

October 28, 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: DPC Building
Lead-in-Water Testing
IEA Project #201610819**

Dear Mr. Vogel,

At the request of South Washington County Schools, IEA collected a total of 40 samples of drinking water on September 23, 2016, for lead analyses from the DPC 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 40 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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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
FAX 763-315-7920
800-233-9513

RESULTS & DISCUSSION

The lead-in-water sampling results ranged from below the level of detection (<0.05 ppb) to 25.2 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 23, 2016

Sample Number	Building	Sampling Location	Fixture Type	Lead Result (ppb)
16-A51640	DPC Building	SR Kitchen Sprayer	Sprayer	25.2

ppb – parts per billion

In addition, four (4) results showed lead levels between 15 ppb and 20 ppb. See *Table 2: Water Testing Results 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 23, 2016

Sample Number	Building	Sampling Location	Fixture Type	Lead Results (ppb)
16-A51636	DPC Building	Kitchen Sink #3	Faucet	15.4
16-A51648	DPC Building	Sink Room 118	Faucet	15.4
16-A51649	DPC Building	Sink Room 124	Faucet	16.6
16-A51655	DPC Building	Sink Room 132	Faucet	16.9

ppb – parts per billion

RECOMMENDATIONS

IEA recommends implementing one of the following treatment options for the fixture 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 (20)
- KITCHEN SINK (6)
- KITCHEN SPRAYER (1)
- DRINKING FOUNTAIN (1)
- WATER BOTTLE FILLER (1)
- WATER COOLER (8)
- INLINE HOT/COLD DISPENSER (3)



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
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PRELIMINARY REPORT ONLY

Report Date: 28 Oct 2016

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

Work Order #: 12-14771
Account #: 002190
Purchase Order #: 201610819

Date Received: 23 Sep 2016
Date Sampled: 23 Sep 2016
Temperature at Receipt: 20.1C

PROJECT NAME: DPC BUILDING
PROJECT NUMBER: 201610819

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A51634	09232016DPC-1 KITCHEN SINK #1	6.88 ug/L	15.0	24 Oct 16	RMB
16-A51635	09232016DPC-2 KITCHEN SINK #2	4.42 ug/L	15.0	24 Oct 16	RMB
16-A51636	09232016DPC-3 KITCHEN SINK #3	15.4 ug/L	15.0	24 Oct 16	RMB
16-A51637	09232016DPC-4 KITCHEN SINK #4	14.2 ug/L	15.0	24 Oct 16	RMB
16-A51638	09232016DPC-6 SR KITCHEN SINK #1	3.89 ug/L	15.0	24 Oct 16	RMB
16-A51639	09232016DPC-7 SR KITCHEN SINK #2	4.36 ug/L	15.0	24 Oct 16	RMB
16-A51640	09232016DPC-8 SR KITCHEN SPRAYER	25.2 ug/L	15.0	24 Oct 16	RMB
16-A51641	09232016DPC-9 SINK LUNCHROOM	10.7 ug/L	15.0	24 Oct 16	RMB
16-A51642	09232016DPC-10 SINK SPECIAL SERVICES	1.02 ug/L	15.0	24 Oct 16	RMB
16-A51643	09232016DPC-11 SINK STORAGE	1.50 ug/L	15.0	24 Oct 16	RMB
16-A51644	09232016DPC-12 INLINE COOLER STORAGE	< 0.5 ug/L	15.0	24 Oct 16	RMB
16-A51645	09232016DPC-16 SINK NURSES OFFICE	9.92 ug/L	15.0	24 Oct 16	RMB
16-A51646	09232016DPC-17 SINK 103	6.51 ug/L	15.0	24 Oct 16	RMB
16-A51647	09232016DPC-18 BOTTLE FILLER NEAR 108	< 0.5 ug/L	15.0	24 Oct 16	RMB
16-A51648	09232016DPC-19 SINK 118	15.4 ug/L	15.0	24 Oct 16	RMB

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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16-A51649	09232016DPC-20 SINK 124	16.6 ug/L	15.0	24 Oct 16	RMB
16-A51650	09232016DPC-21 SOUTH SINK 123	7.22 ug/L	15.0	24 Oct 16	RMB
16-A51651	09232016DPC-22 #1 SINK 125	9.92 ug/L	15.0	24 Oct 16	RMB
16-A51652	09232016DPC-23 SINK 126	11.6 ug/L	15.0	24 Oct 16	RMB
16-A51653	09232016DPC-24 SINK 128	10.5 ug/L	15.0	24 Oct 16	RMB
16-A51654	09232016DPC-25 SINK 130	3.67 ug/L	15.0	24 Oct 16	RMB
16-A51655	09232016DPC-26 SINK 132	16.9 ug/L	15.0	24 Oct 16	RMB
16-A51656	09232016DPC-27 DF NEAR 132	10.6 ug/L	15.0	24 Oct 16	RMB
16-A51657	09232016DPC-28 WATER COOLER #1	0.78 ug/L	15.0	24 Oct 16	RMB
16-A51658	09232016DPC-29 WATER COOLER #2	< 0.5 ug/L	15.0	24 Oct 16	RMB
16-A51659	09232016DPC-30 WATER COOLER #3	1.27 ug/L	15.0	24 Oct 16	RMB
16-A51660	09232016DPC-31 WATER COOLER #4	< 0.5 ug/L	15.0	24 Oct 16	RMB
16-A51661	09232016DPC-32 WATER COOLER #5	< 0.5 ug/L	15.0	24 Oct 16	RMB
16-A51662	09232016DPC-33 WATER COOLER #6	< 0.5 ug/L	15.0	24 Oct 16	RMB

Page: 2

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PROJECT NAME: DPC BUILDING
 PROJECT NUMBER: 201610819

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A51663	09232016DPC-34 WATER COOLER #7	1.05 ug/L	15.0	24 Oct 16	RMB
16-A51664	09232016DPC-35 WATER COOLER #8	0.78 ug/L	15.0	24 Oct 16	RMB
16-A51665	09232016DPC-36 OUTSIDE SR KITCHEN DISP #1	< 0.5 ug/L	15.0	24 Oct 16	RMB
16-A51666	09232016DPC-37 OUTSIDE SR KITCHEN DISP #2	3.28 ug/L	15.0	24 Oct 16	RMB
16-A51667	09232016DPC-38 ROOM 123 SINK N	7.07 ug/L	15.0	24 Oct 16	RMB
16-A51668	09232016DPC-39 ROOM 125 SINK #2	6.54 ug/L	15.0	24 Oct 16	RMB
16-A51669	09232016DPC-40 ROOM 126 SINK NORTH	7.38 ug/L	15.0	24 Oct 16	RMB
16-A51670	09232016DPC-41 ROOM 126A SINK	11.5 ug/L	15.0	24 Oct 16	RMB
16-A51671	09232016DPC-42 ROOM 128 SMALL SINK	4.86 ug/L	15.0	24 Oct 16	RMB
16-A51672	09232016DPC-43 ROOM 130 PORCELAIN SINK	1.47 ug/L	15.0	24 Oct 16	RMB
16-A51673	09232016DPC-44 ROOM 132 PORCELAIN SINK	< 0.5 ug/L	15.0	24 Oct 16	RMB

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