October 5, 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: Park High School
Lead-in-Water Testing
IEA Project #201610819

Dear Mr. Vogel,

At the request of South Washington County Schools, IEA collected a total of 55 samples of drinking water on September 21, 2016, for lead analyses from the Park High School 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 55 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 28.5 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 21, 2016

Sample Number	Building	Sampling Location	Fixture Type	Lead Results (ppb)
16-A49593	Park High School	Sink Room 130	Faucet	28.5

ppb – parts per billion

In addition, one (1) result showed lead level 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 Result Approaching 20 ppb – September 21, 2016

Sample Number	Building	Sampling Location	Fixture Type	Lead Results (ppb)
16	Park High School	Sink #1 Outside Gym	Faucet	16.8

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

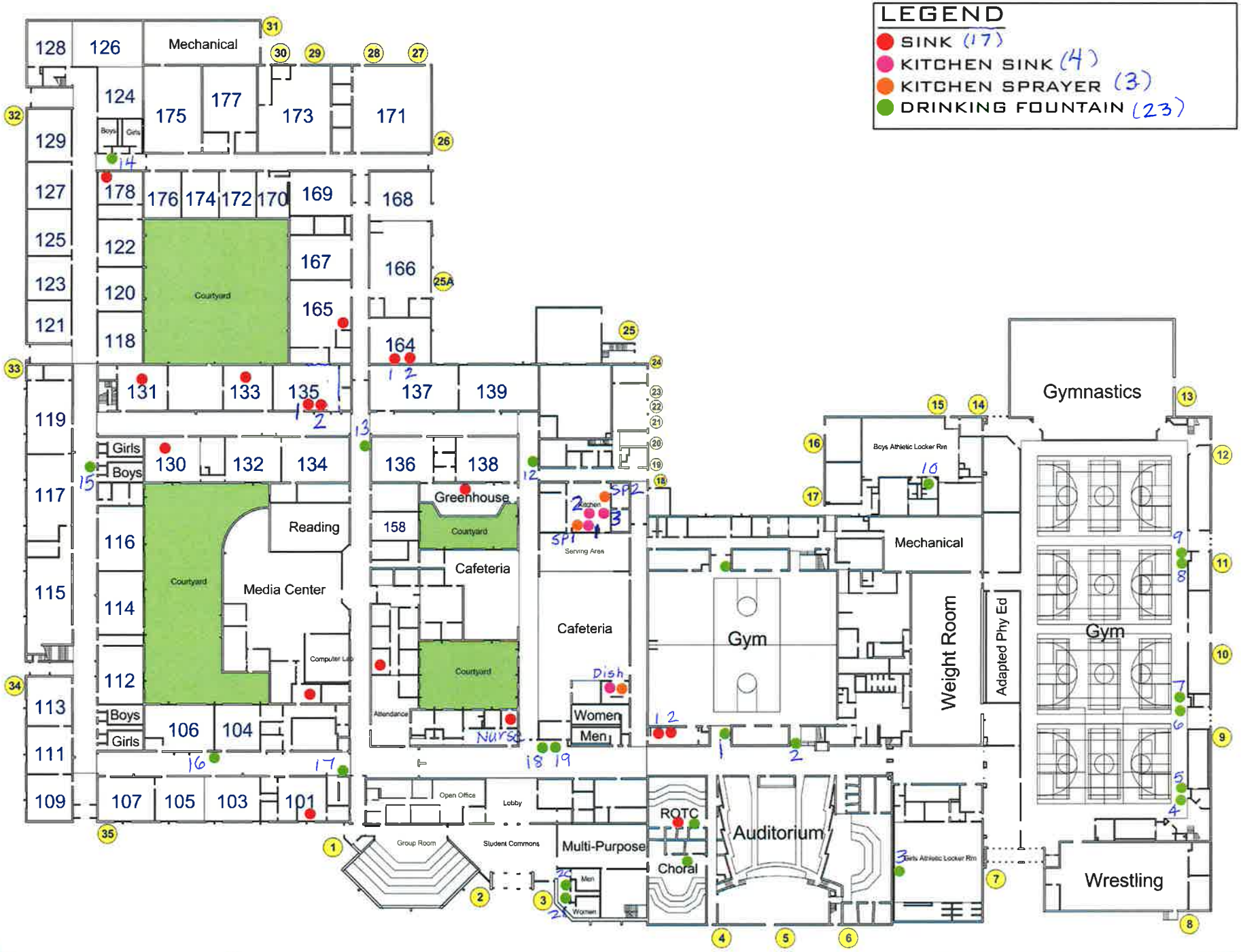
Karen Weiblen
EHS/IEQ Consultant

Enclosure

cc: Damien Nelson, Safety & Security

Appendix A

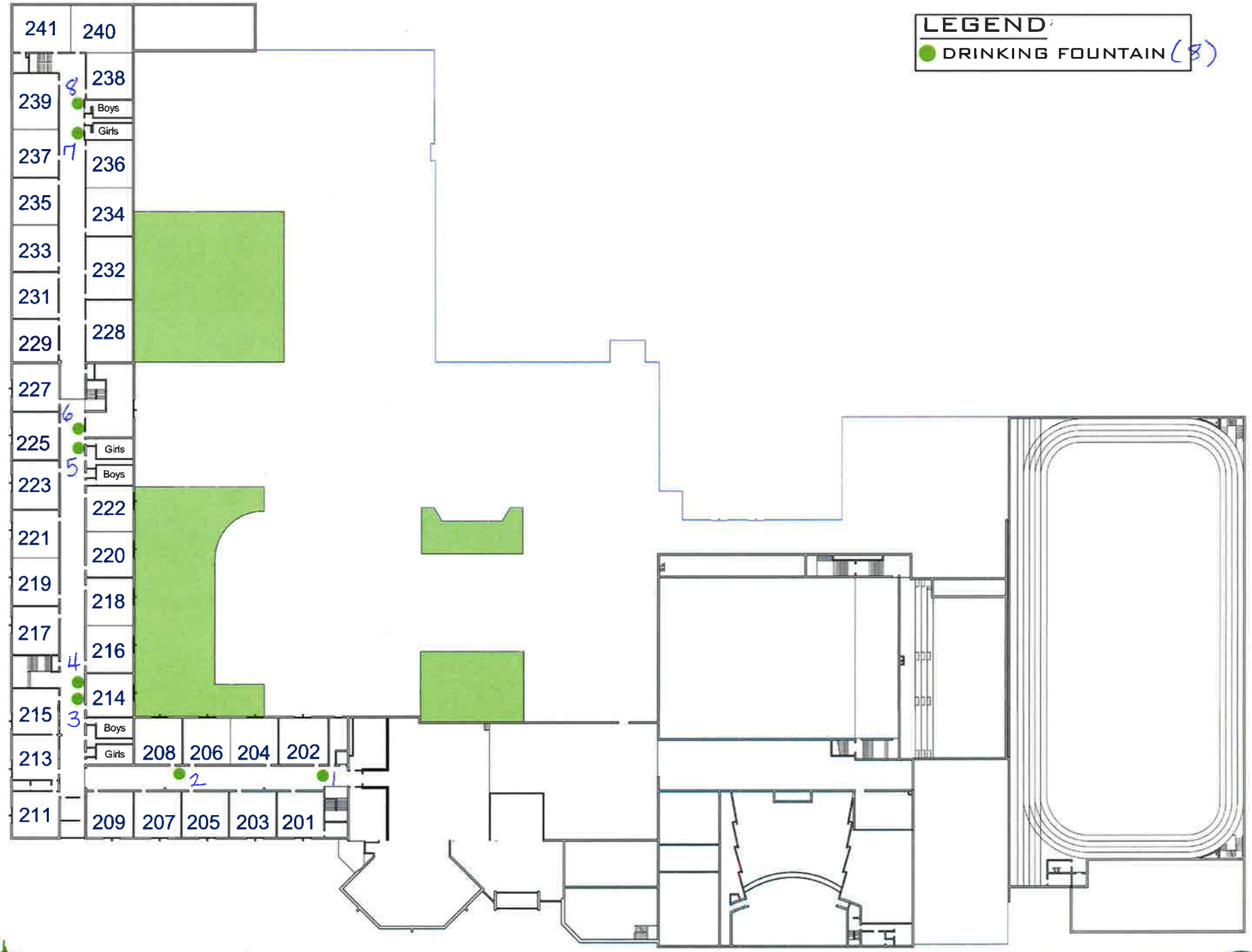
Site Map/Drawing



INSTITUTE FOR ENVIRONMENTAL ASSESSMENT
9201 West Broadway Brooklyn Park, MN 55445
Tel: 763.315.7900 Toll Free: 800.233.9513
Fax: 763.315.7920

PARK HIGH SCHOOL

FIRST LEVEL FLOOR PLAN | OCT. 2016



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PARK HIGH SCHOOL

SECOND LEVEL FLOOR PLAN | OCT. 2016

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Appendix B

Laboratory Testing Report

MINNESOTA VALLEY TESTING LABORATORIES, INC.

MVTL

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

MEMBER ACIL

Report Date: 5 Oct 2016

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

Work Order #: 12-14486
Account #: 002190
Purchase Order #: 201610819

Date Received: 21 Sep 2016
Date Sampled: 21 Sep 2016
Temperature at Receipt: 22.5C

PROJECT NAME: PARK HIGH SCHOOL
PROJECT NUMBER: 201610819

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS		MCL	DATE ANALYZED	ANALYST
16-A49551	09212016PHS-1 KITCHEN SINK #1	2.43	ug/L	15.0	30 Sep 16	RMV
16-A49552	09212016PHS-2 KITCHEN SINK #2	1.51	ug/L	15.0	30 Sep 16	RMV
16-A49553	09212016PHS-3 KITCHEN SINK #3	3.29	ug/L	15.0	30 Sep 16	RMV
16-A49554	09212016PHS-4 KITCHEN SPRAYER #1	5.21	ug/L	15.0	30 Sep 16	RMV
16-A49555	09212016PHS-5 KITCHEN SPRAYER #2	1.60	ug/L	15.0	30 Sep 16	RMV
16-A49556	09212016PHS-6 DISHROOM SPRAYER	1.30	ug/L	15.0	30 Sep 16	RMV
16-A49557	09212016PHS-7 DISHROOM SINK	< 0.5	ug/L	15.0	30 Sep 16	RMV
16-A49558	09212016PHS-8 SINK #1 OUTSIDE GYM	16.8	ug/L	15.0	30 Sep 16	RMV
16-A49559	09212016PHS-9 SINK #2 OUTSIDE GYM	2.48	ug/L	15.0	30 Sep 16	RMV
16-A49560	09212016PHS-10 DF #1	3.17	ug/L	15.0	30 Sep 16	RMV
16-A49561	09212016PHS-11 DF #2	2.58	ug/L	15.0	30 Sep 16	RMV
16-A49563	09212016PHS-12 DF #3	2.08	ug/L	15.0	30 Sep 16	RMV
16-A49564	09212016PHS-13 DF #4	0.79	ug/L	15.0	30 Sep 16	RMV

Approved by: R. Dan O'Connell

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

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS		MCL	DATE ANALYZED	ANALYST
16-A49565	09212016PHS-14 DF #5	0.54	ug/L	15.0	30 Sep 16	RMV
16-A49566	09212016PHS-15 DF #6	2.80	ug/L	15.0	30 Sep 16	RMV
16-A49567	09212016PHS-16 DF #7	2.98	ug/L	15.0	30 Sep 16	RMV
16-A49568	09212016PHS-17 DF #8	2.62	ug/L	15.0	30 Sep 16	RMV
16-A49569	09212016PHS-18 DF #9	1.09	ug/L	15.0	30 Sep 16	RMV
16-A49570	09212016PHS-19 DF #10	13.4	ug/L	15.0	30 Sep 16	RMV
16-A49571	09212016PHS-20 DF #11	5.58	ug/L	15.0	30 Sep 16	RMV
16-A49572	09212016PHS-21 DF #12	5.72	ug/L	15.0	30 Sep 16	RMV
16-A49573	09212016PHS-22 DF #13	1.22	ug/L	15.0	30 Sep 16	RMV
16-A49574	09212016PHS-23 DF #14	2.12	ug/L	15.0	30 Sep 16	RMV
16-A49575	09212016PHS-24 DF #15	0.62	ug/L	15.0	30 Sep 16	RMV
16-A49576	09212016PHS-25 DF #16	1.51	ug/L	15.0	30 Sep 16	RMV
16-A49577	09212016PHS-26 DF #17	2.76	ug/L	15.0	30 Sep 16	RMV

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

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16-A49578	09212016PHS-27 DF #18	1.48	ug/L	15.0	30 Sep 16	RMV
16-A49579	09212016PHS-28 DF #19	1.03	ug/L	15.0	30 Sep 16	RMV
16-A49580	09212016PHS-29 DF #20	0.79	ug/L	15.0	30 Sep 16	RMV
16-A49581	09212016PHS-30 DF #21	0.95	ug/L	15.0	30 Sep 16	RMV
16-A49582	09212016PHS-31 SINK ROTC	4.28	ug/L	15.0	30 Sep 16	RMV
16-A49583	09212016PHS-32 DF ROTC	6.23	ug/L	15.0	30 Sep 16	RMV
16-A49584	09212016PHS-33 DF CHORAL	2.39	ug/L	15.0	30 Sep 16	RMV
16-A49585	09212016PHS-34 SINK NURSES	3.17	ug/L	15.0	30 Sep 16	RMV
16-A49586	09212016PHS-35 SINK 101	2.69	ug/L	15.0	30 Sep 16	RMV
16-A49587	09212016PHS-36 SINK NEAR MEDIA CENTER	4.79	ug/L	15.0	30 Sep 16	RMV
16-A49588	09212016PHS-37 SINK NEAR ATTENDANCE OFFICE	3.28	ug/L	15.0	30 Sep 16	RMV
16-A49589	09212016PHS-38 ROOM 135 SINK #1	2.29	ug/L	15.0	30 Sep 16	RMV

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
16-A49590	09212016PHS-39 ROOM 135 SINK #2	< 0.5 ug/L	15.0	30 Sep 16	RMV
16-A49591	09212016PHS-45 SINK 133	9.25 ug/L	15.0	30 Sep 16	RMV
16-A49592	09212016PHS-46 SINK 131	4.51 ug/L	15.0	30 Sep 16	RMV
16-A49593	09212016PHS-47 SINK 130	28.5 ug/L	15.0	30 Sep 16	RMV
16-A49594	09212016PHS-48 SINK 178	3.10 ug/L	15.0	30 Sep 16	RMV
16-A49595	09212016PHS-49 SINK 165	< 0.5 ug/L	15.0	30 Sep 16	RMV
16-A49596	09212016PHS-50 SINK #1 164	1.40 ug/L	15.0	30 Sep 16	RMV
16-A49597	09212016PHS-51 SINK #2 164	2.66 ug/L	15.0	30 Sep 16	RMV
16-A49598	09212016PHS-52 SINK GREENHOUSE	5.85 ug/L	15.0	30 Sep 16	RMV
16-A49599	09212016PHS-53 DF #1	4.50 ug/L	15.0	30 Sep 16	RMV
16-A49600	09212016PHS-54 DF #2	3.85 ug/L	15.0	30 Sep 16	RMV
16-A49601	09212016PHS-55 DF #3	< 0.5 ug/L	15.0	30 Sep 16	RMV

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16-A49602	09212016PHS-56 DF #4	1.73	ug/L	15.0	30 Sep 16	RMV
16-A49603	09212016PHS-57 DF #5	0.80	ug/L	15.0	30 Sep 16	RMV
16-A49604	09212016PHS-58 DF #6	3.03	ug/L	15.0	30 Sep 16	RMV
16-A49605	09212016PHS-59 DF #7	1.16	ug/L	15.0	30 Sep 16	RMV
16-A49606	09212016PHS-60 DF #8	1.42	ug/L	15.0	30 Sep 16	RMV

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