



Lead Testing in School Drinking Water



Location:

Panama Central School District
Panama CSD and Bus Garage
Panama, New York 14767

Prepared for:

Panama Central School District
41 North Street
Panama, New York 14767

LaBella Project No. 2210863

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I. BACKGROUND

Under Subpart 67-4 of the New York Codes, Rules and Regulations, Title X, “all school districts and boards of cooperative educational services are required to test potable water for lead contamination, and to develop and implement a lead remediation plan, where applicable.”

The Subpart 67-4 testing requirement was first promulgated under emergency legislation in 2016, and was subsequently signed into permanent law. The regulation requires that testing be performed again in 2020, and every five years thereafter.

Lead is a toxic metal that can be harmful to human health when ingested. Young children, especially those 6 years and younger, are at particular risk for lead exposure because they have frequent hand-to-mouth activity and absorb lead more easily than do adults. Children’s nervous systems are still undergoing development and thus are more susceptible to the effects of toxicants. Therefore, emphasis may be placed on assessment of lead exposure in schools and early childhood education facilities, where concentrations of a vulnerable population are regularly congregated.

Lead can be introduced into potable water by being present in the source water or, more commonly, by interaction of the water with fixtures and plumbing materials containing lead. Common sources of lead in potable water include solder, fluxes, pipes and pipe fittings, fixtures, and sediments. It is possible that different water outlets in a given building could have dissimilar concentrations of lead. It is also possible that, due to temporal fluctuations in water chemistry and physical conditions that may affect the integrity of the plumbing and the water being conveyed, the result obtained from a test at a given time may differ from the result obtained from a test at another time, even if the sampling procedures are identical.

II. PROJECT DESCRIPTION

In accordance with sections 1370-a and 1110, Subpart 67-4 of Title 10 (Health) of the Official Compilation of Codes, Rules and Regulations of the State of New York and United States Environmental Protection Agency (EPA) Guidelines LaBella Associates performed sampling of potable water for lead contaminants for the Panama Central School District. Sampling was conducted on April 3, 2020 at the following building and out buildings:

- Panama Central School Building
- Panama CSD Bus Garage

III. SAMPLING PROCEDURES AND SUMMARY OF RESULTS

Prior sampling reports were reviewed to develop an understanding of the previously sampled outlets. Sampling was conducted at client defined locations. These outlets typically included drinking fountains, bottle fillers, kitchen sinks, classroom sinks, bubblers, and medical office sinks. Outlets categorically excluded from testing may include laboratory sinks, showers, janitor’s sinks and mechanical room outlets. Typically, excluded outlets will be capable of being isolated by custodial staff, and will be accompanied by warning signs to prohibit consumption.



On the morning of April 3, 2021, LaBella staff conducted sampling of target outlets prior to facilities opening and before any water was used. The water conditions were reported to be representative of normal consumption patterns with building occupancy controlled during stagnation and sampling periods. It should be noted, sampling occurred during the novel coronavirus (COVID-19) restrictions in which occupancy in school buildings and water usage were in a state of irregularity.

In accordance with Subpart 67-4 requirements, the sampling was limited to “first-draw” samples (a volume of the first 250 mL of water from each cold water outlet in the inventory). The samples were then promptly packaged and shipped to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) accredited laboratory. Samples were analyzed utilizing EPA environmental analysis method 200.9 Rev 2.2 for lead in potable water. Results of the laboratory analyses, field testing, and the visual on-site inspection were compiled and summarized.

Building	Total Number of Outlets	Total number of outlets at or below EPA action level (15ppb)	Total number of outlets above EPA action level (15ppb)
Panama Central School	129	127	2
Panama CSD Bus Garage	4	4	0
Total	133	131	2

Based on laboratory analyses of the samples collected, the following outlets were determined to exceed the NYS Action level of 15 parts per billion (ppb) or equivalent 15 micrograms per liter ($\mu\text{g/L}$). However, the following table does not include all of the outlets sampled during this inspection; for a full list of outlets sampled see Appendix A immediately following this report.

Sample Number	Sample Location	Outlet Type	Result ($\mu\text{g/L}$)
0403-PS-31	Room 119	Sink	48.7
0403-PS-35	South Gym	Fountain	16.4

IV. Response and RECOMMENDATIONS

According to section Subpart 67-4.4 “Response” of the regulation, school districts shall prohibit the use of all outlets which exceed the 15 ppb action level. The outlet shall remain out of service until a lead remediation plan is implemented to reduce the level of lead and resampling indicates lead levels that are at or below the action level. While the outlet is out of service the district must supply an appropriate amount of potable water for drinking or cooking to building occupants.

LaBella would provide the following recommendations for outlets in exceedance of the action level:

1. Follow up testing – This may include an additional first draw sample, or second draw sample to further investigate and evaluate the condition of the plumbing system upstream of the



affected outlets. Sample results may provide some insight on trends, issues with certain portions of the plumbing system or links to specific outlets types and models.

2. Remedial Measures – The school district may elect to commence remediation of affected outlets with or without additional testing. Temporary remediation could include isolating outlets and providing alternate sources of potable drinking or cooking water. Permanent remediation could include replacing outlets, permanently isolating outlets, adding water filtration, or renovations to the plumbing system.

V. Reporting and Record Keeping

In accordance with Subpart 67-4 the district shall:

- Report the test results to the local health department as soon as practicable, but no more than 1 business day after the school received the laboratory report; and
- Notify all staff and all persons in parental relation to children or students of the test results, in writing, as soon as practicable but no more than 10 business days after the school received the laboratory report.
- The school shall make available, on the school’s website, the results of all lead testing performed and lead remediation plans implemented pursuant to this Subpart, as soon as practicable, but no more than 6 weeks after the school received the laboratory reports.
- As soon as practicable, but no more than 10 business days after the school received the laboratory reports, the school shall report data relating to test results to the Department, local health department, and State Education Department, through the Department’s designated statewide electronic reporting system.
- The school shall retain all records of test results, lead remediation plans, determinations that a building is lead-free, and waiver requests, for ten years following the creation of such documentation. Copies of such documentation shall be immediately provided to the Department, local health department, or State Education Department, upon request.