

POST-FIXTURE REPLACEMENT SAMPLING RESULTS REPORT

Flint Institute of Music



September 14, 2016

INTRODUCTION

During the week of May 9, 2016, the Department of Licensing and Regulatory Affairs (DLARA) completed replacement of drinking water fixtures at the Flint Institute of Music. These fixture replacements were required because testing results indicated that the older fixtures at most schools were imparting lead to the drinking water. After the fixtures were replaced, a more thorough flushing of the plumbing lines was completed to remove any remaining materials from the building's water supply system.

On Saturday, June 18, 2016 the Department of Environmental Quality conducted a post-fixture sampling assessment of the plumbing system at the facility.

For the protection of public health, DLARA started offering the installation of filters on drinking water fixtures at the daycare facilities and schools in Flint. This work began in July, 2016.

Water Main Description

Upon inspection of the water main from the interior of the facility, it was determined that the water main is four-inch ductile iron and the distribution consists of two-inch copper lines.

SAMPLING METHODS

Fixture Sampling

There are 11 drinking water fixtures that were identified at the school. After a minimum six-hour stagnation period, four samples were collected at each of the fixtures identified. Two initial samples were collected immediately after turning on the tap. The water was then flushed for 30 seconds and a third sample was collected. Finally, the water was flushed for another two minutes, and the fourth sample was collected. These samples were used to determine the impact of any lead sources in and around each specific fixture and its connecting plumbing.

Deep Plumbing Sampling

A different sampling method is used to determine the impact of any lead sources located deep in the supply plumbing of the building. During this method, ten bottles are collected in a row (consecutively). These bottles

are one liter in size, which is larger than those used for the fixture sampling method.

Sampling Notes

- Forty-four samples from the 11 fixtures were collected and sent to the lab for analysis.
- The facility contact requested that the fixture identified as O1KC001 be added to the sampling list. This fixture had not been replaced by DLARA.
- Twenty samples from two specific fixtures were collected to test the deeper part of the plumbing system and sent to the lab for analysis.

SAMPLING RESULTS

Post-Fixture Replacement

June 18, 2016

Of the 64 samples:

- Lead Range: Non-Detected (ND) to 4 parts per billion (ppb)
- Copper Range: ND to 950 ppb

* Where the result is non-detected for lead it means that the amount of lead in the water was less than 1 ppb.

* Where the result is non-detected for copper it means that the amount of copper in the water was less than 50 ppb.

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Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	01WC001 NORTHEAST	P1	Copper	730
Lead	ND	01WC001 NORTHEAST	P2	Copper	470
Lead	ND	01WC001 NORTHEAST	F01	Copper	100
Lead	ND	01WC001 NORTHEAST	F02	Copper	60
Lead	ND	01WC002 NORTHWEST	P1	Copper	840
Lead	ND	01WC002 NORTHWEST	P2	Copper	470
Lead	1	01WC002 NORTHWEST	F01	Copper	210
Lead	ND	01WC002 NORTHWEST	F02	Copper	180
Lead	ND	01WC003 SOUTHEAST	P1	Copper	630
Lead	ND	01WC003 SOUTHEAST	P2	Copper	440
Lead	ND	01WC003 SOUTHEAST	F01	Copper	190
Lead	ND	01WC003 SOUTHEAST	F02	Copper	50
Lead	ND	01WC004 SOUTHEAST	P1	Copper	140
Lead	ND	01WC004 SOUTHEAST	P2	Copper	90
Lead	ND	01WC004 SOUTHEAST	F01	Copper	ND
Lead	ND	01WC004 SOUTHEAST	F02	Copper	60
Lead	ND	01WC005 ROOM 180	P1	Copper	840
Lead	ND	01WC005 ROOM 180	P2	Copper	420
Lead	ND	01WC005 ROOM 180	F01	Copper	390
Lead	ND	01WC005 ROOM 180	F02	Copper	220
Lead	3	01CF006 ROOM 180	P1	Copper	170
Lead	1	01CF006 ROOM 180	P2	Copper	290
Lead	ND	01CF006 ROOM 180	F01	Copper	330
Lead	ND	01CF006 ROOM 180	F02	Copper	240
Lead	4	01KC007 BETWEEN 180/182	P1	Copper	160
Lead	2	01KC007 BETWEEN 180/182	P2	Copper	390
Lead	ND	01KC007 BETWEEN 180/182	F01	Copper	250
Lead	ND	01KC007 BETWEEN 180/182	F02	Copper	210
Lead	ND	01WC008 ROOM 182	P1	Copper	950
Lead	1	01WC008 ROOM 182	P2	Copper	530
Lead	ND	01WC008 ROOM 182	F01	Copper	270
Lead	ND	01WC008 ROOM 182	F02	Copper	240
Lead	3	01CF009 ROOM 182	P1	Copper	180
Lead	2	01CF009 ROOM 182	P2	Copper	250
Lead	ND	01CF009 ROOM 182	F01	Copper	290
Lead	ND	01CF009 ROOM 182	F02	Copper	200

* Non-detected (ND) means for lead the amount in water is less than 1 ppb and for copper the amount in water is less than 50 ppb.

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Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	01WC010 ACROSS FROM RM 182	P1	Copper	760
Lead	ND	01WC010 ACROSS FROM RM 182	P2	Copper	430
Lead	ND	01WC010 ACROSS FROM RM 182	F01	Copper	260
Lead	ND	01WC010 ACROSS FROM RM 182	F02	Copper	250
Lead	2	01KC011 KITCHEN	P1	Copper	260
Lead	ND	01KC011 KITCHEN	P2	Copper	260
Lead	ND	01KC011 KITCHEN	F01	Copper	170
Lead	ND	01KC011 KITCHEN	F02	Copper	ND
Lead	ND	01WC001 NORTHEAST	A 1	Copper	200
Lead	ND	01WC001 NORTHEAST	A 2	Copper	70
Lead	ND	01WC001 NORTHEAST	A 3	Copper	60
Lead	ND	01WC001 NORTHEAST	A 4	Copper	60
Lead	ND	01WC001 NORTHEAST	A 5	Copper	50
Lead	ND	01WC001 NORTHEAST	A 6	Copper	ND
Lead	ND	01WC001 NORTHEAST	A 7	Copper	ND
Lead	ND	01WC001 NORTHEAST	A 8	Copper	ND
Lead	ND	01WC001 NORTHEAST	A 9	Copper	ND
Lead	ND	01WC001 NORTHEAST	A 10	Copper	ND
Lead	ND	01KC007 BETWEEN 180/182	B 1	Copper	260
Lead	ND	01KC007 BETWEEN 180/182	B 2	Copper	220
Lead	ND	01KC007 BETWEEN 180/182	B 3	Copper	200
Lead	ND	01KC007 BETWEEN 180/182	B 4	Copper	190
Lead	ND	01KC007 BETWEEN 180/182	B 5	Copper	190
Lead	ND	01KC007 BETWEEN 180/182	B 6	Copper	180
Lead	ND	01KC007 BETWEEN 180/182	B 7	Copper	180
Lead	ND	01KC007 BETWEEN 180/182	B 8	Copper	180
Lead	ND	01KC007 BETWEEN 180/182	B 9	Copper	180
Lead	ND	01KC007 BETWEEN 180/182	B 10	Copper	180

* Non-detected (ND) means for lead the amount in water is less than 1 ppb and for copper the amount in water is less than 50 ppb.