

June 18, 2020

Mr. Jason Bichler St. Michael-Albertville ISD #885 11343 50th Street NE Albertville, MN 55301

RE: Lead-in-Water First Draw – Resampling IEA Project #201911210

Dear Mr. Bichler:

At the request of St. Michael-Albertville ISD #885, IEA collected forty-nine (49) follow-up water samples for lead analyses, in response to elevated sample results of "first draw" sampling conducted on January 15, 2020. The current sampling occurred on June 2, 2020, from the following buildings:

• High School (13 samples)

Fieldstone Elementary (4 samples)

- Community Ed (26 samples)
- St. Michael Elementary (6 samples)

The purpose of the resampling is to document lead content in the sampled locations.

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.

METHODOLOGY

IEA collected forty-nine (49) 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 fixtures not be used 6 to 18 hours prior to sampling 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 below the level of detection (<0.5 ppb) to 62 ppb. There are 27 samples results greater than the district designated level of 10 ppb. See *Table 1: Water Testing Results Exceeding 10 ppb*. 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 Exceeding 10 ppb – June 2, 2020

Sample	Building	Sampling	Fixture	Lead Results
Number	Dunung	Location	Type	(ppb)
06022020SMAHS-37	High School	Room 1437 West	Sink	29.6
06022020SMAHS-38	High School	Room 1437 West	Sprayer	14.8
06022020SMAHS-39	High School	Room 1437 East	Sink	35.3
06022020SMAHS-41	High School	Room 1416 (5)	Sink	15.4
06022020SMAHS-42	High School	Room 1416 (6)	Sink	11.6
06022020SMAHS-43	High School	Room 1416 (7)	Sink	10.5
06022020SMAFE-31	Fieldstone Elementary	Kitchen (1)	Sprayer	22.3
06022020SMAFE-33	Fieldstone Elementary	Room 326	Sink	10.7
06022020SMAME-04	St. Michael Elementary	Room 131	Sink	16.2
06022020SMAME-05	St. Michael Elementary	Room 132	Sink	20.4
06022020SMAME-07	St. Michael Elementary	Room 134	Sink	47.2
06022020SMAME-08	St. Michael Elementary	Room 140 Bathroom	Sink	15.2
06022020SMAME-10	St. Michael Elementary	Room 108	Sink	21.0
06022020SMAME-11	St. Michael Elementary	Room 212	Sink	21.4
06022020SMAME-12	St. Michael Elementary	Room 112	Sink	24.7
06022020SMAME-14	St. Michael Elementary	Room 118	Sink	60.9
06022020SMAME-15	St. Michael Elementary	Room 119	Sink	45.3
06022020SMAME-16	St. Michael Elementary	Room 122	Sink	19.4
06022020SMAME-17	St. Michael Elementary	Room 123	Sink	58.7
06022020SMAME-18	St. Michael Elementary	Room 124	Sink	23.6
06022020SMAME-21	St. Michael Elementary	Room 144	Sink	10.4
06022020SMAME-24	St. Michael Elementary	Room 203	Sink	19.2
06022020SMAME-25	St. Michael Elementary	Room 203	Drinking Fountain	13.2
06022020SMAME-26	St. Michael Elementary	Room 149	Sink	42.8
06022020SMACE-28	Community Ed	Room 309	Sink	14.9
06022020SMACE-29	Community Ed	Room 306/305 Office	Sink	62.0
06022020SMACE-30	Community Ed	Room 305/304 Office	Sink	23.6

ppb - parts per billion

RECOMMENDATIONS

IEA recommends implementing one of the following treatment options for fixtures with elevated lead content. Fixtures should be retested after remediation to verify lead content reduction.

- 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 standards are met should be filed with the District.
- Replace lead pipes on the property and district's 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, the MDH recommends labeling any 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 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 St. Michael-Albertville ISD #885, 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 #8572 dated November 5, 2019, regarding lead-in-water sampling at St. Michael-Albertville ISD #885, 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.

Daniel Holcomb

EH&S Project Manager

DH/khb 06182020

Enc.

Appendix A

Laboratory Testing Reports and Maps

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 MEMBER

1201 Lincoln Highway ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.mvtl.com

Report Date: 17 Jun 2020

Work Order #: 12-9310 Account #: 002190

Purchase Order #: 201911210

Date Received: 3 Jun 2020 Date Sampled: 2 Jun 2020

Temperature at Receipt: 24.0C

ACIL

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

PROJECT NAME: ST MICHAEL ALBERTVILLE

PROJECT NUMBER: 201911210

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A25252	06022020MAME-1 KITCHEN SPRAYER 2	6.83 ug/L	15.0	11 Jun 20	RMV
20-A25253	06022020MAME-2 KITCHEN SPRAYER 3	< 0.5 ug/L	15.0	11 Jun 20	RMV
20-A25254	06022020MAME-3 KITCHEN KETTLE	5.27 ug/L	15.0	11 Jun 20	RMV
20-A25255	06022020MAME-4 131 SINK	16.2 ug/L	15.0	11 Jun 20	RMV
20-A25256	06022020MAME-5 132 SINK	20.4 ug/L	15.0	11 Jun 20	RMV
20-A25257	06022020MAME-6 133 DF	0.65 ug/L	15.0	11 Jun 20	RMV
20-A25258	06022020MAME-7 134 SINK	47.2 ug/L	15.0	11 Jun 20	RMV
20-A25259	06022020MAME-8 140 BATHROOM SINK	15.2 ug/L	15.0	11 Jun 20	RMV

Approved by:

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 internal standard response

! = Due to sample quantity CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

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PROJECT NUMBER: 201911210

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A25260	06022020MAME-9 106 SINK	9.57 ug/L	15.0	11 Jun 20	RMV
20-A25261	06022020MAME-10 108 SINK	21.0 ug/L	15.0	15 Jun 20	RMV
20-A25262	06022020MAME-11 212 SINK	21.4 ug/L	15.0	15 Jun 20	RMV
20-A25263	06022020MAME-12 112 SINK	24.7 ug/L	15.0	15 Jun 20	RMV
20-A25264	06022020MAME-13 117 SINK	5.30 ug/L	15.0	15 Jun 20	RMV
20-A25265	06022020MAME-14 118 SINK	60.9 ug/L	15.0	15 Jun 20	RMV
20-A25266	06022020MAME-15 119 SINK	45.3 ug/L	15.0	15 Jun 20	RMV
20-A25267	06022020MAME-16 122 SINK	19.4 ug/L	15.0	15 Jun 20	RMV

Approved by: R Q Q C

David Smahel

Chemistry Laboratory Managers New Ulm, MN

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A25268	06022020MAME-17 123 SINK	58.7 ug/L	15.0	15 Jun 20	RMV
20-A25269	06022020MAME-18 124 SINK	23.6 ug/L	15.0	15 Jun 20	RMV
20-A25270	06022020MAME-19 142 SINK	6.30 ug/L	15.0	15 Jun 20	RMV
20-A25271	06022020MAME-20 143 SINK	6.41 ug/L	15.0	11 Jun 20	RMV
20-A25272	06022020MAME-21 144 SINK	10.4 ug/L	15.0	11 Jun 20	RMV
20-A25273	06022020MAME-22 144 DF	9.28 ug/L	15.0	11 Jun 20	RMV
20-A25274	06022020MAME-23 145 SINK	8.23 ug/L	15.0	11 Jun 20	RMV
20-A25275	06022020MAME-24	19.2 ug/L	15.0	11 Jun 20	RMV

Approved by: R. Dang C.

Dan O'Connell

David Smahel

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
	203 SINK				
20-A25276	06022020MAME-25 203 DF	13.2 ug/L	15.0	11 Jun 20	RMV
20-A25277	06022020MAME-26 149 SINK	42.8 ug/L	15.0	11 Jun 20	RMV
20-A25278	06022020MACE-27 206 SINK	6.06 ug/L	15.0	11 Jun 20	RMV
20-A25279	06022020MACE-28 309 SINK	14.9 ug/L	15.0	11 Jun 20	RMV
20-A25280	06022020MACE-29 306/305 OFFICE SINK	62.0 ug/L	15.0	11 Jun 20	RMV
20-A25281	06022020MACE-30 305/304 OFFICE SINK	23.6 ug/L	15.0	11 Jun 20	RMV
20-A25282	06022020MAFE-31 KITCHEN SPRAYER 1	22.3 ug/L	15.0	11 Jun 20	RMV

Approved by: R. D. C.

David Smahel

Chemistry Laboratory Managers New Ulm, MN

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A25283	06022020MAFE-32 KITCHEN SPRAYER 3	1.17 ug/L	15.0	11 Jun 20	RMV
20-A25284	06022020MAFE-33 326 SINK	10.7 ug/L	15.0	11 Jun 20	RMV
20-A25285	06022020MAHS-34 2204 SINK	2.52 ug/L	15.0	11 Jun 20	RMV
20-A25286	06022020MAHS-35 3335 SINK	3.53 ug/L	15.0	11 Jun 20	RMV
20-A25287	06022020MAHS-36 1456 SINK 7	3.81 ug/L	15.0	11 Jun 20	RMV
20-A25288	06022020MAHS-37 1437 WEST SINK	29.6 ug/L	15.0	11 Jun 20	RMV
20-A25289	06022020MAHS-38 1437 WEST SPRAYER	14.8 ug/L	15.0	11 Jun 20	RMV
20-A25290	06022020MAHS-39 1437 EAST SINK	35.3 ug/L	15.0	11 Jun 20	RMV

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PROJECT NUMBER: 201911210

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
20-A25291	06022020MAHS-40 1416 SINK 3	9.25 ug/L	15.0	11 Jun 20	RMV
20-A25292	06022020MAHS-41 1416 SINK 5	15.4 ug/L	15.0	11 Jun 20	RMV
20-A25293	06022020MAHS-42 1416 SINK 6	11.6 ug/L	15.0	11 Jun 20	RMV
20-A25294	06022020MAHS-43 1416 SINK 7	10.5 ug/L	15.0	11 Jun 20	RMV
20-A25295	06022020MAHS-44 1432 SINK 7	1.68 ug/L	15.0	11 Jun 20	RMV
20-A25296	06022020MAHS-45 1616 WATER COOLER LEFT	< 0.5 ug/L	15.0	11 Jun 20	RMV
20-A25297	06022020MAHS-46 1616 WATER COOLER RIGHT	< 0.5 ug/L	15.0	11 Jun 20	RMV
20-A25298	06022020MAHS-47	0.70 ug/L	15.0	11 Jun 20	RMV

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PROJECT NUMBER: 201911210

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
	DISH ROOM 2				
20-A25299	06022020MAHS-48 124 SINK	0.96 ug/L	15.0	11 Jun 20	RMV
20-A25300	06022020MAHS-49 124 DF	0.75 ug/L	15.0	11 Jun 20	RMV

Approved by: R. Q. C.

David Smahel

Chemistry Laboratory Managers New Ulm, MN

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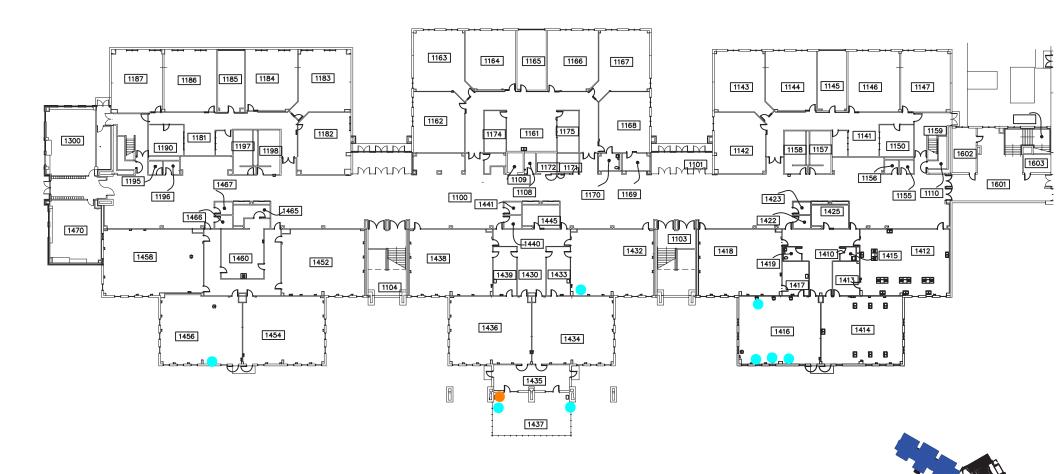
@ = Due to sample matrix

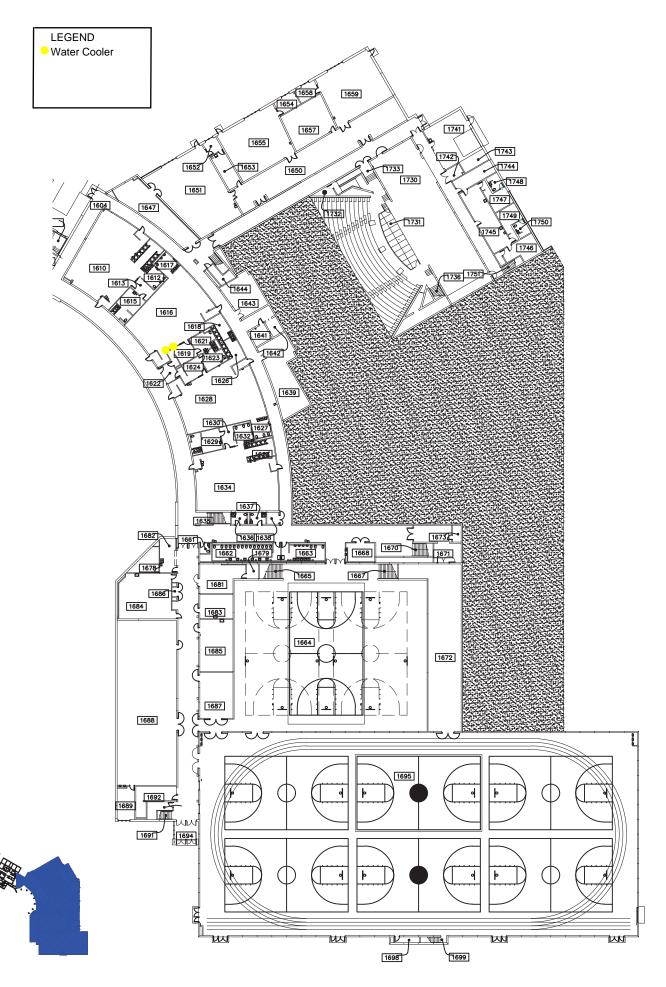
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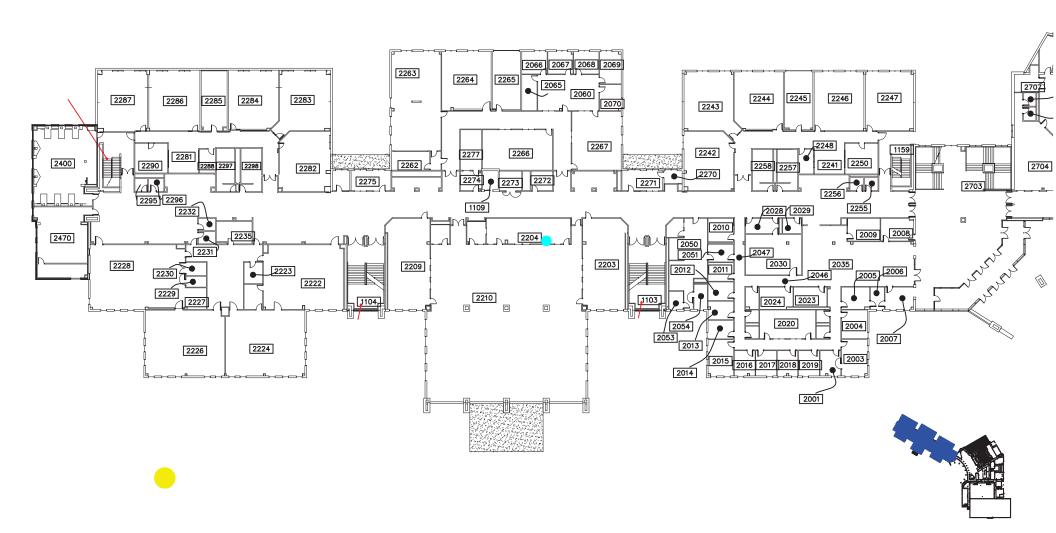












9201 West Broadway Brooklyn Park, MN 55445

