

November 18, 2024

John Baxter  
Director School Facilities  
Byram Hills Central School District  
8 Tripp Lane  
Armonk, NY 10504

Subject: Lead Testing of School Drinking Water  
Coman Hill Elementary School  
558 Bedford Avenue  
Armonk, NY 10504  
Langan Project No.: 101134517

Dear Mr. Baxter:

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) completed the testing program for lead in water at Coman Hill Elementary School located at 558 Bedford Avenue in Armonk, New York. Langan's team of industrial hygienists completed a visual assessment of the building to determine applicable vs non-applicable outlets prior to sampling.

Langan is providing the following New York State Department of Health (NYS DOH) required documentation: Laboratory Results, Exceedance Table, a draft Parents Notification Letter and notification to the local department of health of exceedances, when applicable. If requested by the district, Langan will complete the required reporting into the NYS Health Electronic Response Data System (HERDS). The district will need to provide access to the system for Langan to complete the required reporting.

## **Project Background**

On September 6, 2016, the Governor signed legislation requiring all school districts in NYS to test potable water systems for lead contamination and to take responsive actions. To implement this new law, the DOH issued emergency regulations, titled Lead Testing in School Drinking Water. On May 9, 2018, the Lead Testing in School Drinking Water final regulation was published in the State Register, replacing the emergency regulation:

- By September 30, 2016, all school buildings serving children in pre-K through grade 5 were required to collect a sample from each outlet for testing.
- By October 31, 2016, all school buildings serving children in grades 6 through 12 must collect a sample from each outlet for testing.
- Schools must complete initial first-draw sampling for Compliance Year 2020 between January 1, 2020 – December 31, 2020, and every 5 years thereafter or at an earlier time as determined by the Commissioner of Health. On October 13, 2020, NYS DOH provided an Extension of School Lead Testing Requirements to June 30, 2021.

On December 22, 2022, revisions to the Public Health Law (PHL) which governs potable water testing and standards in schools went into effect. The key revisions to the law requiring changes included:

- Revised action level of lead in drinking water to 5 parts per billion (ppb), reduced from 15 ppb.
- School buildings deemed “lead free” are no longer exempt from testing requirements:
- Should it be necessary to provide water to school occupants following an outlet being taken out of service due to an action level exceedance, it will be provided free of charge.
- Copies of the lead sampling results, including lab results and any lead remediation plans, must be made available to the public and posted on the school’s website.
- Compliance testing will occur on a triennial (every 3 years) schedule.

### **KEY DEFINITIONS IN THE LAW/REGULATIONS**

1. Outlet means a potable water fixture currently or potentially used for drinking or cooking purposes, including but not limited to a bubbler, drinking fountain, hose bib, sinks or faucets.
2. “Applicable” outlets: Outlets that should be sampled may be located anywhere on school property including external outlets (hose bibs) if the outlet may be used for drinking or cooking (including food preparation). Superintendents or their designees have the responsibility to identify which outlets on a school property meet the regulation requirements for sampling (“applicable outlets”). If a Superintendent or their designee determines that they have outlets that fall outside of the scope of the regulation (outlets not used or potentially used for drinking or cooking), the school must remediate or/and have a remedial action plan that includes details on how those outlets will not be accessed and/or utilized for drinking or cooking purposes (“non-applicable outlets”).
3. “Non-applicable” outlets: The Rule of Thumb is that generally, any outlet in a room or office within a school that is not used by students (pre-kindergarten through grade 12) and does not provide water for drinking or cooking does not require sampling.
4. Action level means 5 parts per billion (ppb). Lead test results greater than 5 ppb exceeds the lead action level and requires the outlet to be taken out of service and a remediation action plan be implemented.
5. For additional guidance regarding applicable vs. non-applicable outlets, and other requirements please see the Appendices for NYS DOH Lead Testing in School Drinking Water 2022 Compliance Requirements, and NYS DOH Frequently Asked Questions (FAQs).

### **Sampling Methodology**

1. The NYS DOH Emergency Regulation, Section 67-4.3 – Monitoring states:
  - First-draw samples shall be collected from all “applicable” outlets. A first-draw sample volume shall be 250 milliliters (mL), collected from a cold-water outlet before any water is used. The water shall be motionless in the pipes for a minimum of 8 hours, but no more

than 18 hours, before sample collection. Note: The NYS DOH requires that for outlets which do not have regular use and water remains motionless in the pipes for greater than 18 hours, the outlets were to be sampled as well (to represent "normal use patterns").

- All first-draw samples shall be analyzed by a laboratory approved to perform such analyses by the Department's Environmental Laboratory Approval Program (ELAP).
- Although not required by the NYS DOH Emergency Regulation, Langan also followed additional methodologies included in Environmental Protection Agency (EPA) document entitled "3Ts for Reducing Lead in Drinking Water in Schools".

2. Sampling Plan:

- In developing a sampling plan before sample collection took place at the School, Langan determined the location of the water service line. Sampling at the School started from a location closest to the service line entrance and proceeded outwards from that point.
- A map, depicting the location of the service line entrance, and arrows indicating the direction of sampling was provided to and used by the sampling team. The sampling team verified the location of the service line entrance prior to sampling.

3. Laboratory Analysis: Samples were submitted to York Analytical (Stratford, CT) for analysis under chain-of-custody. The laboratory is certified through the NYS DOH Environmental Laboratory Approval Program (ELAP) and are approved for analysis of lead in potable water.

4. Re-sampling can be performed provided corrective action or remediation options, as reviewed in the Recommendation section, are complete. Proper flushing of new equipment (e.g. pipes, faucets etc.) is recommended.

5. Flushing Program and Resampling: when routine flushing programs are implemented, the school plumbing system should be flushed according to an establish protocol. After flushing and before sampling or resampling, a period of 3-4 days of normal use is recommended. First-draw lead water sampling can be performed after the required hold time of 8-18 hours is completed.

6. In accordance with the NYS DOH, the following post-remediation testing requirements apply:

- Follow-up samples collected after an outlet has been remediated must also be "first-draw" samples. Schools may choose to perform additional sampling (i.e., 30-second flush, etc.) to determine the contribution of lead from plumbing to guide remediation decisions.
- Only those outlets that exceed the action level need to be resampled (following remediation).
- All remediated outlets will likely require flushing before being placed back into service.
- Post-remediation tests results need to be reported in the Department's HERDS application on HCS, and on the school website within the same reporting timeframes/requirements as specified for the initial sampling.

## RESULTS DISCUSSION

The following Assessment Results Exceedance Table provides details on the date of sampling, sample identification, location and laboratory results that exceeded 5 ppb, if applicable. A copy of the full laboratory results and the chain of custody are presented at the end of this report in Appendix A. Laboratory certifications can be found in Appendix B. An Applicable vs Non-Applicable Outlet Inventory & Water Source Location Drawings are located in Appendix C.

Of the **12** samples collected at Coman Hill Elementary School, **two (17%)** had lead concentrations that exceeded 5 ppb. The table below details the sample locations and the laboratory results.

Coman Hill Elementary School				
Sample Date	Sample ID	Floor	Location	Lead Level (ppb)
11/8/2024	6	1	Kitchen – Prep Table Sink	6.58
11/8/2024	8	1	Kitchen – Pot Filler Sink (Spout)	59.3

Upon receipt of the results, Langan is making the following recommendations to the district as required by Subpart 67-4 of Title 10 (Health) of the Official Compilation of Codes, Rules and Regulations of the State of New York:

- Review the Exceedance Table, Laboratory Results and Notification Letter, indicating lead water sample results exceeding the NYSDOH Action Level of 5 ppb, and require these outlets to be taken out of service and a remediation action plan be implemented.
- Please see Lead Testing in School Drinking Water, 10 NYCRR Subpart 67-4, adopted May 9, 2018 for applicable requirements
- ([https://www.health.ny.gov/environmental/water/drinking/lead/lead\\_testing\\_of\\_school\\_drinking\\_water.htm](https://www.health.ny.gov/environmental/water/drinking/lead/lead_testing_of_school_drinking_water.htm))

## RECOMMENDATIONS

When lead concentrations exceed 5 ppb, Langan offers the following recommendations to Byram Hills for remediation:

**In accordance with Subpart 67-4, Section 67-4.4 Response, the following immediate Response Actions are necessary:**

- Prohibit the use of the outlet immediately (take outlet out of service or turn off) until:
  1. A lead remedial action plan is implemented to mitigate the lead level at the outlet, and
  2. Post-remediation test results indicate that the lead levels are at or below the action level;
- Provide building occupants with an adequate supply of water for drinking and cooking until remediation is performed;
- 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;
- Notify all staff and all persons in parental relation to 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.

**If an outlet tested above the “action level”, it can still be used for cleaning and handwashing.**

**However, please note:**

- Signage must be placed at such outlets stating that the water should not be used for drinking (only handwashing and cleaning).
- Pictures should be used if there are small children using the water outlets, and staff should ensure the children understand what the signs mean and monitor the outlets to ensure they are not used for drinking.

### **Corrective Actions / Remediation Options**

- Permanent removal of an outlet
- Outlet replacement with “lead-free” plumbing materials
- Pipe replacement with “lead-free” plumbing materials
- Remove other sources of lead (lead pipe, lead solder joints, and brass plumbing components with “lead-free” materials)
- Flushing (systematic flushing program)
- Point of Use (POU) Filters\*
- Supervision
- Engineering controls
- Education
- Signage. Signage used at outlets are considered to be a temporary measure and cannot be used as a permanent measure.

### **Non-Applicable Outlets**

- Tempered Outlets. These outlets should be clearly posted with signs (“Do Not Drink” or equivalent), provide awareness education to students and staff and implement appropriate remedial actions to prevent drinking from these outlets.
- Science/Art sinks: as noted by NYSDOL, typically these classroom settings prohibit eating and/or drinking. The school Superintendent has the authority to determine whether these outlets may be used for drinking or cooking or whether they require sampling. Management controls such as restricted/secured access (e.g. locked doors), signage, required supervision and other management controls are part of the overall safety and health program elements that should be in place.

## LIMITATIONS, EXCEPTIONS AND ASSUMPTIONS

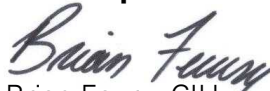
*Opinions and recommendations presented in this report apply to site conditions and features as they existed at the time of Langan's site visits, and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which Langan is unaware and has not had the opportunity to evaluate. The conclusions presented in this report are professional opinions based solely upon Langan's visual observations of accessible areas and sampling data. These conclusions are intended exclusively for the purpose state herein, at the sites indicated, and for the project indicated. No expressed or implied representation or warranty is included or intended in our reports, except that our services were performed, within the limits prescribed by our client, with the customary thoroughness and competence of our profession.*

## CLOSURE

We trust that the information and recommendations provided in this report adequately address your concerns. If you have any questions, please do not hesitate to contact us.

Very Truly Yours,

**Langan Engineering, Environmental, Surveying,  
Landscape Architecture and Geology, D.P.C.**



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