

AUG 07 2017

School District

August 1, 2017

Dr. Frank Prazenica, Acting Superintendent
South Butler County School District
328 Knoch Road
Saxonburg, PA 16056

Subject: *South Butler County School District
Potable Water Lead and Copper Resampling Testing Results*

Dear Dr. Prazenica:

Gannett Fleming is pleased to submit a report of the results of the Lead and Copper testing of plumbing fixtures in the South Butler County School District's High School/Middle School, Intermediate Elementary School, and Primary School. This sampling was conducted on July 12, 2017 and consisted of sampling of fixtures identified from the results of the May 26, 2017 sampling conducted at the district's facilities. Resampling was conducted on the fixtures which showed Lead or Copper levels in excess of 50 percent of the respective Pennsylvania Department of Environmental Protection (PA DEP) Action Levels for Lead and Copper. The PA DEP Lead Action Level is 0.015 mg/L. The PA DEP Copper Action Levels is 1.3 mg/L.

Sampling was conducted by Gannett Fleming personnel following USEPA/PA DEP procedures. This sampling event was slightly modified from the initial sampling. The initial sampling was of one liter "first draw" samples. That is, sampling of the fixtures was conducted after they had been allowed to sit stagnant overnight. Sampling was conducted prior to the buildings being occupied. For the follow-up sampling the same stagnation period was used. To conduct the sampling a 250 mL first draw sample was collected immediately followed by the collection of a one liter sample. The purpose of this split sample was to determine if the cause of original samples approaching or exceeding an Action Level was due to the plumbing fixture itself or the piping leading to that fixture. A result of 50 percent or greater than one of the Action Levels in the 250 mL sample would tend to indicate an issue with the fixture itself. A result of 50 percent or greater than one of the Action Levels in one liter sample would tend to indicate an issue with the piping leading to the fixture.

A total of 19 sample sites were resampled from the High School/Middle School complex for a total of 38 samples. Of those samples, six exceeded the PA DEP's 0.015 mg/L Action Level for Lead and three of the samples were within 50 percent of the Lead Action Level. No samples exceeded the PA DEP's 1.3 mg/L Action Level for Copper and one was within 50 percent of the copper Action Level.

At the High School/Middle School complex all of the Lead samples that exceeded the Action Level were first draw samples with the exception of Faucet #3 in Room 319 Life Skills. The first draw sample from that tap contained 0.005 mg/L. The second sample contained 0.018

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mg/L. The reason for this increase is not yet known and will be investigated. The first draw sample from Faucet #4 in Room 319 exceeded the Lead Action Level. That sample also contained Copper within 50 percent of the Copper Action Level. The second draw sample from that location contained Lead within 50 percent of the Lead Action Level. The first draw sample from Faucet #2 in Room 317 Home Economics contained 0.093 mg/L of Lead. According to the District's Director of Buildings and Grounds there had been a leak on the water line supplying water to the Home Economics/Life Skills area of the facility which had been repaired a few months prior to the sampling. Repair of plumbing can sometimes break loose bits of lead/tin solder which can then become lodged in the strainers of faucets. In fact, staff reported a significant amount of debris in the strainers of the faucets in those rooms. This debris was removed prior to the resampling. The strainers should be examined again to determine if more debris has accumulated.

The second draw samples from those fixtures, with the exception of Faucet #4 in Room 319, all contained Lead and Copper levels that were under 50 percent of the Action Level or less than the laboratory reporting limit. This information would tend to lead to the conclusion that the fixtures are the source of the Lead; however, it should be noted that the faucets in these areas had previously been replaced with Lead-free faucets. An examination of the strainers and of the piping leading to that area of the facility should be conducted to determine the cause of the exceedances.

There were three other sample locations in the High School/Middle School complex that tested in excess of the Lead Action Level. They were Room 125 Teacher's Sink, Room 134 Teacher's Sink and the tap outside of the Locker Room. All of the second draw samples were well under the Lead and Copper Action Levels indicating the issue is most likely with the faucet itself. We recommend changing these faucets to Lead-free fixtures. It may be difficult to replace the tap outside of the Locker Room. Alternately that tap could be labelled "not for potable water" or locked out and only accessible by maintenance staff when needed for outside work.

A total of 11 sample sites were resampled in the Intermediate Elementary School for a total of 22 samples. Of those samples, six exceeded the Lead Action Level and four of the samples were within 50 percent of the Lead Action Level. No samples exceeded the Copper Action Level or were within 50 percent of that Action Level.

Eight of the 10 samples showing Lead above or within 50 percent of the Action Level were from Rooms 210, 212 and 213. Room 210 had excess Lead levels in both the Sink and Bubbler first and second draw samples. Room 212 had excess Lead levels in the Sink first and second draw samples and Room 213 Bubbler had excess Lead levels in the first and second draw samples. Also the Back Sink in Room 208 had a Lead level of 0.009 mg/L in the first draw sample. The second draw sample contained 0.001 mg/L of Lead. This cluster of results coupled with the fact that both the first and second draw samples exceeded or approached the Lead Action Level in all but one of the samples tends to indicate an issue with the piping in that area of the Intermediate School. An examination of the piping and of the fixtures themselves should be conducted to determine the cause of these exceedances.

The other sample from the Intermediate School showing a Lead level of concern was from the Library Sink. This tap contained 0.045 mg/L in the first draw sample. The second draw sample contained 0.005 mg/L of Lead. It is recommended that this faucet be replaced with a Lead-free fixture and retested.

A total of 13 sample sites were resampled from the Primary School for a total of 26 samples. Of those samples, one (Room 431 Sink second draw) was within 50 percent of the Copper Action Level and one (the kitchen Prep Sink and Soap – Dish Wash Right first draw) was within 50 percent of the Lead Action Level. No samples exceeded the Lead or Copper Action Level. It is recommended that these fixtures be replaced with -ree faucets.

Please find attached the laboratory reports for this testing as well as a summary table listing all of the sampling results.

Gannett would like to thank the School District's administrative and maintenance staff for their assistance in completing this project. Please feel free to contact us if you have any questions or comments.

Sincerely,

GANNETT FLEMING, INC.



ERIC T. BUZZA
Project Manager

Attachments

cc: Chris Reiser, South Butler County School District
GF File

South Butler County School District
Lead and Copper Resampling Results - High School / Middle School

Orange highlight indicates result is over 1/2 of DEP Action Level	Yellow highlight indicates result is at/over the DEP Action Level	PA DEP Lead Action Level - 0.015 mg/L	PA DEP Copper Action Level - 1.3 mg/L
Sample Date	Location	Copper Result (mg/L)	Lead Result (mg/L)
7/12/2017	009 Chem Lab Sink - First Draw	0.514	0.007
7/12/2017	009 Chem Lab Sink - Second Draw	0.330	0.003
7/12/2017	Room 317 Home Economics #2 - First Draw	0.118	0.093
7/12/2017	Room 317 Home Economics #2 - Second Draw	0.045	<0.001
7/12/2017	Room 317 Home Economics #3 Left - First Draw	0.080	0.001
7/12/2017	Room 317 Home Economics #3 Left - Second Draw	0.126	0.001
7/12/2017	Room 317 Home Economics #4 Right - First Draw	0.226	<0.001
7/12/2017	Room 317 Home Economics #4 Right - Second Draw	0.079	<0.001
7/12/2017	Room 319 Life Skill #1 Demo - First Draw	0.182	<0.001
7/12/2017	Room 319 Life Skill #1 Demo - Second Draw	0.079	<0.001
7/12/2017	Room 319 Life Skills #2 Door - First Draw	0.116	0.002
7/12/2017	Room 319 Life Skills #2 Door - Second Draw	0.067	<0.001
7/12/2017	Room 319 Life Skills #3 - First Draw	0.443	0.005
7/12/2017	Room 319 Life Skills #3 - Second Draw	0.165	0.018
7/12/2017	Room 319 Life Skills #4 - First Draw	0.739	0.033
7/12/2017	Room 319 Life Skills #4 - Second Draw	0.207	0.010
7/12/2017	Room 326 Sink - First Draw	0.123	0.002
7/12/2017	Room 326 Sink - Second Draw	0.101	<0.001
7/12/2017	Room 501 Sink #2 - First Draw	0.415	0.010
7/12/2017	Room 501 Sink #2 - Second Draw	0.400	0.004
7/12/2017	Room 412 Teachers Sink - First Draw	0.180	0.008
7/12/2017	Room 412 Teachers Sink - Second Draw	0.095	<0.001
7/12/2017	Room 414 Teachers Sink - First Draw	0.186	0.004
7/12/2017	Room 414 Teachers Sink - Second Draw	0.104	<0.001
7/12/2017	Room 413 Sink - First Draw	0.373	0.007
7/12/2017	Room 413 Sink - Second Draw	0.408	0.002
7/12/2017	Girl's Locker Room Fountain - First Draw	0.343	<0.001
7/12/2017	Girl's Locker Room Fountain - Second Draw	0.272	<0.001
7/12/2017	110 Teachers Spigot - First Draw	0.331	0.005
7/12/2017	110 Teachers Spigot - Second Draw	0.398	0.002
7/12/2017	Room 125 Teachers Sink - First Draw	0.401	0.022
7/12/2017	Room 125 Teachers Sink - Second Draw	0.464	0.005
7/12/2017	Room 134 Teachers Sink - First Draw	0.511	0.050
7/12/2017	Room 134 Teachers Sink - Second Draw	0.255	0.001
7/12/2017	012 Weight Room - First Draw	0.192	<0.001
7/12/2017	012 Weight Room - Second Draw	0.152	<0.001
7/12/2017	Locker Room Outside Tap - First Draw	0.372	0.102
7/12/2017	Locker Room Outside Tap - Second Draw	0.580	0.005

**South Butler County School District
Lead and Copper Resampling Results - Primary School**

Orange highlight indicates result is over 1/2 of DEP Action Level	Yellow highlight indicates result is at/over the DEP Action Level	PA DEP Lead Action Level - 0.015 mg/L	PA DEP Copper Action Level - 1.3 mg/L
Sample Date	Location	Copper Result (mg/L)	Lead Result (mg/L)
7/12/2017	Room 212 Sink - First Draw	0.312	<0.001
7/12/2017	Room 212 Sink - Second Draw	0.625	<0.001
7/12/2017	Room 208 Sink - First Draw	0.396	<0.001
7/12/2017	Room 208 Sink - Second Draw	0.345	<0.001
7/12/2017	Room 431 Sink - First Draw	0.439	<0.001
7/12/2017	Room 431 Sink - Second Draw	0.760	<0.001
7/12/2017	Room 431 Bubbler - First Draw	0.525	0.002
7/12/2017	Room 431 Bubbler - Second Draw	0.579	<0.001
7/12/2017	Nurse's Office Exam Sink - First Draw	0.491	<0.001
7/12/2017	Nurse's Office Exam Sink - Second Draw	0.407	<0.001
7/12/2017	Kitchen Prep Sink and Soap - Dish Wash Right - First Draw	0.326	0.010
7/12/2017	Kitchen Prep Sink and Soap - Dish Wash Right - Second Draw	0.140	<0.001
7/12/2017	Room 307 Sink - First Draw	0.121	<0.001
7/12/2017	Room 307 Sink - Second Draw	0.087	<0.001
7/12/2017	Room 311 Sink - First Draw	0.440	<0.001
7/12/2017	Room 311 Sink - Second Draw	0.620	<0.001
7/12/2017	Room 311 Bubbler - First Draw	0.501	<0.001
7/12/2017	Room 311 Bubbler - Second Draw	0.417	<0.001
7/12/2017	428 Teacher's Lounge - First Draw	0.107	<0.001
7/12/2017	428 Teacher's Lounge - Second Draw	0.108	<0.001
7/12/2017	Room 423 Sink - First Draw	0.364	<0.001
7/12/2017	Room 423 Sink - Second Draw	0.240	<0.001
7/12/2017	Room 423 Bubbler - First Draw	0.176	0.004
7/12/2017	Room 423 Bubbler - Second Draw	0.136	<0.001
7/12/2017	Kitchen Soup Kettle - First Draw	0.241	0.003
7/12/2017	Kitchen Soup Kettle - Second Draw	0.288	<0.001

South Butler County School District

Lead and Copper Resampling Results - Intermediate Elementary

Orange highlight indicates result is over 1/2 of DEP Action Level	Yellow highlight indicates result is at/over the DEP Action Level	PA DEP Copper Action Level - 1.3 mg/L	PA DEP Lead Action Level - 0.015 mg/L
Sample Date	Location	Copper Result (mg/L)	Lead Result (mg/L)
7/12/2017	Room 115 Bubbler - First Draw	0.039	<0.001
7/12/2017	Room 115 Bubbler - Second Draw	0.041	0.001
7/12/2017	Room 108 Sink - First Draw	0.117	<0.001
7/12/2017	Room 108 Sink - Second Draw	0.087	<0.001
7/12/2017	Room 213 Bubbler - First Draw	0.104	0.021
7/12/2017	Room 213 Bubbler - Second Draw	0.077	0.017
7/12/2017	Room 212 Sink - First Draw	0.254	0.009
7/12/2017	Room 212 Sink - Second Draw	0.126	0.011
7/12/2017	Room 210 Sink - First Draw	0.159	0.174
7/12/2017	Room 210 Sink - Second Draw	0.09	0.013
7/12/2017	Room 210 Bubbler - First Draw	0.081	0.168
7/12/2017	Room 210 Bubbler - Second Draw	0.07	0.028
7/12/2017	Library Sink - First Draw	0.241	0.045
7/12/2017	Library Sink - Second Draw	0.177	0.005
7/12/2017	Room 208 Back Sink - First Draw	0.081	0.009
7/12/2017	Room 208 Back Sink - Second Draw	0.048	0.001
7/12/2017	Room 005 Sink - First Draw	0.067	0.002
7/12/2017	Room 005 Sink - Second Draw	0.055	<0.001
7/12/2017	Kitchen Sink - Left - First Draw	0.130	0.004
7/12/2017	Kitchen Sink - Left - Second Draw	0.133	0.001
7/12/2017	401 Fountain - First Draw	0.521	0.001
7/12/2017	401 Fountain - Second Draw	0.639	0.002