



OCCU-TEC

Protecting People, Places and Performance

Sampling and Analysis Plan

School Drinking Water Lead Sampling

Kingston K-14 District

Project Number #923334

PREPARED FOR

Kingston K-14 School District

10047 Diamond Road

Cadet, Missouri 63630

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Superintendent

PREPARED BY

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To Whom it May Concern:

The following Sampling and analysis plan has been developed in compliance with the State of Missouri Senate Bill Number 681, also known as the "Get the Lead out of School Drinking Water Act" and herein referred to as SB681. This plan is developed to comply with section SB681 section 160.011 part 4 (b).

This plan will be made available to students, parents and faculty at the districts main office and at the district website at <https://kingston.k12.mo.us/> Although this plan is intended to provide the framework for sampling, analysis, communication and reporting, modifications to this plan may be made due to field considerations and additional information if made available.

If you have any questions, please contact your local administrator at:

Email: clap.christopher@k-4.org, Phone: (573) 438-4982

Respectfully,

Christopher Clapp

Facilities Direction

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1.0 Introduction

This plan has been developed in accordance with the requirements set forth in Senate Bill 681 “Get the Lead out of Schools Act” herein referred to as SB681.

This plan will be utilized by the following district, herein referred to as “the district” to comply with the requirements of SB681:

District Name:	Kingston K-14 School District
District Address:	10047 Diamond Rd, Cadet, Missouri 63630
District Administrator:	Dr. Lee Ann Wallace, Superintendent

This plan will be utilized for completion of sampling within the following District owned or leased buildings:

Building Name	Building Address
Kingston K-14 School District	3221 10047 Diamond Rd, Cadet, Missouri 63630

2.0 Key Personnel

The following individuals represent key personnel involved in this important project and their unique roles and responsibilities. Responsibilities may vary from those listed below.

Contact	Title	Organization	Role	Contact Information
Chris Clapp	Facilities Director	Kingston K-14 School District	Facilities Director	Email: clap.christopher@k-14.org Phone: (573) 438-4982
Kevin Heriford	Director EH&S	OCCU-TEC, Inc	Consultant	kheriford@occutec.com
Coy King	Environmental Specialist	Missouri DHSS	State Representative	DHSS Office

3.0 Inventory

The initial step to completing drinking water sampling for lead in schools is to complete an inventory of the building to determine the plumbing composition, construction dates, number of potential drinking water sources, and types of sources.

The district’s consultant will complete a tour of the building identifying sources that could potentially be utilized for drinking water by students and faculty. The following sources will be included in the inventory;

- Drinking fountains with single bubbler,
- Drinking fountain with multiple bubblers,

- Drinking fountains with a bubbler and bottle filler,
- Bathroom sinks,
- Breakroom sinks,
- Built-in or wall mounted sinks in classrooms,
- Exterior spigots,
- Ice machines,
- Hot drink machines,
- Kitchen sinks for food preparation,
- Kitchen pot fillers,
- Kitchen sinks for hand washing,
- Kitchen sinks used for pot and utensil cleaning, and
- Dishwashing equipment (sprayers included).

Based on the minimal likelihood of use as a drinking water source, the district has elected to exclude the following sources from sampling:

- Janitorial Sinks

Sources that are excluded from sampling will be labeled by the district in a manner to indicate that the source is not to be used for drinking water. Additionally, the district will inform teachers and staff of the labeling with instructions to ensure students are aware and instructed not to use said sources for drinking water.

4.0 Sampling

4.1 Determination

Once a complete inventory of potential drinking water sources is made, sources will be photographed, and a determination will be made on if a source will be included for sampling. For the purposes of this plan, the district will sample the majority of sources within the building. Sources that may be excluded from sampling will include the following:

- Janitorial closet sinks

If the determination is made to not sample the above referenced sources, labels will be made and placed above the source, in a visible location, containing the following language:

“Sink or Spigot for Hand Washing Only” or “Not for Drinking”

The following sources have been excluded from sampling and have been labeled in accordance with this plan:

- Bathroom Sinks

- Janitorial closet sinks

4.2 Sample Labeling

Sample labeling is an important part of the investigation and can assist with sample to source correlation and follow up remediation or additional sampling.

At the time of sampling, samples will be given a unique sample identification number that will allow for easy correlation between sample results and source information.

4.3 Sample Collection

Sampling will be completed from sources identified for sampling and not excluded using methodology based on the 3T's document. All samples will be collected as 'First Draw' samples which is defined in SB681 as: "*A two-hundred-fifty-milliliter sample immediately collected from a drinking water outlet that has not been turned on after a stagnation period of at least eight hours*".

In the 3Ts documentation, recommended stagnation periods are between 8 and 18 hours. In order to prevent concentrations resulting from excessive stagnation periods, sources will be flushed at least 18 hours prior to sampling by allowing the taps to run for approximately 30 seconds. This will only be done for sources that are regularly used during normal school operations. If a source would normally not be used in a less than 18-hour interval, that source will be sampled without flushing.

Once collected, samples will be labeled with the unique identification number, date the sample was collected and time the sample was collected. Samples will be placed in a cooler in preparation for shipment. Once sampling is completed, samples will be shipped under proper chain-of-custody documentation to a Missouri Department of Natural Resources (MDNR) drinking water testing laboratory. All samples will be analyzed for lead concentration using EPA Method 200.8.

5.0 Record Keeping

Proper record keeping is critical to ensuring all sampling information is properly recorded, maintained, and made available for the completion of follow up reporting to the Missouri Department of Health and Senior Services (DHSS). Following sampling, the district will maintain the following records to ensure proper reporting to DHSS and for reimbursement records, if available:

- A copy of the sampling report received from the district consultant after all samples have been analyzed and sample collection information has been uploaded. The sampling report will include:

- Sampling methodology.
- Sample inventories complete with sampling results.
- Recommendations for any sources with analytical results above 5 parts per billion (ppb).
- Analytical results and Chain-of-Custody documentation.

6.0 Teaching and Communication Plan

6.1 Teaching Plan

In order to provide students and staff with the appropriate information regarding lead in drinking water, the district will send an email outlining the health effects of lead and directing staff to this plan located on the district's website. If the district elects to exclude certain sources from sampling due to source type or the district's opinion regarding the viability of the source as a drinking water source, the district will label all outlets excluded in accordance with section 3.0 of this plan. The district will then provide communication instructing teachers and staff on the restrictions for use of these sources and provide information for instructing students regarding proper sources to utilize for drinking.

6.2 Communication Plan

Communication is an important part of completing the sampling and remediation efforts in accordance with SB681. In accordance with 160.011 Part 4(b), districts are required to "Develop a plan for testing each outlet inventoried" and "make such plan available to the public". This plan is intended to satisfy the requirement of Section 160.011 Part 4(b). The sampling plan will be made available on the district's website at the following web address:

<https://kingston.k12.mo.us/>

In accordance with 160.011 Part 4(2)(a) districts are required to "within two weeks after receiving test results, make all testing results and any lead remediation plans available on the school's website." In accordance with 160.011 part 4(7)(a), If testing indicates sample results above 5 parts per billion (ppb), the school shall "contact parents and staff via written notification within seven business days after receiving the test results." The notification will be made via email and include the following:

- The test results and a summary that explains the results.
- A description of any remedial steps taken.
- A description of general health effects of lead contamination and community specific resources. The following websites have information on the health effects of lead:
 - <https://www.epa.gov/lead/what-are-some-health-effects-lead>

- <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>
- <https://health.mo.gov/living/environment/lead/>

7.0 Additional Sampling and Remediation

7.1 Remediation

Remediation to correct elevated concentrations of lead above 5 ppb and prevent additional exposure to students or staff will be completed. Initial remediation will consist of removing the source from service and ensuring that adequate safe drinking water is made available for students and staff.

If testing indicated elevated concentrations entering the building from the main service line, filtration will be installed at the point when the line enters the building to reduce concentrations.

7.2 Retesting and Flush Sampling

After removing the source from service, the fixture will be replaced with a new lead-safe fixture. Following replacement, follow up sampling will be completed to determine if the remediation was successful. If elevated concentrations persist, Flush sampling will be completed to determine if concentrations are a result of lead lines. If it is determined that lead lines within the building are resulting in elevated concentrations, end of line filters will be installed to reduce concentrations below 5 ppb.

Once all sources have been remediated, testing will be completed to ensure sources are below 5 ppb. In accordance with SB681, schools are required to complete annual testing if initial testing indicates results exceeding 5 ppb. If testing indicates sample results for all samples collected are below 5ppb, sampling will be completed every five years.

7.3 Documentation and Reporting

7.3.1 Sample Report Documentation

In order to maintain accurate record keeping in compliance with SB681 requirements, the district will maintain records of all activities completed under this plan in a central location for access. The following reports and documentation related to sampling/remediation will be maintained under this plan:

- Sampling Plan.
- Sampling reports and analytical documentation.
- Remedial activities completed.
- Follow up sampling reports.
- Annual and five-year sampling reports.

Reports and sampling documentation will be kept at the following location:

10047 Diamond Road, Cadet, Missouri 63630

Additionally, electronic copies of all documentation will be stored at the following web address for review:

<https://kingston.k12.mo.us//>

8.0 Closing

The district is committed to providing a safe and healthy environment for education in our community. If you have any questions, please reach out to district representatives.