



464 Valley Brook Avenue, Lyndhurst NJ 07071  
129 Sea Girt Avenue, Manasquan NJ 08736  
Phone: (800) 423-0766 • Fax: (201) 438-1798  
[www.mccabeenv.com](http://www.mccabeenv.com)

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## LEAD IN DRINKING WATER TESTING REPORT

*Conducted for:*

Lyndhurst Board of Education  
420 Fern Avenue  
Lyndhurst, New Jersey 07071

*Conducted at:*

Columbus Elementary School  
640 Lake Avenue  
Lyndhurst, New Jersey 07071

*Submitted by:*

McCabe Environmental Services, L.L.C.  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

**REPORT DATE:** June 02, 2022

**MES PROJECT NO.:** 22-04308

*Prepared by:*

A handwritten signature in black ink that reads 'Luke Giunta'.

**Luke Giunta**  
**Environmental Scientist**

*Signed for the Company by:*

A handwritten signature in blue ink that reads 'John H. Chiaviello'.

**John H. Chiaviello**  
**Vice President**

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## **1.0     INTRODUCTION**

McCabe Environmental Services, L.L.C. (McCabe) was retained by Lyndhurst Board of Education (Client) to conduct lead in drinking water testing at Columbus School located at 640 Lake Avenue, Lyndhurst, New Jersey 07071.

The project information is as follows:

<u>Client Name:</u>	Lyndhurst Board of Education
<u>Contact Person:</u>	Mr. Keith Matino
<u>Project Name:</u>	Lyndhurst Public Schools – Columbus School Lead in Drinking Water Testing
<u>Project Location:</u>	640 Lake Avenue Lyndhurst, New Jersey 07071
<u>Date(s) of Service:</u>	April 21, 2022
<u>McCabe Personnel:</u>	Gary Clare

## **2.0     SCOPE OF WORK**

Drinking water testing was performed at Columbus School located at 640 Lake Avenue, Lyndhurst, New Jersey 07071 on April 21, 2022. The purpose of the testing was to determine if the building's plumbing was having an adverse impact on water quality, specifically with regard to lead concentrations. Samples were collected from various potential drinking water outlets located throughout the building.

## **3.0     PROCEDURES**

After determining which outlets would be sampled, McCabe personnel collected a "first draw" sample at each location. A "first draw" is the initial water that is first to come out of the tap after a period of inactivity. Following the "first draw", a "30 second flush" sample was also collected where the main service line comes into the building. An additional 3-minute flush sample was collected where the main service line comes into the building as well. All samples were collected into 250 mL sterile bottles, labeled with a sample identification, and analyzed in accordance with EPA approved methods to determine the level of lead in drinking water. Samples were analyzed by an accredited laboratory.

The U.S. Environmental Protection Agency (EPA) has established National Primary Drinking Water Regulations (NPDWR) that set mandatory water quality standards for drinking water contaminants. These are enforceable standards called "maximum contaminant levels" or "MCL", which are established to protect the public against consumption of drinking water contaminants that present a risk to human health. An MCL is the maximum allowable amount of a contaminant in drinking water which is delivered to the consumer.

The EPA has established the Lead and Copper Rule that sets standards for state and public water systems. This rule has set an MCL for lead at 15 parts per billion (ppb) for a one liter sample. However, the EPA also established the Lead in Drinking Water at Schools and Child Care Facilities in which the EPA recommends an MCL of 20 ppb for a 250 milliliter first draw sample. In order to be more stringent, for our report purposes we have compared all results to both the 15 ppb and the 20 ppb standards.

**4.0     TABLE OF SAMPLE RESULTS**

The following table presents all sample results in order of sample identification:

<b>Sample ID</b>	<b>Sample Location</b>	<b>Lead Result</b>	<b>Exceeds (MCL 15 ppb)</b>	<b>Exceeds (MCL 20 ppb)</b>
01	Basement Slop Sink – First Draw	< 0.5	Pass	Pass
02	Basement Slop Sink – 30 Second Flush	0.6	Pass	Pass
03	Basement Slop Sink – 3 Minute Flush	< 0.5	Pass	Pass
04	Basement – Water Fountain – Bottle Filler	< 0.5	Pass	Pass
05	Basement Water Fountain	< 0.5	Pass	Pass
06	1 <sup>st</sup> Floor Water Fountain	0.8	Pass	Pass
07	2 <sup>nd</sup> Floor Water Fountain	2.3	Pass	Pass

**5.0     DISCUSSION AND CONCLUSION**

A total of seven (7) samples were collected from Columbus School. All samples were found to be less than the EPA Lead in Drinking Water at Schools and Child Care Facilities standard of 20 ppb, as well as the EPA Lead and Copper Rule standard of 15 ppb.

In addition, McCabe Environmental recommends annual drinking water sampling to ensure that the building's plumbing is not having an adverse impact on water quality.

**APPENDIX A**

**LABORATORY CERTIFICATES OF ANALYSIS  
&  
SAMPLE CHAIN OF CUSTODY FORMS**



Friday, May 06, 2022

Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION  
SDG ID: GCL15202  
Sample ID#s: CL15202 - CL15208

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
UT Lab Registration #CT00007  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Sample Id Cross Reference

May 06, 2022

SDG I.D.: GCL15202

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION

---

Client Id	Lab Id	Matrix
01	CL15202	DRINKING WATER
02	CL15203	DRINKING WATER
03	CL15204	DRINKING WATER
04	CL15205	DRINKING WATER
05	CL15206	DRINKING WATER
06	CL15207	DRINKING WATER
07	CL15208	DRINKING WATER



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## Analysis Report

May 06, 2022

FOR: Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

### Sample Information

Matrix: DRINKING WATER  
Location Code: MCCABE-PB  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

### Date

04/21/22  
04/22/22

### Time

11:50  
16:52

### Laboratory Data

SDG ID: GCL15202  
Phoenix ID: CL15202

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION  
Client ID: 01

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Lead	< 0.5	0.5	2	ppb	15			05/04/22	TH	E200.8
Total Metal Digestion	Completed							04/25/22	AG	E200.8

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected  
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)  
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

### Comments:

Action Level (AL): 40 CFR Part 141.80 Lead & Copper ALs.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
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Phyllis Shiller, Laboratory Director

May 06, 2022

Reviewed and Released by: Rashmi Makol, Project Manager





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## Analysis Report

May 06, 2022

FOR: Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

### Sample Information

Matrix: DRINKING WATER  
Location Code: MCCABE-PB  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

### Date

04/21/22  
04/22/22

### Time

11:51  
16:52

### Laboratory Data

SDG ID: GCL15202  
Phoenix ID: CL15203

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION  
Client ID: 02

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Lead	0.6	0.5	2	ppb	15			05/04/22	TH	E200.8
Total Metal Digestion	Completed							04/25/22	AG	E200.8

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected  
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)  
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

### Comments:

Action Level (AL): 40 CFR Part 141.80 Lead & Copper ALs.

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Phyllis Shiller, Laboratory Director

May 06, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



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## Analysis Report

May 06, 2022

FOR: Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

### Sample Information

Matrix: DRINKING WATER  
Location Code: MCCABE-PB  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

### Date

04/21/22  
04/22/22

### Time

11:54  
16:52

### Laboratory Data

SDG ID: GCL15202  
Phoenix ID: CL15204

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION  
Client ID: 03

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Lead	< 0.5	0.5	2	ppb	15			05/04/22	TH	E200.8
Total Metal Digestion	Completed							04/25/22	AG	E200.8

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected  
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)  
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

### Comments:

Action Level (AL): 40 CFR Part 141.80 Lead & Copper ALs.

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Phyllis Shiller, Laboratory Director

May 06, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



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## Analysis Report

May 06, 2022

FOR: Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

### Sample Information

Matrix: DRINKING WATER  
Location Code: MCCABE-PB  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

### Date

04/21/22  
04/22/22

### Time

11:55  
16:52

### Laboratory Data

SDG ID: GCL15202  
Phoenix ID: CL15205

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION  
Client ID: 04

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Lead	< 0.5	0.5	2	ppb	15			05/04/22	TH	E200.8
Total Metal Digestion	Completed							04/25/22	AG	E200.8

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected  
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)  
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

### Comments:

Action Level (AL): 40 CFR Part 141.80 Lead & Copper ALs.

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Phyllis Shiller, Laboratory Director

May 06, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



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## Analysis Report

May 06, 2022

FOR: Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

### Sample Information

Matrix: DRINKING WATER  
Location Code: MCCABE-PB  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

### Date

04/21/22  
04/22/22

### Time

11:57  
16:52

### Laboratory Data

SDG ID: GCL15202  
Phoenix ID: CL15206

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION  
Client ID: 05

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Lead	< 0.5	0.5	2	ppb	15			05/04/22	CPP	E200.8
Total Metal Digestion	Completed							04/25/22	AG	E200.8

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected  
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)  
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

### Comments:

Action Level (AL): 40 CFR Part 141.80 Lead & Copper ALs.

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Phyllis Shiller, Laboratory Director

May 06, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



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## Analysis Report

May 06, 2022

FOR: Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

### Sample Information

Matrix: DRINKING WATER  
Location Code: MCCABE-PB  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

### Date

04/21/22  
04/22/22

### Time

12:00  
16:52

### Laboratory Data

SDG ID: GCL15202  
Phoenix ID: CL15207

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION  
Client ID: 06

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Lead	0.8	0.5	2	ppb	15			05/04/22	CPP	E200.8
Total Metal Digestion	Completed							04/25/22	AG	E200.8

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected  
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)  
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

### Comments:

Action Level (AL): 40 CFR Part 141.80 Lead & Copper ALs.

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Phyllis Shiller, Laboratory Director

May 06, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Report

May 06, 2022

FOR: Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071

### Sample Information

Matrix: DRINKING WATER  
Location Code: MCCABE-PB  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

### Date

04/21/22  
04/22/22

### Time

12:05  
16:52

### Laboratory Data

SDG ID: GCL15202  
Phoenix ID: CL15208

Project ID: 21-04308 LYNDHURST BOARD OF EDUCATION  
Client ID: 07

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Lead	2.3	0.5	2	ppb	15			05/04/22	CPP	E200.8
Total Metal Digestion	Completed							04/25/22	AG	E200.8

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected  
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)  
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

### Comments:

Action Level (AL): 40 CFR Part 141.80 Lead & Copper ALs.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
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Phyllis Shiller, Laboratory Director

May 06, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

# Analysis Report - Summary

May 06, 2022

Attn: Jarred Panecki  
McCabe Environmental Services, LLC  
464 Valley Brook Avenue  
Lyndhurst, New Jersey 07071



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

SDG I.D.: GCL15202




Sample	Client Id	Col Date	Parameter	Result	RL	CL	Units	Date Analyzed	Reference
Project: 21-04308 Lyndhurst Board Of Education									
CL15202	01	04/21/22	Lead	< 0.5	0.5		ppb	05/04/22	E200.8
CL15203	02	04/21/22	Lead	0.6	0.5		ppb	05/04/22	E200.8
CL15204	03	04/21/22	Lead	< 0.5	0.5		ppb	05/04/22	E200.8
CL15205	04	04/21/22	Lead	< 0.5	0.5		ppb	05/04/22	E200.8
CL15206	05	04/21/22	Lead	< 0.5	0.5		ppb	05/04/22	E200.8
CL15207	06	04/21/22	Lead	0.8	0.5		ppb	05/04/22	E200.8
CL15208	07	04/21/22	Lead	2.3	0.5		ppb	05/04/22	E200.8

## Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level CL=Client Limit

  
Phyllis Shiller  
Laboratory Director  
May 06, 2022



Environmental Laboratories, Inc.  
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Tel. (860) 645-1102 Fax (860) 645-0823



## QA/QC Report

May 06, 2022

### QA/QC Data

SDG I.D.: GCL15202

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
-----------	-------	-----------	------------------	---------------	------------	----------	-----------	------------	---------	----------	-----------	--------------------	--------------------

QA/QC Batch 621825 (mg/L), QC Sample No: CL15194 2X (CL15202, CL15203)

#### ICP MS Metals - Aqueous

Lead	BRL	0.0001	<0.0005	<0.0001	NC	99.4			93.6				
------	-----	--------	---------	---------	----	------	--	--	------	--	--	--	--

QA/QC Batch 621825A (mg/L), QC Sample No: CL15204 2X (CL15204, CL15205, CL15206, CL15207, CL15208)

#### ICP MS Metals - Aqueous

Lead	BRL	0.0001				99.4			95.8				
------	-----	--------	--	--	--	------	--	--	------	--	--	--	--

Comment:

This batch does not include a duplicate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference  
LCS - Laboratory Control Sample  
LCSD - Laboratory Control Sample Duplicate  
MS - Matrix Spike  
MS Dup - Matrix Spike Duplicate  
NC - No Criteria  
Intf - Interference

Phyllis Shiller, Laboratory Director  
May 06, 2022



Friday, May 06, 2022

Criteria: NJ: DW

State: NJ

## Sample Criteria Exceedances Report

### GCL15202 - MCCABE-PB

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
--------	-------	-----------------	----------	--------	----	----------	----------------	-------------------

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



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## Analysis Comments

May 06, 2022

SDG I.D.: GCL15202

---

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

25 WLP

## MCCABE ENVIRONMENTAL SERVICES, L.L.C.

464 VALLEY BROOK AVENUE LYNTHURST, NJ 07071 • PHONE: (201)438-4839 FAX: (201)438-1798

## LEAD in DRINKING WATER

## CHAIN-OF-CUSTODY FORM

CLIENT NAME: Lyndhurst Board of Education		SITE ADDRESS: Columbus School 640 Lake Avenue, Lyndhurst, New Jersey 07071	
FIELD INSPECTOR'S NAME:			
MES PROJECT #: 21-04308	SAMPLE DATE: 4/21/22	TURNAROUND TIME REQUESTED: 2 week	
Matrix	SAMPLE ID	SAMPLE LOCATION	ANALYSIS REQUESTED
DW	01	Basement Slop Sink - First Draw	LEAD - 200.8
DW	02	Basement Slop Sink - 30 second flush	LEAD - 200.8
DW	03	Basement Slop Sink - 3 minute flush	LEAD - 200.8
DW	04	Basement - Water Fountain - Bottle Filler	LEAD - 200.8
DW	05	Basement Water Fountain	LEAD - 200.8
DW	06	1st Floor Water Fountain	LEAD - 200.8
DW	07	2nd Floor Water Fountain	LEAD - 200.8
DW			LEAD - 200.8
DW			LEAD - 200.8
DW			LEAD - 200.8
Relinquished by (Print) Gary Clare		Received by: (Print) Andy Gatt	Date: 4/21/22 1300
Signature: [Signature]		Signature: [Signature]	Time: 1:50
Relinquished by (Print) Phoenix		Received by: (Print) [Signature]	Date: 4/22/22 16:52
Signature: [Signature]		Signature: [Signature]	Time: 16:52
Laboratory Analysis Performed by (Analyst Signature, Laboratory Name & Location): Phoenix Environmental Laboratories			

NJ Certified WBE

**APPENDIX B**

**SCHOOL DISTRICT SAMPLING  
ATTACHMENTS**

### Attachment A - List of Priority for Sampling

SCHOOL NAME	DATE OF SAMPLING	CERTIFIED LABORATORY	NOTES
Columbus School	04/21/2022	Phoenix Environmental Laboratories	

## Attachment B – Plumbing Profile

*Note: Complete for each school. For additional information see the USEPA publication, "The 3Ts for Reducing Lead in Drinking Water in Schools"*

Name of School: Columbus Grade Levels: K-2  
 Address: 650 Lake Ave  
 Individual school project officer Signature: [Signature] Date: 6/1

Questions	Answers
<b>Background Information</b>	
1. What year was the original building constructed?	1920's
Were any buildings or additions added to the original facility?	Yes
2. If the building was constructed or repaired after 1986, was lead-free plumbing and solder utilized?	Yes
What type of solder was used?	
Document all locations where lead solder was used.	
3. Where are the most recent plumbing repairs and replacements?	Location: <u>Rear</u> Description: <u>2 classrooms Bathroom</u>
4. With what materials is the service connection (the pipe that carries water to the school from the public water system's main in the street) made?	Material: <u>Copper</u>
Where is the Service Line located? (This is the POE location.)	Location: <u>Basement</u> <u>Girls Bathroom</u>
5. Is there point of entry (POE) or point of use (POU) treatment in use?	Y / <u>(N)</u> Type: <u></u> Location: <u></u>
6. Are there tanks in your plumbing system (pressure tanks, gravity storage tanks)?	Y / <u>(N)</u>
7. Does the school have a filter maintenance and operation program?	<u>No</u>
If so, who is responsible for this program?	
What is the process for adding filters?	
8. Have accessible screens or aerators on outlets that provide drinking water been cleaned?	<u>(Y)</u> / N
Does the school have a screen or aerator maintenance program?	<u>No</u>
9. Have there been any complaints about bad (metallic) taste?	Y / <u>(N)</u>
Note location(s).	Location: <u></u>
10. Review records and consult with the public water supplier to determine whether any water samples have been taken in the building for any contaminants. If so, identify:	
• Name of contaminant(s)	
• Concentrations found	
• pH level	
Is testing done regularly at the building?	<u>Twice a Year / OPW-Town</u>
11. Other plumbing background questions include:	
• Are blueprints of the building available?	<u>No</u>
• Are there known plumbing "dead-ends", low use areas, existing leaks or other "problem areas"?	<u>No</u>
Are renovations planned for any of the plumbing system?	<u>No</u>

### Walk-Through

*These questions should be addressed during the walk-through of the facility, while Attachment C- Drinking Water Outlet Inventory is being completed.*

1. Confirm the material of Service Line visually.
2. Confirm the presence of POE or POU treatment.
3. What are the potable water pipes made of in your facility?
  - Lead

- Plastic
- Galvanized Metal
- Cast Iron
- ~~Copper~~
- Other

Note the water flow through the building and the areas that receive water first, and which areas receive water last.

4. Are electrical wires grounded to Water Pipes?

Note location(s).

☒ Y ☐ N

Location: main meter & Hot water Tank  
Complete in "Brass" Column in Attachment C- Water Outlet Inventory.

5. Are brass fittings, faucets, or valves used in your drinking water system?

Note that most faucets are brass on the inside.

Document the locations of any brass water outlet to be sampled.

6. Locate all drinking water outlets (i.e. water coolers, bubblers, ice machines, kitchen/ food prep sinks, etc.) in the facility.

Complete in Attachment C-Water Outlet Inventory.

1 on each Floor

7. Have the brands and models of the water coolers in the school been compared to the list of recalled water coolers in the Toolkit?

☒ Y ☐ N

Recalled Drinking Water Fountains NONE

Make and Model

Type

8. Have signs of corrosion, such as frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry been detected?

Complete in "Signs of Corrosion" column in Attachment C- Drinking Water Outlet Inventory.

Note the locations of water outlets.

9. Are there any outlets that are not operational and therefore out of service? Permanently? Temporarily?

Y / ☒ N

Complete "Operational Column" in Attachment C- Drinking Water Outlet Inventory.

Type/ Location

Description

Permanently

Temporarily

### Attachment B.i: Plumbing Profile Instructions

Plumbing Profile Questions	What Your Answers to the Plumbing Profile Questions Mean
<i>The questions in this column will help you determine whether lead is likely to be a problem in your facility, and will enable you to prioritize your sampling effort.</i>	<i>This column discusses the significance of possible answers to the plumbing profile questions.</i>
<b>Background Information</b>	
<p>1. When was the original building constructed?</p> <p>Were any buildings or additions added to the original facility? If so, complete a separate plumbing profile for each building, addition, or wing.</p>	<p>Older Buildings – Through the early 1900s, lead pipes were commonly used for interior plumbing in certain parts of the country in public buildings and private homes. Plumbing installed before 1930 is more likely to contain lead than newer pipes. Between 1920 and 1950, galvanized pipes were also used for plumbing. After 1930, copper generally replaced lead as the most commonly used material for water pipes. Up until the mid- to late-1980s (until the lead-free requirements of the 1986 Safe Drinking Water Act Amendments took effect), lead solder was typically used to join these copper pipes. The efforts of your public water supplier over the years to minimize the corrosiveness of the water may have resulted in mineral deposits forming a coating on the inside of the water pipes (passivation). This coating insulates the water from the plumbing and results in decreased lead levels in water. If the coating does not exist or is disturbed, the water is in direct contact with any lead in the plumbing system.</p>

	<p>Newer Buildings – New buildings are not likely to have lead pipes in their plumbing systems, but they are very likely to have copper pipes with solder joints. Buildings constructed prior to the late 1980s, before the lead-free requirements of the 1986 Safe Drinking Water Act Amendments, may have joints made of lead solder. Buildings constructed after this period should have joints made of lead-free solders. Even if “lead-free” materials were used in new construction and/or plumbing repairs, lead leaching may occur.</p>
<p>2. If built or repaired after 1986, were lead-free plumbing and solder used in accordance with the lead-free requirements of the 1986 Safe Drinking Water Act Amendments? What type of solder has been used?</p> <p>Was lead solder used in your plumbing system? Note the locations of lead solder.</p>	<p>The 1986 Amendments to the Safe Drinking Water Act banned plumbing components that contained elevated levels of lead. Lead-free solder and flux (not more than 0.2% lead) and pipe, pipe fittings, and fixtures (not more than 8% lead) must now be used. The leaching potential of lead-free (i.e., tin-antimony) solder is much less than lead solder. The leaching potential of lead-free pipe, pipe fittings, and fixtures is also less, but leaching is still possible.</p> <p>If lead-free materials were not used in new construction and/or plumbing repairs, elevated lead levels can be produced. If the film resulting from passivation does not exist or has not yet adequately formed, any lead that is present is in direct contact with the water.</p> <p>In some areas of the country, it is possible that high-lead materials were used until 1988 or perhaps even later. Your local plumbing code authority or building inspector may be able to provide guidance regarding when high-lead materials were last used on a regular basis in your area.</p>
<p>3. When were the most recent plumbing repairs and replacements made (note locations)?</p>	<p>Corrosion occurs (1) as a reaction between the water and the pipes and (2) as a reaction between the copper and solder (metal-to-metal). This latter reaction is known as galvanic corrosion, which can be vigorous in new piping. If lead solders were used in the piping or if brass faucets, valves, and fittings containing alloys of lead were installed (<i>see response to Walk Through Question 5 below for further discussion of brass</i>), lead levels in the water may be high. After about 5 years, however, this type of reaction (galvanic corrosion) slows down and lead gets into water mainly as a result of water being corrosive. If the water is non-corrosive, passivation is likely to have occurred and to have reduced opportunities for lead to get into the water system.</p> <p>For these reasons, if the building (or an addition, new plumbing, or repair) is less than 5 years old and lead solder or other materials (e.g., brass faucets containing lead alloys) were used, you may have elevated lead levels. If water supplied to the building is corrosive, lead can remain a problem regardless of the plumbing's age.</p>
<p>4. With what materials is the service connection (the pipe that carries water to the school from the public water system's main in the street) made? Note the location where the service connection enters the building and connects to the interior plumbing. (This is the POE location)</p>	<p>Lead piping was often used for the service connections that join buildings to public water systems. The service connection is the pipe that carries drinking water from a public water main to a building. Some localities actually required the use of lead service connections up until the lead-free requirements of the 1986 Safe Drinking Water Act Amendments took effect. Although a protective layering of minerals may have formed on these pipes, vibrations can cause flaking of any protective build-up and, allowing lead contamination to occur.</p>
<p>5. Is there point of entry (POE) or point of use (POU) treatment in use?</p>	<p>Are there water treatment units in your plumbing system? Treatment units could be, but are not limited to, ion exchange units, filter cartridge, reverse osmosis, etc.</p>
<p>6. Do you have tanks in your plumbing system (pressure tanks, gravity storage tanks)?</p> <p>Note the location of any tanks, and any available information about the tank; e.g., manufacturer, date of installation.</p>	<p>Some older tanks may contain coatings that are high in lead content.</p> <p>Tanks may accumulate sediment that could be flushed back into the plumbing system under certain circumstances. You may wish to contact the supplier or manufacturer to obtain information about coatings. You may also wish to hire a plumber or tank service contractor to inspect your tanks, especially gravity storage tanks that are located outside of the building.</p>
<p>7. Does the school have a filter maintenance and operation program?</p> <p>If so, who is responsible for this program?</p> <p>What is the process for adding filters?</p>	<p>A program for the maintenance and the upkeep of filters on drinking water outlets is necessary to ensure the effectiveness of the filters. Most filters recommend replacement after six months. If the filters need replacement every six months, the program will include a procedure for ensuring that every six month old filter is replaced. An individual should be responsible for ensuring that this filter maintenance program is followed.</p> <p>If the school would like to add a filter to a water outlet, what is the process? Does a request form have to be completed and submitted to the individual in charge of maintenance? Do all filters need to be added at a certain time of year to follow the maintenance program?</p>
<p>8. Do outlets that provide drinking water have accessible screens or aerators? (Standard faucets usually have screens. Many coolers and bubblers also have screens.) Note the locations.</p> <p>Have these screens been cleaned? Note the locations.</p>	<p>Lead-containing sediments that are trapped on screens can be a significant source of lead contamination. Sediments should be tested for the presence of lead, and your facility should create a routine maintenance program to clean the screens frequently. If sediment has been a reoccurring problem regular cleaning of the screens and additional investigating into why the debris is accumulating is appropriate. However, the manufacturer or water service provider should be contacted to obtain instructions.</p>
<p>9. Have there been any complaints about water taste (metallic, etc.) or rusty appearance? Note the locations.</p>	<p>Although you cannot see, taste, or smell lead dissolved in water, the presence of a metallic taste or rusty appearance may indicate corrosion and possible lead contamination.</p>



<p>10. Check building files to determine whether any water samples have been taken from your building for any contaminants (also check with your public water supplier).</p> <ul style="list-style-type: none"> <li>• Name of contaminant(s)?</li> <li>• What concentrations of these contaminants were found?</li> <li>• What was the pH level of the water?</li> <li>• Is testing done regularly at your facility?</li> </ul>	<p>Lead testing may have previously been done voluntarily under the Lead Contamination Control Act. Results of analyses of general water quality, such as measures of pH, calcium hardness, and carbonate alkalinity, can provide important clues about the corrosiveness of the water. Generally, the higher the values of these parameters, the less likely it is that your water is corrosive. If you have no data from your school, your public water system should at least be able to provide information about the general water quality.</p>
<p>11. Other plumbing questions:</p> <ul style="list-style-type: none"> <li>• Are blueprints of the building available?</li> <li>• Are there known plumbing "dead ends," low use areas, existing leaks or other "problem areas"?</li> <li>• Are renovations being planned for part or all of the plumbing system?</li> </ul>	<p>You should incorporate this information into decisions regarding sample locations and sampling protocol. You may wish to note the direction of water flow and the location of fixtures, valves, tanks, areas of sediment accumulation, areas of corrosion, etc., on a sketch or blueprint of the plumbing.</p>
<p><b>Walk-Through</b></p>	
<p>1. Confirm the material that the service line is made of visually</p>	<p>See Background Information Question #4.</p>
<p>2. Confirm the presence of POE or POU treatment.</p>	<p>See Background Information Question #5</p>
<p>3. Specifically, what are the potable water pipes made of in your facility (note the locations)?</p> <ul style="list-style-type: none"> <li>• Lead</li> <li>• Plastic</li> <li>• Galvanized Metal</li> <li>• Cast Iron</li> <li>• Copper</li> <li>• Other</li> </ul> <p>Note the location of the different types of pipe, if applicable, and the direction of water flow through the building. Note the areas of the building that receive water first, and which areas receive water last.</p>	<p>Survey your building for exposed pipes, preferably accompanied by an experienced plumber who should be able to readily identify the composition of pipes on site. Most buildings have a combination of different plumbing materials:</p> <ul style="list-style-type: none"> <li>• Lead pipes are dull gray in color and may be easily scratched by an object such as a knife or key. Lead pipes are a major source of lead contamination in drinking water.</li> <li>• Galvanized metal pipes are gray or silver-gray in color and are usually fitted together with threaded joints. In some instances, compounds containing lead have been used to seal the threads joining the pipes. Debris from this material, which has fallen inside the pipes, may be a source of contamination.</li> <li>• Copper pipes are red-brown in color. Corroded portions may show green deposits. Copper pipe joints were typically joined together with lead solders until the lead-free requirements of the 1986 Safe Drinking Water Act Amendments took effect.</li> <li>• Plastic pipes, especially those manufactured abroad, may contain lead. If plastic pipes are used, be sure they meet NSF International standards. (<i>Note: NSF International is an independent, third-party testing organization. Product listings can be obtained by visiting their Web site at <a href="http://www.nsf.org/business/search_listings/index/asp">http://www.nsf.org/business/search_listings/index/asp</a>.)</i></li> </ul>
<p>4. Is any electrical equipment grounded to water pipes? Note the locations.</p>	<p>If electrical equipment, such as telephones, has been installed using water pipes as a ground, the electric current traveling through the ground wire will accelerate the corrosion of any interior plumbing containing lead. The practice should be avoided, if possible. However, if existing wires are already grounded to water pipes, the wires <i>should not be removed</i> from the pipes unless a qualified electrician installs an alternative grounding system. Check with your local building inspector on this matter. Your state or local building code may require grounding of the wires to the water pipes. Improper grounding of electrical equipment may cause severe shock.</p>
<p>5. Are brass fittings, faucets, or valves used in your drinking water system? (Note: Most faucets are brass on the inside.)</p> <p>You may want to note the locations on a map or diagram of your facility and make extensive notes that would facilitate future analysis of lead sample results.</p>	<p>Brass fittings, faucets, and valves are golden yellow in color, similar to copper in appearance, or are plated with chrome. Brass is composed primarily of two metals, copper and zinc. Most brasses contain lead ranging from 2 percent to 8 percent. That lead can contaminate the water contact surface when it is smeared on the machined surfaces during production. After 1996, brass fittings installed in drinking water outlets such as faucets and water coolers must meet NSF standards for lead content. While this percentage is considered lead-free under the 1986 Safe Drinking Water Act Amendments, some contamination problems still may occur. Older brass faucets may contain higher percentages of lead and lead solder in their interior construction and pose contamination problems. Note that your state or local government may have imposed this standard prior to 1988.</p> <p>The degree to which lead will leach from brass products containing alloys with less than 8 percent lead is dependent upon the corrosiveness of the water and the manufacturing process used to develop the product. A study revealed that fabricated faucets tend to contribute less lead to the water than faucets manufactured by the permanent mold process, regardless of the amount of lead in the alloy.</p> <p>In response to a requirement of the 1996 SDWA, EPA worked with the plumbing industry and NSF International to develop a voluntary industry standard that is designed to minimize the</p>

	<p>amounts of lead being leached from these products. This standard is NSF/ANSI Standard 61, Section 9. Since 1998, all plumbing fixtures for use as drinking water supply must meet this standard. You should require NSF/ ANSI 61 certification on all drinking water system products purchased. Include a copy of the NSF/ ANSI 61 certificate as a requirement on your purchase orders. The distributor or manufacturer can provide you with a list of certified products. You should require NSF/ANSI 61 certification on all drinking water system products used in new construction and inform your architects and revise your building specifications.</p>
<p>6. How many of the following outlets provide water for consumption? Note the locations.</p> <ul style="list-style-type: none"> <li>• Water Coolers</li> <li>• Bubblers</li> <li>• Ice Makers</li> <li>• Kitchen Taps</li> <li>• Drinking Fountains or Taps</li> </ul>	<p>In addition to lead components in the plumbing system, lead solders or lead in the brass fittings and valves used in some taps, bubblers, and refrigerated water coolers may be sources of lead. It is important to identify the locations of all such drinking water outlets. Faucets in restrooms should not be used to obtain water for drinking. Although they may be adequate for washing hands, they may not be appropriate for drinking purposes. You may consider posting "do not drink" signs.</p>
<p>7. Has your school checked the brands and models of water coolers and compared them to the list of recalled water coolers in Appendix H.i Note the locations of any recalled coolers.</p>	<p>Water coolers may be a major source of lead contamination. The Federal Consumer Product Safety Commission negotiated an agreement with Halsey Taylor through a consent order agreement published in June 1990 to provide a replacement or refund program that addresses all the water coolers listed by EPA as having lead-lined tanks. Halsey Taylor was the only company identified by EPA as manufacturing some water coolers with lead-lined tanks. Additionally, some coolers manufactured by EBCO had a bubbler valve and one soldered joint that contained lead.</p> <p>See Attachment H.i of this document for a summary of EPA's list of water coolers found to contain lead. Use the list to help prioritize your sampling. If your water cooler is listed as having a lead-lined tank, you should not use the water for drinking, and you should remove the cooler immediately as these coolers pose the highest risk of contamination.</p>
<p>8. Are there any signs of corrosion, such as frequent leaks, rust-colored water, or stained dishes or laundry? Note the locations.</p>	<p>Frequent leaks, rust-colored water, and stains on fixtures, dishes, and laundry are signs of corrosive water. Blue-green deposits on pipes and sinks indicate copper corrosion; brown stains result from the corrosion of iron. Where such signs occur, high levels of lead, copper, and iron may be present in the water. Lead can accumulate with iron, which can form sediments that are hard to remove.</p>
<p>9. Are there any outlets that are not operational and therefore out of service? Permanently? Temporarily?</p>	<p>Permanently out of service water outlets are outlets that are no longer being used and the facility plans to decommission in the future.</p> <p>Temporarily out of service water outlets are outlets that require repair or replacement and will be put back in service once they are operational.</p>

## Attachment C – Drinking Water Outlet Inventory

Name of School: Columbus School    Address: 640 Lake Avenue, Lyndhurst, New Jersey 07071

Grade Levels: Pre-K – 2nd

Year School Constructed: NA

Renovated/Additions: NA

Individual school project officer Name/Signature: Gary Clare

Date Completed: 05/23/2022

# <sup>1</sup>	Type	Location	Code	Operational <sup>2</sup> (Y/N)	Signs of Corrosion <sup>3</sup> (Y/N)	Filter <sup>4</sup> (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
											Make	Model	
01	Slop Sink	Basement	01	Y	N	N	N	N	N	N	NA	NA	
02	Bottle Filler	Basement	02	Y	N	N	N	N	Y	Y	Elkay	NA	
03	Water Fountain	Basement	03	Y	N	Y	N	N	N	Y	Elkay	NA	
04	Water Fountain	1 <sup>st</sup> Floor	04	Y	N	Y	N	N	N	Y	Elkay	NA	
05	Water Fountain	2 <sup>nd</sup> Floor	05	Y	N	Y	N	N	N	Y	Elkay	NA	

<sup>1</sup> Number outlets starting at the closest outlet to the Point of Entry (POE).

<sup>2</sup> Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.

<sup>3</sup> Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.

<sup>4</sup> Document on Attachment D- Filter Inventory.

**Attachment D - Filter Inventory**Name of School: Columbus Elementary School Grade Levels: Pre-k - 2Address: 640 Lake Avenue, Lyndhurst, New Jersey 07071Individual School Project Officer Signature: Gary Clare Date: 05/23/2022

Sample Location / Code	Brand	Type (Make & Model)	Date Installed or Replaced	Replacement Frequency	NSF Certified for Lead Reduction Y/N
01	NA	NA	NA	NA	NA
02	Elkay	NA	NA	NA	NA
03	Elkay	NA	NA	NA	NA
04	Elkay	NA	NA	NA	NA
05	Elkay	NA	NA	NA	NA

**Attachment E – Flushing Log**Name of School: Columbus Elementary SchoolAddress: 640 Lake Avenue, Lyndhurst, New Jersey 07071Grade Levels: Pre-K - 2Individual School Project Officer Signature: Gary ClareDate: 05/23/2022

Sample Location Description	Sample Location Code	Date	Time	Duration of Flushing	Reason for Flushing
Basement Slop Sink	01, 02, 03	04/20/22	3:00pm	3 Minutes	Water Sampling
Basement Bottle Filler	02	04/20/22	3:00pm	3 Minutes	Water Sampling
Basement Water Fountain	03	04/20/22	3:00pm	3 Minutes	Water Sampling
1 <sup>st</sup> Floor Water Fountain	04	04/20/22	3:00pm	3 Minutes	Water Sampling
2 <sup>nd</sup> Floor Water Fountain	05	04/20/22	3:00pm	3 Minutes	Water Sampling

**Attachment F - Pre - Sampling Water Use Certification**

TO BE COMPLETED BY THE LYNDHURST BOE DISTRICT REPRESENTATIVE:		
School Name: Columbus Elementary School		
Sample collection address:	640 Lake Avenue, Lyndhurst, New Jersey 07071	
Water was last used:	Time: 3:00	Date: 04/20/22
Sample commencement:	Time: 11:50	Date: 04/21/22
I have read the Lead Drinking Water Testing Sampling Plan and Quality Assurance Project Plan and I am certifying that samples were collected in accordance with these plans.		
Gary Clare	05/23/2022	
Signature	Date	