



April 21, 2023

Terry Taylor
Gresham-Barlow School District
Director of Facilities
Gresham, Oregon

Via email: taylor6@gresham.k12.or.us

Regarding: Water Sampling Report
Powell Valley Elementary School
4825 SE Powell Valley Road
Gresham, Oregon 97080
PBS Project 23767.133 Phase 0002

Dear Mr. Taylor:

On April 4, 2023, PBS Engineering and Environmental Inc. (PBS) performed water sampling of water outlets throughout Powell Valley Elementary School located at 4825 SE Powell Valley Road in Gresham, Oregon. In response to mitigation efforts performed by the Gresham-Barlow School District (District), PBS performed sampling at all outlets that previously showed concentrations of lead above the action level. All testing was requested by the District.

EXECUTIVE SUMMARY

Results showed concentrations of lead in all tested outlets were below action levels.

REGULATORY GUIDANCE

Sampling methodology and the interpretation of laboratory results was based on guidance provided under OAR 333-061-0400 and OAR 518-022-2223. Following these regulations, PBS collected the first 250 milliliters (mL) of water from each test location. Each sample was collected after the water had been sitting stagnant between 8 and 18 hours. This protocol is intended to maximize the likelihood that the highest concentrations of lead are found because the first 250 mL are analyzed for lead after overnight stagnation. Sampling protocol specifies 250-mL samples designed to assess the worst cases where the outlet is used for consumption.

OAR 333-061-0400 sets an action level at 15 parts per billion (ppb) and states that schools must perform follow-up testing every six years starting July 1, 2020, unless the tap was installed after 2014, meets the lead-free standard of no more than 0.25% lead by weight, and the tap was tested and no more than 1 ppb of lead was detected.

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

RESULTS

A total of 2 fixtures were sampled. Laboratory analysis indicated that all drinking water samples contained lead at concentrations below the Environmental Protection Agency (EPA) action level of 15 ppb. See the table below for more details.

Table 1: Drinking Water Sample Analytic Results

Sample ID*	Sample Location	Fixture Type	Sample Type	Sample Results (ppb)**
21830900-004SF23A	Room 54	Staff Faucet	Follow-Up	1.29
21830900-011CF23A	Room 16	Classroom Faucet	Follow-Up	1.56

ND = None Detected

*Sample ID numbers were assigned using rules created by the Oregon Department of Education.

**Sample results are presented in parts per billion (ppb).

CONCLUSIONS AND RECOMMENDATIONS

All outlets sampled have shown lead levels below the action limit and are safe for use.

For more detail, please refer to the attached chain-of-custody form and laboratory report. It should be noted that quality control (QC) sample results are included at the end of laboratory information. The QC samples are both laboratory blanks and spiked samples used internally by the laboratory to assess accuracy. Please feel free to contact me at 971.284.7762 or joel.mccarthy@pbsusa.com with any questions or comments.

Sincerely,

Joel McCarthy,
Sr. Project Manager
PBS Engineering and Environmental Inc.

Attachments: Laboratory Results
Chain-of-Custody Form

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



ANALYTICAL REPORT

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

Thursday, April 20, 2023
Joel McCarthy
PBS Engineering and Environmental
4412 S Corbett Ave
Portland, OR 97239

RE: A3D1017 - Powell Valley ES - 23767.133

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 A3D1017, which was received by the laboratory on 4/7/2023 at 12:55:00PM.

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)

Default Cooler 19.6 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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Jason Woodcock, Project Manager



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<u>PBS Engineering and Environmental</u> 4412 S Corbett Ave Portland, OR 97239	Project: <u>Powell Valley ES</u> Project Number: 23767.133 Project Manager: Joel McCarthy	Report ID: A3D1017 - 04 20 23 1018
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
21830900-004SF23A	A3D1017-01	Drinking Water	04/04/23 00:00	04/07/23 12:55
21830900-011CF23A	A3D1017-02	Drinking Water	04/04/23 00:00	04/07/23 12:55

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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
21830900-004SF23A (A3D1017-01)				Matrix: Drinking Water				
<u>Batch: 23D0525</u>								
Lead	1.29	---	0.200	ug/L	1	04/18/23 14:24	EPA 200.8	
21830900-011CF23A (A3D1017-02)				Matrix: Drinking Water				
<u>Batch: 23D0525</u>								
Lead	1.56	---	0.200	ug/L	1	04/18/23 14:28	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 23D0525 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (23D0525-BLK1)		Prepared: 04/13/23 11:19 Analyzed: 04/18/23 14:15										
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
LCS (23D0525-BS1)		Prepared: 04/13/23 11:19 Analyzed: 04/18/23 14:16										
<u>EPA 200.8</u>												
Lead	15.3	---	0.201	ug/L	1	15.0	---	102	85 - 115%	---	---	---

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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: 23D0525</u>							
A3D1017-01	Drinking Water	EPA 200.8	04/04/23 00:00	04/13/23 11:19	10mL/10mL	10mL/10mL	1.00
A3D1017-02	Drinking Water	EPA 200.8	04/04/23 00:00	04/13/23 11:19	10mL/10mL	10mL/10mL	1.00

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QUALIFIER DEFINITIONS

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

There are No Qualifiers on Sample or QC Data for this 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) 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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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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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.

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APEX LABS COOLER RECEIPT FORM

Client: PBS-PDX Element WO#: A3D1017

Project/Project #: POWELL VALLEY | 2776, 7.133

Delivery Info: 2024/10/23
Date/time received: 4/7/23 @ 1255 By: SAT

Delivered by: Apex Client ESS FedEx UPS Radio Morgan SDS Evergreen Other

Cooler Inspection Date/time inspected: 4/7/23 @ 1320 By: SAT

Chain of Custody included? Yes No

Signed/dated by client? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>19.6</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>N</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>None</u>						
Condition (In/Out):	<u>OUT</u>						

Cooler out of temp? (Y/N) Possible reason why: DRINKING WATER

Green dots applied to out of temperature samples? Yes No

Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 4/10/23 @ 12:16 By: AAW

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: No dates on cont. and IDs need
0USE23A & 11CF23A

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

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

Comments: _____

Additional information: _____

Labeled by: AAW Witness: DJS Cooler Inspected by: AAW

Form Y-003 R-00

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