October 24, 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



Providing Trusted
Health & Safety Solutions

RE: Pine Hill Elementary Lead-in-Water Testing

IEA Project #201610819

Dear Mr. Vogel,

At the request of South Washington County Schools, IEA collected a total of 50 samples of drinking water on September 15, 2016, and 18 on September 23, 2016 (the second sampling was necessary due to fixture use by staff on the first sampling visit) for lead analyses from the Pine Hill 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 68 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.

RESULTS & DISCUSSION

The lead-in-water sampling results ranged from below the level of detection (<0.05 ppb) to 25.5 ppb. There are three (3) sample results greater than 20 ppb. See *Table 1: Water Testing Results Exceeding 20 ppb*. The laboratory report is provided in Appendix B. Laboratory results are reported in micrograms per liter (μ g/L) which is equivalent to parts per billion (ppb).

Table 1: Water Testing Results Exceeding 20 ppb – September 15, 2016

Sample Number	Building	Sampling Location	Fixture Type	Lead Results (ppb)
16-A48188	Pine Hill Elementary	Room 204 Sink	Fixture	20.1
16-A48191	Pine Hill Elementary	Room 205 Drinking Fountain	Drinking Fountain	24.9
16-A48210	Pine Hill Elementary	Room 101 Sink	Fixture	25.5

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 15, 2016

Sample Number	Building	Sampling Location	Fixture Type	Lead Results (ppb)
16-A48184	Pine Hill Elementary	Room 202 Sink	Fixture	16.3
16-A48186	Pine Hill Elementary	Room 203 Sink	Fixture	18.1
16-A48196	Pine Hill Elementary	Room 208 Sink	Fixture	15.4
16-A48204	Pine Hill Elementary	Room 212 Sink	Fixture	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/IEO Consultant

Enclosure

cc: Damien Nelson, Safety & Security

Appendix A Site Map/Drawing

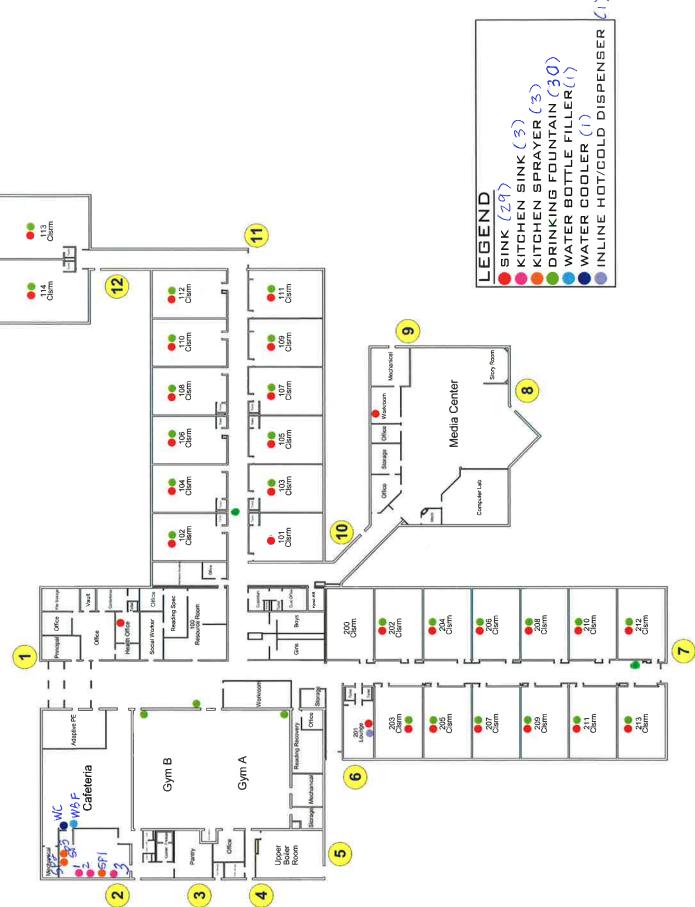












Appendix B

Laboratory Testing Report



Report Date: 28 Sep 2016

Work Order #: 12-14251

Account #: 002190

Purchase Order #: 201610819

Date Received: 15 Sep 2016
Date Sampled: 15 Sep 2016
Temperature at Receipt: 19.4C

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

PROJECT NAME: PINE HILLS ELEM.

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A48170	09152016PHE-1 KITCHEN SINK #1	5.51 ug/L	15.0	20 Sep 16	RMV
16-A48171	09152016PHE-2 KITCHEN SINK #2	3.49 ug/L	15.0	20 Sep 16	RMV
16-A48172	09152016PHE-3 KITCHEN SINK #3	4.22 ug/L	15.0	20 Sep 16	RMV
16-A48173	09152016PHE-4 KITCHEN SPRAYER #1	4.14 ug/L	15.0	20 Sep 16	RMV
16-A48174	09152016PHE-5 KITCHEN SPRAYER #2	3.99 ug/L	15.0	20 Sep 16	RMV
16-A48175	09152016PHE-6 KITCHEN SPRAYER #3	4.30 ug/L	15.0	20 Sep 16	RMV
16-A48176	09152016PHE-7 BOTTLE FILLER IN CAFETERIA	< 0.5 ug/L	15.0	20 Sep 16	RMV
16-A48177	09152016PHE-8 WATER COOLER IN CAFETERIA	< 0.5 ug/L	15.0	20 Sep 16	RMV
16-A48178	09152016PHE-9 GYM B DF	4.03 ug/L	15.0	20 Sep 16	RMV
16-A48179	09152016PHE-10 GYM A DF	2.08 ug/L	15.0	20 Sep 16	RMV
16-A48180	09152016PHE-11 DF OUTSIDE GYMS	3.76 ug/L	15.0	20 Sep 16	RMV
16-A48181	09152016PHE-12 NURSES SINK	7.37 ug/L	15.0	20 Sep 16	RMV
16-A48182	09152016PHE-13 INLINE COOLER-LOUNGE	< 0.5 ug/L	15.0	20 Sep 16	RMV

Approved by: R Da Q CCan D

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 concentration of other analytes

@ = Due to sample matrix # = Due to cor

! = 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

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.mvtl.com

Report Date: 28 Sep 2016

Work Order #: 12-14251

Account #: 002190 Purchase Order #: 201610819

Date Received: 15 Sep 2016
Date Sampled: 15 Sep 2016
Temperature at Receipt: 19.4C

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

PROJECT NAME: PINE HILLS ELEM.

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A48183	09152016PHE-14 SINK-LOUNGE	2.02 ug/L	15.0	20 Sep 16	RMV
16-A48184	09152016PHE-17 SINK-RM 202	16.3 ug/L	15.0	20 Sep 16	RMV
16-A48185	09152016PHE-18 DF-RM 202	5.77 ug/L	15.0	20 Sep 16	RMV
16-A48186	09152016PHE-19 SINK-RM 203	18.1 ug/L	15.0	20 Sep 16	RMV
16-A48187	09152016PHE-20 DF-RM 203	11.6 ug/L	15.0	26 Sep 16	RMV
16-A48188	09152016PHE-21 SINK-RM 204	20.1 ug/L	15.0	26 Sep 16	RMV
16-A48189	09152016PHE-22 DF-RM 204	11.3 ug/L	15.0	26 Sep 16	RMV
16-A48190	09152016PHE-23 SINK-RM 205	3.86 ug/L	15.0	26 Sep 16	RMV
16-A48191	09152016PHE-24 DF-RM 205	24.9 ug/L	15.0	26 Sep 16	RMV
16-A48192	09152016PHE-25 SINK-RM 206	9.91 ug/L	15.0	26 Sep 16	RMV
16-A48193	09152016PHE-26 DF-RM 206	4.21 ug/L	15.0	26 Sep 16	RMV
16-A48194	09152016PHE-27 SINK-RM 207	3.90 ug/L	15.0	26 Sep 16	RMV
16-A48195	09152016PHE-28 DF-RM 207	11.9 ug/L	15.0	26 Sep 16	R MV

Approved by: R. D. Q. Com

Dan O'Connell, Asst. Chemistry Laboratory Manager New Ulm, MN
Page: 2

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 concentration of other analytes

@ = Due to sample matrix # = Due to co

! = 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



Report Date: 28 Sep 2016

Work Order #: 12-14251

Account #: 002190

Purchase Order #: 201610819

Date Received: 15 Sep 2016 Date Sampled: 15 Sep 2016 Temperature at Receipt: 19.4C

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

PROJECT NAME: PINE HILLS ELEM.

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A48196	09152016PHE-29 SINK-RM 208	15.4 ug/L	15.0	26 Sep 16	RMV
16-A48197	09152016PHE-30 DF-RM 208	10.6 ug/L	15.0	26 Sep 16	RMV
16-A48198	09152016PHE-31 SINK-RM 209	12.1 ug/L	15.0	26 Sep 16	RMV
16-A48199	09152016PHE-32 DF-RM 209	1.79 ug/L	15.0	26 Sep 16	RMV
16-A48200	09152016PHE-33 SINK-RM 210	11.6 ug/L	15.0	26 Sep 16	RMV
16-A48201	09152016PHE-34 DF-RM 210	4.27 ug/L	15.0	26 Sep 16	RMV
16-A48202	09152016PHE-35 SINK-RM 211	11.6 ug/L	15.0	26 Sep 16	RMV
16-A48203	09152016PHE-36 DF-RM 211	7.35 ug/L	15.0	26 Sep 16	RMV
16-A48204	09152016PHE-37 SINK-RM 212	16.0 ug/L	15.0	26 Sep 16	RMV
16-A48205	09152016PHE-38 DF-RM 212	6.30 ug/L	15.0	26 Sep 16	RMV
16-A48206	09152016PHE-39 SINK-RM 213	9.48 ug/L	15.0	26 Sep 16	RMV
16-A48207	09152016PHE-40 DF-RM 213	4.16 ug/L	15.0	26 Sep 16	RMV
16-A48208	09152016PHE-41 DF NEAR RM 212	8.27 ug/L	15.0	26 Sep 16	RMV

Approved by: R. O. Q. Camb

Dan O'Connell, Asst. Chemistry Laboratory Manager New Ulm, MN Page: 3

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 + = Due to internal standa CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040



Report Date: 28 Sep 2016

Work Order #: 12-14251

Account #: 002190

Purchase Order #: 201610819

Date Received: 15 Sep 2016 Date Sampled: 15 Sep 2016 Temperature at Receipt: 19.4C

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

PROJECT NAME: PINE HILLS ELEM.

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A48209	09152016PHE-42 SINK MEDIA WORKROOM	7.99 ug/L	15.0	26 Sep 16	RMV
16-A48210	09152016PHE-43 SINK RM 101	25.5 ug/L	15.0	26 Sep 16	RMV
16-A48211	09152016PHE-45 SINK RM 102	12.8 ug/L	15.0	26 Sep 16	RMV
16-A48212	09152016PHE-46 DF RM 102	7.16 ug/L	15.0	26 Sep 16	RMV
16-A48213	09152016PHE-47 SINK RM 103	5.82 ug/L	15.0	26 Sep 16	RMV
16-A48214	09152016PHE-48 DF RM 103	3.23 ùg/L	15.0	26 Sep 16	RMV
16-A48215	09152016PHE-49 SINK RM 104	3.42 ug/L	15.0	26 Sep 16	RMV
16-A48216	09152016PHE-50 DF RM 104	2.40 ug/L	15.0	26 Sep 16	RMV
16-A48217	09152016PHE-51 SINK RM 105	4.11 ug/L	15.0	26 Sep 16	RMV
16-A48218	09152016PHE-52 DF RM 105	6.22 ug/L	15.0	26 Sep 16	RMV
16-A48219	09152016PHE-71 DF NEAR RM 104	3.75 ug/L	15.0	26 Sep 16	RMV

Approved by: R. D. QCC

Dan O'Connell, Asst. Chemistry Laboratory Manager New Ulm, MN Page: 4

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



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.mytl.com

ACIL

Report Date: 24 Oct 2016

Work Order #: 12-14671

Account #: 002190

Purchase Order #: 201610819

Date Received: 23 Sep 2016 Date Sampled: 23 Sep 2016 Temperature at Receipt: 19.0C

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

PROJECT NAME: PINE HILL ELEM. PROJECT NUMBER: 201610819

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A50904	09232016PE-1 SINK RM 106	7.72 ^ug/L	15.0	15 Oct 16	RMV
16-A50905	09232016PE-2 DF RM 106	4.82 ^ug/L	15.0	15 Oct 16	RMV
16-A50906	09232016PE-3 SINK RM 107	2.77 ^ug/L	15.0	15 Oct 16	RMV
16-A50907	09232016PE-4 DF RM 107	3.05 ^ug/L	15.0	15 Oct 16	RMV
16-A50908	09232016PE-5 SINK RM 108	2.14 ^ug/L	15.0	15 Oct 16	RMV
16-A50909	09232016PE-6 DF RM 108	2.75 ^ug/L	15.0	15 Oct 16	RMV
16-A50910	09232016PE-7 SINK RM 109	1.86 ^ug/L	15.0	15 Oct 16	RMV
16-A50911	09232016PE-8 DF RM 109	2.43 ^ug/L	15.0	15 Oct 16	RMV
16-A50912	09232016PE-9 SINK RM 110	3.69 ^ug/L	15.0	15 Oct 16	RMV
16-A50913	09232016PE-10 DF RM 110	4.69 ^ug/L	15.0	15 Oct 16	RMV
16-A50914	09232016PE-11 SINK RM 111	3.36 ^ug/L	15.0	15 Oct 16	RMV
16-A50915	09232016PE-12 DF RM 111	3.87 ^ug/L	15.0	15 Oct 16	RMV
16-A50916	09232016PE-13 SINK RM 112	2.62 ^ug/L	15.0	15 Oct 16	RMV

Approved by: R. Q. Complete 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



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: 24 Oct 2016

Work Order #: 12-14671

Account #: 002190

Purchase Order #: 201610819

Date Received: 23 Sep 2016 Date Sampled: 23 Sep 2016 Temperature at Receipt: 19.0C

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

PROJECT NAME: PINE HILL ELEM. PROJECT NUMBER: 201610819

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A50917	09232016PE-14 DF RM 112	1.50 ^ug/L	15.0	15 Oct 16	RMV
16-A50918	09232016PE-15 SINK RM 113	5.48 ^ug/L	15.0	15 Oct 16	RMV
16-A50919	09232016PE-16 DF RM 113	3.49 ^ug/L	15.0	15 Oct 16	RMV
16-A50920	09232016PE-17 SINK RM 114	10.2 ^ug/L	15.0	15 Oct 16	RMV
16-A50921	09232016PE-18 DF RM 114	2.69 ^ug/L	15.0	15 Oct 16	RMV

Approved by:

Dan O'Connell, Asst. Chemistry Laboratory Manager 2

Page:

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 25 WI LAB # 999447680 CERTIFICATION: MN LAB # 027-015-125 ND MICRO # 1013-M ND WW/DW # R-040