Lead Testing in School Drinking Water

Location:

East Irondequoit Central School District
Rochester, New York 14609

Prepared for:

East Irondequoit Central School District
600 Pardee Road
Rochester, New York 14609

LaBella Project No. 2210737

May 2021

300 Pearl Street, Suite 130 | Buffalo, NY 14202 | p 716-551-6281 | f 716-551-6282

www.labellapc.com

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. Due to the COVID-19 Pandemic, NYSDOH has granted an extension for this testing until June 30, 2021 (see Appendix E).

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 US EPA Guidelines LaBella Associates performed sampling of potable water for lead contaminants for the East Irondequoit Central School District. Sampling was conducted at the following buildings:

Eastridge Senior High School
2350 East Ridge Road, Rochester, New York 14622

East Irondequoit Middle School
155 Densmore Road, Rochester, New York 14609

Laurelton-Pardee Intermediate School
600 Pardee Road, Rochester, New York 14609

Durand-Eastman Intermediate School
95 Point Pleasant Road, Rochester, NY 14622

Helendale Road Primary School
220 Helendale Road, Rochester, New York 14609

Ivan Green Primary School
800 Brown Road, Rochester, New York 14622

III. Sampling Procedures and Summary of Results

Prior sampling reports were reviewed to develop an understanding of the previously sampled outlets. A walkthrough was conducted with district personnel on February 9, 2021 to identify targeted outlets. Although the sampling was conducted at client defined locations, LaBella Associates worked closely with the district to determine and identify potable outlets required for testing. These outlets typically included bottle fillers, kitchen sinks, classroom sinks, and other misc. office sinks. Outlets categorically excluded from testing included laboratory sinks, showers, janitor's sinks, and mechanical room outlets. At the time of testing, the district had implemented a ban on the use of bubblers and drinking fountains to comply with the novel coronavirus (COVID-19) restrictions. Therefore, bubblers and drinking fountains were excluded from testing. Typically, excluded outlets will be capable of being isolated by custodial staff, and will be accompanied by warning signs to prohibit consumption.

After review of the state guidance sent out from the New York State Department of Health on October 13, 2020 extending the sampling deadline, and after discussion with LaBella representatives, the district decided to postpone sampling until February 2021.

On the mornings of February 17, 18, and 19, 2021, LaBella staff conducted first draw sampling of target outlets 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 COVID-19 restrictions in which student/teacher populations and water usage were in somewhat of a state of irregularity.

In accordance with Subpart 67-4 requirements 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 NYS Department of Health 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 were submitted to the district.

Once the district received the results from this initial round of sampling, the outlets with lead results above the EPA action level of 15 parts per billion were remediated. LaBella staff conducted another round of sampling on the morning of March 30, 2021 and April 22, 2021, collecting samples from all of the outlets that had exceeded the action level. The results from both rounds of sampling, as well as the field testing and the visual on-site inspection were compiled and summarized below.

Area/Building	Total Number of Outlets	Total number of outlets at or below EPA action level (15 µg/L)	Total number of outlets above EPA action level (15 µg/L)
Eastridge High School	132	125	7
Middle School	116	116	0
Laurelton-Pardee Intermediate	56	47	9
Durand-Eastman Intermediate	64	63	1
Helendale Road Primary	63	48	15
Ivan Green Primary	84	80	4
Total	515	479	36

Based on laboratory analyses of the samples collected, the following outlets were determined to exceed the EPA Action Level of 15 parts per billion (ppb) or equivalent 15 micrograms per liter (µg/L) following remediation efforts taken by the district. However, the following tables do 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 Count	Sample Number	Sample Location	Outlet Type	Result (µg/L)
Eastridge High School				
1	0330-HS-032R	E1A	Tap	27.7
2	0330-HS-051R	S25	Tap 1	47.5
3	0330-HS-052R	S25	Tap 2	23.2
4	0330-HS-072R	S18	Tap	62.7
5	0330-HS-009R	Men's Toilet by 219	Tap	78.2
6	0330-HS-016R	229A	Tap	62.3
7	0422-HS-129R2	Coach's Office 133	Tap	128
East Irondequoit Middle School				
No samples tested above the EPA Action Level				
Laurelton-Pardee Intermediate School				
1	0330-LP-003R	300	Tap 1	35.9
2	0330-LP-012R	306	Tap	22.3
3	0330-LP-015R	312	Tap 1	21.7

Sample Count	Sample Number	Sample Location	Outlet Type	Result (µg/L)
Laurelton-Pardee Intermediate School (cont.)				
4	0330-LP-016R	312	Tap 2	74.8
5	0330-LP-017R	312	Tap 3	38.8
6	0330-LP-044R	219 Gym Office	Tap	39.3
7	0330-LP-047R	Kitchen	Tap 1	60.7
8	0330-LP-052R	Kitchen	Tap 4	22.1
9	0330-LP-055R	200 Counselor	Tap	23.9
Durand-Eastman Intermediate School				
1	0330-DE-035R	120	Tap	21.3
Helendale Road Primary School				
1	0330-HP-003R	Classroom 8	Tap 1	22.2
2	0330-HP-005R	Classroom 7	Tap 1	18.2
3	0330-HP-006R	Classroom 7	Tap 2	23.6
4	0330-HP-026R	14	Tap	38.8
5	0330-HP-027R	15	Tap	15.3
6	0330-HP-028R	12	Tap	26.7
7	0330-HP-030R	11	Tap	26.8
8	0330-HP-046R	22	Tap	39.2
9	0330-HP-047R	21	Tap	35.5
10	0330-HP-048R	23	Tap	24.5
11	0330-HP-049R	24	Tap	22.4
12	0330-HP-050R	26	Tap	38.1
13	0330-HP-052R	27	Tap	23.7
14	0330-HP-062R	16	Tap	20.2
15	0330-HP-051R	28	Tap	33.1
Ivan Green Primary School				
1	0330-IG-042R	22	Tap	20.7
2	0330-IG-045R	19	Tap	15.6
3	0330-IG-070R	13 Makerspace	Tap	15.7
4	0330-IG-073R	11	Tap	18.9

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 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.