

October 27, 2022

Dave Peterson Hillsboro School District 4901 SE Witch Hazel Road Hillsboro, Oregon 97123

Via e-mail: petersod@hsd.or.k12.us

Regarding: Limited Drinking Water Sampling Report

Lenox Elementary School

21200 NW Rock Creek Boulevard

Portland, Oregon 97229

PBS Project Number 23440.166 / 0006

Dear Mr. Peterson:

On October 7, 2022, PBS Engineering and Environmental Inc. (PBS) performed drinking water sampling in the kitchen and cafeteria areas at Lenox Elementary School in Hillsboro, Oregon. The testing was requested by Hillsboro School District as part of their efforts to ensure that concentrations of lead in drinking water at the school remain below the Oregon Department of Education (ODE) action level of 15 parts per billion (ppb).

The sampling included fixtures that are used for drinking water or food preparation and that are likely to be used by after-school program participants. The pot filler faucet in the kitchen, and all fixtures in the boys and girls restrooms northeast of the cafeteria, were not fully functioning at the time of sampling. Those fixtures have been repaired and will be sampled on October 29, 2022.

Seven samples were delivered under chain of custody to Apex Laboratories in Tigard, Oregon, for lead analysis.

The water samples from the pot filler sprayer and north prep sink faucet in the kitchen showed lead in excess of 15 ppb. These fixtures have been removed from service pending replacement. All other samples analyzed below 15 ppb of lead. The following table lists the results of the analysis:

Fixture Number	Sample Number	Location / Room No.	Results (ppb)
001	Not Sampled	Kitchen – pot filler faucet – not working	
002	22390100-002KF22A	Kitchen – pot filler sprayer	39.3
003	22390100-003KF22A	Kitchen – north prep sink faucet	16.5
004	22390100-004KF22A	Kitchen – north prep sink sprayer	4.82
005	22390100-005WB22A	Cafeteria water bottle filler	3.23
006	22390100-006DW22A	Cafeteria drinking fountain - left	3.53

Limited Drinking Water Sampling Report Lenox Elementary School October 27, 2022 Page 2 of 2

Fixture Number	Sample Number	Location / Room No.	Results (ppb)
007	22390100-007DW22A	Cafeteria, drinking fountain - right	4.55
014	22390100-014BF22A	Front hall – ADA restroom sink faucet	2.70
015	22390100-015BF22A	Staff room, staff restroom sink faucet	1.59

ND = no lead detected

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

Sampling methodology and the interpretation of laboratory results were based on the Environmental Protection Agency guidance document titled 3Ts for Reducing Lead in Drinking Water in Schools. Following this guideline, PBS collected first draw samples from each test location. First draw samples consist of the first 250 milliliters (mL) of water drawn from a fixture after the water has been sitting stagnant for at least 8 hours. The 3Ts' sampling protocol specifying 250-mL samples is designed to maximize the likelihood that the highest concentrations of lead in water used for consumption are identified.

Please feel free to contact me at 503.515.4726 or voeller@pbsusa.com with any questions or comments.

Sincerely,

Dale Voeller, CHMM, CSP Senior Project Manager

Attachments: Fixture Location Drawing

Laboratory Analytical Report

10/27/2022



Apex Laboratories, LLC

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

Tuesday, October 25, 2022

Dale Voeller

PBS Engineering and Environmental
4412 S Corbett Ave

Portland, OR 97239

Cooler #1

RE: A2J0411 - Hillsboro School District - Lenox ES/23440.166/0006

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 A2J0411, which was received by the laboratory on 10/11/2022 at 2:03:00PM.

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, 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)

21.6 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.





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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.



Apex Laboratories, LLC

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

ORELAP ID: OR100062

PBS Engineering and Environmental Project: Hillsboro School District

4412 S Corbett Ave Project Number: Lenox ES/23440.166/0006
Portland, OR 97239 Project Manager: Dale Voeller

Report ID: A2J0411 - 10 25 22 1152

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION						
Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received		
22390100-002KF22A	A2J0411-01	Drinking Water	10/07/22 00:00	10/11/22 14:03		
22390100-003KF22A	A2J0411-02	Drinking Water	10/07/22 00:00	10/11/22 14:03		
22390100-004KF22A	A2J0411-03	Drinking Water	10/07/22 00:00	10/11/22 14:03		
22390100-005WB22A	A2J0411-04	Drinking Water	10/07/22 00:00	10/11/22 14:03		
22390100-006DW22A	A2J0411-05	Drinking Water	10/07/22 00:00	10/11/22 14:03		
22390100-007DW22A	A2J0411-06	Drinking Water	10/07/22 00:00	10/11/22 14:03		
22390100-014BF22A	A2J0411-07	Drinking Water	10/07/22 00:00	10/11/22 14:03		
22390100-015BF22A	A2J0411-08	Drinking Water	10/07/22 00:00	10/11/22 14:03		

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PBS Engineering and Environmental

4412 S Corbett Ave Portland, OR 97239 Project: <u>Hillsboro School District</u>
Project Number: Lenox ES/23440.166/0006

Project Manager: Dale Voeller

Report ID: A2J0411 - 10 25 22 1152

ANALYTICAL SAMPLE RESULTS

Total Metals in Drinking Water by EPA 200.8 (ICPMS)								
	Sample	Detection	Reporting			Date		
Analyte	Result	Limit	Limit	Units	Dilution	Analyzed	Method Ref.	Notes
22390100-002KF22A (A2J0411-01)	002KF22A (A2J0411-01) Matrix: Drinking Water							
Batch: 22J0828								
Lead	39.3		0.222	ug/L	1	10/21/22 09:03	EPA 200.8	DW-D
22390100-003KF22A (A2J0411-02)				Matrix: Dr	rinking Wate	ır		
Batch: 22J0828								
Lead	16.5		0.222	ug/L	1	10/21/22 09:20	EPA 200.8	DW-D
22390100-004KF22A (A2J0411-03)				Matrix: Dr	rinking Wate	ır		
Batch: 22J0727								
Lead	4.82		0.200	ug/L	1	10/20/22 22:43	EPA 200.8	
22390100-005WB22A (A2J0411-04)				Matrix: Dr	rinking Wate	<u></u>		
Batch: 22J0727								
Lead	3.23		0.200	ug/L	1	10/20/22 22:47	EPA 200.8	
22390100-006DW22A (A2J0411-05)				Matrix: Dr	rinking Wate	ır ———		
Batch: 22J0727								
Lead	3.53		0.200	ug/L	1	10/20/22 22:51	EPA 200.8	
22390100-007DW22A (A2J0411-06)				Matrix: Dr	rinking Wate	ır		
Batch: 22J0727								
Lead	4.55		0.200	ug/L	1	10/20/22 22:55	EPA 200.8	
22390100-014BF22A (A2J0411-07)				Matrix: Dr	rinking Wate	•r		
Batch: 22J0727								
Lead	2.70		0.200	ug/L	1	10/20/22 22:59	EPA 200.8	
22390100-015BF22A (A2J0411-08)				Matrix: Dr	rinking Wate	ır		
Batch: 22J0727								
Lead	1.59		0.200	ug/L	1	10/20/22 23:03	EPA 200.8	

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Jason Woodcock, Project Manager



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Project Number: Lenox ES/23440.166/0006

Project Manager: Dale Voeller

Report ID: A2J0411 - 10 25 22 1152

QUALITY CONTROL (QC) SAMPLE RESULTS

		Tota	l Metals in l	Drinking	Water by	EPA 200.	8 (ICPMS)				
Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REG	% REC Limits	RPD	RPD Limit	Notes
Batch 22J0727 - EPA 200.8 Di	rect Analy	sis					Drin	king Wa	ter			
Blank (22J0727-BLK1)		Prepared	: 10/18/22 15:0	00 Analyz	zed: 10/20/2	2 22:10						
EPA 200.8												
Lead	ND		0.200	ug/L	1							
LCS (22J0727-BS1)		Prepared	: 10/18/22 15:0	00 Analyz	zed: 10/20/2	2 22:13						
EPA 200.8												
Lead	16.0		0.201	ug/L	1	15.0		106	85 - 115%			
Batch 22J0828 - EPA 3015A							Drin	king Wa	ter			
Blank (22J0828-BLK1)		Prepared	: 10/20/22 13:5	56 Analyz	zed: 10/21/2	2 07:35						
EPA 200.8												
Lead	ND		0.222	ug/L	1							
LCS (22J0828-BS1)		Prepared	: 10/20/22 13:5	56 Analyz	zed: 10/21/2	2 07:40						
EPA 200.8												
Lead	16.2		0.222	ug/L	1	16.7		97	85 - 115%			

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ORELAP ID: OR100062

PBS Engineering and Environmental Project: Hillsboro School District

 4412 S Corbett Ave
 Project Number:
 Lenox ES/23440.166/0006
 Report ID:

 Portland, OR 97239
 Project Manager:
 Dale Voeller
 A2J0411 - 10 25 22 1152

SAMPLE PREPARATION INFORMATION

		Total Metals	in Drinking Water by	EPA 200.8 (ICPMS)		
Prep: EPA 200.8	B Direct Analysis				Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 22J0727							
A2J0411-03	Drinking Water	EPA 200.8	10/07/22 00:00	10/18/22 15:00	10mL/10mL	10mL/10mL	1.00
A2J0411-04	Drinking Water	EPA 200.8	10/07/22 00:00	10/18/22 15:00	10mL/10mL	10mL/10mL	1.00
A2J0411-05	Drinking Water	EPA 200.8	10/07/22 00:00	10/18/22 15:00	10mL/10mL	10mL/10mL	1.00
A2J0411-06	Drinking Water	EPA 200.8	10/07/22 00:00	10/18/22 15:00	10mL/10mL	10mL/10mL	1.00
A2J0411-07	Drinking Water	EPA 200.8	10/07/22 00:00	10/18/22 15:00	10mL/10mL	10mL/10mL	1.00
A2J0411-08	Drinking Water	EPA 200.8	10/07/22 00:00	10/18/22 15:00	10mL/10mL	10mL/10mL	1.00
Prep: EPA 3015/	<u>A</u>				Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 22J0828		_					
A2J0411-01	Drinking Water	EPA 200.8	10/07/22 00:00	10/20/22 13:56	45mL/50mL	10mL/10mL	1.11
A2J0411-02	Drinking Water	EPA 200.8	10/07/22 00:00	10/20/22 13:56	45mL/50mL	10mL/10mL	1.11

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ORELAP ID: OR100062

PBS Engineering and EnvironmentalProject:Hillsboro School District4412 S Corbett AveProject Number:Lenox ES/23440.166/0006Portland, OR 97239Project Manager:Dale Voeller

Report ID: A2J0411 - 10 25 22 1152

QUALIFIER DEFINITIONS

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

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

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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) 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.

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PBS Engineering and Environmental
Project: Hillsboro School District
Project Number: Lenox ES/23440.166/0006
Portland, OR 97239
Project Manager: Dale Voeller

Report ID: A2J0411 - 10 25 22 1152

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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PBS Engineering and Environmental
Project: Hillsboro School District
4412 S Corbett Ave
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Portland, OR 97239
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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 <u>exception</u> 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 provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Jason Woodcock, Project Manager

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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

Hillsboro School District Project:

Project Number: Lenox ES/23440.166/0006

Project Manager: Dale Voeller

Report ID: A2J0411 - 10 25 22 1152

AZ-30411

Lead in Drinking Wate	er Testing Program
-----------------------	--------------------

Date Collected: 10/07/2022

PBS Project: <u>23440.166 / 0006</u>

School Name: <u>Lenox Elementary School</u>

Building: Main Building

Building Number: 22390100

Analysis Requested: <u>Lead (Pb) in Drinking Water</u>

Email Results To: voeller@pbsusa.com

Turnaround Time: 10-day

	Fixture Number	Sample Number	Location / Description
1	001		
2	002	22390100-002KF22A	Kitchen – pot filler sprayer
3	003	22390100-003KF22A	Kitchen – north prep sink faucet
4	004	22390100-004KF22A	Kitchen – north prep sink sprayer
5	005	22390100~005WB22A	Cafeteria water bottle filler
6	006	22390100-006DW22A	Cafeteria drinking fountain - left
7	007	22390100-007DW22A	Cafeteria, drinking fountain - right
8	008		
9	009		
10	010		
11	011		
12	012		
13	013		
14	014	22390100-014BF22A	Front hall – ADA restroom sink faucet
15	015	22390100-015BF22A	Staff room, staff restroom sink faucet
16	016		
17	017		
18	018	L Management of	
19	019		
20	020		

Relinquished By/Signature

Date/Time: 10/10/22 @ 1:00 Pm

Date/Time: 10/11/22 1403

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Jason Woodcock, Project Manager

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ORELAP ID: OR100062

PBS Engineering and Environmental

4412 S Corbett Ave Portland, OR 97239 Project:

Hillsboro School District

Project Number: Lenox ES/23440.166/0006

Project Manager: Dale Voeller

Report ID:

A2J0411 - 10 25 22 1152

	APEX LABS COOLE	R RECEIPT FORM	
Client: PBS		Element WO#: A2	MAN N
Project/Project #:	Lenox Elementary Scho		
Delivery Info:	,		
Date/time received: /	0/11/22@1403 By: -	ATIM	
Delivered by: Apex	Client ESS FedEx U	IPS Swift Senvoy SDS	Othor
Cooler Inspection	Date/time inspected: 10/11/22	@ 14 41 By AT \ \	Other
Chain of Custody incl	uded? Yes No	Custody seals? Yes1	No.
Signed/dated by client		custody scals: 1cs1	.40
Signed/dated by Apex			
		er #3 Cooler #4 Cooler #5 Coo	lon#6 C1
Temperature (°C)			
Received on ice? (Y/N	D. V		
Temp. blanks? (Y/N)	/		
Ice type: (Gel/Real/Otl			
Condition (In/Out):			
All samples intact? Ye	pples form initiated? Yes No Date/time inspected: 1011210	12.10 By: 1Chp	
Bottle labels/COCs agr	ee? Yes <u> No</u> Comments:		
COC/container discrepa	ancies form initiated? Yes No	×	
	eived appropriate for analysis? Yes		
Do VOA vials have vis	ible headspace? Yes No	NA X	
	cked: Yes <u>No</u> NA_pH appr	opriate? Yes NoNA	
Additional information:			
Labeled by:	Witness:	Collins	
D Nov		Cooler Inspected by:	Form Y-003 R-00 -
MY	D22	RHP	- 00-A coo-1 mic :

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