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April 6, 2017

Mr. Chad Wiese
Madison Metropolitan School District
Building Services
4711 Pflaum Road
Madison, WI 53718

Subject: Water Testing for Lead
Madison Metropolitan District Schools
Summary Report

Dear Mr. Wiese:

As requested by the Madison Metropolitan School District (MMSD), TRC Environmental Corporation (TRC) performed testing for lead in water at 42 district schools.

Testing Procedures

Water testing was performed consistent with the United States Environmental Protection Agency's (USEPA's) guidance document "3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance (USEPA, 2006)." The 3Ts document suggests an action limit of 20 parts per billion (ppb) for lead, but MMSD has selected a more conservative action limit of 15 ppb.

TRC collected samples from cold water outlets on the interior of the buildings, including:

- hallway drinking fountains,
- classroom drinking fountains,
- water bottle refill stations,
- kitchen food preparation sinks,
- Family and Consumer Education (FACE) classroom sinks,
- faculty lounge sinks,
- nurse's office sinks,
- ice machines,

- taps nearest the incoming source water supply (service connection), and
- swimming pools.

Preliminary sample locations were identified on maps provided by MMSD. Following completion of sampling, TRC prepared a map of each school annotated with the final sample locations and identification numbers for each outlet.

Water sampling was conducted from March 14 – 29, 2017. With assistance from MMSD and school staff, TRC collected samples after the tap was left unused for a period of 8 hours, but no longer than 18 hours, as recommended by the USEPA guidance. This required sampling in the early morning hours and over weekends. Upon completion of a sampling event, the sample bottles were packaged and shipped under proper chain-of-custody to TestAmerica in Savannah, GA – a Wisconsin NR 149 certified drinking water laboratory (certification #999819810).

Analytical Method

Analysis for lead was performed using the EPA Method 200.8 (inductively-coupled plasma with mass spectrometry) and achieved detection limits of 1.0 ppb or less.

Samples Collected and Analytical Results

TRC assessed a total of 1,341 fixtures within the school district. Fixtures that were inoperable or otherwise not in use were documented as such and not sampled. Of the 1,337 samples analyzed, 97 had results greater than or equal to the MMSD action level of 15 ppb for lead. The numbers of exceedances per type of fixture is summarized as follows (number of exceedances/number of samples):

- Bubblers – 52/550
- Water coolers – 2/403
- Bottle fillers – 0/38
- Sinks – 40/304
- Ice machines – 0/3
- Swimming pools – 0/5
- Service connections – 3/34

The enclosed Table 1 lists the number of results greater than or equal to 15 ppb lead by school building. TRC has also prepared a separate report summarizing lead data for each of the 42 schools sampled. MMSD plans to post these reports at the following website:

<https://buildings.madison.k12.wi.us/voluntary-water-testing>.



TRC appreciates the opportunity to assist MMSD with this project. If you have any questions or comments concerning this report, please call James at (608) 826-3666.

Sincerely,

TRC Environmental Corporation



James E. Wedekind, P.G.
Project Manager



John B. Tweddale, P.G., CHMM
Principal Consultant

Enclosure: Table 1

cc: Mike MacDonald



Table 1
Summary of Lead in Water Sample Results by School
Madison Metropolitan School District, Madison, WI

SCHOOL NUMBER	SCHOOL NAME	TOTAL FIXTURES ASSESSED	TOTAL SAMPLES ANALYZED	TOTAL ACTION LEVEL EXCEEDANCES
001	Allis Elementary	45	49	8
004	Crestwood Elementary	33	33	1
006	Elvehjem Elementary	44	46	3
007	Emerson Elementary	22	21	0
008	Franklin Elementary	16	17	1
009	Glendale Elementary	34	32	1
011	Falk Elementary	42	44	2
012	Hawthorne Elementary	30	30	1
014	Lake View Elementary	32	32	1
016	Lapham Elementary	21	19	1
017	Muir Elementary	14	14	0
019	Lowell Elementary	19	18	1
021	Mendota Elementary	22	23	2
022	Midvale Elementary	26	27	2
023	Thoreau Elementary	26	23	0
026	Randall Elementary	17	13	0
029	Shorewood Hills Elementary	34	32	3
032	Stephens Elementary	30	29	0
036	Kennedy Elementary	36	34	1
037	Lincoln Elementary	10	10	0
038	Huegel Elementary	16	15	0
052	Chávez Elementary	65	62	1
053	Sandburg Elementary	13	13	0
062	Olson Elementary	54	57	4
071	Lindbergh Elementary	9	9	0
072	Leopold Elementary	32	33	1
141	East High	60	61	8
142	La Follette High	50	45	0
143	West High	50	52	10
145	Memorial High	53	48	0
203	Cherokee Middle	22	21	0
210	Gompers Elementary/Black Hawk Middle	45	51	15
220	Marquette Elementary/O'Keeffe Middle	66	73	13
225	Orchard Ridge Elementary/Toki Middle	48	46	0
227	Schenk Elementary/Whitehorse Middle	35	34	2
228	Sherman Middle/Shabazz City High	23	25	3
231	Spring Harbor Middle	17	15	2
234	Van Hise Elementary/Hamilton Middle	52	54	2
239	Wright Middle	12	9	0
242	Sennett Middle	27	29	4
245	Jefferson Middle	24	26	2
312	Nuestro Mundo Community School	15	13	2
Grand Total		1341	1337	97

Note:

1. Total samples analyzed includes first draw (A) and flush (B) samples

Created by: LCA 4/4/17

Checked by: AES 4/5/17