



Standard Operating Procedures for Lead Testing in School Drinking Water

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NYC Department of Education (NYC DOE) Lead in Water Testing Protocol

Statement of Purpose

The New York City Department of Education (NYC DOE) implements these Standard Operating Procedures (SOPs) to ensure its commitment to providing a safe and healthy environment for students and staff and complying with all applicable rules and regulations with regards to lead testing in school drinking water. These SOPs are effective immediately and are to be followed by Custodian Engineers (CEs) and Environmental Consultants (ECs). The NYS Public Health Law (PBH), Chapter 45, Article 11, Title 1, Section § 1110, (effective 12/22/2022) and the New York State Regulation for Lead Testing in School Drinking Water (Title: Subpart 67-4 Lead Testing in School Drinking Water)¹ mandate that school districts test all school buildings for lead in water every three years. Remediation of outlets is required if the concentration of lead is found to be greater than 5 ppb.

In-scope Outlets

An in-scope outlet is a potable water outlet currently or potentially used for drinking or cooking purposes, including but not limited to a bubbler, drinking fountain, or faucets. All in-scope outlets in NYC DOE school buildings are tested every three years by ECs.

Out-of-scope Outlets

Samples shall not be collected from out-of-scope outlets, and all out-of-scope outlets will be incorporated into the remedial action plan. Out-of-scope, also known as “non-applicable,” outlets include the following:

1. Handwashing sinks in lavatories²
2. Slop sink outlets
3. Steamers inside kitchen
4. Outlets inside recycling/can washrooms
5. Outlets & ice makers in laboratory classrooms
6. Laboratory sinks in classrooms
7. Hose bibs
8. Shower Heads & bathtub spouts
9. Eyewash Stations
10. Cuspidor – “Spittoon”
11. Outlets in secured boiler/mechanical room
12. Outlets in secured storage room
13. Hot water outlets
14. Tempered/mixed outlets
15. Hair washing sinks

¹ <https://regs.health.ny.gov/volume-1a-title-10/1942050456/subpart-67-4-lead-testing-school-drinking-water>

² As per DOHMH guidance, any outlets regularly used by 3–5-year-olds must continue to be tested and remediated in accordance with this SOP and, as such, will remain in-scope.

Labeling

Every in-scope outlet, in all NYC DOE school buildings, is tagged with a metallic adhesive label that has a unique barcode that is entered into a central lead database (asset tag). The bar code is scanned each time the outlet is tested. This ensures that data from all testing rounds is properly cataloged and recorded in a central database. Data points of testing completed at the outlet-level include the testing date and test results. The metallic adhesive labels are installed in unobtrusive areas around the outlet and remain in place.

Sampling Collection

1. Environmental Consultants (ECs)
 - a. Site Access Coordination
 - i. No later than noon of every Thursday, ECs shall submit to the NYC DOE Water Quality Unit (WQU) the proposed sampling schedule for the following week, including the name/building ID# and date and time of the scheduled testing.
 - ii. One day prior to the scheduled sampling date, the EC will conduct a site visit to confirm readiness for sampling. The site visit includes confirming that all locations with outlets are accessible, can and do adhere to the 8-18 hour stagnation window, and that a school escort is available on the day of testing.
 1. Once the WQU has approved the testing schedule, the WQU will provide the EC with contact information, including name and phone number, of the custodial staff who will provide access to the building and escort the ECs through the building to collect water samples.
 2. New, out of scope, and/or previously inaccessible or decommissioned outlets may be entered into the scanning device at this time.
 - b. Sampling
 - i. ECs must meet with the designated custodial staff on site one hour before sampling start time to begin preparation.
 - ii. ECs and designated custodial staff shall conduct a walk-through to ensure no outlets were left open or leaking in a continuous flow. If any outlets have been left open with a continuous flow, sampling is to be canceled and rescheduled.
 - iii. ECs must confirm with the designated custodial staff that water throughout the school building has remained stagnant for a period of 8 to 18 hours before starting sampling. Sampling cannot be done if stagnation is less than 8 hours or over 18 hours. Collection of water samples should only occur from Tuesday through Saturday. The exception is if the school requests a different day and there is normal usage the day prior to scheduled testing. Water Sampling should not occur in the morning after vacations, weekends, or holidays, unless the school was occupied the day before testing.
 - iv. Alteration to the water system, such as removal of the outlet aerators or screens, cannot be done prior to water sampling.
 - v. Samples shall only be collected from in-scope outlets.
 - vi. ECs collect samples using NYC DOE scanners. The process is as follows:
 1. Select building on the device.
 2. Select outlet by scanning the label or entering the barcode number manually (as necessary).

3. Scan the barcode pre-printed on the sample bottle.
 4. The sample ID is recorded along with operator, device ID, building ID, catalog ID, and date/time.
 5. Samples must be collected in pre-cleaned, pre-acidified, 250ml plastic bottles provided to ECs by DOE WQU.
 6. Sample collection must begin at the outlet closest to the water line point of entry in the building. One sample must be collected from each water outlet. A first draw must be collected upon first opening the outlet (1st draw sample).
 7. The rate of flow should be the same as used to fill a glass.
 8. Any outlet conditions that may affect the sample, such as dripping outlet, discolored water, low water pressure, shall be noted on the chain of custody forms.
 9. Place the container under the outlet that is being sampled and turn on the cold water outlet at the same rate that would be used under normal use for filling a glass of water, taking precautions to not allow any water to run down the drain.
 10. Sample shall be collected even if water is discolored, or rate of flow is low.
- vii. After the scanner is placed onto a cradle that is linked to NYC DOE's database, the data is uploaded to the database. The applicable reports may now be generated for transmission to the lab.
1. The EC must sign their name directly on the device to certify chain of custody. If for any reason the EC cannot sign their name directly on the device, they must sign a hardcopy.

Response to Sample Exceedances

1. Prohibit the use of the outlet
 - a. If the lead test result for an outlet exceeds the action level, the school must do the following:
 - i. Prohibit the use of the outlet (take out of service or turn off) unless it's a classroom outlet until
 1. 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
2. Yellow Tags
 - a. A yellow tag is a "Caution" tag that indicates that the outlet is "out of order" (see sample picture in the "Photos" section).
 - i. The following outlets must have a yellow tag if "out of order"
 1. Water Fountain Bubbler
 2. Bottle Filling Station
 3. Food Preparation Sink
 4. LYFE center cold-water outlet
 - ii. The following outlet may remain in service with a posted "hand washing only" sign
 1. Classroom outlet

Laboratory Analysis and Reporting Laboratory Results:

1. ECs shall ship/deliver water samples to NYSDOH ELAP certified laboratories to be analyzed for lead content within two (2) business days of collecting samples unless notification is provided to the WQU and an extension is approved.
2. ECs shall request turnaround for analysis from the laboratory as soon as is practicable. If the laboratory cannot produce sample analysis within six (6) business days, ECs must notify the WQU, and the WQU will provide guidance to the EC.
3. All samples shall be analyzed for Lead content by EPA Methods 200.8 or 200.9.
4. Upon completion of analysis, the laboratory must report the results to ECs by:
 - a. Laboratory analysis report
 - b. Data report as Excel spreadsheet
5. ECs Reporting to DSF/WQU
 - a. ECs must provide laboratory summary results as an email report with the laboratory analysis report and the Excel spreadsheet data report as attachments within two (2) business days of receiving results from lab. The ECs will also include the NYC DOHMH in their email, which will serve as the 24 hours' notice as per the regulation.
6. WQU will send a bimonthly report with all the school(s) results to the NYS DOH in a form of excel spreadsheet to enable the NYS to publish the report of findings to their State-wide database system.
7. WQU will send a backpack letter to each principal(s) of the school(s) tested including all the laboratory analysis and reports, all will be posted on the school individual website.

Remediation of Outlet(s)

1. If sampling from an outlet shows elevated levels of lead, and the outlet was not replaced within the last five (5) years, the outlet must be replaced, e.g., with a refrigerated bottle filler, bubbler, etc., including all the immediate piping to the wall.
2. If sampling from an outlet shows elevated levels of lead, and the outlet is under five (5) years old or was replaced within the last five (5) years, a replacement is not necessary; however, replacement of the outlet with a bottle filler or bubbler is an appropriate remedial action. If not replaced, steps taken include (while remaining isolated, yellow tagged or signed as appropriate):
 - a. CE staff should perform maintenance on the targeted outlet, such as changing/cleaning of aerators/screens, examination of associated plumbing for in-line strainers (to be cleaned) valve positions, etc.
 - b. After these steps are taken, if the testing continues to show elevated lead levels in the outlet, and there are multiple outlets in the building with this status, the school will be a candidate to develop and implement an Enhanced Water Safety Plan. This includes a detailed assessment of the plumbing profile, sample result analysis and specialized flushing protocol.
3. If sampling from an outlet shows an exceedance after three consecutive tests, DOE may consider the option of decommissioning (i.e. removing) the outlet. This step is only taken with outlets that do not affect the availability of potable water or the operations of the building.
4. If drinking water sources are considered for decommissioning, the Deputy director of facilities (DDF) or a Custodian supervisor will ensure that an adequate number of drinking water fountains are available based on the building occupancy. If there is not an adequate number of drinking fountains available, DOE/DSF will provide commercial bulk bottled water dispensers and/or individual drinking bottles of water.

Post-remediation Protocol

1. For post-remediation sampling, ECs must collect two sample bottles, a 30-second flush sample in addition to the standard 1st Draw sample.
2. If the test results for a designated outlet indicate that the levels are below the action level, the custodian may safely flush the outlet and return it to service. Once the outlet has been properly flushed and verified to be functioning correctly, it is safe to use for providing clean drinking water.
3. All remediated outlets along with their testing results and the remediating action, i.e., replacement or decommission, will be described in the remedial action plan.

Appendix I

Roles of Staff

Water Quality Unit

Upon a finding of exceedances, a member from WQU will notify the appropriate school staff and the DSF field team, via email, of the results and what action is required on their part. The notification email will indicate which outlet(s) tested with elevated lead levels and the appropriate course of action. Upon a finding of a non-actionable level, a member from the WQU will notify the appropriate school staff and the DSF field team, via email, of the results and that no action is required on their part.

Custodian Engineer

When a Custodian Engineer (CE) uses custodial staff to replace an in-scope outlet, a work order is required to be submitted to the WQU for follow-up lead testing. The new outlet must remain off until testing and, if applicable, exceedance protocols are concluded. This excludes cold water outlets not used for cooking or drinking. Cold water outlets that are not used for drinking or cooking must be tested but can remain in use with a “hand washing only” sign posted until results come back below the action level. If the outlet is used for cooking or drinking, it must remain off until results come back below the action level.

Skilled Trades

When skilled trades survey an outlet and a replacement of the outlet is deemed necessary, tasks necessary for inventory, labelling, and follow-up testing by WQU are required to be added to the work order by the trade coordinator. This excludes cold water outlets not used for cooking or drinking. Cold water outlets that are not used for drinking or cooking must be tested but can remain in use with a “hand washing only” sign posted until results come back below the action level. If the outlet is used for cooking or drinking, it must remain off until results come back below the action level.

DSF Teams Contract Manager

When a Team contract manager receives a proposal for the replacement or installation of any in-scope outlets, the contract manager contacts the team trade coordinator to add a task for testing by WQU. The replacement outlet must remain off until testing and, if applicable, exceedance protocols are concluded. This excludes cold water outlets not used for cooking or drinking.

Third Party Work

For any work that requires replacement of in-scope outlets, the borough contract manager must include language that specifies that lead testing is required after replacement of said outlet. The new outlet must remain off until testing and, if applicable, exceedance protocols are concluded. This excludes cold water outlets not used for cooking or drinking.

SCA Capital Improvement

When SCA completes an upgrade to a school which includes replacement or addition of an in-scope outlet, the CE must create a work order to WQU for follow-up lead testing. The new outlet must remain off until testing and, if applicable, exceedance protocols are concluded. This excludes cold water outlets not used for cooking or drinking. Cold water outlets that are not used for drinking or cooking must be tested but can remain in use with a "hand washing only" sign posted until results come back below the action level. If the outlet is used for cooking or drinking, it must remain off until results come back below the action level.

Appendix II

Bottle Filler Installation Protocol

1. Please e-mail the designated members of the Water Quality Unit (WQU) and the DSF field team after the installation of a bottle filler and/or kitchen outlet (hereinafter referred to as “Outlets”). For easy identification, this email should include the following information related to the newly- installed outlet(s):
 - a. The school building ID
 - b. Location and/or closest room
2. If the new outlet is replacing an old outlet, please provide the previous asset tag associated with the outlet. This enables the WQU to maintain an up-to-date database of water outlets.
3. Additionally, please notify the building’s CE of the newly installed outlet(s).
4. The CE is responsible for contacting both their DDF and Teams so that they can create a work order.
5. The work order should make note of the newly installed outlets and request both labeling and testing.
6. DSF field team will e-mail the designated members of the WQU after the creation of the work order.
7. A member from the WQU will submit the work order to an EC to conduct the labeling and testing of the outlets listed in the work order description.
8. Relevant parties will be informed of the testing results when they are received and subsequent actions following the test results.

Appendix III

Example Photos



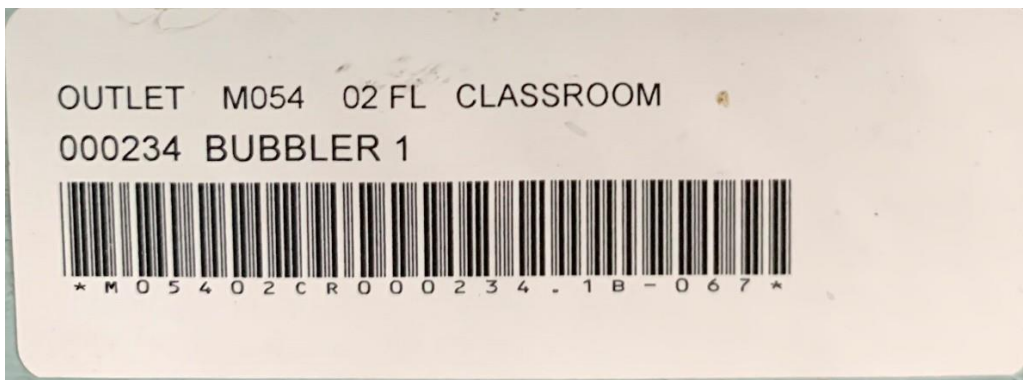




Examples of Current Asset Tags



Examples of Old Asset Tags



Yellow Tagged: Out of Service Outlets



Example of approved New York State “Do not use for drinking” signage



Hand washing only



Not for drinking use