

Limited Drinking Water Testing Report

Captain Gray Elementary School

1102 N 10th Avenue

Pasco, Washington 99301

Prepared for:

Pasco School District

1215 W. Lewis Street

Pasco, WA 99301

February 2024

PBS Project 64324.078



400 BRADLEY BLVD, SUITE 210

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General Information

BUILDING DATA

Captain Gray Elementary School
1102 N 10th Avenue
Pasco, Washington 99301

CLIENT DATA

Pasco School District
1215 W Lewis Street
Pasco, Washington 99301

Survey Scope

PBS Engineering and Environmental Inc. (PBS) has performed limited drinking water testing for lead and copper content of the Captain Gray Elementary School (CGES) kitchen, classroom, and staff drinking water fixtures and compiled this report with the following information:

- Inspection summary
- Water sample inventory
- Findings, conclusions, and recommendations
- Floor plan drawings indicating water sample locations
- Laboratory information

PBS certifies that the information is correct and accurate within the standards of professional quality and contractual obligations.

Carson Linklater
Project Designer



2024.02.14
14:22:55
-08'00'

Signature

Date

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1 INTRODUCTION

PBS Engineering and Environmental (PBS) performed limited drinking water sampling at Captain Gray Elementary School for Pasco School District (the District). Drinking water in Washington State is regulated by the State of Washington Engrossed Second Substitute House Bill 1139. The testing process followed the protocols described in the Environmental Protection Agency (EPA) document, *"3T's for Reducing Lead in Drinking Water in Schools."* Our scope of work included first draw water sampling of all fixtures used for drinking water in specified locations throughout the school. The work scope included analysis for lead and copper.

The District understands that public education and communication is an important element to this project. The Lead Contamination Control Act of 1988 has mandatory public notice requirements for reporting lead test results. There are two separate public availability notifications the schools must perform: making a copy of the sampling results available in the school administrative offices; and providing notification to relevant parent, teacher, and employee organizations that the sampling program results are available.

2 BACKGROUND

Lead and copper are metals commonly found in drinking water. Levels of these metals in drinking water are regulated by the Environmental Protection Agency (EPA) and Washington State Department of Health (DOH) due to their ability to have negative impacts on human health. Washington Administrative Code has published drinking water testing procedures and criteria for copper and lead in schools (WAC 246-366A-130 Lead and WAC 246-366A-135 Copper).

DOH recommends compliance with the EPA document, *"3Ts for Reducing Lead in Drinking Water in Schools"* (3Ts) until WAC 246-366A becomes effective.

3 HISTORY

Lead, a metal found in natural deposits, is commonly found in plumbing materials and water service lines. Although the main sources of exposure to lead are ingestion of paint chips and dust inhalation, EPA estimates that 10 to 20% of human exposure to lead may come from lead in drinking water. Lead in drinking water can cause a variety of adverse health effects and are most severe for infants and children, for whom exposure to lead in drinking water can result in delays in physical and mental development along with slight deficits in attention span and learning abilities. In adults, exposure can cause kidney problems.

Copper is a naturally occurring metal that is an essential element for all living organisms. However, exposure to elevated levels of copper may cause intestinal and stomach related problems, liver or kidney damage, and complications of Wilson's disease in those who are genetically predisposed. High levels of copper occur in drinking water when corrosive water comes in contact with copper plumbing and copper-containing fixtures in the water distribution system.

Lead and copper are rarely found in source water. Typically, these metals get into the system after the water leaves the local treatment plant. The source of lead or copper in a facility's water is most likely the corrosion of lead- and copper-containing pipes, fixtures, or solder. This corrosion often occurs from a reaction between the water and plumbing materials. Through the early 1900s, lead pipes were commonly used for interior plumbing. After 1930, copper generally replaced lead as the most commonly used material for pipes. Until the mid to late 1980s, before the lead-free requirements of the 1986 Safe Drinking Water Act, lead solder was used to join copper pipes. Buildings constructed after this period should have joints made of lead-free solders.

In summary, homes and other buildings built before 1986 are more likely to have lead pipes, fixtures, and solder. New buildings are not likely to have lead pipes in their plumbing systems but are very likely to have copper pipes with solder joints or fixtures that contain lead alloys. Prior to the EPA's 2016 Safe Drinking Water Act (Act), plumbing components could be considered "lead-free" and contain up to 8% lead in the alloy. As a result of the Act, that "lead-free" designation was changed to 0.25%. The result is pre-2016 buildings are at risk because plumbing that was legally considered "lead-free" may have been installed. The most common problem is with brass- or chrome-plated faucets and fixtures, which can leach significant amounts of lead into the water.

4 METHODOLOGY

4.1 Lead and Copper Sampling

PBS performed drinking water sampling at Captain Gray Elementary School (CGES) between November 2023 and February 2024. The testing was requested by the District to ensure that concentrations of lead and copper in drinking water remain below the EPA standards. PBS Engineering and Environmental Inc. (PBS) was requested to perform sampling in each of the following fixtures and locations:

1. Kitchen – Central East Wall, Southern Standard Faucet
2. Staff Lounge – Standard Faucet
3. Portable 130 – West Wall, Standard Faucet
4. Classroom 20 – Drinking Fountain
5. Classroom 5 – Standard Faucet
6. Kitchen – Northern East Wall, Standard Faucet
7. Kitchen – Northern East Wall, Sprayer
8. Kitchen – Central East Wall, Northern Standard Faucet
9. Kitchen – South Wall, Standard Faucet
10. Kitchen – South Wall, Sprayer
11. Kitchen Bathroom – Bathroom Sink
12. Kitchen – Boiler/Appliance
13. Workroom – Standard Faucet

Following the 3Ts guidelines, PBS performed the 2-Step Sampling at the Tap (2-Step) protocol. Step one involves collecting the first 250 milliliters (mL) of water from each test location (first draw). Each sample was collected after the water had been sitting stagnant for a period of between 8 and 18 hours. This EPA protocol is intended to maximize the likelihood that the highest concentrations of lead and copper are found because the first 250 mL are analyzed after overnight stagnation. In step two, PBS collected flush samples after the fixture was allowed to run for 30 seconds. The 2-Step process is designed to pinpoint where lead or copper is entering the system (fixture versus interior plumbing components). Flush samples were held/not analyzed pending results of First Draw samples.

The sample collection procedures were generally as follows:

1. First draw water samples were collected by PBS Industrial Hygienists after a normal day of usage and the water had been sitting in the pipes for 8 – 18 hours. The first draw samples consisted of the first 250 milliliters (ml) of water from the source without wasting any water.
2. The samples were assigned unique identification numbers and the drawings were labeled to identify each location.
3. Chain-of-custody documentation was completed and cross-matched with drawings and container labels.

Due to limited sampling request, the sample numbering scheme was modified to include location, fixture ID, fixture type, sample year, and draw letter.

5 FINDINGS

5.1 Lead and Copper Sampling

All samples were collected in pre-cleaned 250 mL plastic bottles provided by the laboratory. The sample bottles were labeled with unique identification numbers and delivered under chain of custody to On-Site Environmental Inc. of Redmond, Washington, AMTest Laboratories of Kirkland, Washington, and NVL Laboratories of Seattle, Washington (Washington State Certified Drinking Water Laboratories). A total of 25 first-draw samples were collected for lead and copper analysis in accordance with EPA Method 200.8 via inductively coupled plasma mass spectrometry.

Please refer to the following table for the results of the drinking water testing.

Results of November-February Lead (Pb) and Copper (Cu) Drinking Water Sampling at CGES

Sample Number	Sample Location	Sample Date	First Draw	Flush	Initial / Follow-up Sample
Kitchen-001-KF23A	Kitchen – Central East Wall, Southern Standard Faucet	11/02/2023	Pb: 4.5 ppb Cu: 170 ppb	-	Initial
Kitchen-001-KF23A	Kitchen – Central East Wall, Southern Standard Faucet	12/04/2023	Pb: 2.7 ppb Cu: 170 ppb	-	Follow-Up
Kitchen-001-KF24A	Kitchen – Central East Wall, Southern Standard Faucet	01/04/2024	Pb: 0.687 ppb Cu: 79.6 ppb	-	Follow-Up
Lounge-002-SF23A	Staff Lounge – Standard Faucet	11/02/2023	Pb: ND Cu: 27 ppb	-	Initial
Lounge-002-SF24A	Staff Lounge – Standard Faucet	01/04/2024	Pb: ND Cu: 67.8 ppb	-	Follow-Up
Portable130-003-DW23A	Portable 130 – West Wall, Standard Faucet	11/02/2023	Pb: ND Cu: 59 ppb	-	Initial
Classroom20-004-DW23A	Classroom 20 – Drinking Fountain	11/02/2023	Pb: ND Cu: ND	-	Initial
Classroom5-005-DW23A	Classroom 5 – Standard Faucet	11/02/2023	Pb: ND Cu: 270	-	Initial
Kitchen-006-KF23A	Kitchen – Northern East Wall, Standard Faucet	12/04/2023	Pb: 31 ppb Cu: 230 ppb	-	Initial
Kitchen-006-KF24A	Kitchen – Northern East Wall, Standard Faucet	01/04/2024	Pb: 7.49 ppb Cu: 169 ppb	-	Follow-Up
Kitchen-006-KF24A	Kitchen – Northern East Wall, Standard Faucet	02/01/2024	Pb: ND Cu: 37 ppb	-	Follow-Up
Kitchen-007-KF23A	Kitchen – Northern East Wall, Sprayer	12/04/2023	Pb: 6.1 ppb Cu: 220 ppb	-	Initial
Kitchen-007-KF24A	Kitchen – Northern East Wall, Sprayer	01/04/2024	Pb: 0.339 ppb Cu: 22.3 ppb	-	Follow-Up
Kitchen-007-KF24A	Kitchen – Northern East Wall, Sprayer	02/01/2024	Pb: ND Cu: 12 ppb	-	Follow-Up
Kitchen-008-KF23A	Kitchen – Central East Wall, Northern Standard Faucet	12/04/2023	Pb: 7.0 ppb Cu: 300 ppb	-	Initial
Kitchen-008-KF24A	Kitchen – Central East Wall, Northern Standard Faucet	01/04/2024	Pb: 2.45 ppb Cu: 86.2 ppb	-	Follow-Up
Kitchen-009-KF23A	Kitchen – South Wall, Standard Faucet	12/04/2023	Pb: 4.1 ppb Cu: 230 ppb	-	Initial

Sample Number	Sample Location	Sample Date	First Draw	Flush	Initial / Follow-up Sample
Kitchen-009-KF24A	Kitchen – South Wall, Standard Faucet	01/04/2024	Pb: 0.895 ppb Cu: 277 ppb	-	Follow-Up
Kitchen-010-KF23A	Kitchen – South Wall, Sprayer	12/04/2023	Pb: ND Cu: 61 ppb	-	Initial
Kitchen-010-KF24A	Kitchen – South Wall, Sprayer	01/04/2024	Pb: 0.677 ppb Cu: 53.6 ppb	-	Follow-Up
Kitchen-011-KF23A	Kitchen Bathroom – Bathroom Sink	12/04/2023	Pb: ND Cu: 150 ppb	-	Follow-Up
Kitchen-012-KF23A	Kitchen – Boiler/Appliance	12/04/2023	Pb: ND Cu: 48 ppb	-	Initial
Kitchen-012-KF24A	Kitchen – Boiler/Appliance	01/04/2024	Pb: ND Cu: 40.9 ppb	-	Follow-Up
Workroom-013-SF24A	Workroom – Standard Faucet	01/04/2024	Pb: 6.26 ppb Cu: 172 ppb	-	Initial
Workroom-013-SF24A	Workroom – Standard Faucet	02/01/2024	Pb: ND Cu: 14 ppb	-	Follow-Up

ND: not detected; ppb: parts per billion

Bold: denotes exceedance

Water samples collected from CGES were compared to the drinking water standard for lead of >5 micrograms per liter (µg/L) or parts per billion (ppb). Results greater than this threshold are considered elevated and follow-up sampling is recommended to help pinpoint the source of the contamination.

Regarding initial first-draw samples, Kitchen-006, Kitchen-007, Kitchen-008, and Workroom-013 were found to contain levels above 5 ppb. No other first-draw samples had an elevated concentration. As a result, the District installed point of use filters at each of the impaired fixtures.

Following the installation of point of use filters at the previously mentioned fixtures, PBS collected a first-draw sample at each location. The lead result for these samples were below the lead standard with the exception of Kitchen-006. The District then installed more efficient point of use filters at Kitchen-006, Kitchen-007, and Kitchen-008. Following this remedial action, PBS collected a first-draw sample at each fixture. The lead results for these samples were below the lead standard.

Water samples collected from CGES were compared to the WAC drinking water standard for copper of >1.3 milligrams per liter (mg/L) or >1,300 ppb. Results greater than this threshold are considered elevated and follow-up sampling is recommended to help pinpoint the source of the contamination.

No first-draw samples were found to have elevated levels of copper.

Drinking water testing for copper is not currently required under WAC 246-366A-135 or the 3Ts. As such, no follow-up samples for the elevated copper results were required.

Refer to Appendix A for a sample location diagram. Refer to Appendix B for laboratory reports and chain of custody documentation. Copies of the laboratory drinking water certifications are provided in Appendix C.

6 CONCLUSIONS AND RECOMMENDATIONS

A total of Four (4) fixtures were found to contain lead levels >5 ppb by laboratory analysis. Non-operational fixtures should be sampled prior to use.

The State of Washington Engrossed Second Substitute House Bill 1139 requires for any school that receives an elevated sample result of >5 ppb lead at one or more drinking water outlets the school's governing body to adopt a school action plan in accordance with RCW 28A.210.410 section 5 within 6 months of receipt of results.

All fixtures with sample results of >15 ppb lead or > 1,300 ppb for copper need to be shut off as soon as practicable until a lead contamination mitigation measure, such as use of a filter or fixture replacement, is implemented.

The Washington State Department of Health Technical Guidance lists the following as remediation options for fixtures with elevated lead levels:

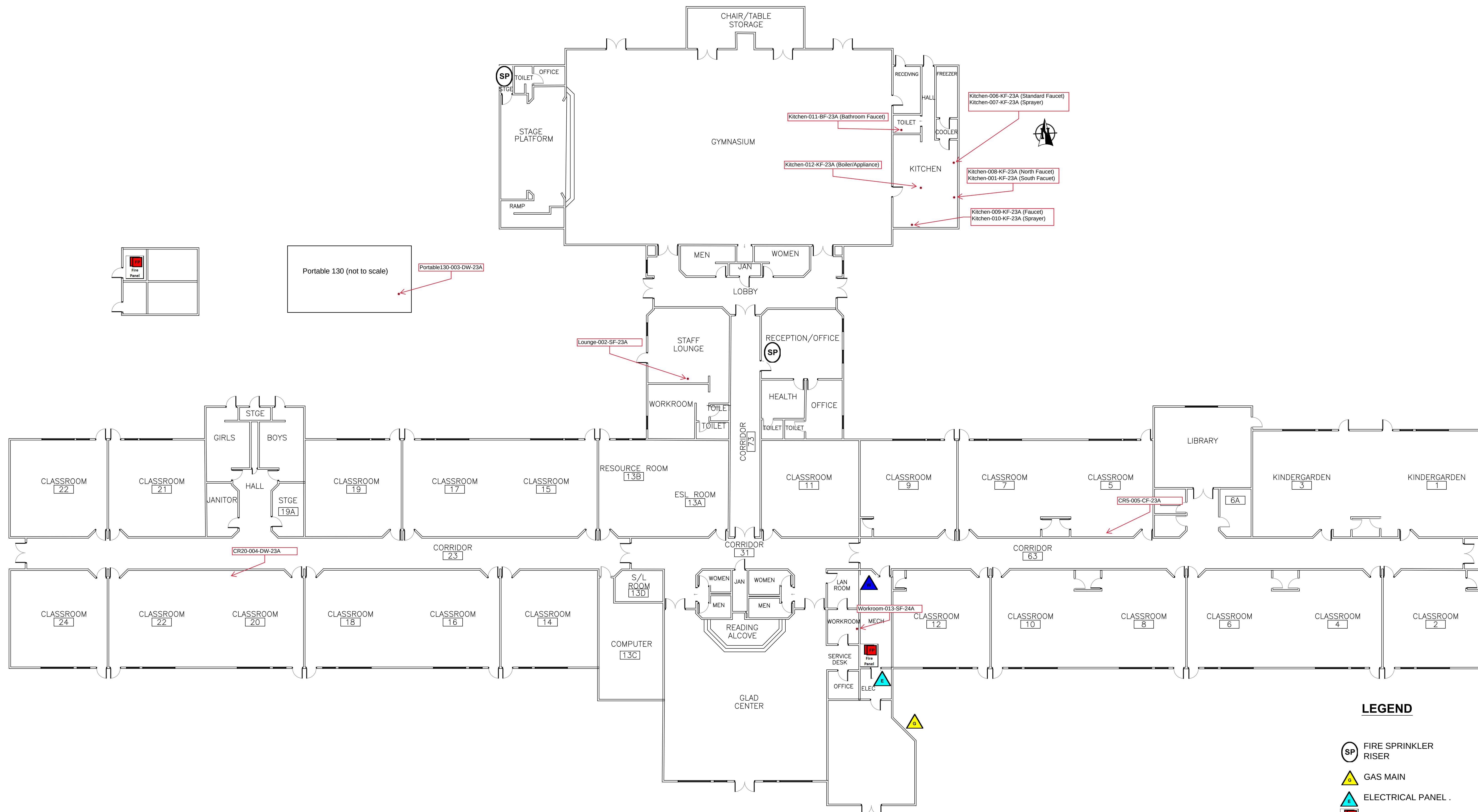
- Shutting off outlets or taking out of service.
 - This is the lowest cost option. Generally used for outlets that are in areas of infrequent use or if there are other fixtures in the area as alternate options.
- Mark outlets as "hand wash only".
 - All fixtures not sampled/not intended for consumption should be labeled "hand wash only" or "non-potable water" (e.g. Restrooms, science room, science prep rooms, art rooms, hose spigots or other fixtures not intended for consumption)
- Fixture/plumbing replacement.
 - This option requires follow up testing after replacement to ensure remediation actions have reduced lead levels to less than 5 ppb or less than 1,300ppb for copper. For fixture replacement PBS recommends collecting flush (second draw) samples to help determine if the lead contamination is coming from the fixture or the buildings plumbing.

Please do not hesitate to contact us if you have any questions regarding this report or require additional information.

REPORT END

APPENDIX A

Sample Location Drawings



LEGEND

-  FIRE SPRINKLER RISER
-  GAS MAIN
-  ELECTRICAL PANEL
-  FIRE PANEL
-  WATER
-  SEWER

APPENDIX B

Drinking Water Sampling Report and Chain of Custodies



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

November 8, 2023

J. Kanani Patricio-Young
PBS Engineering & Environmental
400 Bradley Blvd., Suite 106
Richland, WA 99352

Re: Analytical Data for Project 64324.078
Laboratory Reference No. 2311-057

Dear J.:

Enclosed are the analytical results and associated quality control data for samples submitted on November 6, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2023
Samples Submitted: November 6, 2023
Laboratory Reference: 2311-057
Project: 64324.078

Case Narrative

Samples were collected on November 3, 2023 and received by the laboratory on November 6, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: November 8, 2023
 Samples Submitted: November 6, 2023
 Laboratory Reference: 2311-057
 Project: 64324.078

**DRINKING WATER METALS
 EPA 200.8**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Kitchen-001-KF23A						
Laboratory ID: 11-057-01						
Copper	170	10	EPA 200.8		11-7-23	
Lead	4.5	2.5	EPA 200.8		11-7-23	

Client ID: Lounge-002-SF23A						
Laboratory ID: 11-057-02						
Copper	27	10	EPA 200.8		11-7-23	
Lead	ND	2.5	EPA 200.8		11-7-23	

Client ID: Portable130-003-DW23A						
Laboratory ID: 11-057-03						
Copper	59	10	EPA 200.8		11-7-23	
Lead	ND	2.5	EPA 200.8		11-7-23	

Client ID: CR20-004-DW23A						
Laboratory ID: 11-057-04						
Copper	ND	10	EPA 200.8		11-7-23	
Lead	ND	2.5	EPA 200.8		11-7-23	

Client ID: CR5-005-CF23A						
Laboratory ID: 11-057-05						
Copper	270	10	EPA 200.8		11-7-23	
Lead	ND	2.5	EPA 200.8		11-7-23	



Date of Report: November 8, 2023
 Samples Submitted: November 6, 2023
 Laboratory Reference: 2311-057
 Project: 64324.078

**DRINKING WATER METALS
 EPA 200.8
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1107DW1					
Copper	ND	4.0	EPA 200.8		11-7-23	
Lead	ND	1.0	EPA 200.8		11-7-23	

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		
					Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	11-044-01									
	ORIG	DUP								
Copper	33.7	33.9	NA	NA		NA	NA	1	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	11-044-01									
	MS	MSD	MS	MSD		MS	MSD			
Copper	215	226	200	200	33.7	90	96	75-125	5	20
Lead	184	198	200	200	ND	92	99	75-125	8	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and June have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Page 1 of 1

Company: **PBS ENGINEERING & ENVIRONMENTAL**

Laboratory Number: 11-057

☐ Same Day ☐ 1 Day

☒ 2 Days ☐ 3 Days

☒ 2 Days ☐ 3 Days

□

☐ _____ (other)

Date **Time**

Number of Containers

NWTPH-HCID
NWTPH-Gx/BTEX (8021 8260)
NWTPH-Gx
NWTPH-Dx (SG Clean-up)
Volatiles 8260
Halogenated Volatiles 8260
EDB EPA 8011 (Waters Only)
Semivolatiles 8270/SIM (with low-level PAHs)
PAHs 8270/SIM (low-level)
PCBs 8082
Organochlorine Pesticides 8081
Organophosphorus Pesticides 8270/SIM
Chlorinated Acid Herbicides 8151
Total RCRA Metals
Total MTCA Metals
TCLP Metals
HEM (oil and grease) 1664
Drinking Water EPA 200.8 (Lead & Copper)
Drinking Water EPA 13 Priority Pollutant Metals
Drinking Water EPA 24 Target Analyte Metals (TAL)
% Moisture

11/3/23	6:01	3
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13/23	6.07	W
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1/3/23	6:11	W
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13/23	6:15	W
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1/3/23	6:18	M
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	Company
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100 Engineering & En

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[illegible][illegible][illegible]

Reviewed/Date

PBS ENGINEERING & ENVIRONMENTAL
400 BRADLEY BLVD, SUITE 106
RICHLAND, WA 99352

EMAIL: RESULTS@PUSUSA.COM
- KANAANI.YOUNG@PUSUSA.COM
- CARSON.LINKLATER@PUSUSA.COM
- KAITLYN.GAMBLE@PUSUSA.COM

BILL TO: ACCOUNTPAYABLES@PUSUSA.COM
O: 509-542-1800 / D: 509-575-7833

Data Package: Standard ☐ Level III ☐

Chromatograms with final report ☐ Elect

Key Deliverables (EDDs) ☐



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 15, 2023

J. Kanani Patricio-Young
PBS Engineering & Environmental
400 Bradley Blvd., Suite 106
Richland, WA 99352

Re: Analytical Data for Project 64324.078 Phase 0002
Laboratory Reference No. 2312-049

Dear J.:

Enclosed are the analytical results and associated quality control data for samples submitted on December 5, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 15, 2023
Samples Submitted: December 5, 2023
Laboratory Reference: 2312-049
Project: 64324.078 Phase 0002

Case Narrative

Samples were collected on November 30 and December 1, 2023 and received by the laboratory on December 5, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: December 15, 2023
 Samples Submitted: December 5, 2023
 Laboratory Reference: 2312-049
 Project: 64324.078 Phase 0002

**DRINKING WATER METALS
EPA 200.8**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: Kitchen-001-KF-23A						
Laboratory ID:	12-049-01					
Copper	170	10	EPA 200.8		12-13-23	
Lead	2.7	2.5	EPA 200.8		12-13-23	

Client ID: Kitchen-006-KF-23A						
Laboratory ID:	12-049-02					
Copper	230	10	EPA 200.8		12-13-23	
Lead	31	2.5	EPA 200.8		12-13-23	

Client ID: Kitchen-007-KF-23A						
Laboratory ID:	12-049-03					
Copper	220	10	EPA 200.8		12-13-23	
Lead	6.1	2.5	EPA 200.8		12-13-23	

Client ID: Kitchen-008-KF-23A						
Laboratory ID:	12-049-04					
Copper	300	10	EPA 200.8		12-13-23	
Lead	7.0	2.5	EPA 200.8		12-13-23	

Client ID: Kitchen-009-KF-23A						
Laboratory ID:	12-049-05					
Copper	230	10	EPA 200.8		12-13-23	
Lead	4.1	2.5	EPA 200.8		12-13-23	

Client ID: Kitchen-010-KF-23A						
Laboratory ID:	12-049-06					
Copper	61	10	EPA 200.8		12-13-23	
Lead	ND	2.5	EPA 200.8		12-13-23	

Client ID: Kitchen-011-KF-23A						
Laboratory ID:	12-049-07					
Copper	150	10	EPA 200.8		12-13-23	
Lead	ND	2.5	EPA 200.8		12-13-23	



Date of Report: December 15, 2023
Samples Submitted: December 5, 2023
Laboratory Reference: 2312-049
Project: 64324.078 Phase 0002

DRINKING WATER METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	Kitchen-012-KF-23A					
Laboratory ID:	12-049-08					
Copper	48	10	EPA 200.8		12-13-23	
Lead	ND	2.5	EPA 200.8		12-13-23	



Date of Report: December 15, 2023
 Samples Submitted: December 5, 2023
 Laboratory Reference: 2312-049
 Project: 64324.078 Phase 0002

**DRINKING WATER METALS
 EPA 200.8
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1213DW3					
Copper	ND	4.0	EPA 200.8		12-13-23	
Lead	ND	1.0	EPA 200.8		12-13-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	12-049-01							
	ORIG	DUP						
Copper	172	173	NA	NA	NA	NA	1	20
Lead	2.67	2.78	NA	NA	NA	NA	4	20

MATRIX SPIKES

Laboratory ID:	12-049-01									
	MS	MSD	MS	MSD		MS	MSD			
Copper	377	356	200	200	172	103	92	75-125	6	20
Lead	210	211	200	200	2.67	103	104	75-125	1	20





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.on-site-env.com

Chain of Custody

Page 1 of 1

Analytical Laboratory Testing Services 14648 NE 96th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com										Turnaround Request (in working days)									
Company: PBS Engineering and Environmental										(Check One) ☐ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days ☒ Standard (7 Days)									
Project Number: 64324.078 Phase 0002																			
Project Name: P50 Captain Grey ES																			
Project Manager: JKP Young																			
Sampled by: Carson Linklater										☐ (other) _____									
Lab ID										Date Sampled									
Sample Identification										Time Sampled									
Matrix										Number of Containers									
1 Kitchen-001-KF-23A										11/30/23 5:40 W 1									
2 Kitchen-006-KF-23A										11/30/23 5:46 W 1									
3 Kitchen-007-KF-23A										11/30/23 5:49 W 1									
4 Kitchen-008-KF-23A										11/30/23 5:53 W 1									
5 Kitchen-009-KF-23A										11/30/23 5:57 W 1									
6 Kitchen-010-KF-23A										11/30/23 6:01 W 1									
7 Kitchen-011-KF-23A										12/1/23 5:43 W 1									
8 Kitchen-012-KF-23A										12/1/23 5:47 W 1									
Signature										Company									
Relinquished										PBS Engineering + Environmental 12/4/23 3:00pm									
Received										12/5/23 1200									
Relinquished																			
Received																			
Relinquished																			
Received																			
Reviewed/Date										Reviewed/Date									
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐										Data Package: Standard ☐ Level III ☐ Level IV ☐									
Comments/Special Instructions										PBS Engineering + Environmental 400 Bradley Blvd. Suite 210 Email Results to: -Kananii.Young@pbsusa.com -Carson.Linklater@pbsusa.com Bill to: Account payable@pbsusa.com O: 509-947-1600 / D: 509-375-7833									
Laboratory Number: 12-049										NWTPH-HCID NWTPH-Gx/BTEX NWTPH-Gx NWTPH-Dx (☐ Acid / SG Clean-up) Volatiles 8260C Halogenated Volatiles 8260C EDB EPA 8011 (Waters Only) Semivolatiles 8270D/SIM (with low-level PAHs) PAHs 8270D/SIM (low-level) PCBs 8082A Organochlorine Pesticides 8081B Organophosphorus Pesticides 8270D/SIM Chlorinated Acid Herbicides 8151A Total RCRA Metals Total MTCA Metals TCLP Metals HEM (oil and grease) 1664A Drinking Water EPA 200.8 (Pb+Copper) % Moisture									



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 9, 2024

Carson Linklater
PBS Engineering & Environmental
400 Bradley Blvd., Suite 106
Richland, WA 99352

Re: Analytical Data for Project 64324.078 Ph0003
Laboratory Reference No. 2401-049

Dear Carson:

Enclosed are the analytical results and associated quality control data for samples submitted on January 5, 2024.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister
Project Manager



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
Services**

Jan 9 2024
On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
KITCHEN-001-KF-24A	Drinking Water	24-A000401	Lead/Copper
LOUNGE-002-SF-24A	Drinking Water	24-A000402	Lead/Copper
KITCHEN-006-KF-24A	Drinking Water	24-A000403	Lead/Copper
KITCHEN-007-KF-24A	Drinking Water	24-A000404	Lead/Copper
KITCHEN-008-KF-24A	Drinking Water	24-A000405	Lead/Copper
KITCHEN-009-KF-24A	Drinking Water	24-A000406	Lead/Copper
KITCHEN-010-KF-24A	Drinking Water	24-A000407	Lead/Copper
WORKROOM-013-SF-24A	Drinking Water	24-A000408	Lead/Copper
KITCHEN-012-KF-24A	Drinking Water	24-A000409	Lead/Copper

Your samples were received on Monday, January 8, 2024. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

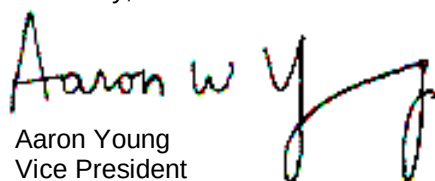
The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron Young
Vice President

Project #: 64324.078PH0003
SDG #: 2432880

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



*Professional
Analytical
Services*

ANALYSIS REPORT

On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
SDG Number: 2432880
Project #: 64324.078PH0003
All results reported on an as received basis.

Date Received: 01/08/24
Date Reported: 1/ 9/24

AMTEST Identification Number 24-A000401
Client Identification KITCHEN-001-KF-24A
Sampling Date 01/04/24, 06:16

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	79.6	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	0.687	ug/L		0.2	EPA 200.8	CM	01/09/24

AMTEST Identification Number 24-A000402
Client Identification LOUNGE-002-SF-24A
Sampling Date 01/04/24, 06:32

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	67.8	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	< 0.2	ug/L		0.2	EPA 200.8	CM	01/09/24

On-Site Environmental
Project Name:
AmTest ID: 24-A000403

AMTEST Identification Number 24-A000403
Client Identification KITCHEN-006-KF-24A
Sampling Date 01/04/24, 06:21

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	169.	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	7.49	ug/L		0.2	EPA 200.8	CM	01/09/24

AMTEST Identification Number 24-A000404
Client Identification KITCHEN-007-KF-24A
Sampling Date 01/04/24, 06:23

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	22.3	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	0.339	ug/L		0.2	EPA 200.8	CM	01/09/24

AMTEST Identification Number 24-A000405
Client Identification KITCHEN-008-KF-24A
Sampling Date 01/04/24, 06:14

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	86.2	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	2.45	ug/L		0.2	EPA 200.8	CM	01/09/24

On-Site Environmental
Project Name:
AmTest ID: 24-A000406

AMTEST Identification Number 24-A000406
Client Identification KITCHEN-009-KF-24A
Sampling Date 01/04/24, 06:05

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	277.	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	0.895	ug/L		0.2	EPA 200.8	CM	01/09/24

AMTEST Identification Number 24-A000407
Client Identification KITCHEN-010-KF-24A
Sampling Date 01/04/24, 06:10

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	53.6	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	0.677	ug/L		0.2	EPA 200.8	CM	01/09/24

AMTEST Identification Number 24-A000408
Client Identification WORKROOM-013-SF-24A
Sampling Date 01/04/24, 06:38

ICP/MS Metals 200.8

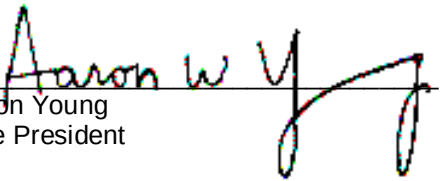
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	172.	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	6.26	ug/L		0.2	EPA 200.8	CM	01/09/24

On-Site Environmental
Project Name:
AmTest ID: 24-A000409

AMTEST Identification Number 24-A000409
Client Identification KITCHEN-012-KF-24A
Sampling Date 01/04/24, 06:26

ICP/MS Metals 200.8

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Copper	40.9	ug/L		0.5	EPA 200.8	CM	01/09/24
Lead	< 0.2	ug/L		0.2	EPA 200.8	CM	01/09/24


Aaron Young
Vice President

QC Summary for sample numbers: 24-A000401 to 24-A000409

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
24-A000254	Copper	ug/L	124.	231.	100.	107.00 %
24-A000254	Copper	ug/L	124.	232.	100.	108.00 %
24-A000254	Lead	ug/L	0.599	103.	100.	102.40 %
24-A000254	Lead	ug/L	0.599	104.	100.	103.40 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Copper	ug/L	231.	232.	0.43
Spike	Lead	ug/L	103.	104.	0.97

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Copper	ug/L	25.0	22.6	90.4 %
Copper	ug/L	25.0	22.5	90.0 %
Lead	ug/L	25.0	23.2	92.8 %
Lead	ug/L	25.0	23.6	94.4 %

BLANKS

ANALYTE	UNITS	RESULT
Copper	ug/L	< 0.5
Copper	ug/L	< 0.5
Lead	ug/L	< 0.2
Lead	ug/L	< 0.2



14648 NE 96th Street, Redmond, WA 98052 • (425) 883-3881

Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th Pl Kirkland, WA 98034

Phone Number: (425) 885-1664

Laboratory Reference #: 01-049

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 64324.078 Ph0003

Project Name:

Turnaround Request

1 Day 2 Day 3 Day

Standard

Other:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analyses
401	Kitchen-001-KF-24A	1/4/24	6:16	DW	1	Total Lead and Copper
402	Lounge-002-SF-24A	1/4/24	6:32	DW	1	Total Lead and Copper
403	Kitchen-006-KF-24A	1/4/24	6:21	DW	1	Total Lead and Copper
404	Kitchen-007-KF-24A	1/4/24	6:23	DW	1	Total Lead and Copper
405	Kitchen-008-KF-24A	1/4/24	6:14	DW	1	Total Lead and Copper
406	Kitchen-009-KF-24A	1/4/24	6:05	DW	1	Total Lead and Copper
407	Kitchen-010-KF-24A	1/4/24	6:10	DW	1	Total Lead and Copper
408	Workroom-013-SF-24A	1/4/24	6:38	DW	1	Total Lead and Copper
409	Kitchen-012-KF-24A	1/4/24	6:26	DW	1	Total Lead and Copper
Relinquished by: [Signature]		Company		Date	Time	Comments/Special Instructions
Received by: [Signature]		AmTest		1/8/24	2:30 PM	DRINKING WATER
Relinquished by:				1/8/24	1509	
Received by:						
Relinquished by:						
Received by:						
Relinquished by:						
Received by:						



Chain of Custody

Page 1 of 1

Company: **PBS ENGINEERING & ENVIRONMENTAL**

PBS ENGINEERING & ENVIRONMENTAL

604 324.678 Pn0003

Captain Grey Elm. School

Carson Linclater

Kait Gamble

☐ Same Day ☒ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____
 (other)

Turnaround Request
(in working days)

Laboratory Number: 01-049

Company: PBS ENGINEERING & ENVIRONMENTAL					
Project Number: W4324.078 Pn0003					
Project Name: Captain Grey Elm School					
Project Manager: Carson Linklater					
Sampled by: Kait Gamble					
(Check One) ☐ Same Day ☒ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard (7 Days)					
Date Sampled _____ (other) _____					
Time Sampled _____					
Matrix _____					
Number of Containers _____					
Lab ID					
Sample Identification					
Date Sampled					
Time Sampled					
Matrix					
Number of Containers					
NWTPH-HCID					
NWTPH-Gx/BTEX (8021 ☐ 8260 ☐)					
NWTPH-Gx					
NWTPH-Dx (SG Clean-up ☐)					
Volatiles 8260					
Halogenated Volatiles 8260					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270/SIM (with low-level PAHs)					
PAHs 8270/SIM (low-level)					
PCBs 8082					
Organochlorine Pesticides 8081					
Organophosphorus Pesticides 8270/SIM					
Chlorinated Acid Herbicides 8151					
Total RCRA Metals					
Total MTCA Metals					
TCLP Metals					
HEM (oil and grease) 1664					
Drinking Water EPA 200.8 (Lead & Copper)					
Drinking Water EPA 13 Priority Pollutant Metals					
Drinking Water EPA 24 Target Analyte Metals (TAL)					
% Moisture					

February 6, 2024

Carson Linklater

PBS Environmental - Richland

400 Bradley Blvd. Suite 106
Richland, WA 99352



NVL Batch # 2401995.00

RE: Total Metal Analysis
Method: EPA 200.8 Pb & Cu by ICPMS
Item Code: ICPMS-M4

Client Project: 64324.075 0004

Location: Captain Gray Elementary School, 1102 M 10th Ave Pasco, WA 99301

Dear Mr. Linklater,

NVL Labs received 3 sample(s) for the said project on 2/2/2024. Preparation of these samples was conducted following protocol outlined in EPA 200.8, unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with EPA 200.8 Pb & Cu by ICPMS <drinking water>. The results are usually expressed in ug/L and ppb. Test results are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more detail.

At NVL Labs all analyses are performed under strict guidelines of the Quality Assurance Program. This report is considered highly confidential and will not be released without your approval. Samples are archived after two weeks from the analysis date. Please feel free to contact us at 206-547-0100, in case you have any questions or concerns.

Sincerely,

Nick Ly, Technical Director

Enc.: Sample results



Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)
4708 Aurora Avenue North | Seattle, WA 98103-6516

Analysis Report

Total Metals



Client: PBS Environmental - Richland
Address: 400 Bradley Blvd. Suite 106
Richland, WA 99352

Attention: **Mr. Carson Linklater**

Project Location: Captain Gray Elementary School, 1102 M 10th Ave
Pasco, WA 99301

Batch #: 2401995.00

Matrix: Drinking Water

Method: EPA 200.8

Client Project #: 64324.075 0004

Date Received: 2/2/2024

Samples Received: 3

Samples Analyzed: 3

Lab ID	Client Sample #	Element	RL (ug/L)	Results in ug/L	Results in ppb
24012243	Kitchen-001-KF-24A	Lead (Pb)	1.0	< 1.0	< 1.0
		Copper (Cu)	5.0	37.0	37.0
24012244	Kitchen-002-KF-24A	Lead (Pb)	1.0	< 1.0	< 1.0
		Copper (Cu)	5.0	12.0	12.0
24012245	Library-003-SF-24A	Lead (Pb)	1.0	< 1.0	< 1.0
		Copper (Cu)	5.0	14.0	14.0

Sampled by: Client

Analyzed by: Shalini Patel

Reviewed by: Nick Ly

Date Analyzed: 02/02/2024

Date Issued: 02/06/2024

Nick Ly, Technical Director

ug/ L = Micrograms per Liter

ppb = Parts per billion

RL = Reporting Limit

'<' = Below the reporting limit

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

METALS LABORATORY SERVICES - PER ANALYTE TEST



Company PBS Environmental - Richland Address 400 Bradley Blvd. Suite 106 Richland, WA 99352 Project Manager Mr. Carson Linklater Phone (509) 942-1600 Cell (458) 210-5390	NVL Batch Number 2401995.00 TAT 2 Days AH No Rush TAT Due Date 2/6/2024 Time 9:45 AM Email carson.linklater@pbsusa.com Fax (866) 727-0140
---	---

Project Name/Number: 64324.075 0004 **Project Location:** Captain Gray Elementary School, 1102 M 10th Ave Pasco, WA 99301

Subcategory Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) - PPB (ug/L) Level

Item Code ICPMS-M4 **EPA 200.8 (Price per Analyte)** <Drinking Water>

Metals Copper (Cu), Lead (Pb)

Total Number of Samples 3 **Rush Samples** _____

	Lab ID	Sample ID	Description	A/R
1	24012243	Kitchen-001-KF-24A		A
2	24012244	Kitchen-002-KF-24A		A
3	24012245	Library-003-SF-24A		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Federal Express				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Kelly AuVu		NVL	2/2/24	945
Analyzed by	Shalini Patel		NVL	2/2/24	
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions: _____

Date: 2/2/2024
 Time: 9:47 AM
 Entered By: Kelly AuVu

2401995



METALS CHAIN OF CUSTODY

Turn Around Time

- ☐ 2 Hour ☐ 4 Hours ☐ 24 Hours
☒ 2 Days ☐ 3 Days ☐ 4 Days
☐ 5 Days ☐ 6-10 Days

Please call for TAT less than 24 Hours

Company PBS Engineering & Environmental INC. Project Manager Carson Linklater
 Address 400 Bradley Blvd. Suite 100 Cell (458) 210-5390
Richland, WA 99352 Email Carson.Linklater@PBSUSA.com
 Phone (509) 942-1600 Fax () -

Project Name/Number <u>64324-078/10004</u>		Project Location <u>Captain Gray Elementary School, Pasco, WA 99301</u>	
☐ Total Metals	☐ FAA (ppm)	☐ Air Filter	☐ Paint Chips (%)
☐ TCLP	☐ ICP (PPM)	☐ Paint Chips (cm)	☐ Dust Wipes
	☐ GFAA (ppb)	☒ Drinking Water	☐ Waste Water
	☐ CVAA (ppb)	☐ Other <u>EPA 200.8 (Lead & copper)</u>	
RCRA 8		RCRA 11	
☐ Barium		☐ Chromium	☐ Silver
☐ Arsenic		☐ Mercury	☐ Lead
☐ Selenium		☐ Cadmium	☐ Other

Reporting Instructions

☐ Call () - ☐ Fax () - ☒ Email Carson.Linklater@PBSUSA.com
Karani.Young@PBSUSA.com

Total Number of Samples

Sample ID	Description	A/R
1	Kitchen-001-KF-24A	
2	Kitchen-002-KF-24A	
3	Library-003-SF-24A	
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

	Print Name	Signature	Company	Date	Time
Sampled by	Cienna Landon	<i>Cienna Landon</i>	PBS Engineering & Environmental	2/1/2024	6:00AM
Relinquish by	Cienna Landon	<i>Cienna Landon</i>	PBS Engineering & Environmental	2/1/2024	6:00AM

Office Use Only

	Print Name	Signature	Company	Date	Time
Received by	Kenneth	<i>Kenneth</i>	NVL	2-2-24	9:45 AM
Analyzed by					
Called by					
Faxed/Email by					

APPENDIX C

Laboratory Certifications

The State of Washington
Department of Ecology



NVL Laboratories, Inc
Seattle, WA

has complied with provisions set forth in Chapter 173-50 WAC and is hereby recognized by the Department of Ecology as an ACCREDITED LABORATORY for the analytical parameters listed on the accompanying Scope of Accreditation. This certificate is effective July 18, 2023 and shall expire July 17, 2024.

Witnessed under my hand on August 1, 2023

Rebecca Wood
Lab Accreditation Unit Supervisor

Laboratory ID
C797

The State of
Department



Washington
of Ecology

AmTest Laboratories
Kirkland, WA

has complied with provisions set forth in Chapter 173-50 WAC and is hereby recognized by the Department of Ecology as an ACCREDITED LABORATORY for the analytical parameters listed on the accompanying Scope of Accreditation. This certificate is effective July 26, 2023 and shall expire July 25, 2024.

Witnessed under my hand on August 16, 2023

Rebecca Wood
Lab Accreditation Unit Supervisor

Laboratory ID
C554

The State of
Department



Washington
of Ecology

OnSite Environmental, Inc.
Redmond, WA

has complied with provisions set forth in Chapter 173-50 WAC and is hereby recognized by the Department of Ecology as an ACCREDITED LABORATORY for the analytical parameters listed on the accompanying Scope of Accreditation.

This certificate is effective July 27, 2023 and shall expire July 26, 2024.

Witnessed under my hand on August 11, 2023.

Rebecca Wood
Lab Accreditation Unit Supervisor

Laboratory ID
C591

APPENDIX D

Inspector Certifications

STATE OF WASHINGTON

Department of Commerce

Lead-Based Paint Activities Program

Carson Kai Linklater

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

Certification #

8877

Issuance Date

06/14/2023

Expiration Date

03/30/2026