

POST-FIXTURE REPLACEMENT SAMPLING RESULTS REPORT

Gloria's Little Angels Child Care Center



September 21, 2016

INTRODUCTION

By May 31, 2016, the Department of Licensing and Regulatory Affairs (DLARA) completed replacement of drinking water fixtures at Gloria's Little Angels Child Care Center. These fixture replacements were required because testing results indicated that the older fixtures at 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 material from the building's water supply system.

On Saturday, April 9, 2016, the Department of Environmental Quality conducted a post-fixture sampling assessment of the plumbing system at the Gloria's Little Angels Child Care Center.

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

The investigation of the water main yielded a four-inch ductile iron main and one-inch copper distribution lines.

SAMPLING METHODS

Fixture Sampling

There are nine drinking water fixtures that were identified at the facility. 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

- Thirty-six samples from the nine fixtures were collected and sent to the lab for analysis.
- Ten samples from one fixture selected to test the deeper part of the plumbing system were collected and set to the lab for analysis.

SAMPLING RESULTS

Post-Fixture Replacement

April 9, 2016
Of the 46 samples:

- Lead Range: Non-Detected (ND) to 7 parts per billion (ppb)
- Copper Range: ND to 330 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.

Gloria's Little Angels

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Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	2	01BF001	P1	Copper	120
Lead	2	01BF001	P2	Copper	70
Lead	ND	01BF001	F01	Copper	70
Lead	ND	01BF001	F02	Copper	ND
Lead	2	01BF002	P1	Copper	100
Lead	ND	01BF002	P2	Copper	ND
Lead	ND	01BF002	F01	Copper	ND
Lead	ND	01BF002	F02	Copper	ND
Lead	ND	01KC003	P1	Copper	130
Lead	ND	01KC003	P2	Copper	110
Lead	ND	01KC003	F01	Copper	140
Lead	ND	01KC003	F02	Copper	ND
Lead	2	01KC004	P1	Copper	110
Lead	ND	01KC004	P2	Copper	70
Lead	ND	01KC004	F01	Copper	ND
Lead	ND	01KC004	F02	Copper	ND
Lead	2	01BF005	P1	Copper	210
Lead	1	01BF005	P2	Copper	320
Lead	ND	01BF005	F01	Copper	120
Lead	ND	01BF005	F02	Copper	ND
Lead	ND	01BF006	P1	Copper	270
Lead	ND	01BF006	P2	Copper	330
Lead	ND	01BF006	F01	Copper	100
Lead	ND	01BF006	F02	Copper	ND
Lead	3	01KC007	P1	Copper	220
Lead	1	01KC007	P2	Copper	200
Lead	ND	01KC007	F01	Copper	ND
Lead	ND	01KC007	F02	Copper	ND
Lead	4	01CF008	P1	Copper	150
Lead	2	01CF008	P2	Copper	180
Lead	ND	01CF008	F01	Copper	ND
Lead	ND	01CF008	F02	Copper	ND
Lead	1	01CF009	P1	Copper	110
Lead	2	01CF009	P2	Copper	110
Lead	ND	01CF009	F01	Copper	ND
Lead	ND	01CF009	F02	Copper	ND
Lead	6	01KC007	CA1	Copper	ND
Lead	3	01KC007	CA2	Copper	ND
Lead	7	01KC007	CA3	Copper	ND
Lead	4	01KC007	CA4	Copper	ND
Lead	2	01KC007	CA5	Copper	ND
Lead	2	01KC007	CA6	Copper	ND
Lead	2	01KC007	CA7	Copper	ND
Lead	1	01KC007	CA8	Copper	ND
Lead	1	01KC007	CA9	Copper	ND
Lead	1	01KC007	CA10	Copper	ND

* 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.