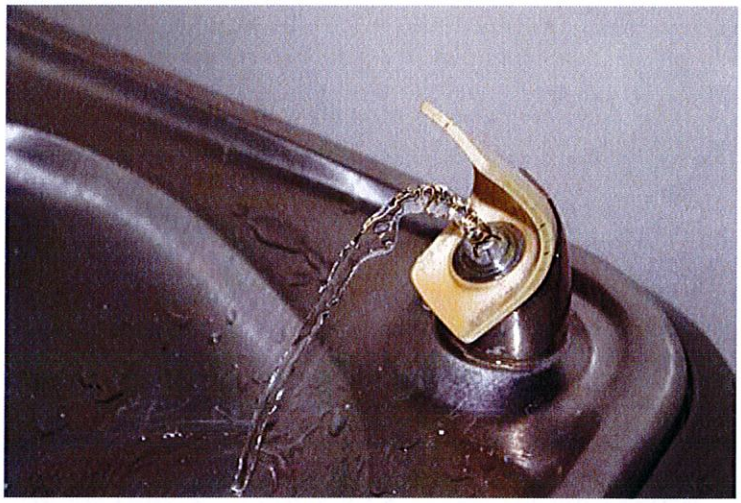

Lead Testing in Drinking Water

Site:
Lincoln Elementary School
400 Morningside Drive
Marion, IL 62959

Local Education Agency:
Marion C.U.S.D. 2

Completion Date:
October 11, 2017

IDEAL
ENVIRONMENTAL
ENGINEERING, INC.

Public Act 099-0922

Public Act 099-0922, was passed into law in January 2017. The Act requires the Local Education Agency (LEA) to test for lead in all water sources used for cooking and drinking in schools built on or before January 1, 2000, where more than 10 pre-kindergarten through 5th grade children are present. The timeframe for compliance is December 31, 2017, for buildings constructed prior to January 1, 1987; and December 31, 2018, for those built between January 2, 1987 and January 1, 2000. Water samples are required to be analyzed by a method approved by the Illinois Environmental Protection Agency (IEPA) that provides a minimum reporting limit of 2 parts per billion (ppb). Notifications are required. Mitigation may be required based on test results. A Water Quality Management Plan (WQMP) is required.

Scope of Service

On October 11, 2017, Ideal Environmental Engineering (IDEAL) performed water sampling at Lincoln Elementary School in Marion, IL at the request of the LEA. The water source locations were provided to IDEAL by the LEA.

Purpose of Sampling

Lincoln Elementary School is a facility built prior to January 1, 2000, where pre-K through 5th grade students are present. The water was tested to identify possible lead contamination for compliance with Public Act 099-0922.

Sampling Methodology

Prior to sampling, in order to verify that the required 8-18 hour water stagnation period had been met, school personnel provided IDEAL's water collector with the date and time the plumbing system had last been used. The date and time provided are recorded on the chain of custody (COC).

For each water source identified by the LEA, a first-draw 250 milliliter (mL) sample of cold water was collected in a bottle provided by an IEPA-approved laboratory. A first-draw sample is the first amount of water collected from a source. After the first draw was collected, the source was flushed for 30 seconds, followed by the collection of a second-draw 250 mL sample of water. This second sample is called a flush sample. If multiple faucets use the same drain, only one second-draw (flush) sample may have been collected.

Each bottle was placed in a position that allowed for the collection of all of the water. Care was taken to prevent overflow. Each bottle was labeled with a unique identifier (sample ID). The sample ID was recorded on the COC, which lists the location of the sample, source of the sample, and the date and time the sample was collected.

The water bottles were delivered—with the COC to show the relinquishment and receipt of the samples—to an IEPA-accredited laboratory for analysis. The laboratory's accreditation was reviewed by IDEAL to ensure that it was current for an IEPA-approved method of analysis for lead in drinking water.

Summary of Sampling

42 water samples were collected from 21 sources. All results are shown in Table 1.1.

Table 1.1

Sample ID	Sample Location Description	Fixture Type	Sample Type	Concentration
LIS-1	Hall by Cafeteria - Left	DF - Drinking Fountain	First Draw	ND
LIF-1	Hall by Cafeteria - Left	DF - Drinking Fountain	Flush	ND
LIS-2	Hall by Cafeteria - Right	DF - Drinking Fountain	First Draw	ND
LIF-2	Hall by Cafeteria - Right	DF - Drinking Fountain	Flush	ND
LIS-3	Kitchen - Prep Sink	KS - Kitchen Sink	First Draw	ND
LIF-3	Kitchen - Prep Sink	KS - Kitchen Sink	Flush	ND
LIS-4	Kitchen - Pot Filler	O - Other	First Draw	ND
LIF-4	Kitchen - Pot Filler	O - Other	Flush	ND
LIS-5	Office	S - Sink	First Draw	ND
LIF-5	Office	S - Sink	Flush	ND
LIS-6	Nurse Office	S - Sink	First Draw	ND
LIF-6	Nurse Office	S - Sink	Flush	ND
LIS-7	Room A-2	S - Sink	First Draw	ND
LIF-7	Room A-2	S - Sink	Flush	ND
LIS-8	Room A-1	S - Sink	First Draw	ND
LIF-8	Room A-1	S - Sink	Flush	ND
LIS-9	Hall by Room A-3 - Left	DF - Drinking Fountain	First Draw	ND
LIF-9	Hall by Room A-3 - Left	DF - Drinking Fountain	Flush	ND
LIS-10	Room A-3	S - Sink	First Draw	ND
LIF-10	Room A-3	S - Sink	Flush	ND
LIS-11	Hall by Room A-3 - Right	DF - Drinking Fountain	First Draw	ND
LIF-11	Hall by Room A-3 - Right	DF - Drinking Fountain	Flush	ND
LIS-12	Room A-4	S - Sink	First Draw	2.46 ppb
LIF-12	Room A-4	S - Sink	Flush	ND
LIS-13	Room A-5	S - Sink	First Draw	ND
LIF-13	Room A-5	S - Sink	Flush	ND
LIS-14	Hall by Media Center - Left	DF - Drinking Fountain	First Draw	ND
LIF-14	Hall by Media Center - Left	DF - Drinking Fountain	Flush	ND
LIS-15	Hall by Media Center - Right	DF - Drinking Fountain	First Draw	ND
LIF-15	Hall by Media Center - Right	DF - Drinking Fountain	Flush	ND

Sample ID	Sample Location Description	Fixture Type	Sample Type	Concentration
LIS-16	Hall by Room C-3 - Right	DF - Drinking Fountain	First Draw	ND
LIF-16	Hall by Room C-3 - Right	DF - Drinking Fountain	Flush	ND
LIS-17	Hall by Room C-3 - Left	DF - Drinking Fountain	First Draw	ND
LIF-17	Hall by Room C-3 - Left	DF - Drinking Fountain	Flush	ND
LIS-18	Hall by Room C-9 - Left	DF - Drinking Fountain	First Draw	ND
LIF-18	Hall by Room C-9 - Left	DF - Drinking Fountain	Flush	ND
LIS-19	Hall by Room C-11 - Right	DF - Drinking Fountain	First Draw	ND
LIF-19	Hall by Room C-11 - Right	DF - Drinking Fountain	Flush	ND
LIS-20	Room A-6	S - Sink	First Draw	ND
LIF-20	Room A-6	S - Sink	Flush	ND
LIS-21	Room A-7	S - Sink	First Draw	ND
LIF-21	Room A-7	S - Sink	Flush	ND
ND = None Detected				

Notifications

This building is subject to the Act. Notification as outlined below is not optional.

> **Notification Requirements:**
> **The Illinois Department of Public Health (IDPH) must be informed of the results. The LEA is also required to provide notification of all water testing results to parents and legal guardians of all enrolled students. Notification can be done, at a minimum, on the school's website. In addition, when any test result exceeds 5 ppb, individual written or electronic notification is required to be sent to parents and legal guardians of all enrolled students and must include the location and source exceeding 5 ppb, and the USEPA website for information about lead in drinking water:** www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water

Based on sample results, the following are notification requirements for this building:

- Submit to IDPH at dph.leadh2O@illinois.gov all sample results as shown in Table 1.1. As a courtesy, this step has been done by IDEAL. Please refer to Appendix A for electronic transmittal(s).

- Provide to parents and legal guardians all sample results as shown in Table 1.1. This can be done, at a minimum, on the school's website.

Mitigation

This building is subject to the Act. Mitigation is not optional.

Mitigation Requirements:

IDPH requires mitigation when lead is found in a sample above the detection limit. They recommend the sampling source be removed from service immediately upon learning that it has tested positive for lead. Re-testing is required after mitigation unless the sampling source is taken out of service. Mitigation is to continue until subsequent testing indicates no lead is present.

Based on sample results, the following are mitigation requirements for this building:

- One or more samples shown in Table 1.3 were found to contain lead at or above the 2 ppb detection limit. Mitigate all sources identified in Table 1.3, and retest after mitigation is complete.

Refer to IDPH's website for mitigation strategies:
www.dph.illinois.gov/sites/default/files/publications/school-lead-mitigation-strategies-050917.pdf

Table 1.3 – Results over 2 ppb

Sample ID	Sample Location Description	Fixture Type	Sample Type	Concentration
LIS-12	Room A-4	S - Sink	First Draw	2.46 ppb

Water Quality Management Plan

For all schools subject to the Act, regardless of lead results, a Water Quality Management Plan (WQMP) must be developed and maintained.

Refer to IDPH's website for steps to an effective WQMP:
www.dph.illinois.gov/sites/default/files/publications/school-lead-mitigation-strategies-050917.pdf

General Comments

Refer to Appendix C for the complete analysis report, including chain of custody and laboratory accreditation.

This report is based strictly on Illinois Public Act 099-0922. You may also wish to refer to the EPA's *3 T's for Reducing Lead in Drinking Water* for additional guidance.

The scope of work presented in this report was based on an understanding between IDEAL and the client, whether the understanding was from verbal conversation or written document(s). The scope of work and report shall be deemed accepted by the client unless the client advises to the contrary in writing within 10 days of the receipt of this report.

Please call our office at (800)535-0964 or (309)828-4259 if you have any questions, or if we can be of further assistance with your mitigation, water retesting, the WQMP, or with other environmental services such as asbestos, indoor air quality or bleacher inspections.

Thank you for giving us the opportunity to provide this service to you. We sincerely appreciate the trust and confidence you have in our services.