May 15, 2023

*Providing Trusted*
*Health and Safety Solutions*

Racheal Udstuen
Spring Grove Public Schools
113 2nd Avenue NW
Spring Grove, MN 55974

**RE: Spring Grove Public School**
**Lead-in-Water First Draw – Initial Testing**
**IEA Project #202310235**

Dear Ms. Udstuen:

At the request of Spring Grove Public School District, IEA collected 15 water samples from identified potable water sources on April 19, 2023, at Spring Grove Public School.

The purpose of the sampling 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 fifteen (15) first-draw 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 RMB Environmental Laboratories, Inc. in Bloomington, Minnesota, which uses EPA-approved analytical methods and quality control/assurance procedures. Samples were analyzed using the EPA Method 200.9.

## RESULTS & DISCUSSION

The lead-in-water sampling results ranged from <2 ppb to 18.2 ppb. There are 3 sample results greater than 2ppb. See *Table 1: Water Testing Results Exceeding 2.0 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 2.0 ppb**

| Sample Number | Building | Sampling Location | Fixture Type | Lead Results (ppb) |
|---|---|---|---|---|
| 041923SGS-09 | Spring Grove School | Wood Shop | Drinking Fountain | 18.2 |
| 041923SGS-04 | Spring Grove School | Boy's Locker Room | Drinking Fountain | 4.3 |
| 041923SGS-10 | Spring Grove School | Metal Shop | Drinking Fountain | 3.2 |

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.

- The fixture should be removed from service by disconnecting it from the water supply and/or posting signs that the water is not potable and notify staff accordingly. The MDH and MDE recommend taking a fixture out of service if levels are 20 parts per billion (ppb) or higher until further action can be taken.
- Lead pipes on the property and district portion of the service line should be replaced.
- The plumbing system should be reconfigured to redirect the water to bypass any known sources of lead contamination.
- The fixture should be replaced 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.
- A drinking water treatment unit certified to NSF/ANSI 53 or NSF/ANSI 42 for lead reduction should be installed.
- Flush testing should be conducted 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:
  - A flushing program should be implemented which includes documentation of daily flushing and periodic program review.

- It should be noted that elevated levels can return quickly following flushing depending upon the age and condition of the plumbing. The plumbing components should be replaced to ensure any repair or replacement is done using only "lead-free" solder can address high lead levels.
- Existing wires in the building that could be grounded to lead piping should be checked, since the electrical current produced may accelerate the corrosion of the pipes. The wires could also be checked to find 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 Spring Grove School 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 #10776 dated February 24, 2023, regarding lead-in-water sampling at Spring Grove Public School, 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.

Dan Fitch, CSRM
Senior Project Manager
Enc.

# Appendix A

*Laboratory Testing Report*

RMB Environmental Laboratories, Inc.
www.rmbel.com

Bloomington
2200 West 94th Street
Bloomington, MN 55431
952-456-8470

Detroit Lakes
22796 County Highway 6
Detroit Lakes, MN 56501
218-846-1465

Hibbing
1111 7th Ave. E.
Hibbing, MN 55746
218-440-2043

April 30, 2023
Laboratory Report

IEA - Rochester
Angie Radel
210 Woodlake Drive SE
Rochester, MN 55904

RE: Spring Grove Public Schools - Spring Grove School
Work Order :B008563

Enclosed are the results of analyses for samples received by the laboratory on 04/21/2023 14:30. If you have any questions concerning this report, please feel free to reach out to customer service at 888-200-5770 or the contacts listed below:


| | | | |
|---|---|---|---|
| Justin Tweedale | Sr. Project Manager | Justin.Tweedale@rmbel.com | (218) 849-8747 |
| Kathleen Mitchell | Quality Assurance Director | Kathleen.Mitchell@rmbel.info | (785) 493-1633 |
| Robert Borash | President \| CEO | Robert.Borash@rmbel.info | (218) 849-6420 |


Report approved by:

Kathleen A. Mitchell

Kathleen Mitchell For Justin Tweedale
Senior Project Manager
justin.tweedale@rmbel.com



Detroit Lakes (DL) Certification / Accreditation Numbers: EPA Lab ID MN00918 • Minnesota Department of Health 027-005-336 • North Dakota Department of Environmental Quality R-187
Bloomington (BL) Certification / Accreditation Numbers: EPA Lab ID MN01091 • Minnesota Department of Health 027-053-475 • North Dakota Department of Environmental Quality R-231
Hibbing (HB) Certification / Accreditation Numbers: EPA Lab ID MN01082 • Minnesota Department of Health 027-137-480 • North Dakota Department of Environmental Quality R-228

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1111 7th Ave. E.
Hibbing, MN 55746
218-440-2043

**Report Date: April 30,2023**

**IEA - Rochester**
**210 Woodlake Drive SE**
**Rochester MN, 55904**

**Project:** Spring Grove Public Schools - Spring Grove School
**Project Number:** 202310235

**Date/Time Received**
4/21/2023 2:30:00PM

## ANALYTICAL REPORT FOR SAMPLES

| Laboratory ID | Sample ID | Location | Matrix | Date/Time Sampled |
|---|---|---|---|---|
| B008563-01 | 041923SGS-01 | Kitchen Prep Sink - S | Water | 04/19/2023 06:30 |
| B008563-02 | 041923SGS-02 | Main Gym - BF | Water | 04/19/2023 06:30 |
| B008563-03 | 041923SGS-03 | Main Gym Lobby - BF | Water | 04/19/2023 06:30 |
| B008563-04 | 041923SGS-04 | Boys Locker Room -DF | Water | 04/19/2023 06:30 |
| B008563-05 | 041923SGS-05 | Lower Level Hallway by Kitchen - BF | Water | 04/19/2023 06:30 |
| B008563-06 | 041923SGS-06 | Laundry Room - S | Water | 04/19/2023 06:30 |
| B008563-07 | 041923SGS-07 | Lower Level Hallway by Office - BF | Water | 04/19/2023 06:30 |
| B008563-08 | 041923SGS-08 | Lower Level Elementary Hallway - BF | Water | 04/19/2023 06:30 |
| B008563-09 | 041923SGS-09 | Wood Shop - DF | Water | 04/19/2023 06:30 |
| B008563-10 | 041923SGS-10 | Metals Shop - WC | Water | 04/19/2023 06:30 |
| B008563-11 | 041923SGS-11 | Mid Level Hallway by Room 106 - BF | Water | 04/19/2023 06:30 |
| B008563-12 | 041923SGS-12 | Mid Level Hallway by Room 105 - BF | Water | 04/19/2023 06:30 |
| B008563-13 | 041923SGS-13 | Mid Level Hallway by Room 110 - BF | Water | 04/19/2023 06:30 |
| B008563-14 | 041923SGS-14 | Upper Level Hallway by Room 206 - WC | Water | 04/19/2023 06:30 |
| B008563-15 | 041923SGS-15 | Upper Level Hallway by Room 206 - BF | Water | 04/19/2023 06:30 |

**Additional information:**

All samples will be retained for 30 days from date sampled, unless otherwise requested.
Record retention policy is 5 years unless otherwise agreed to in writing.
All calculations are performed using the raw data results.

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218-440-2043

**Laboratory Results**

**April 30, 2023**

| Lab Number | Analyte | Sample ID | Location | Result | Units | Sample RL | DF | Analysis Method | Analyzed | Batch | Analyte Qualifiers | Facility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals by GFAA** | | | | | | | | | | | | |
| B008563-01 | Lead | 041923SGS-01 | Kitchen Prep Sink - S | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:05 | BG02551 | | DL |
| B008563-02 | Lead | 041923SGS-02 | Main Gym - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:13 | BG02551 | | DL |
| B008563-03 | Lead | 041923SGS-03 | Main Gym Lobby - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:16 | BG02551 | | DL |
| B008563-04 | Lead | 041923SGS-04 | Boys Locker Room -DF | **4.3** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:19 | BG02551 | | DL |
| B008563-05 | Lead | 041923SGS-05 | Lower Level Hallway by Kitchen - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:21 | BG02551 | | DL |
| B008563-06 | Lead | 041923SGS-06 | Laundry Room - S | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:30 | BG02551 | | DL |
| B008563-07 | Lead | 041923SGS-07 | Lower Level Hallway by Office - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:32 | BG02551 | | DL |
| B008563-08 | Lead | 041923SGS-08 | Lower Level Elementary Hallway - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:35 | BG02551 | | DL |
| B008563-09 | Lead | 041923SGS-09 | Wood Shop - DF | **18.2** | ug/L | 2.0 | 1 | EPA 200.9 | 04/27/23 19:19 | BG02552 | | DL |
| B008563-10 | Lead | 041923SGS-10 | Metals Shop - WC | **3.2** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:38 | BG02551 | | DL |
| B008563-11 | Lead | 041923SGS-11 | Mid Level Hallway by Room 106 - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:43 | BG02551 | | DL |
| B008563-12 | Lead | 041923SGS-12 | Mid Level Hallway by Room 105 - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:46 | BG02551 | | DL |
| B008563-13 | Lead | 041923SGS-13 | Mid Level Hallway by Room 110 - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:49 | BG02551 | | DL |
| B008563-14 | Lead | 041923SGS-14 | Upper Level Hallway by Room 206 - WC | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:51 | BG02551 | | DL |
| B008563-15 | Lead | 041923SGS-15 | Upper Level Hallway by Room 206 - BF | **< 2.0** | ug/L | 2.0 | 1 | EPA 200.9 | 04/26/23 17:54 | BG02551 | | DL |

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## Metals by GFAA - Quality Control

| Analyte | Result | Units | Qualifiers | Sample RL | DF | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch BG02551 - EPA 200.9** | | | | | | | | | | | |
| **Blank** (BG02551-BLK1) | | | | | | | | | | | |
| Prepared & Analyzed: 04/26/2023 | | | | | | | | | | | |
| **Lead** | < 2.0 | ug/L | | 2.0 | 1 | | | | | | |
| **LCS** (BG02551-BS1) | | | | | | | | | | | |
| Prepared & Analyzed: 04/26/2023 | | | | | | | | | | | |
| **Lead** | 32.0 | ug/L | | 2.0 | 1 | 30.0 | | 107 | 85-115 | | |
| **Matrix Spike** (BG02551-MS3) | | | | | | | | | | | |
| Prepared & Analyzed: 04/26/2023 | | | | | | | | | | | |
| Source: B008563-01 | | | | | | | | | | | |
| **Lead** | 34.6 | ug/L | | 2.0 | 1 | 30.0 | < 2.0 | 115 | 70-130 | | |
| **Matrix Spike** (BG02551-MS4) | | | | | | | | | | | |
| Prepared & Analyzed: 04/26/2023 | | | | | | | | | | | |
| Source: B008563-10 | | | | | | | | | | | |
| **Lead** | 38.1 | ug/L | | 2.0 | 1 | 30.0 | 3.2 | 116 | 70-130 | | |
| **Matrix Spike Dup** (BG02551-MSD3) | | | | | | | | | | | |
| Prepared & Analyzed: 04/26/2023 | | | | | | | | | | | |
| Source: B008563-01 | | | | | | | | | | | |
| **Lead** | 34.3 | ug/L | | 2.0 | 1 | 30.0 | < 2.0 | 114 | 70-130 | 1 | 20 |
| **Batch BG02552 - EPA 200.9** | | | | | | | | | | | |
| **Blank** (BG02552-BLK1) | | | | | | | | | | | |
| Prepared & Analyzed: 04/27/2023 | | | | | | | | | | | |
| **Lead** | < 2.0 | ug/L | | 2.0 | 1 | | | | | | |
| **LCS** (BG02552-BS1) | | | | | | | | | | | |
| Prepared & Analyzed: 04/27/2023 | | | | | | | | | | | |
| **Lead** | 31.7 | ug/L | | 2.0 | 1 | 30.0 | | 106 | 85-115 | | |
| **Matrix Spike** (BG02552-MS1) | | | | | | | | | | | |
| Prepared & Analyzed: 04/27/2023 | | | | | | | | | | | |
| Source: B008563-09 | | | | | | | | | | | |
| **Lead** | 49.9 | ug/L | | 2.0 | 1 | 30.0 | 18.2 | 106 | 70-130 | | |
| **Matrix Spike Dup** (BG02552-MSD1) | | | | | | | | | | | |
| Prepared & Analyzed: 04/27/2023 | | | | | | | | | | | |
| Source: B008563-09 | | | | | | | | | | | |
| **Lead** | 49.8 | ug/L | | 2.0 | 1 | 30.0 | 18.2 | 105 | 70-130 | 0.2 | 20 |

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**Qualifiers and Definitions**

| Item | Definition |
|---|---|
| RL | Reporting Limit (Corrected for dilution factor when applicable due to sample preparation variation.) |
| MDL | Method Detection Limit (Corrected for sample preparation variation.) |
| DF | Dilution Factor |
| DL | Indicates test performed by RMB Environmental Laboratories - Detroit Lakes |

B008563

# Chain of Custody

9201 West Broadway North, Suite 600
Brooklyn Park, MN 55445
763.315.7900 1.800.233.9513

| | | | | | |
|---|---|---|---|---|---|
| Client Name | Spring Grove Public Schools | Building Name | Spring Grove School | Analytical Lab | RMB |
| Contact Name | Emma Squires Sperling Dan Fitch | Project # | 202310235 | Project Name | 2023 Lead in Water Testing |
| Phone # | 763-315-7900 | IEA Fax # | 763-315-7927 | Written Sample Results To | |
| Other Information | | | | | |
| Sampled By | Dan Fitch | Date 4/19/2023 | Time 6:30 AM | Analyzed By (Company) | Analyst / Date & Time |
| Shipped By | RMB Pickup | Date | Time | Turnaround Time Normal | Notes |
| Received By | | Date | Time | Sample Condition Good | Temperature |

| Lab Number | Sample Number | Sample Location | Sample Type: Water | Sample Type: Soil | Sample Type: Other | Date Sampled | Volume/ Bottle Type | Analysis Required | Comments & Observations |
|---|---|---|---|---|---|---|---|---|---|
| 01 | 041923SGS-01 | Kitchen Prep Sink - S | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 02 | 041923SGS-02 | Main Gym - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 03 | 041923SGS-03 | Main Gym Lobby - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 04 | 041923SGS-04 | Boys Locker Room - DF | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 05 | 041923SGS-05 | Lower Level Hallway by Kitchen - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 06 | 041923SGS-06 | Laundry Room - S | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 07 | 041923SGS-07 | Lower Level Hallway by Office - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 08 | 041923SGS-08 | Lower Level Elementary Hallway - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 09 | 041923SGS-09 | Wood Shop - DF | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 10 | 041923SGS-10 | Metals Shop - WC | X | | | 4/19/2023 | 250mL unpreserved | Lead | |
| 11 | 041923SGS-11 | Mid Level Hallway by Room 106 - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | Elem Rooms in this hallway need handwashing signs |
| 12 | 041923SGS-12 | Mid Level Hallway by Room 105 - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | By Door 2 |
| 13 | 041923SGS-13 | Mid Level Hallway by Room 110 - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | By Door 2 |
| 14 | 041923SGS-14 | Upper Level Hallway by Room 208 - WC | X | | | 4/19/2023 | 250mL unpreserved | Lead | Left of Bottle Filler (BF) |
| 15 | 041923SGS-15 | Upper Level Hallway by Room 206 - BF | X | | | 4/19/2023 | 250mL unpreserved | Lead | Right of Water Cooler (WC) |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Nitric Preservation
Date 4/21/23 Time: 1430
Staff: BS6 BL Lab

CMH 04/24/23

Original - Analytical Lab
Copy - Client File
Copy - IEA Lab