



February 25, 2019

Mr. Bob Indihar  
Moose Lake Public Schools  
413 Birch Avenue  
Moose Lake, MN 55767

**Re: Lead (Pb) In School Drinking Water Sampling Results - Retest**

Dear Mr.Indihar:

MacNeil Environmental, Inc. (MEI) has received the laboratory analytical testing results for the water samples collected from your District facility locations. The enclosed report provides a summary of the sampling results and pertinent recommendations, as necessary.

I have also enclosed a copy of the "Reducing Lead in Drinking Water" Guide that the Minnesota Department of Education and Minnesota Department of Health has put out to help with deciding which solutions best fit your school district.

### **Minnesota Department of Health Guidance Criteria**

The MDH/MDE guidance document requires the testing of all water fixtures used in food preparation or used by children, staff, or pregnant women for drinking water purposes. Lead in water can result from plumbing systems where leaded solder was used to connect copper piping or from lead-lined water cooler outlets. The table below is the recommendations from the Minnesota Department Health.

Any results over 2.0 ppb to 20 ppb should be looked at and retested using the flushing method. If tests come back under 2.0 ppb using the flushing method, then flushing could be one of the recommended solutions for keeping lead in water at its lowest for that particular water source. Taking water source out of service is also a solution for any tap or faucet that is over the limit also.

I have included an explanation of the retesting procedures using the flushing method.

Lead Level At The Tap	Lead Hazard Reduction Options
< 2 ppb or None Detected	<ul style="list-style-type: none"> <li>• Lead was not detected. Tap may be used as normal;</li> <li>• Record result and test again in 5 years; and</li> <li>• Make all test results and lead education materials accessible to the community, such as on a website, or annual report, and available upon request.</li> </ul>
2 ppb to 20 ppb	<p>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.</p> <p><u>Options include:</u></p> <ul style="list-style-type: none"> <li>• 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;</li> <li>• 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;</li> <li>• Make all test results and lead education materials accessible to the community, such as on a website, or annual report, and available upon request.</li> </ul>
> 20 ppb	<p>Action should be taken to reduce exposure. The specific action(s) taken will be dependent on individual school conditions.</p> <p><u>Options include:</u></p> <ul style="list-style-type: none"> <li>• Remove tap from service until problem is demonstrably corrected by replacement, a flushing program, filtration, or treatment;</li> <li>• Do not use tap for cooking or drinking water;</li> <li>• 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;</li> <li>• Implement a flushing protocol or other lead hazard reduction option; sampling should be used to evaluate effectiveness;</li> <li>• 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</li> <li>• Provide targeted communication and education to individuals, parents, and staff members that routinely use that tap.</li> </ul>

## Water Sampling Results

The samples below collected at your school are within the Minnesota Department of Health guideline limit of <2.0 ppb. Using the flushing method helped to lower the lead in water amount. Continued use of the flushing method daily should keep this water source within the recommended limits set by the Minnesota Department of Health. Retesting of the potable water sources shall be completed in five years

<i>Sample ID#</i>	<i>Fixture Location</i>	<i>Results (ppb)</i>
18-14740	Kitchen Sink #58	<2.0ppb
18-14741	Schnoll Science Rm (#6)	<2.0ppb
18-14743	Kitchen Groen #61	<2.0ppb
18-14744	Eliason Science Room #26	<2.0ppb
*18-14742	Kitchen Line Entry Sink #70	4.55

\*This sample still came in over the recommended limit for the Minnesota Department of Health, which is <2.0ppb. It is however within the EPA guidelines of <15ppb. Since this result came in quite a bit lower than the original sample, I would suggest doing another retest with a longer flushing period on this water line. If a flush time of 20 minutes was tried we may get this down below the Minnesota Department of Health recommendation also.

## Sample Analysis

All sample analysis was completed by the Twin City Water Clinic per the current USEPA Method for Chemical Analysis of Water and Wastes, EPA-600/4-79-020. Chain of custody worksheets have been used throughout the analytical process. The laboratory analysis report has been attached for your review.

## Comments

Your MEI Account Manager has been provided a copy of this report and is prepared to review the results with you during the next site visit. If you have any questions regarding this report, please feel free to contact me at 800-642-6730.

Sincerely,

MACNEIL ENVIRONMENTAL, INC.



Carol Sertich  
Administrative Assistant

Cc: Andy Sertich, Account Manager



