

December 12, 2024

Will Wenzloff
 Hillsboro School District
 4901 SE Witch Hazel Road
 Hillsboro, Oregon 97123

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

Regarding: Drinking Water Sampling Report
 Miller Education Center East – Main Building and Multi-Purpose Building
 215 SE 6th Avenue
 Hillsboro, OR 97123
 PBS Project 23440.191 / 0003

Dear Mr. Wenzloff:

On June 1, 2024, PBS Engineering and Environmental LLC (PBS) performed drinking water sampling in the main building and multi-purpose building at the Miller Education Center East 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 building remain below the Oregon Department of Education (ODE) action level of 15 parts per billion (ppb).

Sixteen samples were delivered under chain of custody to Apex Laboratories in Tigard, Oregon for lead analysis. All samples analyzed below 15 ppb of lead. The following tables list the results of the analysis.

Main Building

Fixture Number	Sample Number	Location / Room No.	Results (ppb)
001	22390016-001SF24A	Break Room – sink faucet	2.04
002	22390016-002OT24A	Break Room – instant hot water tap	ND
003	22390016-003CF24A	Room 108 – sink faucet	2.07
004	22390016-004BF24A	Womens restroom -sampled left to right (1)	2.74
005	22390016-005BF24A	Womens restroom -sampled left to right (2)	0.299
006	22390016-006BF24A	Womens restroom -sampled left to right (3)	1.37
007	22390016-007BF24A	Mens restroom -sampled left to right (1)	0.456
008	22390016-008BF24A	Mens restroom -sampled left to right (2)	0.659
009	22390016-009BF24A	Mens restroom -sampled left to right (3)	0.303
010	22390016-010DW24A	Lobby drinking fountain – left	ND
011	22390016-011DW24A	Lobby drinking fountain - right	0.241

ND = no lead detected

Multi-Purpose Building

Fixture Number	Sample Number	Location / Room No.	Results (ppb)
001	22390017-001KF24A	Kitchen – sink faucet	2.00
002	22390017-002KF24A	Kitchen – hand wash sink	1.05
003	22390017-003BF24A	Restroom – sink faucet	0.952
004	22390017-004WB24A	Cafeteria – water bottle filler	ND
005	22390017-005DW24A	Cafeteria – drinking fountain	ND

ND = no lead detected

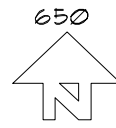
Please refer to the attached sample location drawings and laboratory analytical report for additional details. The laboratory analytical results are reported in micrograms per liter ($\mu\text{g/L}$), a unit of measure that is equivalent to ppb. Sampling methodology and the interpretation of laboratory 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.

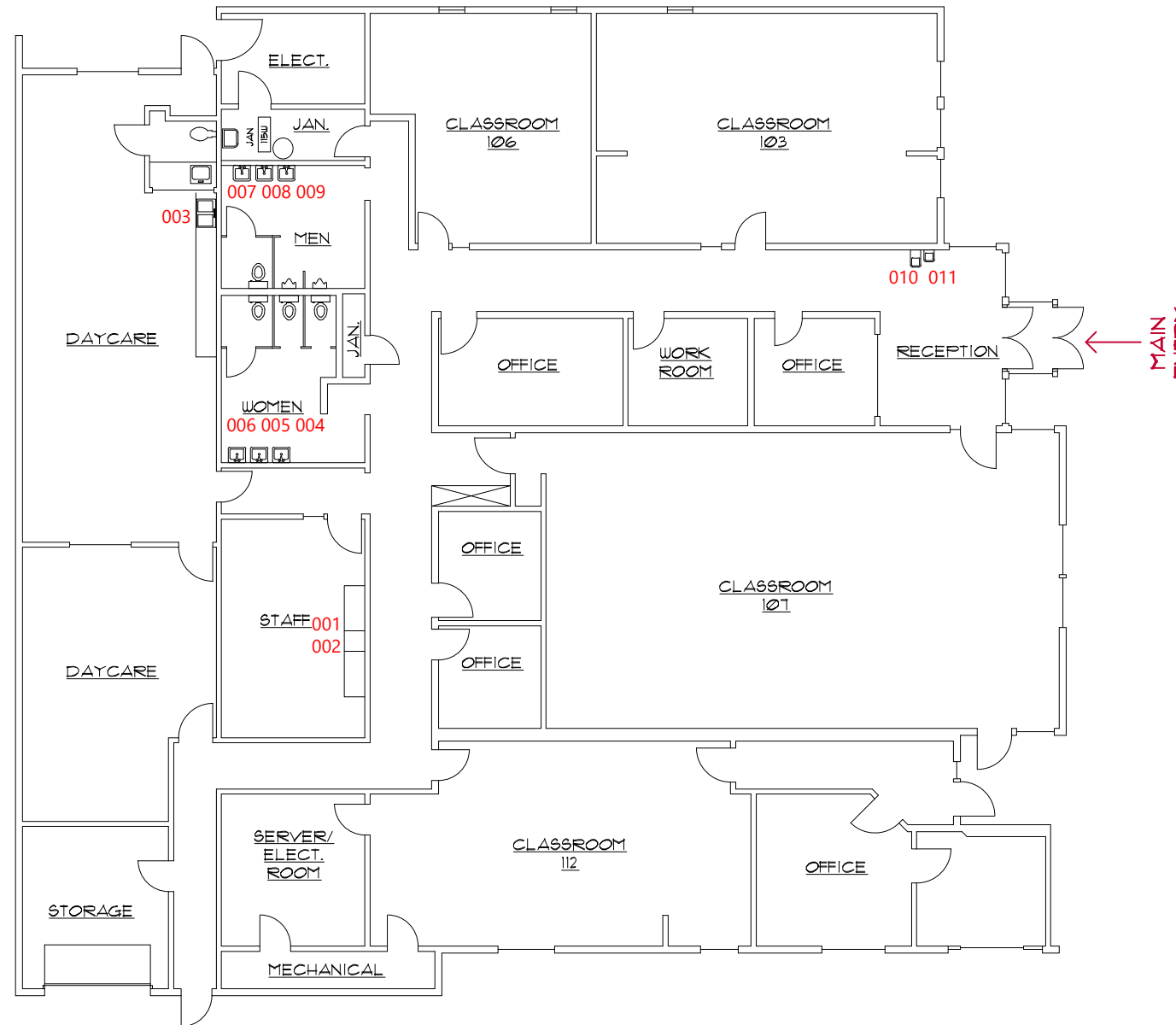
Sincerely,

Dale Voeller, CHMM, CSP
Senior Project Manager

Attachments: Sample Location Drawings
Laboratory Analytical Report



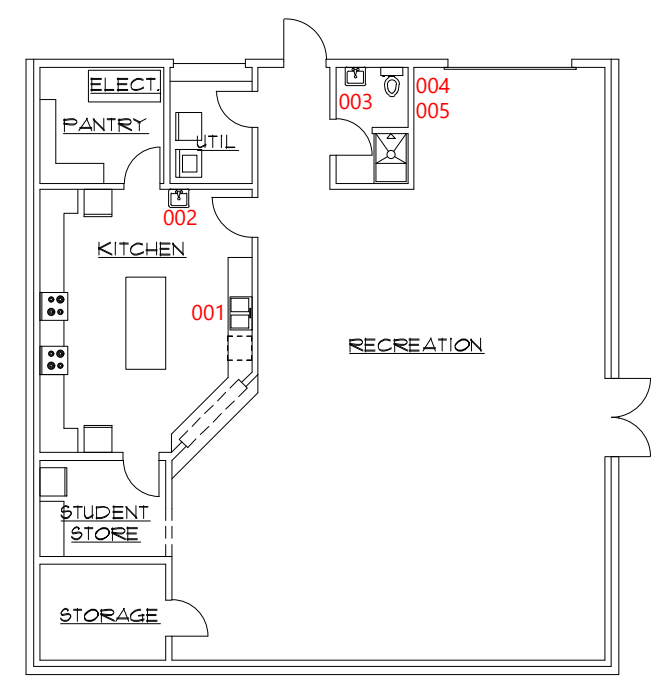
Fixture Location Drawing
June 2024





MILLER EDUCATION CENTER EAST
MULTI PURPOSE BUILDING
MAIN LEVEL BUILDING PLAN

Fixture Location Drawing
June 2024



Laboratory Analytical Results

MEC West – Main Building



ANALYTICAL REPORT

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

Thursday, June 13, 2024
Dale Voeller
PBS Engineering and Environmental
4412 S Corbett Ave
Portland, OR 97239

RE: A4F0787 - Hillsboro School District - MEC East/23440.191

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 A4F0787, which was received by the laboratory on 6/3/2024 at 10:31:00AM.

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		
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>		
(See Cooler Receipt Form for details)		
Default Cooler	1.6	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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503-718-2323
ORELAP ID: OR100062

<u>PBS Engineering and Environmental</u> 4412 S Corbett Ave Portland, OR 97239	Project: <u>Hillsboro School District</u> Project Number: MEC East/23440.191 Project Manager: Dale Voeller	Report ID: A4F0787 - 06 13 24 1222
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
22390016-001SF24A	A4F0787-01	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-002OT24A	A4F0787-02	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-003CF24A	A4F0787-03	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-004BF24A	A4F0787-04	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-005BF24A	A4F0787-05	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-006BF24A	A4F0787-06	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-007BF24A	A4F0787-07	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-008BF24A	A4F0787-08	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-009BF24A	A4F0787-09	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-010DW24A	A4F0787-10	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390016-011DW24A	A4F0787-11	Drinking Water	06/01/24 00:00	06/03/24 10:31

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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	
22390016-001SF24A (A4F0787-01)				Matrix: Drinking Water					
<u>Batch: 24F0210</u>									
Lead	2.04	---	0.200	ug/L	1	06/11/24 17:01	EPA 200.8		
22390016-002OT24A (A4F0787-02)				Matrix: Drinking Water					
<u>Batch: 24F0210</u>									
Lead	ND	---	0.200	ug/L	1	06/11/24 17:03	EPA 200.8		
22390016-003CF24A (A4F0787-03)				Matrix: Drinking Water					
<u>Batch: 24F0210</u>									
Lead	2.07	---	0.200	ug/L	1	06/11/24 17:04	EPA 200.8		
22390016-004BF24A (A4F0787-04)				Matrix: Drinking Water					
<u>Batch: 24F0279</u>									
Lead	2.74	---	0.200	ug/L	1	06/12/24 13:34	EPA 200.8		
22390016-005BF24A (A4F0787-05)				Matrix: Drinking Water					
<u>Batch: 24F0279</u>									
Lead	0.299	---	0.200	ug/L	1	06/12/24 13:39	EPA 200.8		
22390016-006BF24A (A4F0787-06)				Matrix: Drinking Water					
<u>Batch: 24F0279</u>									
Lead	1.37	---	0.200	ug/L	1	06/12/24 13:41	EPA 200.8		
22390016-007BF24A (A4F0787-07)				Matrix: Drinking Water					
<u>Batch: 24F0279</u>									
Lead	0.456	---	0.200	ug/L	1	06/12/24 13:42	EPA 200.8		
22390016-008BF24A (A4F0787-08)				Matrix: Drinking Water					
<u>Batch: 24F0279</u>									
Lead	0.659	---	0.200	ug/L	1	06/12/24 13:44	EPA 200.8		
22390016-009BF24A (A4F0787-09)				Matrix: Drinking Water					
<u>Batch: 24F0279</u>									
Lead	0.303	---	0.200	ug/L	1	06/12/24 13:46	EPA 200.8		

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PBS Engineering and Environmental 4412 S Corbett Ave Portland, OR 97239	Project: Hillsboro School District Project Number: MEC East/23440.191 Project Manager: Dale Voeller	Report ID: A4F0787 - 06 13 24 1222
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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
22390016-010DW24A (A4F0787-10)				Matrix: Drinking Water				
<u>Batch: 24F0279</u>								
Lead	ND	---	0.200	ug/L	1	06/12/24 13:51	EPA 200.8	
22390016-011DW24A (A4F0787-11)				Matrix: Drinking Water				
<u>Batch: 24F0279</u>								
Lead	0.241	---	0.200	ug/L	1	06/12/24 13:52	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 24F0210 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (24F0210-BLK1)		Prepared: 06/06/24 14:00		Analyzed: 06/11/24 16:19								
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (24F0210-BS1)		Prepared: 06/06/24 14:00		Analyzed: 06/11/24 16:21								
<u>EPA 200.8</u>												
Lead	15.0	---	0.201	ug/L	1	15.0	---	100	85 - 115%	---	---	
Matrix Spike (24F0210-MS2)		Prepared: 06/06/24 14:00		Analyzed: 06/11/24 17:06								
<u>QC Source Sample: 22390016-003CF24A (A4F0787-03)</u>												
<u>EPA 200.8</u>												
Lead	16.4	---	0.201	ug/L	1	15.0	2.07	96	70 - 130%	---	---	
Batch 24F0279 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (24F0279-BLK1)		Prepared: 06/10/24 07:40		Analyzed: 06/12/24 13:31								
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (24F0279-BS1)		Prepared: 06/10/24 07:40		Analyzed: 06/12/24 13:32								
<u>EPA 200.8</u>												
Lead	14.7	---	0.201	ug/L	1	15.0	---	98	85 - 115%	---	---	
Duplicate (24F0279-DUP1)		Prepared: 06/10/24 07:40		Analyzed: 06/12/24 13:36								
<u>QC Source Sample: 22390016-004BF24A (A4F0787-04)</u>												
<u>EPA 200.8</u>												
Lead	2.61	---	0.200	ug/L	1	---	2.74	---	---	5	20%	
Matrix Spike (24F0279-MS1)		Prepared: 06/10/24 07:40		Analyzed: 06/12/24 13:37								
<u>QC Source Sample: 22390016-004BF24A (A4F0787-04)</u>												
<u>EPA 200.8</u>												
Lead	17.0	---	0.201	ug/L	1	15.0	2.74	95	70 - 130%	---	---	

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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: 24F0210</u>							
A4F0787-01	Drinking Water	EPA 200.8	06/01/24 00:00	06/06/24 14:00	10mL/10mL	10mL/10mL	1.00
A4F0787-02	Drinking Water	EPA 200.8	06/01/24 00:00	06/06/24 14:00	10mL/10mL	10mL/10mL	1.00
A4F0787-03	Drinking Water	EPA 200.8	06/01/24 00:00	06/06/24 14:00	10mL/10mL	10mL/10mL	1.00
<u>Batch: 24F0279</u>							
A4F0787-04	Drinking Water	EPA 200.8	06/01/24 00:00	06/10/24 07:40	10mL/10mL	10mL/10mL	1.00
A4F0787-05	Drinking Water	EPA 200.8	06/01/24 00:00	06/10/24 07:40	10mL/10mL	10mL/10mL	1.00
A4F0787-06	Drinking Water	EPA 200.8	06/01/24 00:00	06/10/24 07:40	10mL/10mL	10mL/10mL	1.00
A4F0787-07	Drinking Water	EPA 200.8	06/01/24 00:00	06/10/24 07:40	10mL/10mL	10mL/10mL	1.00
A4F0787-08	Drinking Water	EPA 200.8	06/01/24 00:00	06/10/24 07:40	10mL/10mL	10mL/10mL	1.00
A4F0787-09	Drinking Water	EPA 200.8	06/01/24 00:00	06/10/24 07:40	10mL/10mL	10mL/10mL	1.00
A4F0787-10	Drinking Water	EPA 200.8	06/01/24 00:00	06/10/24 07:40	10mL/10mL	10mL/10mL	1.00
A4F0787-11	Drinking Water	EPA 200.8	06/01/24 00:00	06/10/24 07:40	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 one half of the Reporting Limit (RL).
 Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
 -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.

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Jason Woodcock, Project Manager



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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.

Benzofluoranthene Isomer Reporting:

Due to coelutions present on the analytical column, the results reported for Benzo(b+j)fluoranthene(s) represent the concentration of both the Benzo(b)fluoranthene and Benzo(j)fluoranthene isomers. Calibration, validation and accreditation are based on the Benzo(b)fluoranthene isomer.

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

Field Testing Parameters

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

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APEX LABS COOLER RECEIPT FORM

Client: PBS Element WO#: A4 E0787

Project/Project #: MEC East 23440.191/0003

Delivery Info:

Date/time received: 4/3/24 @ 1031 By: RK

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

From USDA Regulated Origin? Yes No

Cooler Inspection Date/time inspected: 4/3/24 @ 1141 By: JS

Chain of Custody included? Yes No

Signed/dated by client? Yes No

Contains USDA Reg. Soils? Yes No Unsure (email RegSoils)

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.6</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

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

Green dots applied to out of temperature samples? Yes No

Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 6/3/24 @ 12:00 By: KN

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: no time on cont; Proj # rec. as "23440.191/0001" instead of "23440.191/0003"

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 pH ID: A23E172

Comments: _____

Labeled by: KAB JS AKK for JS KAB 6/13/24

Witness: JS JS for KN 6/13/24

Cooler Inspected by: JS

Form Y-003 R-02

Apex Laboratories

Jason Woodcock, Project Manager

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Laboratory Analytical Results MEC

West Multi-Purpose Building



ANALYTICAL REPORT

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

Thursday, June 13, 2024
Dale Voeller
PBS Engineering and Environmental
4412 S Corbett Ave
Portland, OR 97239

RE: A4F0783 - Hillsboro School District - Miller Education Center East/23440.191

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 A4F0783, which was received by the laboratory on 6/3/2024 at 10:31:00AM.

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		
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>		
(See Cooler Receipt Form for details)		
Default Cooler	1.6	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



ANALYTICAL REPORT

Apex Laboratories, LLC

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

<u>PBS Engineering and Environmental</u> 4412 S Corbett Ave Portland, OR 97239	Project: <u>Hillsboro School District</u> Project Number: Miller Education Center Ea Project Manager: Dale Voeller	Report ID: A4F0783 - 06 13 24 1219
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
22390017-001KF24A	A4F0783-01	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390017-002KF24A	A4F0783-02	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390017-003BF24A	A4F0783-03	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390017-004WB24A	A4F0783-04	Drinking Water	06/01/24 00:00	06/03/24 10:31
22390017-005DW24A	A4F0783-05	Drinking Water	06/01/24 00:00	06/03/24 10:31

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Jason Woodcock, Project Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

PBS Engineering and Environmental 4412 S Corbett Ave Portland, OR 97239	Project: Hillsboro School District Project Number: Miller Education Center Ea Project Manager: Dale Voeller	Report ID: A4F0783 - 06 13 24 1219
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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
22390017-001KF24A (A4F0783-01)				Matrix: Drinking Water				
<u>Batch: 24F0210</u>								
Lead	2.00	---	0.200	ug/L	1	06/11/24 16:29	EPA 200.8	
22390017-002KF24A (A4F0783-02)				Matrix: Drinking Water				
<u>Batch: 24F0210</u>								
Lead	1.05	---	0.200	ug/L	1	06/11/24 16:31	EPA 200.8	
22390017-003BF24A (A4F0783-03)				Matrix: Drinking Water				
<u>Batch: 24F0210</u>								
Lead	0.952	---	0.200	ug/L	1	06/11/24 16:32	EPA 200.8	
22390017-004WB24A (A4F0783-04)				Matrix: Drinking Water				
<u>Batch: 24F0210</u>								
Lead	ND	---	0.200	ug/L	1	06/11/24 16:34	EPA 200.8	
22390017-005DW24A (A4F0783-05)				Matrix: Drinking Water				
<u>Batch: 24F0210</u>								
Lead	ND	---	0.200	ug/L	1	06/11/24 16:39	EPA 200.8	

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<u>PBS Engineering and Environmental</u> 4412 S Corbett Ave Portland, OR 97239	Project: <u>Hillsboro School District</u> Project Number: Miller Education Center Ea Project Manager: Dale Voeller	Report ID: A4F0783 - 06 13 24 1219
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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 24F0210 - EPA 200.8 Direct Analysis						Drinking Water						
Blank (24F0210-BLK1)		Prepared: 06/06/24 14:00 Analyzed: 06/11/24 16:19										
<u>EPA 200.8</u>												
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
LCS (24F0210-BS1)		Prepared: 06/06/24 14:00 Analyzed: 06/11/24 16:21										
<u>EPA 200.8</u>												
Lead	15.0	---	0.201	ug/L	1	15.0	---	100	85 - 115%	---	---	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Jason Woodcock, Project Manager



ANALYTICAL REPORT

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

<u>PBS Engineering and Environmental</u> 4412 S Corbett Ave Portland, OR 97239	Project: <u>Hillsboro School District</u> Project Number: Miller Education Center Ea Project Manager: Dale Voeller	Report ID: A4F0783 - 06 13 24 1219
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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: 24F0210</u>							
A4F0783-01	Drinking Water	EPA 200.8	06/01/24 00:00	06/06/24 14:00	10mL/10mL	10mL/10mL	1.00
A4F0783-02	Drinking Water	EPA 200.8	06/01/24 00:00	06/06/24 14:00	10mL/10mL	10mL/10mL	1.00
A4F0783-03	Drinking Water	EPA 200.8	06/01/24 00:00	06/06/24 14:00	10mL/10mL	10mL/10mL	1.00
A4F0783-04	Drinking Water	EPA 200.8	06/01/24 00:00	06/06/24 14:00	10mL/10mL	10mL/10mL	1.00
A4F0783-05	Drinking Water	EPA 200.8	06/01/24 00:00	06/06/24 14:00	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 one half of the Reporting Limit (RL).
 Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
 -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.

Apex Laboratories

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Jason Woodcock, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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

PBS Engineering and Environmental

4412 S Corbett Ave
Portland, OR 97239

Project: **Hillsboro School District**

Project Number: **Miller Education Center Ea**

Project Manager: **Dale Voeller**

Report ID:

A4F0783 - 06 13 24 1219

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.

Benzofluoranthene Isomer Reporting:

Due to coelutions present on the analytical column, the results reported for Benzo(b+j)fluoranthene(s) represent the concentration of both the Benzo(b)fluoranthene and Benzo(j)fluoranthene isomers. Calibration, validation and accreditation are based on the Benzo(b)fluoranthene isomer.

Apex Laboratories

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Jason Woodcock, Project Manager



ANALYTICAL REPORT

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

Table with 3 columns: Client (PBS Engineering and Environmental), Project (Hillsboro School District), and Report ID (A4F0783 - 06 13 24 1219).

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

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

Field Testing Parameters

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

Apex Laboratories

Handwritten signature of Jason Woodcock

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Jason Woodcock, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

PBS Engineering and Environmental 4412 S Corbett Ave Portland, OR 97239	Project: Hillsboro School District Project Number: Miller Education Center Ea Project Manager: Dale Voeller	Report ID: A4F0783 - 06 13 24 1219
--	--	---

APEX LABS COOLER RECEIPT FORM

Client: PBS Element WO#: A4 F0783
Project/Project #: Miller Education Center East 2340.191/0003

Delivery Info:
 Date/time received: 4/3/24 @ 1031 By: RK
 Delivered by: Apex Client ESS FedEx UPS Radio Morgan SDS Evergreen Other _____
 From USDA Regulated Origin? Yes _____ No

Cooler Inspection Date/time inspected: 4/3/24 @ 1141 By: JS
 Chain of Custody included? Yes No _____
 Signed/dated by client? Yes No _____
 Contains USDA Reg. Soils? Yes _____ No Unsure (email RegSoils) _____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.6</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes No
 Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 4/3/24 @ 11:48 By: KN
 All samples intact? Yes No _____ Comments: _____

Bottle labels/COCs agree? Yes _____ No Comments: sample 1 reads "22390017-001KFF24A" instead of "22390017-001KFF24A" / no time listed on bottles / proj # ver as 23440.191/0003
 COC/container discrepancies form initiated? Yes _____ No instead of 23440.191/0003

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 _____ pH ID: A23 I 172
 Comments: _____

Labeled by: WAB Witness: JS Cooler Inspected by: JS
WAB for KN 4/3/24 Form Y-003 R-02