IEA, INC.

MURRAY COUNTY CENTRAL SCHOOLS

Management Plan for Lead-in-Water

MAY - 2018

IEA Project #201711352

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MCC Schools

Management Plan for Lead-in-Water

Table of Contents

Appendices

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MCC Schools* Annual Review Form *Management Plan for Lead-in-Water

Certification

I certify that I have reviewed the information provided and accept this written management plan. With assistance from our EHS consultant, the district will implement the policies and procedures noted within this plan. The written plan is a working document that will be reviewed and revised annually, or as needed.

Print Name	Signature	Date

Program reviews and follow-up of program-related issues are documented below.

Date	Actions/Comments	Reviewed by:
October 2020	Updated and reviewed program.	John Schaefer
3/16/21	Annual Review	John Schaefer

1.0 Purpose

MCC Schools is committed to providing a safe working and learning environment for employees and students. This Management Plan for Lead-in-Water was developed to reduce the potential for exposure to lead in water and to comply with Minnesota Statute 121A.335, as well as recommendations from the Environmental Protection Agency's (EPA's) *3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance* (2006) and the Lead Contamination Control Act (LCCA) of 1988, the Minnesota Department of Health (MDH) and the Minnesota Department of Education (MDE).

Minnesota Statute 121A.335 requires public school buildings serving pre-kindergarten and kindergarten through grade 12 to test for lead in water in potable water sources (water for consumption) every 5 years. The MDH and MDE have published *Reducing Lead in Drinking Water: A Technical Guidance and Model Plan for Minnesota's Public Schools*, which presents a model plan that school districts can choose to adopt as part of the requirement of Minnesota Statute 121A.335. The *EPA 3Ts* was created by the EPA to identify and reduce lead in drinking water in schools. 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. Exposure to lead is a significant health concern.

The *EPA 3Ts* has recommended that schools take remedial action to address lead-in-water exposure whenever lead levels exceed 20 parts per billion (ppb). The MDH and the MDE have jointly provided guidance that there is no safe level of lead and that districts should work to minimize the risk of lead..

2.0 Water Sampling Program Development

Identified potable water sources in district facilities, including sinks and drinking fountains in kitchens, staff lounges, classrooms, home economics classrooms, and hallways, will be sampled during the school year throughout the district at least once every five years.

Prior to sampling the following takes place:

- An inventory of potable water taps is taken;
- All drinking fountains are checked to ensure the EPA has not identified them as having a lead lined tank under LCCA. This list can be found in Appendix A.
- Water outlets in restrooms, custodial closets, science labs, art rooms, and other general-purpose workrooms are not included in the sampling inventory, and should be clearly marked not for drinking.

Potable water sources are to be resampled at least once every five years, per MN Statute 121A.335, or when a fixture or water supply is repaired or replaced, or after construction activities that may impact the plumbing system. A testing schedule is included in Appendix B which has each school scheduled to complete testing every 5 years.

3.0 First Draw Tap Monitoring

Water sampling of the identified cold water taps is conducted as a "first draw" sample prior to usage on the day of sampling. Sampling begins at the taps closest to building entry point of water source to prevent accidental flushing of other sample locations in the building. Normal usage of building should occur the day before sampling; sampling should not take place on Mondays or after non-school days.

Taps included in the first draw sampling should not be used for 6-18 hours prior to sampling. If the district cannot ensure identified taps were used the day prior to sampling, flushing will occur according to EPA protocol (2-3 minutes, 8-18 hours prior to sampling). Water samples of 250 milliliters (ml) are analyzed by an accredited testing laboratory, using EPA approved analytical methods and quality control procedures (i.e. such as the ICP/MS EPA Method 200.8).

4.0 Maintenance Procedures

When lead content exceeds 20 ppb, fixtures should be taken out of service until the lead content can be reduced to 20 ppb or lower. While fixtures can still be used for drinking and cooking, MDH and MDE recommend actions be taken to determine the source of lead and reduce lead levels in fixtures when sampling reveals lead content between 2 and 20 ppb. A lead-in-water concentration of or less than 20 ppb (maximum) is considered acceptable by the EPA. Potable water outlets found to have greater than this concentration are repaired, replaced, or flushed.

In addition, the MDH and MDE model plan recommends routine maintenance take place to prevent and help reduce elevated lead levels in drinking water. This includes cleaning faucet aerators where lead-containing materials may accumulate on a quarterly basis and following manufacturer's recommendations for water softener settings to ensure an appropriate level of hardness. The following maintenance procedures are based on MDH/MDE recommended Lead Hazard Reduction Options, located in Appendix D:

Flushing

Flushing may be used as an alternative to repair or replacement. For any location with an elevated lead level, conduct flush sampling to determine if a longer flush will reduce lead levels to an acceptable level. 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.

Individual Tap Flushing

MDE and MDH suggest running each tap for 2 to 3 minutes in the morning before children arrive, and 2 to 3 minutes midday if the tap has been unused for the morning period. Periodic testing may be done prior to and after the midday flushing to ensure the lead concentrations have remained low throughout the morning hours. If they have not, the flushing time should be increased, or another option implemented.

Main Pipe Flushing

The MDH and MDE model plan explains that Main Pipe Flushing can be used if lead levels are found to be high throughout the entire school or are confined to a certain area of the school. Flushing should be completed each day school is in session. Begin by flushing the tap furthest away from the water source for at least ten minutes; then flush the tap the second furthest away and continue until all taps have been flushed. Periodic testing may be done to ensure the lead concentrations have remained low and that the flushing protocol is effective.

In addition, it is recommended to flush potable water outlets following any two-week vacancy or prior to the beginning of school in the fall, regardless of the lead levels found in the most recent sampling. As long as the fixtures are used regularly, lead levels should remain acceptable. The fixtures should be flushed when the building has been at low occupancy, for example, following school breaks.

Repair and Replace Options

Recommendations of one of the following treatment options for fixtures with lead levels approaching or exceeding the EPA action level may be considered for implementation:

- Install a National Sanitation Foundation (NSF) certified filter for lead reduction.
    - The filter selected should work by size exclusion of lead particles as opposed to lead adsorption. Filters should have tight pores (1-micron or less). NSF lists many such filters on its website.
    - Following replacement, retest the first-draw lead level after flushing the line 8-18 hours prior to testing to confirm that filter is successful in reducing lead levels.
    - Note: Point-of-Use (POU) Treatment Device systems may be subject to Department of Labor and Industry (DLI) or local administrative authority plan review and approval prior to installation. Contact DLI at 651-284-5063 for more information.

- Investigate further to determine the source of the lead responsible for an elevated lead level. Collecting multiple samples in a row can assist in determining the location of the lead-containing component (e.g. fittings for cold water supply lines). Samples should be collected upstream of the cold supply lines. Once the source is identified, remove, replace with lead-free component, and retest.
- If sampling indicates that fixture is the source of the elevated lead level, replace fixture 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 list of EPA Lead Free Certification Marks can be found here: **http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100GRDZ.txt**
- Remove fixture from service by disconnecting it from the water supply and/or clearly mark water fixtures that are not for drinking or cooking.

The MDH recommends taking the following actions at 2 ppb to 20 ppb:

- Retest the sampled tap and attempt to more accurately determine the source of the lead; consider monitoring tap more frequently until the source of lead is found and removed;
- Consider the feasibility of flushing or other steps to minimize lead exposure, taking into account other actions that the school may already have in place;
- Make all test results and lead education materials accessible to community, such as on a website, or annual report, and available upon request.

5.0 Communication of Results and Follow-up Actions

Per Minnesota Statute 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. It is recommended that a copy of the district's Lead-in-Drinking Water Testing reports be made available to staff and the public through the district's administrative offices and district website.

Notification is accomplished by publishing a statement in the MCC Schools annual District notifications that is available to staff, student, parents and the public. For example notifications, see the MDE and MDH *Education and Communication Toolkit: Reducing Lead in Drinking Water, A Technical Guidance and Model Plan for Minnesota's Public Schools*, located on the MDH website.

The MDE and MDH guidance document states in their Model Plan that School Management should:

- Assign a designated person to be the contact;
- Notify affected individuals about the availability of the testing results within a reasonable time. School employees, students and parents should be informed and involved in the communication process. Results of initial and any follow-up testing should be easily accessible along with documentation of lead hazard reduction options. Posting the information on a website is preferred, but the information should also be available to those without easily accessible internet access. Examples of other information venues are: meetings, open houses, and public notices; and
- Identify and share specific activities pursued to correct any lead problems. Local health officials can assist in understanding potential health risks, technical assistance and communication strategies.

6.0 Recordkeeping

Lead-in-water testing reports are located and available for review in the MCC Schools District Office. See Appendix C for the most recent sampling locations and results. This includes a floor plan with test locations and recommendations for further action if necessary.

MCC Schools retains lead-in-water records for a minimum of five years.

Appendix A

EPA Factsheet: Lead in Drinking Water Coolers

United States
Environmental Protection Agency | Office of Water 4601 | EPA 810/F-90-021 February 1990

EPA FACT SHEET: LEAD IN DRINKING WATER COOLERS

Protecting the nation's children from exposure to lead from school drinking water coolers is the primary goal of the Lead Contamination Control Act (LCCA), which was signed into law on October 31, 1988. EPA recommends that drinking water outlets--especially water coolers--in schools be tested to ensure that lead levels in the water are below 20 parts per billion.

This fact sheet will help school administrators address the problem of school water coolers that contain lead. It reflects current information as of February 1990. The information on the accompanying list will be updated periodically.

How To Identify Problems

First, identify which water coolers contain lead components; follow these steps as a minimum protocol.

- Inventory each cooler and note its brand, model, serial number, and year.
- Check the accompanying list to identify any coolers that are not lead free.
- Sample water from all outlets where lead contamination is most likely, especially coolers that are not lead free and those with lead-lined tanks. However, even coolers that are "lead free" may have high lead levels in their water due to other sources in the plumbing system and should be tested. Follow the sampling and testing protocols in the EPA booklet *Lead in Schools Drinking Water*. (See the box below, right.)
- Contact your State agency responsible for the LCCA program (see box below, right) for information and assistance on testing your water samples. Water samples should be sent only to certified laboratories that use the EPA-approved Graphite Furnace Atomic Absorption (AA) method. In some cases, the local water supplier, local or State department of health or environment, or the lab will collect and analyze the samples. In most cases, the lab will provide containers and instructions for collection. The charge for lab tests ranges from $7 to $30 per sample. In some States or localities, there may be funding available for testing.

What To Do If Problems Are Found

If the lead level of any fountain or outlet exceeds 20 parts per billion (ppb), take immediate action to reduce the level of contamination. Flushing outlets on a daily basis before school begins may sufficiently reduce exposures, especially if the problem is localized to a few outlets in a building. However, daily flushing may not be practical for water coolers.

Take follow-up samples from any outlet with lead levels above 20 ppb to pinpoint the source of the problem. Make sure to follow the instructions in the EPA booklet *Lead In School Drinking Water*. If you find a cooler to be the source of the lead, contact the distributor or manufacturer to determine how the problem may be corrected. If a cooler that is not lead free is responsible for high lead levels, removal may be necessary. The Consumer Product Safety Commission (CPSC) has the responsibility to issue an order to require manufacturers and importers to repair, replace or recall water coolers identified by EPA has having lead-lined tanks. Contact the CPSC Hotline (800/638-2772) to determine the status of their actions.

For More Information

Contact the State office listed below for information on identifying and correcting lead in drinking water problems. Contact the EPA Safe Drinking Water Hotline at 800/426-4791 for other information and for the booklet *Lead In Schools Drinking Water*.

Water Coolers With Lead-Lined Tanks

The following list of model numbers represents all of the drinking water coolers with lead-lined tanks that have been identified to date. The models listed here were selected because one or more of the units in that model series have been tested and found to have lead-lined tanks. These six models are made by the Halsey Taylor Company.

WM 8A	GC 10ACR	GC 5A
WT 8A	GC 10A	RWM 13A

Other Water Coolers Containing Lead

EBCO Manufacturing Company

EBCO has identified all pressure bubbler water coolers with shipping dates from 1962 through 1977 as having a bubbler valve containing lead, as defined by the LCCA. The units contain a single 50-50 tin-lead solder joint on the bubbler valve. Model numbers for those coolers in this category were not available.

The following EBCO models of pressure bubbler coolers produced from 1978 through 1981 contain one 50-50 tin-lead solder joint each:

CP3	DP7SM	DPM8H
CP10-50	DP10F	DP16M
DP20-50	CP3H	DP7S
DP13A	13P	DP7WM
DP7M	DP3RH	EP10F
DP13M-60	DP14A-50/60	CP10
CP5M	DP12N	DP20
DP14S	DPM8	DP8AH
DP5F	DP15M	C10E
CP3-50	DP5S	DP5M
7P	DP13SM	DP13M
DP3R	EP5F	CP3M
DP13A-50	CP5	DP13S
PX-10	13PL	DP7WMD
DP7MH	DP8A	WTC10
DP14M	DP10X	
DP15MW	DP15W	

Pressure bubbler water coolers manufactured by EBCO and marketed under the "Oasis" and "Kelvinator" brand names with the identified model numbers have been distributed in the U.S. In addition, EBCO indicated that "Aquarius" pressure bubbler water coolers are manufactured for distribution in foreign countries, including Canada. Although unlikely, it is conceivable that an "Aquarius" cooler with one of the model numbers listed above could have been transported into the U.S.

Halsey Taylor Company

Halsey Taylor reports using lead solder in these models of water cooler manufactured between 1978 and the last week of 1987.

WMA-I	SCWT/SCWT-A
SWA-I	DC/DHC-1
S3/5/10 D	BFC-4F/7F/4FS/7FS
S300/500/1000D	

In addition to these Halsey Taylor models, Halsey Taylor indicates that the following Haws brand coolers manufactured for Haws by Halsey Taylor from November 1984 through December 18, 1987, are not lead free because they contain two tin-lead solder joints. The model designations for these coolers are:

HC8WT	HC14W	HCBF7D
HC8WTH	HC4F	HCBF7HO
HC14WT	HC4FH	HWC7
HC14WTH	HC8F	HWC7D
HC14WL	HC8FH	HC2F
HC16WT	HC14F	HC2FH
HC4W	HC14FH	HC5F
HC6W	HC14FL	HC10F
HC8W	HCBF7	

Note: A number of water coolers have been deleted from the proposed list identifying them as not lead free. For information about these water coolers and others, refer to the January 18, 1990 Federal Register notice.

Appendix B

Testing Schedule

Lead-in-Water Sampling Schedule
Murray County Central Public Schools

Buildings Included	Sampling Schedule
• MCC High School • MCC Elementary School	Last Sampling Occurred: November 2016 Next Scheduled Sampling: November 2021

Appendix C

Lead-in-Water Testing Results and Locations

Appendix D

Recommended Lead Hazard Reduction Options

Recommended Lead Hazard Reduction Options

Lead Level At The Tap	Lead Hazard Reduction Options
< 2 ppb or Non-Detected	• Lead was not detected. Tap may be used as normal; • Record result and test again in 5 years; and • Make all test results and lead education materials accessible to the community, such as on a website, or annual report, and available upon request.
2 ppb to 20 ppb*	The tap may be used for cooking and drinking water while steps are taken to reduce overall exposure. A higher number of taps with elevated results increases the urgency to implement hazard reduction. Options include: • Retest the sample tap and attempt to more accurately determine the source of the lead; consider monitoring tap more frequently until the source of lead is found and removed; • Consider the feasibility of flushing or other steps to minimize lead exposure, including limiting softened water supplies to hot water taps only, taking into account other actions that the school may already have in place; • Make all test results and lead education materials accessible to the community, such as on a website, or annual report, and available upon request.
> 20 ppb*	Action should be taken to reduce exposure. The specific action(s) taken will be dependent on individual school conditions. Options include: • Remove tap from service until problem is demonstrably corrected by replacement, a flushing program, filtration, or treatment; • Do ***not*** use tap for cooking or drinking water; • Retest the tap and attempt to determine the source of the lead; If the tap is not replaced, consider monitoring tap more frequently, such as annually, until the source of lead is found and removed; • Implement a flushing protocol or other lead hazard reduction option; sampling should be use to evaluate effectiveness; • Make all test results and lead education materials accessible to the community, such as on a website, or annual report, and available upon request; and • Provide targeted communication and education to individuals, parents, and staff members that routinely use that tap.

*established by EPA 3Ts guidance; if EPA amends, Table 3 will be adjusted to be consistent with new value

May 12, 2021

Providing Trusted
Health and Safety Solutions

Mr. Joe Meyer
Murray County Central Schools
2420 - 28th Street
Slayton, MN 56712

RE: 2021 Lead-in-Water First Draw – Initial Testing
IEA Project #202110266

Dear Mr. Meyer:

At the request of Murray County Central Schools, IEA collected 53 water samples from identified potable water sources on April 23, 2021, for lead analyses from the Murray County Central School.

The purpose of the sampling is to document lead content in the sampled locations and compare to the district-designated action level of over 20 parts per billion (ppb).

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 ppb or higher. The MDH and MDE also recommend taking action according to their guidelines for fixtures with levels of 2 ppb or higher.

METHODOLOGY

IEA collected 53 first-draw (unless otherwise noted) 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 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 (<0.5 ppb) to 35.7 ppb. There is one (1) sample result greater than the district-designated action level of over 20 ppb. See *Table 1: Water Testing Results Exceeding 20 ppb*. The laboratory report is 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 20 ppb - April 23, 2021

Sample Number	Sampling Location	Fixture Type	Lead Results (ppb)
042321-MCC-53	ROOM 136 SINK	Faucet	35.7

ppb – parts per billion

RECOMMENDATIONS

IEA recommends implementing one of the following treatment options for the one (1) fixture with elevated lead content. Fixture 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.
- Bottled water should be provided to occupants which meets FDA and state standards. A written statement from the bottled water distributor guaranteeing the standards are met should be filed with the district.
- 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 the 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 #9567 dated March 22, 2021, regarding lead-in-water sampling at district locations, 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.

John Schaefer
EHS Account Manager

Reviewed by:

Karen Weiblen
EHS Consultant

JS/wb 051221

Enc.

Appendix A

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: 7 May 2021

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

Work Order #: 12-8422
Account #: 002190
Purchase Order #: 202110266

Date Received: 26 Apr 2021
Date Sampled: 23 Apr 2021
Time Sampled: 5:55
Temperature at Receipt: 20.4C

PROJECT NAME: MURRAY CO CENTRAL SCHOOL
PROJECT NUMBER: 202110266

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
21-A18906	042321-MCC-01 KITCHEN RO FAUCET	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18907	042321-MCC-02 KITCHEN LEFT FAUCET	2.13 ug/L	15.0	5 May 21	RMV
21-A18908	042321-MCC-03 KITCHEN MIDDLE FAUCET	4.95 ug/L	15.0	5 May 21	RMV
21-A18909	042321-MCC-04 KITCHEN RIGHT FAUCET	2.47 ug/L	15.0	5 May 21	RMV
21-A18910	042321-MCC-05 LOUNGE RO FAUCET	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18911	042321-MCC-06 LOUNGE SINK FAUCET	1.02 ug/L	15.0	5 May 21	RMV
21-A18912	042321-MCC-07 FACS #1 FAUCET	0.87 ug/L	15.0	5 May 21	RMV
21-A18913	042321-MCC-08 FACS #2 FAUCET	0.73 ug/L	15.0	5 May 21	RMV

Approved by: R. Daniel O'Connell

Dan O'Connell
Chemistry Laboratory Managers

David Smahel
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 sample quantity
= Due to concentration of other analytes
+ = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 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
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MEMBER ACIL

Report Date: 7 May 2021

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

Work Order #: 12-8422
Account #: 002190
Purchase Order #: 202110266

Date Received: 26 Apr 2021
Date Sampled: 23 Apr 2021
Time Sampled: 5:55
Temperature at Receipt: 20.4C

PROJECT NAME: MURRAY CO CENTRAL SCHOOL
PROJECT NUMBER: 202110266

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
21-A18914	042321-MCC-09 FACS #3 FAUCET	2.40 ug/L	15.0	5 May 21	RMV
21-A18915	042321-MCC-10 FACS #4 FAUCET	2.36 ug/L	15.0	5 May 21	RMV
21-A18916	042321-MCC-11 FACS #5 FAUCET	2.69 ug/L	15.0	5 May 21	RMV
21-A18917	042321-MCC-12 BF-OUTSIDE FACS	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18918	042321-MCC-13 RESOURCE ROOM SINK	0.81 ug/L	15.0	5 May 21	RMV
21-A18919	042321-MCC-14 RESOURCE ROOM BATHROOM SINK	1.64 ug/L	15.0	5 May 21	RMV

Approved by: R. Daniel O'Connell

Dan O'Connell — **David Smahel**
Chemistry Laboratory Managers 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 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

MEMBER ACIL

Report Date: 7 May 2021

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

Work Order #: 12-8422
Account #: 002190
Purchase Order #: 202110266

Date Received: 26 Apr 2021
Date Sampled: 23 Apr 2021
Time Sampled: 5:55
Temperature at Receipt: 20.4C

PROJECT NAME: MURRAY CO CENTRAL SCHOOL
PROJECT NUMBER: 202110266

LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
21-A18920	042321-MCC-15 BF OUTSIDE SUPERINTENDENT OFFICE	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18921	042321-MCC-16 NURSES OFFICE SINK	17.5 ug/L	15.0	5 May 21	RMV
21-A18922	042321-MCC-17 BF OUTSIDE ROOM 125	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18923	042321-MCC-18 ROOM 125 SINK	0.74 ug/L	15.0	5 May 21	RMV
21-A18924	042321-MCC-19 ROOM 126 SINK	0.82 ug/L	15.0	5 May 21	RMV
21-A18925	042321-MCC-20 ROOM 128 SINK	1.25 ug/L	15.0	5 May 21	RMV
21-A18926	042321-MCC-21 ROOM 129 SINK	1.05 ug/L	15.0	5 May 21	RMV

Approved by: R. Daniel O'Connell

Dan O'Connell David Smahel
Chemistry Laboratory Managers New Ulm, MN

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@ = Due to sample matrix # = Due to concentration of other analytes
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CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

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21-A18927	042321-MCC-22 BF OUTSIDE ROOM 242	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18928	042321-MCC-23 BF OUTSIDE ROOM 233	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18929	042321-MCC-24 BF OUTSIDE GYM	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18930	042321-MCC-25 DF LEFT BY CONCESSIONS	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18931	042321-MCC-26 DF RIGHT BY CONCESSIONS	< 0.5 ug/L	15.0	6 May 21	RMV
21-A18932	042321-MCC-27 CONCESSIONS SINK	0.74 ug/L	15.0	6 May 21	RMV
21-A18933	042321-MCC-28 BF GYM LOBBY	< 0.5 ug/L	15.0	6 May 21	RMV
21-A18934	042321-MCC-29	3.99 ug/L	15.0	6 May 21	RMV

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Chemistry Laboratory Managers

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
	KITCHEN SINGLE SINK				
21-A18935	042321-MCC-30 KITCHEN LEFT FAUCET	2.25 ug/L	15.0	6 May 21	RMV
21-A18936	042321-MCC-31 KITCHEN RIGHT FAUCET	< 0.5 ug/L	15.0	6 May 21	RMV
21-A18937	042321-MCC-32 BF OUTSIDE 122	< 0.5 ug/L	15.0	6 May 21	RMV
21-A18938	042321-MCC-33 ROOM 122 SINK	< 0.5 ug/L	15.0	6 May 21	RMV
21-A18939	042321-MCC-34 ROOM 121 SINK	4.22 ug/L	15.0	3 May 21	RMV
21-A18940	042321-MCC-35 ROOM 120 SINK	5.40 ug/L	15.0	3 May 21	RMV
21-A18941	042321-MCC-36 ROOM 119 SINK	5.73 ug/L	15.0	3 May 21	RMV

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Dan O'Connell **David Smahel**
Chemistry Laboratory Managers New Ulm, MN

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
21-A18942	042321-MCC-37 ROOM 118 SINK	3.88 ug/L	15.0	3 May 21	RMV
21-A18943	042321-MCC-38 ROOM 117 SINK	1.72 ug/L	15.0	3 May 21	RMV
21-A18944	042321-MCC-39 ROOM 110 RO	< 0.5 ug/L	15.0	3 May 21	RMV
21-A18945	042321-MCC-40 ROOM 110 SINK	3.60 ug/L	15.0	3 May 21	RMV
21-A18946	042321-MCC-41 COPY ROOM SINK	1.96 ug/L	15.0	3 May 21	RMV
21-A18947	042321-MCC-42 ROOM 146 SINK	4.43 ug/L	15.0	3 May 21	RMV
21-A18948	042321-MCC-43 ROOM 145 SINK	9.09 ug/L	15.0	6 May 21	RMV

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS	MCL	DATE ANALYZED	ANALYST
21-A18949	042321-MCC-44 ROOM 144 SINK	3.59 ug/L	15.0	6 May 21	RMV
21-A18950	042321-MCC-45 BF OUTSIDE ROOM 135	< 0.5 ug/L	15.0	5 May 21	RMV
21-A18951	042321-MCC-46 ROOM 143 SINK	5.00 ug/L	15.0	6 May 21	RMV
21-A18952	042321-MCC-47 ROOM 142 SINK	8.09 ug/L	15.0	6 May 21	RMV
21-A18953	042321-MCC-48 ROOM 141 SINK	2.55 ug/L	15.0	6 May 21	RMV
21-A18954	042321-MCC-49 ROOM 140 SINK	2.01 ug/L	15.0	6 May 21	RMV
21-A18955	042321-MCC-50 ROOM 139 SINK	1.28 ug/L	15.0	6 May 21	RMV
21-A18956	042321-MCC-51	< 0.5 ug/L	15.0	6 May 21	RMV

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LAB NUMBER	SAMPLE DESCRIPTION	LEAD RESULTS		MCL	DATE ANALYZED	ANALYST
	ROOM 138 SINK					
21-A18957	042321-MCC-52 ROOM 137 SINK	3.22	ug/L	15.0	6 May 21	RMV
21-A18958	042321-MCC-53 ROOM 136 SINK	35.7	ug/L	15.0	3 May 21	RMV

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+ = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

Twin City Water Clinic Laboratory Test Report

Minnesota State Laboratory ID# 027-053-119
Wisconsin State Laboratory ID# 105-10117
Wisconsin DNR Lab ID#399073400

Client: Musser Environmental
Murray County Central
Address: 24594 Upsala Lane
Hutchinson, MN 55350

Report Number: 16-17007
Sample Collection Date: 11/11/16
Sample Collection Time: 5:45
Sample Receipt Date: 11/11/16

Twin City Water Clinic Inc.
617 13th Avenue South
Hopkins, MN 55343
Phone: (952)935-3556

X No samples were subcontracted; or the above test result(s) with '**' designation were produced by a subcontracted laboratory. [Laboratory name; address; MDH Lab ID#]. The subcontracted laboratory maintains MDH Certification for the field(s) of testing performed.

Laboratory	Analyte	Sample Location	Parameter	Sample Prep		Sample Analysis		Test	
Sample ID				Date	Time	Date	Time	Results	Units
16-17007	Lead	East Gym	Drinking Water	11/21/16	13:20	12/05/16	12:45	<2.0	µg/L
16-17008	Lead	West Gym	Drinking Water	11/21/16	13:20	12/05/16	12:49	<2.0	µg/L
16-17009	Lead	East Hall	Drinking Water	11/21/16	13:20	12/05/16	12:54	<2.0	µg/L
16-17010	Lead	North Hall	Drinking Water	11/21/16	13:20	12/05/16	12:58	<2.0	µg/L
16-17011	Lead	North West	Drinking Water	11/21/16	13:20	12/05/16	13:02	<2.0	µg/L
16-17012	Lead	South West	Drinking Water	11/21/16	13:20	12/05/16	13:06	<2.0	µg/L
16-17013	Lead	Kindergarten Hall	Drinking Water	11/21/16	13:20	12/05/16	13:20	<2.0	µg/L
16-17014	Lead	Kitchen	Drinking Water	11/21/16	13:20	12/05/16	13:47	3.19	µg/L
16-17015	Lead	West Elem. N/S Hall	Drinking Water	11/21/16	13:20	12/05/16	13:51	<2.0	µg/L
16-17016	Lead	West Elem Kitchen	Drinking Water	11/21/16	13:20	12/05/16	13:55	6.48	µg/L
16-17017	Lead	West Elem E/W Hall	Drinking Water	11/21/16	13:20	12/05/16	14:00	<2.0	µg/L
	Lead		Drinking Water						µg/L
	Lead		Drinking Water						µg/L
	Lead		Drinking Water						µg/L
	Lead		Drinking Water						µg/L
	Lead		Drinking Water						µg/L
	Lead		Drinking Water						µg/L
	Lead		Drinking Water						µg/L
	Lead		Drinking Water						µg/L
	Lead		Drinking Water						µg/L

Approved methods used in analyzing the samples listed above have the following reporting levels:
SM3113 - Lead, 2.0 µg / L
Maximum contaminant levels: Lead, 15.0 µg / L

Sample Temp: 20 °C

Sample Collected by: X Client ___ TCWC
Date Reported: 12/05/16

Approved By:

Laboratory Manager Senior Analyst

The results listed in this report apply only to the above listed samples. All routine quality assurance procedures were followed, unless otherwise noted. This analytical report must be reported in its entirety. All methods are certified by the Minnesota Department of Health, unless otherwise noted.