

August 27, 2020

Mr. Steve Anderson
Albert Lea Area Schools
211 W Richway Drive
Albert Lea, MN 56007



**RE: Lead-in-Water First Draw – Follow-up Testings
IEA Project #202010549**

Dear Mr. Anderson:

At the request of Albert Lea Area Schools, IEA collected sixteen (16) follow-up water samples for lead analyses in response to previously elevated sample results. This current sampling occurred on August 18, 2020, at the following buildings:

- Southwest Middle School – 3 samples
- Lakeview Elementary – 11 samples
- Brookside Education Center – 2 samples

The purpose of the sampling was to document lead content of water in the sixteen (16) locations post-remediation and to compare the results to initial “first draw” sampling conducted on July 9, 2020; and to document current lead content in the sampled locations with regard to the district-designated action level of 20 ppb.

INTRODUCTION

Minnesota Statute 121A.335 requires public school buildings serving pre-kindergarten through grade 12 to test for lead in potable water fixtures every five years. The *3Ts for Reducing Lead in Drinking Water Toolkit (2018)* and the Lead Contamination Control Act (LCCA) of 1988 were created by the Environmental Protection Agency (EPA) to identify and reduce lead in drinking water. Lead is a metal that usually enters drinking water through the distribution system, including pipes, solders, faucets, and valves. Lead content in water may increase when the water is allowed to sit undisturbed in the system. Exposure to lead is a health concern.

The EPA recommends taking action when elevated lead levels are noted in water fixtures. The MDH and MDE recommend taking a fixture out of service if levels are 20 parts per billion (ppb) or higher. The MDH and MDE also recommend taking action according to their guidelines for fixtures with levels of 2 parts per billion (ppb) or higher.

First draw samples taken on July 9, 2020, showed these sample locations had elevated lead content above the district designated action level of 20 ppb.

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9201 West Broadway, #600
Brooklyn Park, MN 55445
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MANKATO
610 North Riverfront Drive
Mankato, MN 56001
507-345-8818 / FAX 507-345-5301
800-233-9513

ROCHESTER
210 Woodlake Drive SE
Rochester, MN 55904
507-281-6664 / FAX 507-281-6695
800-233-9513

BRAINERD
601 NW 5th Street, Ste. #4
Brainerd, MN 56401
218-454-0703 / FAX 218-454-0703
800-233-9513

MARSHALL
1420 East College Drive
Marshall, MN 56258
507-476-3599 / FAX 507-537-6985
800-233-9513

VIRGINIA
5525 Emerald Avenue
Mountain Iron, MN 55768
218-410-9521
800-233-9513

METHODOLOGY

IEA collected sixteen (16) first-draw (unless otherwise noted) samples of approximately 250 milliliters (ml) of water. “First draw” means the samples are collected before the fixture is used or flushed during the day. The first-draw sample results reflect a worst-case scenario, i.e., the highest lead level that would be consumed by building occupants. MDH recommends water stand in pipes for at least 8 hours, but not more than 18 hours prior to sampling identified fixtures.

Water samples were analyzed by Minnesota Valley Testing Laboratories (MVTL) in New Ulm, Minnesota, which uses EPA-approved analytical methods and quality control/assurance procedures. Samples were analyzed using the ICP/MS EPA Method 200.8.

RESULTS & DISCUSSION

The lead-in-water sampling results ranged from 8.42 ppb to 50.9 ppb. These sixteen (16) locations are displayed in *Table 1: Water Testing Results*. The laboratory reports are provided in Appendix A. Laboratory results are reported in micrograms per liter (µg/L) which is equivalent to ppb.

Table 1: Water Testing Results – 7-9-2020 and 8-18-2020

Sample Number	Building	Sampling Location	Fixture Type	Lead Results (ppb)*	
				7-9-20	8-18-20
20-A40563	Southwest Middle School	HOME ECONOMICS SE #2 SINK	Faucet	24.7	11.1
20-A40564	Southwest Middle School	HOME ECONOMICS WEST WALL SINK	Faucet	29.0	8.48
20-A40565	Southwest Middle School	NURSES OFFICE SINK	Faucet	30.7	16.3
20-A40566	Lakeview Elementary	KITCHEN SINK-SOUTH WALL	Faucet	35.1	22.2
20-A40567	Lakeview Elementary	KITCHEN SINK-NORTH PREP SINK	Faucet	39.8	16.0
20-A40568	Lakeview Elementary	STEAM KETTLE	Faucet	698.0	50.9
20-A40569	Lakeview Elementary	NURSES OFFICE SINK	Faucet	21.4	22.8
20-A40570	Lakeview Elementary	ROOM 216 DRINKING FOUNTAIN	Drinking Fountain	32.5	37.0
20-A40571	Lakeview Elementary	ROOM 212 DRINKING FOUNTAIN	Drinking Fountain	43.2	13.2
20-A40572	Lakeview Elementary	ROOM 211 SINK	Faucet	26.4	20.0
20-A40573	Lakeview Elementary	ROOM 112 DRINKING FOUNTAIN	Drinking Fountain	22.1	41.2
20-A40574	Lakeview Elementary	ROOM 117 DRINKING FOUNTAIN	Drinking Fountain	30.3	8.42
20-A40575	Lakeview Elementary	ROOM 118 DRINKING FOUNTAIN	Drinking Fountain	35.1	17.2
20-A40576	Lakeview Elementary	ROOM 316 DRINKING FOUNTAIN	Drinking Fountain	28.3	14.2
20-A40561	Brookside Education Center	KITCHEN SOUTH PREP SINK	Faucet	21.4	15.7
20-A40562	Brookside Education Center	ROOM 208 SINK	Faucet	154.0	10.7

* ppb – parts per billion

RECOMMENDATIONS

Ten (10) re-sampled fixtures from August 18, 2020, showed lead levels below the district designated action level of 20 ppb. Based on these sample results, no further action is required at this time. However, MDH recommend taking action according to their guidelines for fixtures with levels of 2 ppb or higher.

IEA recommends implementing one of the following treatment options for the six (6) fixtures with lead content exceeding the district designated action level of 20 ppb.

- Remove fixture from service by disconnecting it from the water supply and/or post signs that the water is not potable and notify staff accordingly.
- Provide bottled water to occupants which meet FDA and state standards. A written statement from the bottled water distributor guaranteeing the standard are met should be filed with the district.
- Replace lead pipes on the property and district portion of the service line.
- Reconfigure plumbing system to redirect the water to bypass any known sources of lead contamination.
- Replace fixture with a "lead-free" fixture certified to NSF/ANSI 372 or NSF/ANSI 61-G. The *Reduction of Lead in Drinking Water Act* redefines "lead-free" as "not more than a weighted average of 0.25% lead when used with respect to wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures." Effective January 4, 2014, drinking water system components sold or installed must adhere to this new requirement.
- Install a drinking water treatment unit certified to NSF/ANSI 53 or NSF/ANSI 42 for lead reduction.
- Conduct flush testing in accordance with MDH, MDE, and EPA guidelines to determine if flushing will reduce lead content. If results indicate that flushing will reduce lead to acceptable levels:
 - Implement a flushing program which includes documentation of daily flushing and periodic program review.
 - Note that elevated levels can return quickly following flushing depending upon the age and condition of the plumbing. Replace the plumbing components and ensure any repair or replacement is done using only "lead-free" solder can address high lead levels.
 - Check existing wires in the building that could be grounded to lead piping. The electrical current produced may accelerate the corrosion of the pipes. Consider checking the wires and finding an alternative grounding system.

In addition, MDH recommends labeling water fixtures not included in the sampling program, including bathroom taps, hose bibbs, laboratory faucets/sinks or custodial closet sinks.

If the school receives its water from a Community Public Water Supply, such as a municipal water supply, MDH encourages the school to work with them to assess the source contribution of lead coming into the school.

It is recommended that a copy of the district's Lead-in-Drinking Water Testing Report be made available to staff and the public through the district's administrative offices. Per Minnesota Statutes, section 121A.335, a school district that has tested its buildings for the presence of lead shall make the results of the testing available to the public for review and must notify parents of the availability of the information.

GENERAL CONDITIONS

The analysis and opinions expressed in this report are based upon data obtained from the district at the indicated locations. This report does not reflect variations in conditions that may occur across the site, property, or facility. Actual conditions may vary and may not become evident without further assessment.

The report is prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted environmental, health and safety practices. Other than as provided in the preceding sentence and in our Proposal #9041 dated June 16, 2020, regarding lead-in-water sampling at district locations including the General Conditions attached thereto, no warranties are extended or made.

Please contact IEA if you would like assistance with any of the above recommendations or have questions regarding this report.


Sincerely,

IEA, Inc.



Susan Liebl
EHS Account Manager

Reviewed by:



Karen Weiblen
EHS Consultant

KW/khb 08282020

Enc.

Appendix A

Laboratory Testing Reports



MINNESOTA VALLEY TESTING LABORATORIES, INC.

1126 N. Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
 2616 E. Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
 1201 Lincoln Highway ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

MEMBER
ACIL

www.mvtl.com

Report Date: 26 Aug 2020

HEIDI SOLBERG
 IEA/BROOKLYN PARK
 9201 W BDWY STE #600
 BROOKLYN PARK MN 55445

Work Order #: 12-12877
 Account #: 002190
 Purchase Order #: 2020010549

Date Received: 19 Aug 2020
 Date Sampled: 18 Aug 2020
 Temperature at Receipt: 24.8C

PROJECT NAME: SOUTHWEST MIDDLE SCHOOL
 PROJECT NUMBER: 202010549

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A40563	081820-SW-01 HOME ECONOMICS SE #2 SINK	11.1 ug/L	15.0	25 Aug 20	KAM
20-A40564	081820-SW-02 HOME ECONOMICS WEST WALL	8.48 ug/L	15.0	25 Aug 20	KAM
20-A40565	081820-SW-03 NURSES OFFICE	16.3 ug/L	15.0	25 Aug 20	KAM

Approved by:

Dan O'Connell **David Smahel**
 Chemistry Laboratory Managers New Ulm, MN

Analyses performed under our Minnesota Department of Health Accreditation conform to the current TNI standards. The reporting limit was elevated for any analyte requiring a dilution as coded below:

@ = Due to sample matrix # = Due to concentration of other analytes
 ! = Due to sample quantity + = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

MVTl guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.



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Report Date: 26 Aug 2020

HEIDI SOLBERG
 IEA/BROOKLYN PARK
 9201 W BDWY STE #600
 BROOKLYN PARK MN 55445

Work Order #: 12-12878
 Account #: 002190
 Purchase Order #: 2020010549

Date Received: 19 Aug 2020
 Date Sampled: 18 Aug 2020
 Temperature at Receipt: 24.8C

PROJECT NAME: LAKEVIEW ELEM SCHOOL
 PROJECT NUMBER: 202010549

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A40566	081820-LAKE-01 KITCHEN SINK-SOUTH WALL	22.2 ug/L	15.0	25 Aug 20	KAM
20-A40567	081820-LAKE-02 KITCHEN SINK-NORTH PREP SINK	16.0 ug/L	15.0	25 Aug 20	KAM
20-A40568	081820-LAKE-03 STEAM KETTLE	50.9 ug/L	15.0	25 Aug 20	KAM
20-A40569	081820-LAKE-04 NURSES OFFICE	22.8 ug/L	15.0	25 Aug 20	KAM
20-A40570	081820-LAKE-05 ROOM 216-DF	37.0 ug/L	15.0	25 Aug 20	KAM
20-A40571	081820-LAKE-06 ROOM 212-DF	13.2 ug/L	15.0	25 Aug 20	KAM
20-A40572	081820-LAKE-07 ROOM 211-SINK	20.0 ug/L	15.0	25 Aug 20	KAM
20-A40573	081820-LAKE-08 ROOM 112 DF	41.2 ug/L	15.0	25 Aug 20	KAM

Approved by:

Dan O'Connell **David Smahel**
 Chemistry Laboratory Managers New Ulm, MN

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Work Order #: 12-12878
 Account #: 002190
 Purchase Order #: 2020010549

Date Received: 19 Aug 2020
 Date Sampled: 18 Aug 2020
 Temperature at Receipt: 24.8C

PROJECT NAME: LAKEVIEW ELEM SCHOOL
 PROJECT NUMBER: 202010549

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A40574	081820-LAKE-09 ROOM 117 DF	8.42 ug/L	15.0	25 Aug 20	KAM
20-A40575	081820-LAKE-10 ROOM 118 DF	17.2 ug/L	15.0	25 Aug 20	KAM
20-A40576	081820-LAKE-11 ROOM 316 DF	14.2 ug/L	15.0	25 Aug 20	KAM

Approved by:

Dan O'Connell **David Smahel**
 Chemistry Laboratory Managers New Ulm, MN

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Report Date: 26 Aug 2020

HEIDI SOLBERG
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 BROOKLYN PARK MN 55445

Work Order #: 12-12876
 Account #: 002190
 Purchase Order #: 2020010549

Date Received: 19 Aug 2020
 Date Sampled: 18 Aug 2020
 Temperature at Receipt: 24.8C

PROJECT NAME: BROOKSIDE EDU CTR
 PROJECT NUMBER: 202010549

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A40561	081820-BROOK-01 KITCHEN SOUTH PREP SINK	15.7 ug/L	15.0	25 Aug 20	KAM
20-A40562	081820-BROOK-02 ROOM 208 SINK	10.7 ug/L	15.0	25 Aug 20	KAM

Approved by:

Dan O'Connell **David Smahel**
 Chemistry Laboratory Managers New Ulm, MN

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