331

A280932

Project Name:

Site Location:

Date:

Project Contact:

Test Drinking Water for Lead
Columbia Heights Elementary
Feb 21, 2022
T. Nadermann

Pg 4 of 6

Turnaround Time:

Normal: ☒

Other: ☐

Sample ID	Location/Description	Analysis	Comments
CH-114-F	Glass - 114-Sink Faucet	Lead	EPA Method 200.8
" - " - WF	" - " - Water Fountain		
" - 115-F	" - 115-Sink Faucet		
" - " - DW	" - " - Water Fountain		
" - " - B-F	" - " - Boy's Rest Rm - Sink Faucet		
" - " - G-F	" - " - Girl's Rest Rm - "		
" - 116-F	" - 116-Sink Faucet		
" - " - WF	" - " - Water Fountain		
" - " - RR-F.1	" - " - Rest Rm - Sink Faucet #1		
" - " - RR-F.2	" - " - " - " - Sink Faucet #2		
" - 117-F	" - 117-Sink Faucet		
" - " - DW	" - " - Water Fountain		
" - 118-F	" - " - Sink Faucet		

Sampled by:

T. Nadermann
E. Wilson

Date:

Feb 21, 2022

1172
2023072

Chain of Custody

Field Sampling Log



Sterling Technologies, LLC

Providing technical consulting support to the
environmental and manufacturing industries

317 NE 144th Street Vancouver, WA 98685
360.576.6331

A28932

Project Name:

Site Location:

Date:

Project Contact:

Test Drinking Water for Lead
Columbia Heights Elementary
Feb 21, 2022
T. Nadermann

Pg 5 of 6

Turnaround Time:

Normal: ☒

Other: ☐

Sample ID	Location/Description	Analysis	Comments
CH-118-WF	Class - 118 - Water Fountain	Lead	EPA Method 200.8
CH-119-F	" - 119 - Sink Faucet		
" - " - F-B	" - " - Sink Faucet - Back		
" - " - WF	" - " - Water Fountain		
" - 120-F	" - 120 - Sink Faucet		
" - " - WF	" - 120 - Water Fountain		
" - TL-F1	Teachers Lounge - Sink Faucet		
" - H-F	Health Area - "		
" - H-DW	" - Water Fountain		
" - " - RR-F	" - Rest Room Sink Faucet		
" - SRR-F	Staff Rest Room - "		
" - L-RR-F	Library - " - "		
" - K-F1	Kitchen Sink Faucet - #1		

Sampled by:

T. Nadermann
E. Wilson

Date:

Feb 21, 2022

[Signature]
M. Kordich
2-22-22

Apex Labs Cooler Receipt Summary Report

APEX LABS COOLER RECEIPT FORM

Client: Starling Technologies LLC Element WO#: A230932

Project/Project #: Test Drinking Water for Lead- Columbia Heights Elementary

Delivery Info:

Date/time received: 2-23-22 @ 1122 By: MM

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

Cooler Inspection Date/time inspected: 2-23-22 @ 1250 By: MM

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)	<u>11.4</u>						
Received on ice? (Y/N)	<u>N</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>N/A</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: Drinking Waters/Lead Testing

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

Out of temperature samples form initiated? Yes ☒ No ☐

Sample Inspection: Date/time inspected: 2/23/22 @ 13:30 By: JAM

All samples intact? Yes ☒ No ☐ Comments: _____

Bottle labels/COCs agree? Yes ☒ No ☐ Comments: _____

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: Received sample CH-107 DW at a pH of 7

Additional information: _____

Labeled by:

JAM

Witness:

[Signature]

Cooler Inspected by:

JAM



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Wednesday, March 16, 2022

Thomas Nadermann
Sterling Technologies LLC
317 NE 144th St
Vancouver, WA 98685

RE: A2B0932 - Drinking Water - 2022 - Columbia Heights Elementary

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 A2B0932, which was received by the laboratory on 2/23/2022 at 11:22:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@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	11.4 degC
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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.

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Sterling Technologies LLC317 NE 144th St
Vancouver, WA 98685Project: Drinking Water - 2022Project Number: Columbia Heights Elementa
Project Manager: Thomas NadermannReport ID:

A2B0932 - 03 16 22 1700

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CH-101-F1	A2B0932-01	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-101-F2	A2B0932-02	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-101-WF	A2B0932-03	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-102-F	A2B0932-04	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-102-DW	A2B0932-05	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-102-B-F	A2B0932-06	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-102-G-F	A2B0932-07	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-103-F	A2B0932-08	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-103-WF	A2B0932-09	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-104-F	A2B0932-10	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-104-DW	A2B0932-11	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-104-B-S	A2B0932-12	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-104-B-N	A2B0932-13	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-106-F-1	A2B0932-14	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-106-F-2	A2B0932-15	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-106-DW-1	A2B0932-16	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-106-DW-2	A2B0932-17	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-107-F	A2B0932-18	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-107-DW	A2B0932-19	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-107-B-F	A2B0932-20	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-107-G-F	A2B0932-21	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-108-F	A2B0932-22	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-108-DW	A2B0932-23	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-109-F	A2B0932-24	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-109-DW	A2B0932-25	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-109-RR-N-F	A2B0932-26	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-109-RR-S-F	A2B0932-27	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-110-F	A2B0932-28	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-110-WF	A2B0932-29	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-111-F	A2B0932-30	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-111-DW	A2B0932-31	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-111-B-F	A2B0932-32	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-111-G-F	A2B0932-33	Drinking Water	02/21/22 00:00	02/23/22 11:22

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.

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Sterling Technologies LLC

317 NE 144th St

Vancouver, WA 98685

Project: Drinking Water - 2022

Project Number: Columbia Heights Elementa

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CH-112-F	A2B0932-34	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-112-DW	A2B0932-35	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-113-F	A2B0932-36	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-113-DW	A2B0932-37	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-113-BF	A2B0932-38	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-113-GF	A2B0932-39	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-114-F	A2B0932-40	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-114-WF	A2B0932-41	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-115-F	A2B0932-42	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-115-DW	A2B0932-43	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-115-B-F	A2B0932-44	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-115-G-F	A2B0932-45	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-116-F	A2B0932-46	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-116-WF	A2B0932-47	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-116-RR-F-1	A2B0932-48	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-116-RR-F-2	A2B0932-49	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-117-F	A2B0932-50	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-117-DW	A2B0932-51	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-118-F	A2B0932-52	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-118-WF	A2B0932-53	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-119-F	A2B0932-54	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-119-F-B	A2B0932-55	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-119-WF	A2B0932-56	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-120-F	A2B0932-57	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-120-WF	A2B0932-58	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-TL-FL	A2B0932-59	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-H-F	A2B0932-60	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-H-DW	A2B0932-61	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-H-RR-F	A2B0932-62	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-SRR-F	A2B0932-63	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-L-RR-F	A2B0932-64	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-K-F1	A2B0932-65	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-K-F2	A2B0932-66	Drinking Water	02/21/22 00:00	02/23/22 11:22

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Sterling Technologies LLC

317 NE 144th St
Vancouver, WA 98685

Project: **Drinking Water - 2022**

Project Number: **Columbia Heights Elementa**
Project Manager: **Thomas Nadermann**

Report ID:

A2B0932 - 03 16 22 1700

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CH-G-B-F1	A2B0932-67	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-G-B-F2	A2B0932-68	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-G-G-F1	A2B0932-69	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-G-G-F2	A2B0932-70	Drinking Water	02/21/22 00:00	02/23/22 11:22
CH-G-DW	A2B0932-71	Drinking Water	02/21/22 00:00	02/23/22 11:22

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Project Manager: Thomas Nadermann

Report ID:

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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
CH-101-F1 (A2B0932-01)		Matrix: Drinking Water						
Batch: 22C0185								
Lead	0.727	---	0.200	ug/L	1	03/04/22 22:51	EPA 200.8	
CH-101-F2 (A2B0932-02)		Matrix: Drinking Water						
Batch: 22C0185								
Lead	2.31	---	0.200	ug/L	1	03/04/22 22:54	EPA 200.8	
CH-101-WF (A2B0932-03)		Matrix: Drinking Water						
Batch: 22C0185								
Lead	0.320	---	0.200	ug/L	1	03/04/22 22:58	EPA 200.8	
CH-102-F (A2B0932-04)		Matrix: Drinking Water						
Batch: 22C0186								
Lead	0.896	---	0.200	ug/L	1	03/04/22 23:21	EPA 200.8	
CH-102-DW (A2B0932-05)		Matrix: Drinking Water						
Batch: 22C0186								
Lead	3.06	---	0.200	ug/L	1	03/04/22 23:32	EPA 200.8	
CH-102-B-F (A2B0932-06)		Matrix: Drinking Water						
Batch: 22C0186								
Lead	ND	---	0.200	ug/L	1	03/04/22 23:36	EPA 200.8	
CH-102-G-F (A2B0932-07)		Matrix: Drinking Water						
Batch: 22C0186								
Lead	ND	---	0.200	ug/L	1	03/04/22 23:40	EPA 200.8	
CH-103-F (A2B0932-08)		Matrix: Drinking Water						
Batch: 22C0186								
Lead	0.908	---	0.200	ug/L	1	03/04/22 23:43	EPA 200.8	
CH-103-WF (A2B0932-09)		Matrix: Drinking Water						
Batch: 22C0186								
Lead	2.62	---	0.200	ug/L	1	03/04/22 23:47	EPA 200.8	
CH-104-F (A2B0932-10)		Matrix: Drinking Water						
Batch: 22C0186								

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ORELAP ID: OR100062**Sterling Technologies LLC**317 NE 144th St
Vancouver, WA 98685Project: **Drinking Water - 2022**Project Number: **Columbia Heights Elementa**Project Manager: **Thomas Nadermann****Report ID:****A2B0932 - 03 16 22 1700****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
CH-104-F (A2B0932-10)				Matrix: Drinking Water				
Lead	0.719	---	0.200	ug/L	1	03/04/22 23:59	EPA 200.8	
CH-104-DW (A2B0932-11)				Matrix: Drinking Water				
Batch: 22C0186								
Lead	1.12	---	0.200	ug/L	1	03/05/22 00:02	EPA 200.8	
CH-104-B-S (A2B0932-12)				Matrix: Drinking Water				
Batch: 22C0186								
Lead	11.1	---	0.200	ug/L	1	03/05/22 00:05	EPA 200.8	
CH-104-B-N (A2B0932-13)				Matrix: Drinking Water				
Batch: 22C0186								
Lead	0.883	---	0.200	ug/L	1	03/05/22 00:10	EPA 200.8	
CH-106-F-1 (A2B0932-14)				Matrix: Drinking Water				
Batch: 22C0186								
Lead	1.00	---	0.200	ug/L	1	03/05/22 00:13	EPA 200.8	
CH-106-F-2 (A2B0932-15)				Matrix: Drinking Water				
Batch: 22C0186								
Lead	0.341	---	0.200	ug/L	1	03/05/22 00:16	EPA 200.8	
CH-106-DW-1 (A2B0932-16)				Matrix: Drinking Water				
Batch: 22C0186								
Lead	2.41	---	0.200	ug/L	1	03/05/22 00:20	EPA 200.8	
CH-106-DW-2 (A2B0932-17)				Matrix: Drinking Water				
Batch: 22C0186								
Lead	2.15	---	0.200	ug/L	1	03/05/22 00:24	EPA 200.8	
CH-107-F (A2B0932-18)				Matrix: Drinking Water				
Batch: 22C0186								
Lead	5.37	---	0.200	ug/L	1	03/05/22 00:28	EPA 200.8	
CH-107-DW (A2B0932-19)				Matrix: Drinking Water				
Batch: 22C0186								

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Project Number: Columbia Heights Elementa

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

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
CH-107-DW (A2B0932-19) Matrix: Drinking Water								
Lead	7.06	---	0.200	ug/L	1	03/05/22 00:32	EPA 200.8	
CH-107-B-F (A2B0932-20) Matrix: Drinking Water								
Batch: 22C0186								
Lead	0.697	---	0.200	ug/L	1	03/05/22 00:44	EPA 200.8	
CH-107-G-F (A2B0932-21) Matrix: Drinking Water								
Batch: 22C0186								
Lead	ND	---	0.200	ug/L	1	03/05/22 00:48	EPA 200.8	
CH-108-F (A2B0932-22) Matrix: Drinking Water								
Batch: 22C0186								
Lead	1.37	---	0.200	ug/L	1	03/05/22 00:51	EPA 200.8	
CH-108-DW (A2B0932-23) Matrix: Drinking Water								
Batch: 22C0186								
Lead	1.92	---	0.200	ug/L	1	03/05/22 00:54	EPA 200.8	
CH-109-F (A2B0932-24) Matrix: Drinking Water								
Batch: 22C0242								
Lead	0.433	---	0.200	ug/L	1	03/07/22 15:40	EPA 200.8	
CH-109-DW (A2B0932-25) Matrix: Drinking Water								
Batch: 22C0242								
Lead	1.26	---	0.200	ug/L	1	03/07/22 15:50	EPA 200.8	
CH-109-RR-N-F (A2B0932-26) Matrix: Drinking Water								
Batch: 22C0242								
Lead	1.33	---	0.200	ug/L	1	03/07/22 15:54	EPA 200.8	
CH-109-RR-S-F (A2B0932-27) Matrix: Drinking Water								
Batch: 22C0242								
Lead	1.61	---	0.200	ug/L	1	03/07/22 16:05	EPA 200.8	
CH-110-F (A2B0932-28) Matrix: Drinking Water								
Batch: 22C0242								

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A2B0932 - 03 16 22 1700

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
CH-110-F (A2B0932-28)				Matrix: Drinking Water				
Lead	3.84	---	0.200	ug/L	1	03/07/22 16:09	EPA 200.8	
CH-110-WF (A2B0932-29)				Matrix: Drinking Water				
Batch: 22C0242								
Lead	32.5	---	0.200	ug/L	1	03/07/22 16:13	EPA 200.8	
CH-111-F (A2B0932-30)				Matrix: Drinking Water				
Batch: 22C0242								
Lead	0.398	---	0.200	ug/L	1	03/07/22 16:17	EPA 200.8	
CH-111-DW (A2B0932-31)				Matrix: Drinking Water				
Batch: 22C0242								
Lead	6.90	---	0.200	ug/L	1	03/07/22 16:21	EPA 200.8	
CH-111-B-F (A2B0932-32)				Matrix: Drinking Water				
Batch: 22C0242								
Lead	0.936	---	0.200	ug/L	1	03/07/22 16:25	EPA 200.8	
CH-111-G-F (A2B0932-33)				Matrix: Drinking Water				
Batch: 22C0242								
Lead	1.22	---	0.200	ug/L	1	03/07/22 16:28	EPA 200.8	
CH-112-F (A2B0932-34)				Matrix: Drinking Water				
Batch: 22C0242								
Lead	1.14	---	0.200	ug/L	1	03/07/22 16:31	EPA 200.8	
CH-112-DW (A2B0932-35)				Matrix: Drinking Water				
Batch: 22C0275								
Lead	145	---	0.200	ug/L	1	03/08/22 00:48	EPA 200.8	DW-D, Q-42
CH-113-F (A2B0932-36)				Matrix: Drinking Water				
Batch: 22C0242								
Lead	0.546	---	0.200	ug/L	1	03/07/22 16:35	EPA 200.8	
CH-113-DW (A2B0932-37)				Matrix: Drinking Water				
Batch: 22C0242								

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A2B0932 - 03 16 22 1700

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
CH-113-DW (A2B0932-37) Matrix: Drinking Water								
Lead	5.34	---	0.200	ug/L	1	03/07/22 16:38	EPA 200.8	
CH-113-BF (A2B0932-38) Matrix: Drinking Water								
Batch: 22C0242								
Lead	0.905	---	0.200	ug/L	1	03/07/22 16:50	EPA 200.8	
CH-113-GF (A2B0932-39) Matrix: Drinking Water								
Batch: 22C0242								
Lead	0.794	---	0.200	ug/L	1	03/07/22 16:53	EPA 200.8	
CH-114-F (A2B0932-40) Matrix: Drinking Water								
Batch: 22C0242								
Lead	0.667	---	0.200	ug/L	1	03/07/22 16:57	EPA 200.8	
CH-114-WF (A2B0932-41) Matrix: Drinking Water								
Batch: 22C0242								
Lead	0.703	---	0.200	ug/L	1	03/07/22 17:00	EPA 200.8	
CH-115-F (A2B0932-42) Matrix: Drinking Water								
Batch: 22C0242								
Lead	1.54	---	0.200	ug/L	1	03/07/22 17:03	EPA 200.8	
CH-115-DW (A2B0932-43) Matrix: Drinking Water								
Batch: 22C0242								
Lead	0.279	---	0.200	ug/L	1	03/07/22 17:07	EPA 200.8	
CH-115-B-F (A2B0932-44) Matrix: Drinking Water								
Batch: 22C0242								
Lead	0.826	---	0.200	ug/L	1	03/07/22 17:11	EPA 200.8	
CH-115-G-F (A2B0932-45) Matrix: Drinking Water								
Batch: 22C0243								
Lead	0.330	---	0.200	ug/L	1	03/07/22 17:33	EPA 200.8	
CH-116-F (A2B0932-46) Matrix: Drinking Water								
Batch: 22C0243								

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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
CH-116-F (A2B0932-46)		Matrix: Drinking Water						
Lead	0.289	---	0.200	ug/L	1	03/07/22 17:44	EPA 200.8	
CH-116-WF (A2B0932-47)		Matrix: Drinking Water						
Batch: 22C0243								
Lead	0.995	---	0.200	ug/L	1	03/07/22 17:48	EPA 200.8	
CH-116-RR-F-1 (A2B0932-48)		Matrix: Drinking Water						
Batch: 22C0243								
Lead	0.204	---	0.200	ug/L	1	03/07/22 17:51	EPA 200.8	
CH-116-RR-F-2 (A2B0932-49)		Matrix: Drinking Water						
Batch: 22C0243								
Lead	0.372	---	0.200	ug/L	1	03/07/22 17:54	EPA 200.8	
CH-117-F (A2B0932-50)		Matrix: Drinking Water						
Batch: 22C0243								
Lead	ND	---	0.200	ug/L	1	03/07/22 17:58	EPA 200.8	
CH-117-DW (A2B0932-51)		Matrix: Drinking Water						
Batch: 22C0243								
Lead	1.57	---	0.200	ug/L	1	03/07/22 18:01	EPA 200.8	
CH-118-F (A2B0932-52)		Matrix: Drinking Water						
Batch: 22C0243								
Lead	0.512	---	0.200	ug/L	1	03/07/22 18:05	EPA 200.8	
CH-118-WF (A2B0932-53)		Matrix: Drinking Water						
Batch: 22C0243								
Lead	0.576	---	0.200	ug/L	1	03/07/22 18:16	EPA 200.8	
CH-119-F (A2B0932-54)		Matrix: Drinking Water						
Batch: 22C0243								
Lead	1.11	---	0.200	ug/L	1	03/07/22 18:19	EPA 200.8	
CH-119-F-B (A2B0932-55)		Matrix: Drinking Water						
Batch: 22C0243								

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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
CH-119-F-B (A2B0932-55) Matrix: Drinking Water								
Lead	5.58	---	0.200	ug/L	1	03/07/22 18:23	EPA 200.8	
CH-119-WF (A2B0932-56) Matrix: Drinking Water								
Batch: 22C0243								
Lead	0.577	---	0.200	ug/L	1	03/07/22 18:27	EPA 200.8	
CH-120-F (A2B0932-57) Matrix: Drinking Water								
Batch: 22C0243								
Lead	0.442	---	0.200	ug/L	1	03/07/22 18:30	EPA 200.8	
CH-120-WF (A2B0932-58) Matrix: Drinking Water								
Batch: 22C0243								
Lead	3.19	---	0.200	ug/L	1	03/07/22 18:33	EPA 200.8	
CH-TL-FL (A2B0932-59) Matrix: Drinking Water								
Batch: 22C0243								
Lead	1.25	---	0.200	ug/L	1	03/07/22 18:38	EPA 200.8	
CH-H-F (A2B0932-60) Matrix: Drinking Water								
Batch: 22C0243								
Lead	0.535	---	0.200	ug/L	1	03/07/22 18:41	EPA 200.8	
CH-H-DW (A2B0932-61) Matrix: Drinking Water								
Batch: 22C0243								
Lead	1.89	---	0.200	ug/L	1	03/07/22 18:44	EPA 200.8	
CH-H-RR-F (A2B0932-62) Matrix: Drinking Water								
Batch: 22C0243								
Lead	0.519	---	0.200	ug/L	1	03/07/22 18:48	EPA 200.8	
CH-SRR-F (A2B0932-63) Matrix: Drinking Water								
Batch: 22C0243								
Lead	2.30	---	0.200	ug/L	1	03/07/22 18:59	EPA 200.8	
CH-L-RR-F (A2B0932-64) Matrix: Drinking Water								
Batch: 22C0243								

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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
CH-L-RR-F (A2B0932-64)		Matrix: Drinking Water						
Lead	0.301	---	0.200	ug/L	1	03/07/22 19:04	EPA 200.8	
CH-K-F1 (A2B0932-65)		Matrix: Drinking Water						
Batch: 22C0245								
Lead	1.09	---	0.200	ug/L	1	03/07/22 19:18	EPA 200.8	
CH-K-F2 (A2B0932-66)		Matrix: Drinking Water						
Batch: 22C0245								
Lead	0.484	---	0.200	ug/L	1	03/07/22 19:29	EPA 200.8	
CH-G-B-F1 (A2B0932-67)		Matrix: Drinking Water						
Batch: 22C0245								
Lead	1.02	---	0.200	ug/L	1	03/07/22 19:33	EPA 200.8	
CH-G-B-F2 (A2B0932-68)		Matrix: Drinking Water						
Batch: 22C0245								
Lead	0.968	---	0.200	ug/L	1	03/07/22 19:44	EPA 200.8	
CH-G-G-F1 (A2B0932-69)		Matrix: Drinking Water						
Batch: 22C0245								
Lead	1.33	---	0.200	ug/L	1	03/07/22 19:47	EPA 200.8	
CH-G-G-F2 (A2B0932-70)		Matrix: Drinking Water						
Batch: 22C0245								
Lead	1.50	---	0.200	ug/L	1	03/07/22 19:50	EPA 200.8	
CH-G-DW (A2B0932-71)		Matrix: Drinking Water						
Batch: 22C0245								
Lead	5.48	---	0.200	ug/L	1	03/07/22 19:54	EPA 200.8	

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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 22C0185 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (22C0185-BLK1)			Prepared: 03/04/22 07:29 Analyzed: 03/04/22 21:11									
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22C0185-BS1)			Prepared: 03/04/22 07:29 Analyzed: 03/04/22 21:15									
EPA 200.8												
Lead	14.8	---	0.201	ug/L	1	15.0	---	99	85-115%	---	---	
Duplicate (22C0185-DUP1)			Prepared: 03/04/22 07:29 Analyzed: 03/04/22 21:23									
QC Source Sample: Non-SDG (A2B0912-57)												
Lead	2.91	---	0.200	ug/L	1	---	2.76	---	---	5	20%	
Matrix Spike (22C0185-MS1)			Prepared: 03/04/22 07:29 Analyzed: 03/04/22 21:27									
QC Source Sample: Non-SDG (A2B0912-57)												
EPA 200.8												
Lead	17.2	---	0.201	ug/L	1	15.0	2.76	96	70-130%	---	---	
Matrix Spike (22C0185-MS2)			Prepared: 03/04/22 07:29 Analyzed: 03/04/22 23:02									
QC Source Sample: CH-101-WF (A2B0932-03)												
EPA 200.8												
Lead	15.1	---	0.201	ug/L	1	15.0	0.320	99	70-130%	---	---	
Batch 22C0186 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (22C0186-BLK2)			Prepared: 03/04/22 07:32 Analyzed: 03/08/22 14:21									
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	Q-16
LCS (22C0186-BS1)			Prepared: 03/04/22 07:32 Analyzed: 03/04/22 23:17									
EPA 200.8												
Lead	14.7	---	0.201	ug/L	1	15.0	---	98	85-115%	---	---	
Duplicate (22C0186-DUP1)			Prepared: 03/04/22 07:32 Analyzed: 03/04/22 23:25									
QC Source Sample: CH-102-F (A2B0932-04)												

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ANALYTICAL REPORT

Apex Laboratories, LLC

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

Sterling Technologies LLC

317 NE 144th St

Vancouver, WA 98685

Project: Drinking Water - 2022

Project Number: Columbia Heights Elementa

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

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 22C0186 - EPA 200.8 Direct Analysis						Drinking Water						
Duplicate (22C0186-DUP1)			Prepared: 03/04/22 07:32 Analyzed: 03/04/22 23:25									
<u>QC Source Sample: CH-102-F (A2B0932-04)</u>												
<u>EPA 200.8</u>												
Lead	0.897	---	0.200	ug/L	1	---	0.896	---	---	0.2	20%	
Matrix Spike (22C0186-MS1)			Prepared: 03/04/22 07:32 Analyzed: 03/04/22 23:28									
<u>QC Source Sample: CH-102-F (A2B0932-04)</u>												
<u>EPA 200.8</u>												
Lead	15.2	---	0.201	ug/L	1	15.0	0.896	95	70-130%	---	---	
Matrix Spike (22C0186-MS2)			Prepared: 03/04/22 07:32 Analyzed: 03/05/22 00:58									
<u>QC Source Sample: CH-108-DW (A2B0932-23)</u>												
<u>EPA 200.8</u>												
Lead	16.0	---	0.201	ug/L	1	15.0	1.92	94	70-130%	---	---	

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Vancouver, WA 98685Project: Drinking Water - 2022

Project Number: Columbia Heights Elementa

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

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 22C0242 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (22C0242-BLK1)			Prepared: 03/07/22 09:03		Analyzed: 03/07/22 15:32							
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22C0242-BS1)			Prepared: 03/07/22 09:03		Analyzed: 03/07/22 15:35							
EPA 200.8												
Lead	15.5	---	0.201	ug/L	1	15.0	---	104	85-115%	---	---	
Duplicate (22C0242-DUP1)			Prepared: 03/07/22 09:03		Analyzed: 03/07/22 15:43							
QC Source Sample: CH-109-F (A2B0932-24)												
EPA 200.8												
Lead	0.482	---	0.200	ug/L	1	---	0.433	---	---	11	20%	
Matrix Spike (22C0242-MS1)			Prepared: 03/07/22 09:03		Analyzed: 03/07/22 15:46							
QC Source Sample: CH-109-F (A2B0932-24)												
EPA 200.8												
Lead	15.5	---	0.201	ug/L	1	15.0	0.433	101	70-130%	---	---	
Matrix Spike (22C0242-MS2)			Prepared: 03/07/22 09:03		Analyzed: 03/07/22 17:14							
QC Source Sample: CH-115-B-F (A2B0932-44)												
EPA 200.8												
Lead	15.8	---	0.201	ug/L	1	15.0	0.826	100	70-130%	---	---	

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317 NE 144th St

Vancouver, WA 98685

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Project Number: Columbia Heights Elementa

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

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 22C0243 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (22C0243-BLK1)			Prepared: 03/07/22 09:06		Analyzed: 03/07/22 17:18							
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22C0243-BS1)			Prepared: 03/07/22 09:06		Analyzed: 03/07/22 17:21							
EPA 200.8												
Lead	15.3	---	0.201	ug/L	1	15.0	---	102	85-115%	---	---	
Duplicate (22C0243-DUP1)			Prepared: 03/07/22 09:06		Analyzed: 03/07/22 17:37							
QC Source Sample: CH-115-G-F (A2B0932-45)												
EPA 200.8												
Lead	0.330	---	0.200	ug/L	1	---	0.330	---	---	0.09	20%	
Matrix Spike (22C0243-MS1)			Prepared: 03/07/22 09:06		Analyzed: 03/07/22 17:40							
QC Source Sample: CH-115-G-F (A2B0932-45)												
EPA 200.8												
Lead	15.4	---	0.201	ug/L	1	15.0	0.330	101	70-130%	---	---	
Matrix Spike (22C0243-MS2)			Prepared: 03/07/22 09:06		Analyzed: 03/07/22 19:07							
QC Source Sample: CH-L-RR-F (A2B0932-64)												
EPA 200.8												
Lead	15.1	---	0.201	ug/L	1	15.0	0.301	99	70-130%	---	---	

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Vancouver, WA 98685Project: Drinking Water - 2022

Project Number: Columbia Heights Elementa

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

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 22C0245 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (22C0245-BLK1)			Prepared: 03/07/22 09:08		Analyzed: 03/07/22 19:11							
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22C0245-BS1)			Prepared: 03/07/22 09:08		Analyzed: 03/07/22 19:14							
EPA 200.8												
Lead	15.4	---	0.201	ug/L	1	15.0	---	102	85-115%	---	---	
Duplicate (22C0245-DUP1)			Prepared: 03/07/22 09:08		Analyzed: 03/07/22 19:22							
QC Source Sample: CH-K-F1 (A2B0932-65)												
EPA 200.8												
Lead	1.10	---	0.200	ug/L	1	---	1.09	---	---	2	20%	
Matrix Spike (22C0245-MS1)			Prepared: 03/07/22 09:08		Analyzed: 03/07/22 19:25							
QC Source Sample: CH-K-F1 (A2B0932-65)												
EPA 200.8												
Lead	16.2	---	0.201	ug/L	1	15.0	1.09	101	70-130%	---	---	
Matrix Spike (22C0245-MS2)			Prepared: 03/07/22 09:08		Analyzed: 03/07/22 20:48							
QC Source Sample: Non-SDG (A2C0189-08)												
EPA 200.8												
Lead	15.6	---	0.201	ug/L	1	15.0	0.163	103	70-130%	---	---	

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Vancouver, WA 98685

Project: Drinking Water - 2022

Project Number: Columbia Heights Elementa

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

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 22C0275 - EPA 3015A						Drinking Water						
Blank (22C0275-BLK1)			Prepared: 03/07/22 14:36 Analyzed: 03/08/22 00:29									
EPA 200.8												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (22C0275-BS1)			Prepared: 03/07/22 14:36 Analyzed: 03/08/22 00:34									
EPA 200.8												
Lead	16.4	---	0.200	ug/L	1	16.7	---	99	85-115%	---	---	
Duplicate (22C0275-DUP1)			Prepared: 03/07/22 14:36 Analyzed: 03/08/22 00:43									
QC Source Sample: Non-SDG (A2B0860-05)												
Lead	4.90	---	0.200	ug/L	1	---	4.97	---	---	1	20%	DW-D
Matrix Spike (22C0275-MS1)			Prepared: 03/07/22 14:36 Analyzed: 03/08/22 00:53									
QC Source Sample: CH-112-DW (A2B0932-35)												
EPA 200.8												
Lead	155	---	0.200	ug/L	1	16.7	145	60	70-130%	---	---	DW-D, Q-03

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317 NE 144th St

Vancouver, WA 98685

Project: Drinking Water - 2022

Project Number: Columbia Heights Elementa

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

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
<u>Batch: 22C0185</u>							
A2B0932-01	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:29	10mL/10mL	10mL/10mL	1.00
A2B0932-02	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:29	10mL/10mL	10mL/10mL	1.00
A2B0932-03	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:29	10mL/10mL	10mL/10mL	1.00
<u>Batch: 22C0186</u>							
A2B0932-04	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-05	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-06	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-07	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-08	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-09	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-10	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-11	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-12	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-13	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-14	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-15	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-16	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-17	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-18	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-19	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-20	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-21	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-22	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
A2B0932-23	Drinking Water	EPA 200.8	02/21/22 00:00	03/04/22 07:32	10mL/10mL	10mL/10mL	1.00
<u>Batch: 22C0242</u>							
A2B0932-24	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-25	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-26	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-27	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-28	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-29	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-30	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-31	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-32	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-33	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Sterling Technologies LLC

317 NE 144th St

Vancouver, WA 98685

Project: **Drinking Water - 2022**Project Number: **Columbia Heights Elementa**Project Manager: **Thomas Nadermann****Report ID:****A2B0932 - 03 16 22 1700****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
A2B0932-34	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-36	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-37	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-38	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-39	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-40	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-41	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-42	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-43	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
A2B0932-44	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:03	10mL/10mL	10mL/10mL	1.00
Batch: 22C0243							
A2B0932-45	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-46	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-47	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-48	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-49	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-50	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-51	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-52	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-53	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-54	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-55	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-56	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-57	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-58	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-59	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-60	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-61	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-62	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-63	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
A2B0932-64	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:06	10mL/10mL	10mL/10mL	1.00
Batch: 22C0245							
A2B0932-65	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:08	10mL/10mL	10mL/10mL	1.00
A2B0932-66	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:08	10mL/10mL	10mL/10mL	1.00
A2B0932-67	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:08	10mL/10mL	10mL/10mL	1.00
A2B0932-68	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:08	10mL/10mL	10mL/10mL	1.00

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Sterling Technologies LLC

317 NE 144th St

Vancouver, WA 98685

Project: **Drinking Water - 2022**

Project Number: **Columbia Heights Elementa**

Project Manager: **Thomas Nadermann**

Report ID:

A2B0932 - 03 16 22 1700

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
A2B0932-69	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:08	10mL/10mL	10mL/10mL	1.00
A2B0932-70	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:08	10mL/10mL	10mL/10mL	1.00
A2B0932-71	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 09:08	10mL/10mL	10mL/10mL	1.00

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 22C0275							
A2B0932-35	Drinking Water	EPA 200.8	02/21/22 00:00	03/07/22 14:36	45mL/50mL	45mL/50mL	1.00

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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.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)

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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) may not be 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

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Project Number: **Columbia Heights Elementa**
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Report ID:

A2B0932 - 03 16 22 1700

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.

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ORELAP ID: OR100062

Sterling Technologies LLC

317 NE 144th St
Vancouver, WA 98685

Project: **Drinking Water - 2022**

Project Number: **Columbia Heights Elementa**

Project Manager: **Thomas Nadermann**

Report ID:

A2B0932 - 03 16 22 1700

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
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

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

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Darrell Auvil, Client Services Manager

Sterling Technologies LLC

317 NE 144th St
Vancouver, WA 98685

Project: Drinking Water - 2022

Project Number: Columbia Heights Elementary

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

A2B0932
Sterling Technologies, LLC
Providing technical consulting support to the
environmental and manufacturing industries
317 NE 144th Street Vancouver, WA 98685
360.576.0331



Chain of Custody
Field Sampling Log

Pg 1 of 6

Test Drinking Water for Lead
Columbia Heights Elementary
Feb 21, 2022
T. Nadermann

Project Name:
Site Location:
Date:
Project Contact:

Turnaround Time:
Normal: ☒
Other:

Sample ID	Location/Description	Analysis	Comments
CH-101-F1	Class - 101 - Sink Faucet - #1	Lead	EPA Method 2008
" - 101 - F2	" - " - " - #2		
CH-101-WF	" - " - Water Fountain		
CH-102-F	" - 102 - Sink Faucet		
CH-102-DW	" - " - Water Fountain		
" - " - B-F	" - " - Boys - Sink		
" - " - G-F	" - " - Girls - Sink		
" - 103-F	" - 103 - Sink Faucet		
" - " - WF	" - " - Water Fountain		
" - 104-F	" - 104 - Sink Faucet		
" - 104-DW	" - " - Water Fountain		
" - " - B-S	" - " - Rest - Room - South		
" - " - B-N	" - " - " - North		

T. Nadermann
E. Wilson

Sampled by:

Date: Feb 22, 2022

M. Wilson
2-22-22



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Sterling Technologies LLC

317 NE 144th St
Vancouver, WA 98685

Project: Drinking Water - 2022Project Number: Columbia Heights ElementaryProject Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

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317 NE 144th Street Vancouver, WA 98685
360.376.6331

Chain of Custody

Field Sampling Log

pg 2 of 6
Turnaround Time: X
Normal: X
Other:

Test Drinking Water for Lead
Columbia Heights Elementary
Feb 21, 2022
T. Nadermann

Project Name:
Site Location:
Date:
Project Contact:

Sample ID	Location/Description	Analysis	Comments
CH-106-F-1	Class - 106 - Sink - #1	Lead	EPA Method 200.8
" - " - F-2	" - 106 - " - #2		
" - " - DW-1	" - " - Water Fountain - #1		
" - " - DW-2	" - " - " - #2		
" - 107-F	" - 107 - Sink Faucet		
" - 107-DW	" - " - Water Fountain		
" - " - B-F	" - " - Boys - Sink Faucet		
" - " - G-F	" - " - Girls - Sink Faucet		
" - 108-F	" - 108 - Sink Faucet		
" - 108-DW	" - " - Water Fountain		
" - 109-F	" - 109 - Sink Faucet		
" - 109-DW	" - " - Water Fountain		
" - 109-RR-N-F	" - " - North - Sink Faucet		

Date: Feb 23, 2022
M. Wilson
M. Wilson

Sampled by:
T. Nadermann
E. Wilson

Apex Laboratories

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Darrell Auvil, Client Services Manager

Sterling Technologies LLC

317 NE 144th St
Vancouver, WA 98685

Project: Drinking Water - 2022

Project Number: Columbia Heights Elementary

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

A2B0932

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360.576.6331

pg 3 of 6

Turnaround Time: X

Normal: X

Other:

Chain of Custody

Field Sampling Log

Project Name: Test Drinking Water for Lead

Site Location: Columbia Heights Elementary

Date: Feb 21, 2022

Project Contact: T. Nadermann

Test Drinking Water for Lead
Columbia Heights Elementary
Feb 21, 2022
T. Nadermann

Sample ID	Location/Description	Analysis	Comments
CH-109-AR-S-F	Glass - 109 - South Rest Rm - Sink	Lead	EPA Method 200.8
CH-110-F	" - 110 - Sink Faucet		
CH-110-WF	" - " - Water Fountain		
" - 111-F	" - 111 - Sink Faucet		
" - " - DW	" - " - Water Fountain		
" - " - B-F	" - " - Rest Rm - Sink		
" - " - G-F	" - " - Girl's Rest Rm - " "		
" - 112-F	" - 112 - Sink Faucet		
" - " - DW	" - " - Water Fountain		
" - 113-F	" - 113 - Sink Faucet		
" - 113-DW	" - " - Water Fountain		
" - 113-BF	" - " - Rest Rm - Sink		
" - " - GF	" - " - Girl's Rest Rm - " "		

Date: Feb 21, 2022
1/22
2-23-22
M. Kuchuk

Sampled by: T. Nadermann
E. Wilson

Sterling Technologies LLC

317 NE 144th St
Vancouver, WA 98685

Project: Drinking Water - 2022

Project Number: Columbia Heights Elementary

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

A2B0932

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pg 4 of 6

Turnaround Time:

Normal: X

Other:

Chain of Custody

Field Sampling Log

Project Name:

Site Location:

Date:

Project Contact:

Test Drinking Water for Lead
Columbia Heights Elementary
Feb 21, 2022
T. Nadermann

Sample ID	Location/Description	Analysis	Comments
CH-114-F	Class - 114 - Sink Faucet	Lead	EPA Method 200.8
" - " - WF	" - " - Water Fountain		
" - 115-F	" - 115 - Sink Faucet		
" - " - DW	" - " - Water Fountain		
" - " - B-F	" - " - Boy's Restroom - Sink		
" - " - G-F	" - " - Girl's Restroom		
" - 116-F	" - 116 - Sink Faucet		
" - " - WF	" - " - Water Fountain		
" - " - AR-F-1	" - " - Rest - Sink Faucet #1		
" - " - AR-F-2	" - " - " - " - #2		
" - 117-F	" - 117 - Sink Faucet		
" - " - DW	" - " - Water Fountain		
" - 118-F	" - " - Sink Faucet		

Sampled by:

T. Nadermann
E. Wilson

Date:

Feb 21, 2022
M. Nadeau
1122
2-73-22

Sterling Technologies LLC

317 NE 144th St

Vancouver, WA 98685

Project: Drinking Water - 2022

Project Number: Columbia Heights Elementary

Project Manager: Thomas Nadermann

Report ID:

A2B0932 - 03 16 22 1700

A2B0932

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Providing technical consulting support to the
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317 NE 144th Street Vancouver, WA 98685
360.576.6331

pg 5 of 6

Turnaround Time:

Normal: X

Other:

Chain of Custody

Field Sampling Log

Project Name:

Site Location:

Date:

Project Contact:

Test Drinking Water for Lead
Columbia Heights Elementary
Feb 21, 2022
T. Nadermann

Sample ID	Location/Description	Analysis	Comments
CH-118-WF	Class - 118 - Water Fountain	Lead	EPA Method 200.8
CH-119-F	" - 119 - Sink Faucet		
" - 11-F-B	" - " - Sink Faucet - Back		
" - 11-WF	" - " - Water Fountain		
" - 120-F	" - 120 - Sink Faucet		
" - " - WF	" - 120 - Water Fountain		
" - TL-FI	Teachers - Sink Faucet		
" - H-F	Health Area - " -		
" - H-DW	" - Water Fountain		
" - " - RR-F	" - Rest - Sink Faucet		
" - SRR-F	Staff - Rest - " -		
" - L-RR-F	Library - " - " -		
" - K-FI	Kitchen - Sink Faucet - #1		

Sampled by:

T. Nadermann
E. Wilson

Date:

Feb 21, 2022
1122
1122
1122



ANALYTICAL REPORT

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Report ID:

A2B0932 - 03 16 22 1700

APEX LABS COOLER RECEIPT FORM

Client: Sterling Technologies LLC Element WO#: A2B0932Project/Project #: Test Drinking Water for Lead - Columbia Heights Elementary

Delivery Info:

Date/time received: 2-23-22 @ 1122 By: MKDelivered by: Apex ☒ Client ☐ ESS ☐ FedEx ☐ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other ☐Cooler Inspection Date/time inspected: 2-23-22 @ 1250 By: MKChain 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)	<u>11.4</u>						
Received on ice? (Y/N)	<u>N</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>N/A</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: Drinking Water / Lead TestingGreen dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐Sample Inspection: Date/time inspected: 2/23/22 @ 13:30 By: ZAMAll samples intact? Yes ☒ No ☐ Comments: _____Bottle labels/COCs agree? Yes ☒ No ☐ Comments: _____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: Received sample CH-107 DW at a pH of 7

Additional information:

Labeled by:

ZAM

Witness:

(Signature)

Cooler Inspected by:

ZAM

Apex Laboratories

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(Signature)

Darrell Auvil, Client Services Manager

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