



April 7, 2017

Forest Hills School District
Bob VanderWoude
7550 Forest Road
Cincinnati, OH 45244

Mercer Elementary School

Dear Mr. VanderWoude:

Thank you for taking the responsibility seriously to protect the health of the children by voluntarily testing the water in your school for lead!

Attached please find the results of the lead analyses performed for Mercer Elementary School by the Greater Cincinnati Water Works (GCWW). The following comments speak to the process, samples analyzed and additional steps needed to help ensure the safety of all the students within the school.

School Sampling Process and Results

GCWW and Forest Hills School District (FHSD) staff worked together to finalize a sampling plan for the school. The *USEPA 3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance Document (3Ts Guidelines)* is the process and guidelines used for assisting schools with testing for lead.

In March, seventy-nine (79) samples were collected from drinking fountains, cooking outlets and sinks throughout the school. Including sinks as sampling locations speaks to your proactive approach towards understanding the water quality within the schools. The results show the following:

- 46 samples (58.23%), below the detection level (<1)
- 24 samples (30.38%), between 1ppb and 5ppb
- 7 samples (8.86%), between 5ppb and 10ppb
- 2 samples (2.53%), between 10ppb and 15ppb
- 0 samples (0%) greater than 15ppb.

One hundred percent (100%) of the sample results were below the detection level or below the federal action level.

Fifteen parts per billion (ppb) is the federal Lead and Copper Rule action level; desired results are below 15. The federal action level of 15ppb pertains to water utilities and GCWW's review and comments are based on this action level. However, the USEPA 3Ts Guidelines document outlines practices for schools to put in place if samples are greater than 20 ppb.

While we strive to have results less than 15, we recognize that lead is a pervasive environmental contaminant, and no safe blood lead threshold has been identified in children or adults. Therefore, we provide recommendations to further reduce any lead levels discovered in your school.

Next steps

GCWW has reviewed the results from your samples and provides some next-steps comments.

1. Great news! All samples were below the federal action level of 15ppb and below the 20ppb trigger level outlined in the 3Ts Guidelines for schools to take action to reduce lead. Although below these levels, there were some lead detections. The following comments speak to how you can lower the lead levels and reduce the risk of lead in your school.



2. With the exception of sample location MER-FL2-603-DF-MER43, all drinking fountain results were below the detection level. Consider letting the water run before using the fountain with the lead detection OR if it isn't used on a regular basis, consider taking the fountain out of service. If the fountain will continue to be used, work to understand what is causing the lead detection and put solutions in place to lower the level.
3. Four (4) of the five (5) sample locations in the kitchen had lead detections. Work to understand what might be causing these lead detections (fixtures, etc.) and put solutions in place to further reduce the risk of lead. Consider immediate remedies such as flushing the lines (letting the water run) before use in food preparation and other kitchen functions.
4. The sink in the early childhood room, MER-FL1-EARLYCHILDHOOD-SINK-MER3, has a higher lead level than the other samples (but still below the federal action level of 15ppb). Although labeled as a sink, work to make sure this sink is not being used as a drinking water or cooking outlet within the room. Posting signs limiting the use of the sink will remind staff and others assisting in the room of this.

Also for this location, review how water is being used. If water is not used on a regular basis at this location, the infrequent use may be contributing to the lead detection. Again, signage at this location may be helpful (hand washing only, etc.).

5. With the exception of the drinking fountain, all other sample locations that had lead detections were sinks. Although lower than the federal action level of 15ppb, as an added precaution, consider posting signs at some of the sink locations indicating 'hand washing only' (or other specific purposes) as these locations should not to be used as drinking water or cooking outlets. Posting a sign will deter students and staff from potentially using the sink to fill a water bottle, etc.

For a few of the locations with higher lead levels (than the others) but still lower than the federal action level of 15ppb, again, review how the water is being used. If water is not used on a regular basis at these locations, the infrequent use may be contributing to the lead detection. As explained before, post signs limiting the use.

6. The lead detections in most of the samples were low. If interested in further reducing the lead levels, consider completing a plumbing profile to review the fixtures in the school as some fixtures may be contributing to the lead detections in samples. If the fixtures are the source of the lead, plan to replace them. The USEPA 3Ts Guidelines outlines a great approach to creating and implementing a remediation plan. A copy of the Guidelines can be found on our website <http://www.cincinnati-oh.gov/water/assets/File/3T%20Guidance%20Manual%20for%20Schools.pdf>.

State funds are available through the new Lead Plumbing Fixture Replacement Assistance Grant Program established to provide reimbursement to eligible schools for the assessment and replacement of certain plumbing fixtures. The Program was established in House Bill 390 to provide \$12,000,000 in funding to eligible schools to reimburse for the sampling and replacement of drinking fountains, water coolers, plumbing fixtures, and limited connected piping. Schools built before 1990 can apply for reimbursement up to \$15,000 for sampling of eligible fixtures and the material costs to replace those fixtures if they are identified as being over the federal action level for lead. The program is open to traditional public schools, community schools, and chartered non-public schools. Program information can be found on the Ohio Facilities Construction Commission (OFCC) Services and Programs website <http://ofcc.ohio.gov/ServicesPrograms/LeadFixtureReplacementGrants.aspx>.

7. Since most of the lead detections were low, the following suggestion may help more than completing a plumbing profile. For the sample locations with lead detections, we have known and learned from other schools (that are participating in this program) that cleaning the faucet and aerator may reduce the lead levels. This is due to the cleaning that removes particles that are sometimes trapped on the aerator. Follow-up sampling at these locations can occur if you choose to clean the faucet and aerator. GCWW can assist with this.
8. If it hasn't occurred already, a robust communications plan is suggested. Communications plan steps are outlined in the 3Ts Guidelines. This plan will inform the school community of the sampling work the school has done to date and the steps the school will take to correct any issues discovered. GCWW employees can assist with this plan and are available to attend any school meetings to help explain our lead program, the sample results and our partnership with your school. Suggestions for language and a letter template can be provided if needed. Sampling results will be posted on the GCWW lead.mygcww.org website with other school sampling results.

Greater Cincinnati Water Works takes the presence of lead service lines and the removal of those service lines in our system very seriously. In addition, minimizing the exposure of lead within our preschools, schools, and daycares is one of our highest priorities under our Enhanced Lead Program. Please contact Jim Nelson at 591-6869 if you have any questions.

Thanks again for your partnership with Greater Cincinnati Water Works and your work to further understand the water quality within your building. Your extra steps and care to keep the children in our community safe are appreciated!

Sincerely,



Cathy B. Bailey
Director/Greater Cincinnati Water Works

Cc: Dr. Marilyn Crumpton, Cincinnati Health Department
Dr. Camille Jones, Cincinnati Health Department
Chuck DeJonckheere, Hamilton County Public Health
Sheila Hill-Christian, City of Cincinnati
Verna Arnette, Greater Cincinnati Water Works
Jeff Swertfeger, Greater Cincinnati Water Works
Jason DeLaet, Greater Cincinnati Water Works

Forest Hills School District - Mercer Elementary School - Lead Testing Results

SAMPLE #	SAMPLE DATE	SAMPLE TIME	SAMPLE	PARAMETER CODE	AMOUNT	GCWW COMMENTS/REVIEW/RECOMMENDATIONS REGARDING RESULTS
MER1	3/15/2017	6:54:00	MER-FL1-HALLWAYNEAR215-LSINK-MER1	Lead, ppb	<1	Less than detection level
MER2	3/15/2017	6:53:00	MER-FL1-HALLWAYNEAR215-RSINK-MER2	Lead, ppb	<1	Less than detection level
MER3	3/15/2017	6:49:00	MER-FL1-EARLYCHILDHOOD-SINK-MER3	Lead, ppb	10.6	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER4	3/15/2017	6:50:00	MER-FL1-EARLYCHILDHOODRR-SINK-MER4	Lead, ppb	<1	Less than detection level
MER5	3/15/2017	6:50:00	MER-FL1-HALLWAYNEAR212-DF-MER5	Lead, ppb	<1	Less than detection level
MER6	3/15/2017	6:03:00	MER-FL1-GIRLSRRNEARCAFE-LSINK-MER6	Lead, ppb	<1	Less than detection level
MER7	3/15/2017	6:03:00	MER-FL1-GIRLSRRNEARCAFE-MSINK-MER7	Lead, ppb	1.05	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER8	3/15/2017	6:04:00	MER-FL1-GIRLSRRNEARCAFE-RSINK-MER8	Lead, ppb	<1	Less than detection level
MER9	3/15/2017	6:10:00	MER-FL1-BOYSRRNEARCAFE-LSINK-MER9	Lead, ppb	1.3	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER10	3/15/2017	6:10:00	MER-FL1-BOYSRRNEARCAFE-MSINK-MER10	Lead, ppb	1.3	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER11	3/15/2017	6:10:00	MER-FL1-BOYSRRNEARCAFE-RSINK-MER11	Lead, ppb	<1	Less than detection level
MER12	3/15/2017	6:00:00	MER-FL1-HALLWAYNEARCAFE-DF-MER12	Lead, ppb	<1	Less than detection level
MER13	3/15/2017	6:03:00	MER-FL1-KITSTOCKPOT-FILLER-MER13	Lead, ppb	2.66	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER14	3/15/2017	6:01:00	MER-FL1-KIT3TUB-LSINK-MER14	Lead, ppb	2.61	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER15	3/15/2017	6:01:00	MER-FL1-KIT3TUB-RSINK-MER15	Lead, ppb	8.57	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER16	3/15/2017	6:03:00	MER-FL1-KITNEARDISHRM-HANDSINK-MER16	Lead, ppb	<1	Less than detection level

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MER17	3/15/2017	6:02:00	MER-FL1-KITSTAFFRR-SINK-MER17	Lead, ppb	2.69	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER18	3/15/2017	6:48:00	MER-FL1-203RR-SINK-MER18	Lead, ppb	1.09	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER19	3/15/2017	6:48:00	MER-FL1-205RR-SINK-MER19	Lead, ppb	1.1	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER20	3/15/2017	6:51:00	MER-FL1-HALLWAYNEAR205-DF-MER20	Lead, ppb	<1	Less than detection level
MER21	3/15/2017	6:52:00	MER-FL2-BOYSRRNEAR302-LSINK-MER21	Lead, ppb	<1	Less than detection level
MER22	3/15/2017	6:52:00	MER-FL2-BOYSRRNEAR302-MSINK-MER22	Lead, ppb	1.54	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER23	3/15/2017	6:53:00	MER-FL2-BOYSRRNEAR302-RSINK-MER23	Lead, ppb	<1	Less than detection level
MER24	3/15/2017	6:45:00	MER-FL2-GIRLSRRNEAR302-LSINK-MER24	Lead, ppb	1.15	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER25	3/15/2017	6:45:00	MER-FL2-GIRLSRRNEAR302-MSINK-MER25	Lead, ppb	3.23	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER26	3/15/2017	6:46:00	MER-FL2-GIRLSRRNEAR302-RSINK-MER26	Lead, ppb	<1	Less than detection level
MER27	3/15/2017	6:47:00	MER-FL2-HALLWAYNEAR302-DF-MER27	Lead, ppb	<1	Less than detection level
MER28	3/15/2017	6:50:00	MER-FL2-303NEARWINDOW-SINK-MER28	Lead, ppb	5.03	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER29	3/15/2017	6:50:00	MER-FL2-303ISLAND-SINK-MER29	Lead, ppb	3.36	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.

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MER30	3/15/2017	7:00:00	MER-FL2-GIRLSRRNEAR600-FLSINK-MER30	Lead, ppb	1.35	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER31	3/15/2017	7:00:00	MER-FL2-GIRLSRRNEAR600-LSINK-MER31	Lead, ppb	1.73	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER32	3/15/2017	7:00:00	MER-FL2-GIRLSRRNEAR600-RSINK-MER32	Lead, ppb	1.46	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER33	3/15/2017	7:00:00	MER-FL2-GIRLSRRNEAR600-FRSINK-MER33	Lead, ppb	1.61	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER34	3/15/2017	6:55:00	MER-FL2-BOYSRRNEAR600-FLSINK-MER34	Lead, ppb	1.77	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER35	3/15/2017	6:55:00	MER-FL2-BOYSRRNEAR600-LSINK-MER35	Lead, ppb	1.59	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER36	3/15/2017	6:55:00	MER-FL2-BOYSRRNEAR600-RSINK-MER36	Lead, ppb	1.76	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER37	3/15/2017	6:44:00	MER-FL2-BOYSRRNEAR600-FRSINK-MER37	Lead, ppb	<1	Less than detection level
MER38	3/15/2017	6:45:00	MER-FL2-HALLWAYNEARELEV-LDF-MER38	Lead, ppb	<1	Less than detection level
MER39	3/15/2017	6:43:00	MER-FL2-HALLWAYNEARELEV-RDF-MER39	Lead, ppb	<1	Less than detection level
MER40	3/15/2017	6:50:00	MER-FL2-SPECIALNEEDSRRNEAR603-SINK-MER40	Lead, ppb	1.31	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER41	3/15/2017	6:30:00	MER-FL2-HALLWAYNEAR603-DF-MER41	Lead, ppb	<1	Less than detection level

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MER42	3/15/2017	6:30:00	MER-FL2-603-SINK-MER42	Lead, ppb	3.13	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER43	3/15/2017	6:30:00	MER-FL2-603-DF-MER43	Lead, ppb	5.45	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER44	3/15/2017	6:30:00	MER-FL2-608-SINK-MER44	Lead, ppb	<1	Less than detection level
MER45	3/15/2017	6:30:00	MER-FL2-608-DF-MER45	Lead, ppb	<1	Less than detection level
MER46	3/15/2017	6:35:00	MER-FL2-612-SINK-MER46	Lead, ppb	<1	Less than detection level
MER47	3/15/2017	6:35:00	MER-FL2-612-DF-MER47	Lead, ppb	<1	Less than detection level
MER48	3/15/2017	6:35:00	MER-FL2-HANDYRRNEAR612-SINK-MER48	Lead, ppb	<1	Less than detection level
MER49	3/15/2017	6:30:00	MER-FL2-WORKRMNEAR608-SINK-MER49	Lead, ppb	<1	Less than detection level
MER50	3/15/2017	6:31:00	MER-FL2-WORKRMNEAR608-DF-MER50	Lead, ppb	<1	Less than detection level
MER51	3/15/2017	6:35:00	MER-FL2-HALLWAYNEAR608-DF-MER51	Lead, ppb	<1	Less than detection level
MER52	3/15/2017	6:34:00	MER-FL2-STAFFLRRNEARLOUNGE-SINK-MER52	Lead, ppb	5.24	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER53	3/15/2017	6:36:00	MER-FL2-STAFFRRRNEARLOUNGE-SINK-MER53	Lead, ppb	1.21	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER54	3/15/2017	6:31:00	MER-FL2-STAFFLOUNGENEAR613-SINK-MER54	Lead, ppb	<1	Less than detection level
MER55	3/15/2017	6:26:00	MER-FL2-HALLWAYNEAR504-DF-MER55	Lead, ppb	<1	Less than detection level
MER56	3/15/2017	6:26:00	MER-FL2-HALLWAYNEAR502-DF-MER56	Lead, ppb	1.36	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER57	3/15/2017	6:14:00	MER-FL1-413GIRLSRR-FLSINK-MER57	Lead, ppb	<1	Less than detection level
MER58	3/15/2017	6:14:00	MER-FL1-413GIRLSRR-LSINK-MER58	Lead, ppb	<1	Less than detection level
MER59	3/15/2017	6:14:00	MER-FL1-413GIRLSRR-RSINK-MER59	Lead, ppb	<1	Less than detection level
MER60	3/15/2017	6:14:00	MER-FL1-413GIRLSRR-FRSINK-MER60	Lead, ppb	<1	Less than detection level
MER61	3/15/2017	6:15:00	MER-FL1-413BOYSRR-FLSINK-MER61	Lead, ppb	<1	Less than detection level
MER62	3/15/2017	6:15:00	MER-FL1-413BOYSRR-LSINK-MER62	Lead, ppb	<1	Less than detection level
MER63	3/15/2017	6:15:00	MER-FL1-413BOYSRR-MSINK-MER63	Lead, ppb	<1	Less than detection level

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SAMPLE #	SAMPLE DATE	SAMPLE TIME	SAMPLE	PARAMETER CODE	AMOUNT	GCWW COMMENTS/REVIEW/RECOMMENDATIONS REGARDING RESULTS
MER64	3/15/2017	6:15:00	MER-FL1-413BOYSRR-RSINK-MER64	Lead, ppb	<1	Less than detection level
MER65	3/15/2017	6:15:00	MER-FL1-413BOYSRR-FRSINK-MER65	Lead, ppb	<1	Less than detection level
MER66	3/15/2017	6:15:00	MER-FL1-HALLWAYNEAR400-COMBODF-MER66	Lead, ppb	<1	Less than detection level
MER67	3/15/2017	6:22:00	MER-FL1-HALLWAYNEAR400-COMBOBF-MER67	Lead, ppb	<1	Less than detection level
MER68	3/15/2017	6:43:00	MER-FL1-HALLWAYNEAR411-DF-MER68	Lead, ppb	<1	Less than detection level
MER69	3/15/2017	6:43:00	MER-FL1-HANDYRRNEAR411-SINK-MER69	Lead, ppb	<1	Less than detection level
MER70	3/15/2017	6:16:00	MER-FL1-401-SINK-MER70	Lead, ppb	7.6	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER71	3/15/2017	6:21:00	MER-FL1-404-SINK-MER71	Lead, ppb	7.08	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER72	3/15/2017	6:15:00	MER-FL1-HALLWAYNEAR410-DF-MER72	Lead, ppb	<1	Less than detection level
MER73	3/15/2017	6:15:00	MER-FL1-HANDYRRNEAR410-SINK-MER73	Lead, ppb	1.43	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER74	3/15/2017	6:15:00	MER-FL1-405-SINK-MER74	Lead, ppb	14.3	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER75	3/15/2017	6:15:00	MER-FL1-409-SINK-MER75	Lead, ppb	5.54	Lead detected; less than 15ppb action level. Review 3Ts Guidelines to understand options to further reduce the risk of lead.
MER76	3/15/2017	6:17:00	MER-FL1-400ARTLISLAND-LSINK-MER76	Lead, ppb	<1	Less than detection level
MER77	3/15/2017	6:17:00	MER-FL1-400ARTLISLAND-RSINK-MER77	Lead, ppb	<1	Less than detection level
MER78	3/15/2017	6:16:00	MER-FL1-400ARTRISLAND-LSINK-MER78	Lead, ppb	<1	Less than detection level
MER79	3/15/2017	6:16:00	MER-FL1-400ARTRISLAND-RSINK-MER79	Lead, ppb	<1	Less than detection level