

October 25, 2016

Mr. Mike Vogel  
Interim Director of Facilities and Construction Management  
South Washington County Schools  
7362 East Douglas Point Road S  
Cottage Grove, MN 55016  
P 651-425-6274  
E mvogel@sowashco.org



**RE: Newport Elementary  
Lead-in-Water Testing  
IEA Project #201610819**

Dear Mr. Vogel,

At the request of South Washington County Schools, IEA collected a total of 33 samples of drinking water on September 22, 2016, for lead analyses from the Newport Elementary building.

The purpose of the site sampling was to document lead levels in the sampled locations and compare them to the EPA action level of 20 parts per billion (ppb).

## INTRODUCTION

The Environmental Protection Agency (EPA) established the Lead Contamination Control Act (LCCA) of 1988 to identify and reduce lead in drinking water. Both the EPA and the Minnesota Department of Health (MDH) recommend testing of potable water sources (water used for consumption) every five years for the presence of lead. Lead is a metal that usually enters drinking water through the distribution system, including pipes, solders, faucets, and valves. Lead levels in water may increase when the water is allowed to sit undisturbed in the system, such as in science, biology, or art areas. Exposure to lead is a significant health concern, especially to infants and young children whose growing bodies absorb lead more readily than adult bodies do. Lead exposure can cause delays in physical and/or mental development in children and damage to the brain, kidneys, nervous system, and red blood cells. The EPA and MDH recommend that action be taken at a specific fixture when the lead concentration exceeds the EPA's action level for schools of 20 parts per billion (ppb).

## METHODOLOGY

IEA collected 33 first-draw (unless otherwise noted) samples of approximately 500 milliliters (ml). "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. Current protocol calls for flushing locations 8-18 hours prior to sampling.

Site map with sample locations are included in Appendix A. 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.

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BRAINERD  
13432 Elmwood Drive, Ste. #5  
Baxter, MN 56425  
218-454-0703  
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800-233-9513

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1420 East College Drive  
Marshall, MN 56258  
507-476-3599  
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5525 Emerald Avenue  
Mountain Iron, MN 55768  
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800-233-9513

## RESULTS & DISCUSSION

The lead-in-water sampling results ranged from below the level of detection (<0.05 ppb) to 21.7 ppb. There is one (1) sample result greater than 20 ppb. See *Table 1: Water Testing Result Exceeding 20 ppb*. The laboratory report is provided in Appendix B. Laboratory results are reported in micrograms per liter (µg/L) which is equivalent to parts per billion (ppb).

**Table 1: Water Testing Result Exceeding 20 ppb – September 22, 2016**

Sample Number	Building	Sampling Location	Fixture Type	Lead Results (ppb)
16-A50515	Newport Elementary	Sink Special Ed	Faucet	21.7

ppb – parts per billion

In addition, one (1) result showed a lead levels between 15 ppb and 20 ppb. See *Table 2: Water Testing Result Approaching 20 ppb* for these results. Although the EPA recommends that school drinking water not exceed 20 ppb, the MDH recommends schools seek to reduce the amount of lead in drinking water to as close to zero as possible.

**Table 2: Water Testing Results Approaching 20 ppb – September 22, 2016**

Sample Number	Building	Sampling Location	Fixture Type	Lead Results (ppb)
16-A50508	Newport Elementary	Sink 122	Faucet	16.0

ppb – parts per billion

## RECOMMENDATIONS

IEA recommends implementing one of the following treatment options for the fixtures with lead level exceeding the EPA action level of 20 ppb. These recommendations should also be considered for the fixtures with lead level approaching 20 ppb.

- Install a point-of-use treatment device, such as the Omnipure OMB934 1M Lead Reduction Filter.
- Conduct flush testing in accordance with EPA or MDH guidelines to determine if flushing will reduce lead levels. 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.
- Replace fixture with “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 the 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.
- Remove fixture from service by disconnecting it from the water supply.
- Post signs that the water is not potable and to notify staff of this.

In addition, IEA recommends 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.

## GENERAL CONDITIONS

The analysis and opinions expressed in this report are based upon water testing at South Washington County Schools. This report does not reflect variations in conditions that may occur. 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 #5406A dated August 5, 2016 regarding Lead-in-Water Testing, 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.

  
Amy Satterfield, CPPM I  
Director of Business Development

  
Karen Weiblen  
EHS/IEQ Consultant

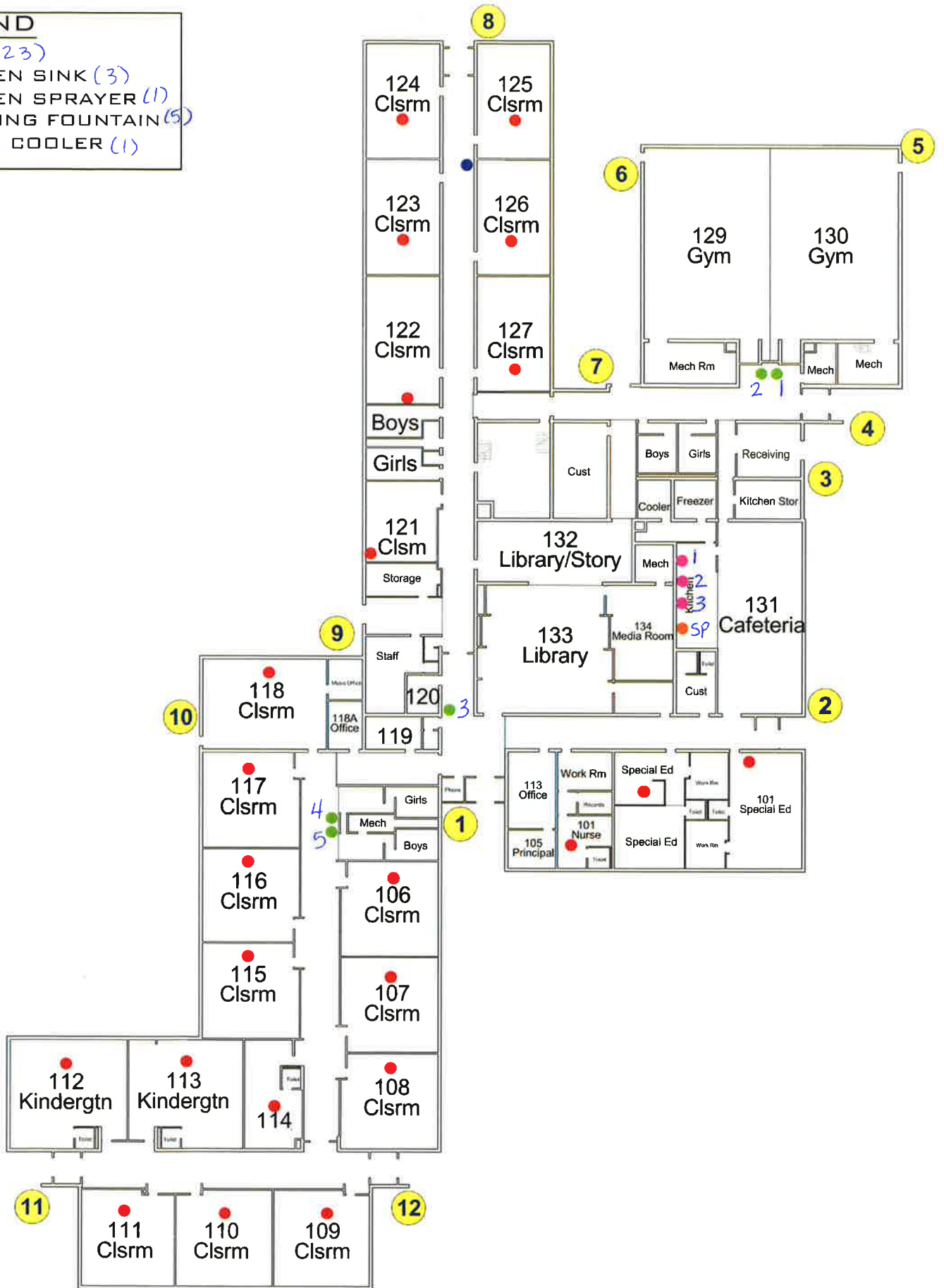
Enclosure

cc: Damien Nelson, Safety & Security

**Appendix A**  
*Site Map/Drawing*

**LEGEND**

- SINK (23)
- KITCHEN SINK (3)
- KITCHEN SPRAYER (1)
- DRINKING FOUNTAIN (5)
- WATER COOLER (1)



## **Appendix B**

### ***Laboratory Testing Report***



# 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  
 www.mvttl.com

MEMBER  
ACIL

Report Date: 25 Oct 2016

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

Work Order #: 12-14656  
 Account #: 002190  
 Purchase Order #: 201610819

Date Received: 22 Sep 2016  
 Date Sampled: 22 Sep 2016  
 Temperature at Receipt: 21.1C

PROJECT NAME: NEWPORT ELEM.  
 PROJECT NUMBER: 201610819

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A50484	09222016NE-1 KITCHEN SINK #1	0.94 ug/L	15.0	21 Oct 16	RMB
16-A50485	09222016NE-2 KITCHEN SINK #2	3.76 ug/L	15.0	10 Oct 16	RMB
16-A50486	09222016NE-3 KITCHEN SINK #3	1.55 ug/L	15.0	10 Oct 16	RMB
16-A50487	09222016NE-4 KITCHEN SPRAYER	2.55 ug/L	15.0	10 Oct 16	RMB
16-A50488	09222016NE-5 DF NEAR CAFETERIA	< 0.5 ug/L	15.0	10 Oct 16	RMB
16-A50489	09222016NE-6 DF #2	1.02 ug/L	15.0	10 Oct 16	RMB
16-A50490	09222016NE-7 DF #3	< 0.5 ug/L	15.0	10 Oct 16	RMB
16-A50491	09222016NE-8 DF #4	5.60 ug/L	15.0	10 Oct 16	RMB
16-A50492	09222016NE-9 DF #5	6.34 ug/L	15.0	10 Oct 16	RMB
16-A50493	09222016NE-10 WATER COOLER NEAR 125	0.65 ug/L	15.0	10 Oct 16	RMB
16-A50494	09222016NE-11 SINK 106	12.9 ug/L	15.0	10 Oct 16	RMB
16-A50495	09222016NE-12 SINK 107	11.4 ug/L	15.0	10 Oct 16	RMB
16-A50496	09222016NE-13 SINK 108	12.4 ug/L	15.0	10 Oct 16	RMB

Approved by:   
 Dan O'Connell, Asst. Chemistry Laboratory Manager 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 WI LAB # 999447680 ND MICRO # 1013-M 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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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A50497	09222016NE-14 SINK 109	9.83 ug/L	15.0	10 Oct 16	RMB
16-A50498	09222016NE-15 SINK 110	9.10 ug/L	15.0	10 Oct 16	RMB
16-A50499	09222016NE-16 SINK 111	5.04 ug/L	15.0	10 Oct 16	RMB
16-A50500	09222016NE-17 SINK 112	6.65 ug/L	15.0	10 Oct 16	RMB
16-A50501	09222016NE-18 SINK 113	12.3 ug/L	15.0	10 Oct 16	RMB
16-A50502	09222016NE-19 SINK 113	1.34 ug/L	15.0	10 Oct 16	RMB
16-A50503	09222016NE-20 SINK 115	4.60 ug/L	15.0	10 Oct 16	RMB
16-A50504	09222016NE-21 SINK 116	3.89 ug/L	15.0	10 Oct 16	RMB
16-A50505	09222016NE-22 SINK 117	9.93 ug/L	15.0	10 Oct 16	RMB
16-A50506	09222016NE-23 DRINKING FOUNTAIN 112	1.03 ug/L	15.0	10 Oct 16	RMB
16-A50507	09222016NE-24 SINK STAFFROOM	10.6 ug/L	15.0	10 Oct 16	RMB
16-A50508	09222016NE-25 SINK 122	16.0 ug/L	15.0	10 Oct 16	RMB
16-A50509	09222016NE-26 SINK 123	11.2 ug/L	15.0	10 Oct 16	RMB

Approved by:   
Dan O'Connell, Asst. Chemistry Laboratory Manager New Ulm, MN

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PROJECT NAME: NEWPORT ELEM.  
PROJECT NUMBER: 201610819

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A50510	09222016NE-27 SINK 124	10.4 ug/L	15.0	10 Oct 16	RMB
16-A50511	09222016NE-28 SINK 125	11.4 ug/L	15.0	10 Oct 16	RMB
16-A50512	09222016NE-29 SINK 126	14.9 ug/L	15.0	10 Oct 16	RMB
16-A50513	09222016NE-30 SINK 127	8.59 ug/L	15.0	10 Oct 16	RMB
16-A50514	09222016NE-31 SINK NURSE	12.1 ug/L	15.0	10 Oct 16	RMB
16-A50515	09222016NE-32 SINK SPECIAL ED	21.7 ug/L	15.0	10 Oct 16	RMB
16-A50516	09222016NE-33 SINK SPECIAL ED 101	4.03 ug/L	15.0	10 Oct 16	RMB

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