

LEAD DRINKING WATER TESTING SAMPLING PLAN

Gibbsboro BOE
37 Kirkwood Road
Gibbsboro, NJ 08026

June 2017



Lead in Water Sampling Plan

Schools/Facilities covered by this plan:

1. Gibbsboro Elementary School


Approvals & Signatures

School District Representatives

Program Manager	Frank Domin		
	Print	Signature	Date
Project Manager	David Savidge		
	Print	Signature	Date

Third Party Sampling Firm/Field Sampling Team

Name of Firm Environmental Design Inc. (856-616-9516)

Company Representative	Tom Pruno		6/9/2017
	Print	Signature	Date

Individual School Project Officers (ISPO)

Gibbsboro Elementary School				
Name of ISPO	Title	Phone #	Signature	Date
David Savidge		856-834-8216		

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1. INTRODUCTION

This Lead Drinking Water Testing Sampling Plan was developed by the GIBBSBORO SCHOOL DISTRICT based on guidance developed by the New Jersey Department of Environmental Protection (NJDEP) and the United States Environmental Protection Agency (USEPA), and is based in part on the USEPA publication *"The 3Ts for Reducing Lead in Drinking Water in Schools"* and other NJDEP guidance. The purpose of this document is to establish a plan for sampling lead at drinking water outlets used for consumption or food preparation within the District. The data collected through the execution of this Sampling Plan will determine if remedial measures are necessary and will assist in the prioritization of future water testing for lead.

Drinking water outlets include faucets, ice machines, water fountains/bubblers, and water coolers in classrooms, restroom, kitchens, food preparation areas, snack stands, and athletic fields. In other words, drinking water outlets are those locations from which water is consumed, either directly (i.e. water fountain) or indirectly (i.e. kitchen sink used for cooking).

The testing of drinking water outlets will be conducted in accordance with this Sampling Plan and the corresponding Quality Assurance Project Plan (QAPP). Corrective actions may be implemented at any drinking water outlets found to exceed the US Environmental Protection Agency (USEPA) drinking water lead Action Level of 15 micrograms per liter ($\mu\text{g/L}$). For the purposes of compliance, the Action Level is defined as greater than or equal to 15.5 $\mu\text{g/L}$.

The District's Quality Assurance Project Plan (QAPP) is available under a separate cover.

2. OBJECTIVE

The 1988 Lead Contamination Control Act (LCCA) is aimed at identifying and reducing lead (Pb) in drinking water in schools and child care facilities. In response, the USEPA prepared guidance documents to assist school districts in meeting the requirements of the LCCA. The guidance documents were used as a resource in developing this Sampling Plan.

For determining immediate remedial measures, the District is required to utilize the lead Action level established in the SDWA rules by the USEPA at 40 CFR 141.80 for lead in drinking water. At the time of development of this Sampling Plan, the lead Action level is 15 $\mu\text{g/L}$, which is more stringent than the guidance provided by USEPA in their Lead in Schools Guidance which recommends action be taken at drinking water outlets greater than 20 $\mu\text{g/L}$.

3. SAMPLING PROJECT COORDINATION

3.1 List of Names

The names of the individuals fulfilling these roles for the GIBBSBORO SCHOOL DISTRICT are included at the beginning of this Sampling Plan.

3.2 Program Manager

The Program Manager is the overall authority in the execution of the district's lead sampling project. The Program Manager is responsible for the initial notification to the district of the testing program, obtaining funds for testing, assigning the Project Manager, requesting/enlisting the assistance from other district departments if needed, approving the district's QAPP, approving the Final Report for each school, and coordinating with other district officials to make the results of the testing available to the public. The Program Manager coordinates the activities of the third party Environmental Consultant, Environmental Design Inc. (856-616-9516), hired by the district to assist with compliance and implementation of the Lead in Drinking Water Sampling Program.

3.3 Project Manager

The Project Manager is responsible for overseeing the execution of lead sampling at each school/facility covered by the QAPP and this Sampling Plan. The Project Manager serves as the liaison between the school district, state agencies, local Health Departments, third party laboratories and public water systems (if applicable). The Project Manager reports to the Program Manager. The Project Manager will work closely with the district's Environmental Consultant, Environmental Design Inc., to ensure compliance and implementation of the QAPP and Sampling Plan. The Project Manager's responsibilities include:

- Ensure the Sampling Plan and QAPP are complete
- Oversee Individual School Project Officers
- Ensure laboratory is NJ certified for performing lead in drinking water analysis
- Verify that each school is aware of sampling scheduled and the expected duration
- Coordinate and schedule sampling events at each school/facility
- Review of the Field Sampling Summary Report(s)
- Review of Laboratory Data Reports (LDR)
- Review of Final Project Reports
- Maintain documents, reports, and records, as applicable
- Maintain other relevant records such as Purchase Orders and receipts

3.4 Individual School Project Officer (ISPO)

A Project Officer is someone who is familiar with the building layout and plumbing system. An Individual School Sampling Project Officer (Project Officer) is assigned for each school/facility covered by the QAPP and Sampling Plan. The Project Officer will closely with the district's

Environmental Consultant, Environmental Design Inc., to ensure compliance and implementation of the program. The responsibilities of the Project Officer include:

- General project oversight for each assigned school/facility
- Ensure completion of the Plumbing Profile for each assigned school/facility
- Assist with completion of the following reports:
 - Drinking Water Outlet Inventory
 - Filter Inventory Report
 - Flushing Log
 - Pre-Sampling Water Use Certification
- Prepare for sampling event including preparation of Floor Plan
- Identify drinking water outlets to be flushed and attach flush tag, as applicable
- Ensure that Sampling Team has all relevant sampling supplies and access to facility
- Ensure that all drinking water outlets to be sampled are identified
- Ensure that any low-use drinking water outlets are flushed before sampling
- Remove flush tags from drinking water outlet once sampling is completed
- Verify water remains motionless for a minimum of eight hours prior to sampling event
- Complete the Pre-Sampling Water Use Certification

3.5 Individual School Protocols

Separate supporting documentation will be kept for each school. The documentation will include the Attachments found at the end of this plan.

4. SCHOOL/FACILITY SAMPLING PRIORITY

The GIBBSBORO SCHOOL DISTRICT developed a list of all school facilities scheduled for sampling (see list at beginning of Sampling Plan). The list may be updated periodically.

5. PLUMBING SURVEY

A plumbing survey will be conducted for each school/facility to be sampled. The plumbing survey will incorporate details listed below.

5.1 Plumbing Profile

The purpose of the Plumbing Profile (see Attachment) is to identify and categorize plumbing and related infrastructure to prioritize facilities and drinking water outlets within the facility for testing, and to identify potential sources of lead (i.e. lead service lines, or lead piping or solder). The Plumbing Profile helps determine the sampling locations and priority within the individual school/facility.

The Plumbing Profile will include the following:

- Year school built and dates of any additions
- Service line material
- Material of internal plumbing and whether it meets the current New Jersey “lead-free” plumbing code
- Point-of-entry or point-of-use treatment being used
- All drinking water outlets including fountains that are permanently out of service
- All drinking water outlets including fountains that are temporarily out of service
- All drinking water outlets including drinking water fountains that are leaking or evidence of staining and in need of repair
- Type (make and model) and location of all drinking water fountains, including whether they are lead-lined or if they have been involved in any recalls (<http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=30005UPU.txt>)
- Locations of any electrical wires grounded to water pipes
- Building blue prints and floor diagrams, as available

5.2 Filter Inventory (If Applicable)

A Filter Inventory (see Attachment) will be prepared for any use of filters to control lead, which will include the following information:

- Location (school and outlet);
- Make and model;
- Installation date (last replaced);
- Replacement frequency;
- Documentation of repairs; and
- Contaminants the filter is capable of and/or NSF-certified for the removing

6. PLANNING

6.1 Walk-Through/Pre-Sampling Review

As part of the planning process, a Walk-Through may be conducted prior to sampling event. The Walk-Through will include an assessment of every room where there is a drinking water outlet (including but not limited to classrooms, offices, bathrooms, kitchens and recreational areas) in the facility. The Walk-Through will identify all drinking water and food preparation outlets to be sampled, which will be marked on the corresponding floor plan/floor diagram.

The assessment will include recording the specific characteristics of each outlet, such as leaks or staining (see Attachment). During the assessment, the water will be turned on to determine the spray pattern, whether there is adequate flow to collect samples, if there any odor or color differences are present, and whether the cold-water faucet is functioning properly. Only cold water faucets will be sampled. For motion sensor and metered sinks, the hot water valve

will be shut off on the day of sampling. All outlets in need of repair will be repaired prior to sampling or documented on the temporary out of service list.

6.2 Floor Diagram (floor plan)

Each drinking water outlet will be identified on floor plan/floor diagram. The floor plan will identify room numbers as well as the following features:

- Service Line
- Point of Entry (the closest water outlet to the entrance of the service line)
- Food preparation outlets (i.e. cafeteria, kitchen and home economics class faucets)
- Drinking Water Fountains
- Other types of drinking water outlets to be sampled, as applicable

7. SAMPLE LOCATIONS

7.1 Sample Locations

At a minimum the following types of water outlets will be sampled at each school/facility:

- Kitchen outlets
- Food Preparation outlets
- Teacher Lounge outlets
- Nurse's Office outlets
- Home Economic sink outlets
- Drinking Water Fountains - Bubblers and Water Coolers
- Outside drinking water fountains and food preparation areas (i.e. snack stands)
- Ice Machines
- Other drinking water outlets used for consumption

Examples of outlets that are not required to be sampled include utility sinks, outside spigots, restroom sinks, and classroom sinks, unless any of these sinks are used routinely for consumption.

7.2 Sample Location Codes

Each drinking water outlet will be identified using a code such as those listed below (additional/different codes may be utilized):

Type/Location	Code
Kitchen sink	S
Cafeteria sink	S
Food Prep sink	S
Teacher Lounge sink	S
Nurse's Office sink	S
Home Economics sink	S
Drinking Water Bubbler	WF
Water Cooler (chiller unit)	WC
Ice Machine	I
Dishwasher	DWR
Sink (any type)	S
Water Fountain	WF

7.3 Sampling Location Inventory

A Drinking Water Outlet Inventory detailing all the drinking water outlets to be sampled in each school/facility is included in Appendix C. The inventory includes the type, location, and sample code of each drinking water outlet. The make and model of all water fountains and water coolers is also noted. Additionally, the inventory notes the following conditions for each outlet:

- If the drinking water outlet has a chiller unit
- If the drinking water outlet has an aerator/screen
- If the drinking water outlet is motion activated
- If the drinking water outlet is operational
- If the drinking water outlet has a filter

8. SAMPLING PROCEDURES

8.1 Timeline

Samples will be collected after the water sits undisturbed/unused in the pipes for at least 8 hours, but not more than 48 hours. The Sampling Team will ensure all irrigation and outdoor water features are turned off, as well.

For buildings that have not been used for more than 48 hours, the District will perform systematic flushing 48 hours prior to the sampling event, as described in the USEPA's *"3Ts For Reducing Lead in Drinking Water in Schools"* (revised October 2006, see page 56). Any flushing event will be documented in the log (see Attachment).

Prior to collecting samples the staff at each school/facility to be sampled will be notified of the event. The District will ensure that access to the building is restricted to ensure water sits undisturbed for a minimum of 8 hours.

Prior to collecting samples the Sampling Team will gather the necessary equipment and supplies (i.e. sample bottles, weatherproof labels, chain of custody forms, etc.) to conduct the sampling event.

The Sampling Team will identify every drinking water outlet which is sampled with a specific alpha-numeric Code in the event the District has to re-visit the sample location.

Filters, aerators or screens, if any are present, will not be removed prior to or during the sampling event.

8.2 Sample Collection

Sample Collection Method

Sampling will begin at the outlet closest to the point of entry and continue to the outlet furthest from the entry point to ensure the water remains as motionless as possible in the plumbing lines. This will minimize the chance that an outlet will be inadvertently flushed by an upstream fixture.

The GIBBSBORO SCHOOL DISTRICT will utilize the "First Draw and Follow-up Flush Sampling Conducted on Different Days" sampling method. The process is outline below:

- A new pair of non-colored latex or nitrile gloves will be used to sample each drinking water outlet. This is to minimize the potential for cross contamination of sample outlets by sampling personnel.
- First draw samples after the water has sat undisturbed for a minimum of 8 hours.
 - Samples will be collected from the cold-water outlet at each location
 - The sample will be collected by placing the bottle under the drinking water outlet before turning on the cold-water outlet.
 - For motion-activated faucets, the hot water valve must be turned off prior to sampling.
 - No water is allowed to run prior to collecting a sample.
- Each sample will be properly identified on the sample bottle and chain of custody.
- Samples will be delivered to the Laboratory by the Sampling Team.

- After receiving the testing results, the District may conduct a second sampling event by collecting a follow-up flush sample at any drinking water outlet reported with an initial result of greater than 15 µg/L (as defined as greater than or equal to 15.5 µg/L).
- Prior to the follow-up sampling event, the following preparations will take place:
 - The targeted outlets will be listed on a Follow-Up Sampling, labelled and identified on the floor plan/diagram.
 - The water will remain undisturbed for a minimum of 8 hours prior to sampling.
- The follow-up flush sampling will be conducted as described below:
 - The drinking water outlet will be turned on and allowed to run for 30 seconds
 - The water will be captured in a clean 250 mL container
 - If the drinking water outlet is a water cooler with a cooler unit, then allow the water to run for 15 minutes prior to collecting a flushed sample in a pre-cleaned 250 mL container

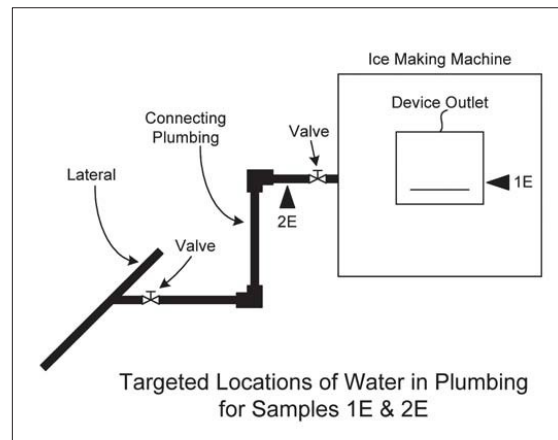
Sampling Personnel Responsibilities

- Preparation of labels, which will include a unique alpha-numeric sample ID number
- Preparation of a chain of custody to include the field sample information which will include the sampler's name, the school name, the Sample Location Code, a unique alpha-numeric sample ID number, parameter to be analyzed, date of collection, and any preservation technique used
- Documentation of all observations such as automatic sensors, odors, change in water color, low water flow, water outlet leaks, irregular water spray, attached filter(s), if the screen/aerator is on/off the water outlet, or if the water becomes warm/hot
- Proper handling techniques to minimize the potential for cross contamination of sample outlets
- Ensure the water is collected from the outlet directly into each container
- Follow all the sampling procedures outlined in the Sampling Plan and the QAPP

8.3 Ice Machines Sample Collection Procedure

Ice Machine Initial Screening Sample

- Fill a suitable container (250 mL or larger, wide-mouthed bottle or other container) provided by the laboratory at least three-quarters full of ice. Do not touch the ice with your hands. Use the non-metal scoop or disposable plastic gloves provided by the laboratory to place the ice in the container.
- If the lead level in Sample exceeds 15 µg/L (ppb), collect a follow-up sample to determine if the source of the lead is the plumbing or the ice machine itself.



Ice Machine Follow-Up Sample

- Disconnect the ice machine from the plumbing and look for a screen at the inlet. Remove the screen. If debris is present, forward a sample of the debris to the laboratory for analysis and clean out the remaining debris. The laboratory will determine whether lead solder is present. Clean the screen routinely to avoid accumulations of debris.
- Collect the sample from the disconnected plumbing as close to the ice machine as possible. Fill the sample container with 250 mL of water. If no outlet is available, contact the ice machine manufacturer for recommendations that will minimize disruption of existing plumbing. Adding outlets or valves could add new sources of lead to the plumbing, even if the new devices are lead-free and meet NSF Standard 61, section 8. If a sample outlet or valve is available, collect the sample immediately after opening the outlet or valve.

Additional Sampling Event

Upon receiving the results of the initial samples and follow-up flush samples, if applicable, the District will conduct additional sampling events for the following situations:

- Any location required to be sampled initially, but that was not sampled (i.e. not operational during initial sampling event)
- Any location that was not sampled initially, but that by sampling could help pinpoint the source of lead in an outlet
- Where there was a possible lab error or sample collection error

8.4 School-Wide Flushing Procedure

- Locate the faucet furthest away from the service line on each wing and floor of the building, open the faucets wide, and let the water run for 10 minutes. This 10-minute time frame is considered adequate for most buildings.
- Open valves at all drinking water fountains without refrigeration units and let the water run for roughly 30 seconds to one minute, or until cold.
- Let the water run on all refrigerated water fountains for 15 minutes.

8.5 New Jersey Certified Laboratories

Laboratory Responsibilities

- The laboratory will document that its personnel have previous experience sampling for lead and have been properly trained to conduct USEPA Method 200.8 or other methods that are approved sampling methods

- Approved sampling methods are USEPA Method 200.9, USEPA Method 200.5, SM3113B, and ASTM3559-D provided the reporting limit for the method is less than or equal to 2 µg/L
- The laboratory will conduct analysis of a laboratory fortified blank (Field Blank) to assess the accuracy; the acceptance criteria for accuracy for the results will be within plus or minus 15% recovery of the known value
- Laboratories will provide the results within timeframe required under contract
- Laboratories will report in µg/L (micrograms per liter) or ppb (parts per billion) and to at least three significant figures

8.6 Sampling Results

The laboratories will provide the lead sample results in electronic format within the timeframe required under the contract. The chain of custody forms will be included with the results report.

Within 24 hours after the District has reviewed and verified the final laboratory results, the District will make the results publicly available. If any results exceed the Action Level, the District will provide written notification to the parents/guardians of all students as well as to the Department of Education.

8.7 Intermediate Remedial Measures

Upon receiving sample results, the District will turn off all outlets with results that exceed 15 µg/L (as defined as greater than or equal to 15.5 µg/L). If these locations must remain on for non-drinking purposes, then a "DO NOT DRINK - SAFE FOR HANDWASHING ONLY" sign will be posted.

Glossary of Terms

Drinking Water Outlet: an outlet that can be used for the consumption of water, such as, water fountains, water coolers, bubblers, kitchen sinks and food preparation sinks; however, classroom, bathroom, and outlets used for washing dishes are not drinking water outlets.

Action Level (AL): the lead level established by the USEPA at 40 CFR 141.80 for lead in drinking water.

Bottled Water: includes sealed purchased water from an external company (individual bottles or dispensers). Drinking water dispensers that utilize purchased water are not required to be sampled.

First Draw Sample: a sample that is collected from outlets where water sat undisturbed for a minimum of 8 hours.

Follow-up Flush Sample: sample that is collected from outlets after they have been manually flushed.

Low-Use Outlets: outlets that are not used routinely and may sit for periods of time with minimal or no use. Examples include those outlets in a wing of a school that is temporarily closed off and are not being used, or fountains and food preparation outlets that are only used during sporting or other events.

Out of Service Outlets: drinking water outlets as identified on inventory that are not operational.

Permanently Out of Service Outlets: outlets that are not being used and the District plans to decommission.

Temporarily Out of Service Outlets: outlets that require repair or replacement and will be put back in service once they are repaired. For example, an outlet with a broken handle.

Point of entry (POE): the point at which the service line enters the building. For the purposes of sample collection, the POE sample location is the closest water outlet to the entrance of the service line into the school.

Quality Assurance Project Plan (QAPP) Template: describes the planning, implementation, and evaluation steps that will be consistently applied by those involved in a School District's Sampling Plan. The QAPP will provide a high level of confidence in the results of this sampling and aid in meeting the overall goal of ensuring any appropriate remediation measures are quickly identified and implemented.

Sampler: personnel responsible for collecting the drinking water outlet samples for a school. The individual is required to review and understand their roles and responsibilities under the District's Quality Assurance Program Plan and the is required to collect samples in accordance with the District's Sampling Plan.

Service Line: the pipe that carries water to the school from the public water system's main in the street.

School Wide Systematic Flush: system flushing is required if the school has been dormant for greater than 48 hours (holiday or seasonal break). A Flushing Log needs to be completed for each flushing event.

Water Cooler: any mechanical device affixed to drinking water supply plumbing that actively cools water for human consumption. The reservoir can consist of a small tank or a pipe coil.

Attachments

Attachment A - List of Equivalents

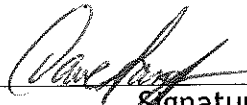
This table lists the attachments included in the district's Lead Sampling Plan & QAPP and the corresponding document(s) referenced in the NJ DEP model program. As noted below, some of the state documents have been eliminated, modified, or merged with other documents within the district's overall plan. This List of Equivalents is provided as reference for future reference.

NJ Model Plan Document	District Document
Attachment A - List of Schools	List of facilities included in Sampling Plan
Attachment B -Profile questionnaires Plumbing	Attachment B - form modified
Attachment C - Outlet Inventory	Attachment C - form modified
Attachment D - Filter Inventory	Renamed as Attachment F
Attachment E - Flushing Log	Renamed as Attachment G
Attachment F - Pre-Sampling Water Use Certification	Renamed as Attachment D
Attachment G - Sample Flush Tag	Renamed as Attachment H
Attachment H. i. - Recalled Water Cooler List	Renamed as Attachment J
Attachment H. ii. - Ice Machine Sample Collection Procedure	Incorporated into Sampling Plan procedures
Attachment H. iii. - School Wide Flushing Procedure	Incorporated into Sampling Plan procedures
Attachment H. iv. - Sampling Event Checklist	Incorporated into Sampling Plan procedures
Attachment H. v. - Sample Signs	Renamed as Attachment K
Attachment H. vi. - School Sampling Package Review Checklist	Incorporated into Sampling Plan procedures
Attachment H. vii. - Follow-up Sampling Inventory	Renamed as Attachment E
Attachment H. viii. - Water Coolers on EPA Recall List	Renamed as Attachment J
Attachment H. ix. - Outlets with Filters Installed	Renamed as Attachment F
Attachment H. x. - Data Review Summary	Incorporated into Sampling Plan procedures

Attachment B - Plumbing Profile Background Information

Name of School: Gibbsboro BOE Grade Levels: K-8

Address: 37 Kirkwood Road, Gibbsboro NJ 08026

Project Officer:  5-5-17
Signature Date

Questions - Background Information

1. What year was the original building constructed? 1953
Were any buildings or additions added to the original facility? ☒ Yes ☐ No

Date of Addition(s): 1963 2004

2. If the building was constructed or repaired after 1986, was lead-free plumbing and solder utilized? ☒ Yes ☐ No

If no, location(s) where lead solder used:

3. Where are the most recent plumbing repairs and replacements?

Location & Description: Boiler Rm. Hot Water Heater + Temp. Regulating valve

4 a. What material is the service connection, which is the pipe that carries water to the school from the public water system's main in the street (i.e. cast iron, copper)?

Cast iron

4 b. Where is the Service Line located? This is the Point of Entry (POE) location.

From the Main Road (Kirkwood rd)

5. Is there Point of Entry (POE) or Point of Use (POU) treatment in use? ☐ Yes ☒ No
Is there Point of Use (POU) treatment in use? ☐ Yes ☒ No

If yes, Location/Type:

Attachment B - Plumbing Profile Background Information

6. Are there tanks in your plumbing system (pressure tanks, gravity storage tanks)?

~~Yes~~

☒ No

Location/Type:

7. Does the school have a filter maintenance and operation program? ☐ Yes ☒ No
If so, who is responsible for this program? What is the process for adding filters?

8. Have accessible screens or aerators on outlets been cleaned? ☒ Yes ☐ No
Does the school have a screen or aerator maintenance program? ☐ Yes ☒ No

9. Have there been any complaints about bad (metallic) taste? Note location(s).

☐ Yes

☒ No

Location(s):

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 the following:

Name of contaminant(s):

Concentrations found:

pH level:

Is testing done regularly at the building? ☐ Yes ☒ No

11. Other plumbing background questions include:

Are blueprints of the building available? ☒ Yes ☐ No

Are there known plumbing "dead-ends", low use areas, existing leaks or other "problem areas"? ☐ Yes ☒ No If yes, describe below.

Are renovations planned for any of the plumbing system? ☐ Yes ☒ No

Attachment B - Plumbing Profile Walk-Through Questions

Name of School: Gibbsboro BOE

Questions - Walk-Through

(complete during Drinking Water Outlet Inventory)

1. Confirm the material of Service Line visually. ☐ Confirmed

Material:

N/A

2. Confirm the presence of POE or POU treatment, if any. ☐ Present ☒ No Treatment

If yes, describe:

3. What are the potable water pipes made of in your facility? Check all that apply:

Lead

☐

Plastic

☐

Copper

☒

Galvanized Metal

☐

Cast Iron

☐

Other

☐

If "other" explain:

4. Are electrical wires grounded to Water Pipes? ☒ Yes ☒ No Note location(s).

Location(s): Boiler Room

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

☒ Yes

☐ No

If yes, then document brass water outlets in appropriate column in Attachment C

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

Locations of all drinking water outlets are documented in Attachment C - Water Outlet Inventory

Attachment B - Plumbing Profile Walk-Through Questions

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? ☐ Yes ☒ No

Any Recalled Drinking Water Fountains? ☐ Yes ☒ No

If yes, then list make/model:

8. Have signs of corrosion, such as frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry been detected? ☐ Yes ☒ No

If yes, then document brass water outlets in appropriate column in Attachment C

9. Are there any outlets that are not operational and out of service? ☐ Yes ☒ No

Permanently? ☐ Yes ☒ No

Temporarily? ☐ Yes ☒ No

If yes, explain:

Attachment C - Drinking Water Outlet Inventory

School:	Gibbsboro Elementary School				Address:	37 Kirkwood Road, Gibbsboro, NJ 08026			
Grade Levels:	K-8	Year Constructed:	1953	Year of Renovations/Additions:	1963; 2004				

Outlet Code ¹	Location/Description	Sample # (see Chain of Custody)	Operating ² (Y/N)	Corrosion ³ (Y/N)	Filter ⁴ (Y/N)	Brass ⁵ (Y/N)	Aerator/ Screen	Motion Activated	Chiller (Y/N)	Water Cooler	
										Make	Model
1S	Nurse's Office-1st Sink near entrance	38-0418-G01	Y	N	N	Y	N	N	N		
2S	Nurse's Office Sink next to Refrigerator	38-0418-G02	Y	N	N	Y	N	N	N		
3WF	Water Fountain near Rm 111	38-0418-G03	Y	N	N	Y	N	N	N		
4WF	Water Fountain part of Sink in Rm 117	38-0418-G04	Y	N	N	Y	N	N	N		
5S	Sink in Rm 117	38-0418-G05	Y	N	N	Y	N	N	N		
6WF	WF outside of Rm 201-Right Side	38-0418-G06	Y	N	N	Y	N	N	N		
7WF	Water Fountain outside of Rm 412	38-0418-G07	Y	N	N	Y	N	N	N		
8WF	WF across from Rm 304-Left, higher	38-0418-G08	Y	N	N	Y	N	N	Y	Halsey Taylor	HAC8F5BLQIE
9WF	WF across from Rm 304-Right, lower	38-0418-G09	Y	N	N	Y	N	N	Y	Halsey Taylor	HAC8F5BLQIE
10S	Rm 107 Sink	38-0418-G10	Y	N	Y	Y	N	N	N		
11WF	Rm 106 Water Fountain	38-0418-G11	Y	N	N	Y	N	N	N		

¹ Number outlets starting at the closest outlet to the Point of Entry (POE)

² Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile

³ Signs of corrosion detected, such as but not limited to leaks, rust-colored water, or stained fixtures

⁴ Document on Attachment D- Filter Inventory

⁵ Indicated if any fittings, faucets or valves are brass

Individual School Project Officer Name, Signature & Date: _____

I have read the district's Lead Drinking Water Testing Sampling Plan and Quality Assurance Project Plan and I am certifying that samples were collected in accordance with these plans.

District Representative David Savidge _____
 Print Signature Date

Address: 37 Kirkwood Road, Gibbsboro, NJ 08026

Project Officer: _____

Signature Date

[illegible]

Attachment F - Filter Inventory

Attachment G - Flushing Log

Attachment H - Example of a Sample Flush Tag

FLUSH TAG

Water outlet sampling in progress. Please do not use water

School Name:	Gibbsboro Elementary School
School Address:	37 Kirkwood Road, Gibbsboro, NJ 08026
Date Flushed:	
Flushing Process Start Time:	
Flushing Process End Time:	
Location of flushed outlet:	

Is the fountain front cover removed for the sampler to determine the reservoir type?
(check one): ☐ Yes ☐ No

Person responsible for the flushing process (print & sign name):

Signature: _____

* Water within the school distribution system should sit in the pipes unused for at least eight (8) hours after flushing but not more than 48 hours before a sample is taken.

Note to the person responsible for the flushing process:

- A. Turn-off lawn sprinkler outlet(s) until water sampling is complete.
- B. Make sure sampling outlets are accessible.

Attachment I - Water Fountains/Coolers on EPA Recall List

Name of School: Gibbsboro Elementary School Grade Levels: K-8

Address: 37 Kirkwood Road, Gibbsboro, NJ 08026

Project Officer: _____
Signature Date

SAMPLE ID/ LOCATION	MAKE	MODEL	TAKEN OUT OF SERVICE	INITIALS

If N/A, provide signature below indicating that the school does not have any drinking water fountains/water coolers on the EPA Recall list.

Attachment J - USEPA's Water Cooler Recall List

*Tables from EPA's 3Ts for Reducing Lead in Drinking Water in Schools Revised
Technical Guidance*

Table E-1
Halsey Taylor Water Coolers With Lead-Lined Tanks²

The following six model numbers have one or more units in the model series with lead-lined tanks:

WM8A WT8A GC10ACR GC10A GC5A RWM13A

The following models and serial numbers contain lead-lined tanks:

<u>WM14A Serial No.</u> <u>843034</u>	<u>WM14A Serial No.</u> <u>843006</u>	<u>WT11A Serial No. 222650</u>
<u>WT21A Serial No.</u> <u>64309550</u>	<u>WT21A Serial No.</u> <u>64309542</u>	<u>LL14A Serial No. 64346908</u>

² Based upon an analysis of 22 water coolers at a US Navy facility and subsequent data obtained by EPA, EPA believes the most serious cooler contamination problems are associated with water coolers that have lead-lined tanks.

USEPA's Water Cooler Recall List (cont.)

Table E-2
Water Coolers With Other Lead Components

EBCO Manufacturing

All pressure bubbler water coolers with shipping dates from 1962 through 1977 have a bubbler valve containing lead. The units contain a single, 50-50 tin-lead solder joint on the bubbler valve. Model numbers for coolers in this category are not available.

The following models of pressure bubbler coolers produced from 1978 through 1981 contain one 50-50 tin-lead solder joint each.

<u>CP3</u>	<u>DP15W</u>	<u>DPM8</u>	<u>7P</u>	<u>13P</u>	<u>DPM8H</u>	<u>DP15M</u>	<u>DP3R</u>	<u>DP8A</u>
<u>DP16M</u>	<u>DP5S</u>	<u>C10E</u>	<u>PX-10</u>	<u>DP7S</u>	<u>DP13SM</u>	<u>DP7M</u>	<u>DP7MH</u>	<u>DP7WMD</u>
<u>WTC10</u>	<u>DP13M-60</u>	<u>DP14M</u>	<u>CP10-50</u>	<u>CP5</u>	<u>CP5M</u>	<u>DP15MW</u>	<u>DP3R</u>	<u>DP14S</u>
<u>DP20-50</u>	<u>DP7SM</u>	<u>DP10X</u>	<u>DP13A</u>	<u>DP13A-50</u>	<u>EP10F</u>	<u>DP5M</u>	<u>DP10F</u>	<u>CP3H</u>
<u>CP3-50</u>	<u>DP13M</u>	<u>DP3RH</u>	<u>DP5F</u>	<u>CP3M</u>	<u>EP5F</u>	<u>13PL</u>	<u>DP8AH</u>	<u>DP13S</u>
<u>CP10</u>	<u>DP20</u>	<u>DP12N</u>	<u>DP7WM</u>	<u>DP14A-50/60</u>				

Halsey Taylor

1. Lead solder was used in these models of water coolers manufactured between 1978 and the last week of 1987:

<u>WMA-1</u>	<u>SCWT/SCWT-A</u>	<u>SWA-1</u>	<u>DC/DHC-1</u>
<u>S3/5/10D</u>	<u>BFC-4F/7F/4FS/7FS</u>	<u>S300/500/100D</u>	

2. The following coolers manufactured for Haws Drinking Faucet Company (Haws) by Halsey Taylor from November 1984 through December 18, 1987, are not lead-free because they contain 2 tin-lead solder joints. The model designations for these units are as follows:

<u>HC8WT</u>	<u>HC14F</u>	<u>HC6W</u>	<u>HWC7D</u>	<u>HC8WTH</u>	<u>HC14F</u> <u>H</u>	<u>HC8W</u>	<u>HC2F</u>	<u>HC14WT</u>
<u>HC14FL</u>	<u>HC14W</u>	<u>HC2FH</u>	<u>HC14WTH</u>	<u>HC8FL</u>	<u>HC4F</u>	<u>HC5F</u>	<u>HC14WL</u>	<u>HCBF7D</u>
<u>HC4FH</u>	<u>HC10F</u>	<u>HC16WT</u>	<u>HCBF7HO</u>	<u>HC8F</u>	<u>HC8FH</u>	<u>HC4W</u>	<u>HWC7</u>	

Attachment K - Sample Signs

The following examples can be utilized by the District, as applicable:

**WATER TESTING IN
PROGRESS
DO NOT USE
ANY WATER SOURCES -
SINKS, FOUNTAINS,
TOILETS, ETC.**

DO NOT DRINK



**SAFE FOR
HANDWASHING**

Attachment L - Lead in Water Sample Results Summary

School Name: Gibbsboro BOE - Gibbsboro Elementary School

Outlet Code	Sample ID	Location/Description	Result (ppb)	Above AL?
1S	38-0418-G01	Nurse's Office-1st Sink near entrance	ND	No
2S	38-0418-G02	Nurse's Office Sink next to Refrigerator	1.5	No
3WF	38-0418-G03	Water Fountain near Rm 111	ND	No
4WF	38-0418-G04	Water Fountain part of Sink in Rm 117	ND	No
5S	38-0418-G05	Sink in Rm 117	ND	No
6WF	38-0418-G06	Water Fountain outside of Rm 201-Right Side	2.36	No
7WF	38-0418-G07	Water Fountain outside of Rm 412	ND	No
8WF	38-0418-G08	Water Fountain across from Rm 304-Left, higher fountain	ND	No
9WF	38-0418-G09	Water Fountain across from Rm 304-Right, lower fountain	ND	No
10S	38-0418-G10	Rm 107 Sink	ND	No
11WF	38-0418-G11	Rm 106 Water Fountain	ND	No

Action Level (AL) ≥ 15.5 parts per billion (ppb)



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: EnvChemistry2@emsl.com

Attn:

**Tom Pruno
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109**

5/5/2017

Phone: (856) 616-9516

Fax: (586) 616-9517

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 4/24/2017. The results are tabulated on the attached data pages for the following client designated project:

Gibbsboro BOE - Gibbsboro Elementary School / PR-170321-1017

The reference number for these samples is EMSL Order #011703127. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry
Laboratory Director



The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted.

NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 1877

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 011703127

CustomerID: EDI50

CustomerPO:

ProjectID:

Attn: **Tom Pruno**
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: (856) 616-9516
 Fax: (586) 616-9517
 Received: 04/24/17 2:30 PM

Project: Gibbsboro BOE - Gibbsboro Elementary School / PR-170321-1017

Analytical Results

Client Sample Description 38-0418-G01
 Nurse's Office - 1st Sink Near Entrance
Collected: 4/18/2017 **Lab ID:** 011703127-0001

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G02
 Nurse's Office Sink Next To Refrigerator
Collected: 4/18/2017 **Lab ID:** 011703127-0002

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	1.50	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G03
 Water Fountain Near Rm 111
Collected: 4/18/2017 **Lab ID:** 011703127-0003

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G04
 Water Fountain Part of Sink Rm 117
Collected: 4/18/2017 **Lab ID:** 011703127-0004

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G05
 Sink in Rm 117
Collected: 4/18/2017 **Lab ID:** 011703127-0005

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G06
 Water Fountain Outside of Rm 201 - Right Side
Collected: 4/18/2017 **Lab ID:** 011703127-0006

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	2.36	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G07
 Watwe Fountain Outside of Rm 412
Collected: 4/18/2017 **Lab ID:** 011703127-0007

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 011703127

CustomerID: EDI50

CustomerPO:

ProjectID:

Attn: **Tom Pruno**
Environmental Design, Inc.
5434 King Avenue
Suite 101
Pennsauken, NJ 08109

Phone: (856) 616-9516
Fax: (586) 616-9517
Received: 04/24/17 2:30 PM

Project: **Gibbsboro BOE - Gibbsboro Elementary School / PR-170321-1017****Analytical Results**

Client Sample Description 38-0418-G08 **Collected:** 4/18/2017 **Lab ID:** 011703127-0008
Wtaer Fountain Across From Rm-304-Left,
Higher Fountain

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G09 **Collected:** 4/18/2017 **Lab ID:** 011703127-0009
Wtaer Fountain Across From Rm-304-
Right, Lower Fountain

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G10 **Collected:** 4/18/2017 **Lab ID:** 011703127-0010
Rm 107 Sink

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Client Sample Description 38-0418-G11 **Collected:** 4/18/2017 **Lab ID:** 011703127-0011
Rm 106 Water Fountain

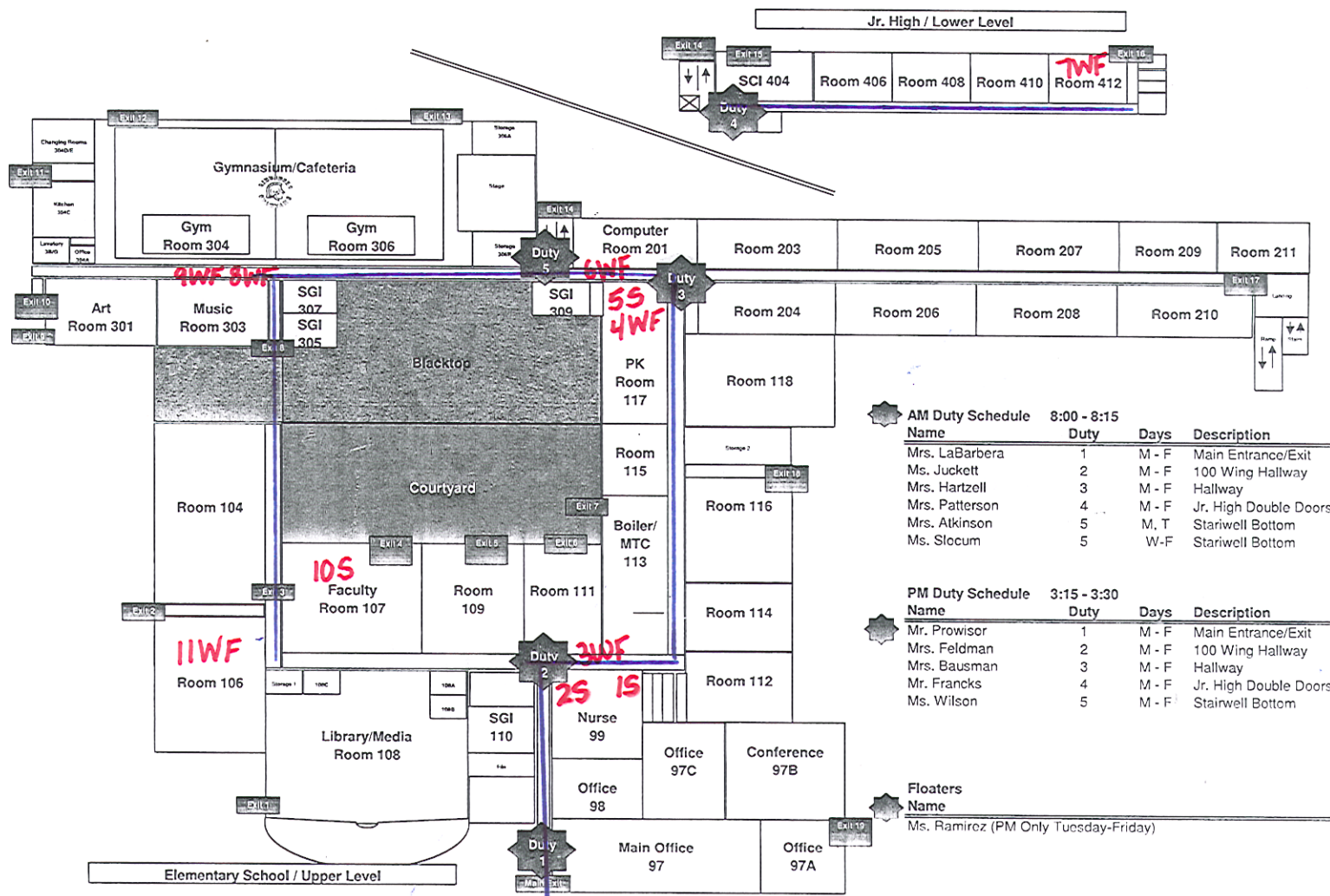
Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
200.8	Lead	ND	1.00	µg/L	4/27/2017	AE	4/28/2017	EG

Definitions:

ND - indicates that the analyte was not detected at the reporting limit

RL - Reporting Limit (Analytical)

GIBBSBORO ELEMENTARY SCHOOL



AM Duty Schedule 8:00 - 8:15		Days	Description
Name	Duty		
Mrs. LaBarbera	1	M - F	Main Entrance/Exit
Ms. Juckett	2	M - F	100 Wing Hallway
Mrs. Hartzell	3	M - F	Hallway
Mrs. Patterson	4	M - F	Jr. High Double Doors
Mrs. Atkinson	5	M, T	Starivell Bottom
Ms. Slocum	5	W-F	Starivell Bottom

PM Duty Schedule 3:15 - 3:30			
Name	Duty	Days	Description
Mr. Prowisor	1	M - F	Main Entrance/Exit
Mrs. Feldman	2	M - F	100 Wing Hallway
Mrs. Bausman	3	M - F	Hallway
Mr. Francks	4	M - F	Jr. High Double Doors
Ms. Wilson	5	M - F	Stairwell Bottom

Floater	
Name	
Ms. Ramirez (PM Only Tuesday-Friday)	