

POST-FIXTURE REPLACEMENT SAMPLING RESULTS REPORT

International Academy of Flint



September 14, 2016

INTRODUCTION

During the week of May 1, 2016, the Department of Licensing and Regulatory Affairs (DLARA) completed replacement of drinking water fixtures at International Academy of Flint. 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 material from the building's water supply system.

On Saturday, May 14, 2016, the DLARA and the Department of Environmental Quality (DEQ) conducted a post-fixture sampling assessment of the plumbing system at the Academy.

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

SAMPLING METHODS

Fixture Sampling

There are 27 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

- The school installed filters for each drinking water fixture, with the exception of two fixtures in a mechanical room. The filters were by-passed during the sampling event.

- Initially, there were only 26 fixtures identified for sampling. An additional water cooler near Room 101 was added to the sampling list.
- One hundred eight samples from 27 fixtures were collected and sent to the lab for analysis.
- Fifty samples from five specific fixtures were collected to test the deeper part of the plumbing system and sent to the lab for analysis.

SAMPLING RESULTS

May 14, 2016
Of the 158 samples:

- Lead Range: All samples were Non-Detected (ND)
- Copper Range: ND to 680 parts per billion (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	LL01CF001 ROOM 9	P1	Copper	90
Lead	ND	LL01CF001 ROOM 9	P2	Copper	100
Lead	ND	LL01CF001 ROOM 9	F01	Copper	170
Lead	ND	LL01CF001 ROOM 9	F02	Copper	110
Lead	ND	LL01CF002 ROOM 9	P1	Copper	90
Lead	ND	LL01CF002 ROOM 9	P2	Copper	100
Lead	ND	LL01CF002 ROOM 9	F01	Copper	100
Lead	ND	LL01CF002 ROOM 9	F02	Copper	100
Lead	ND	LL01WC003 ACROSS MECH RM 5B	P1	Copper	610
Lead	ND	LL01WC003 ACROSS MECH RM 5B	P2	Copper	460
Lead	ND	LL01WC003 ACROSS MECH RM 5B	F01	Copper	230
Lead	ND	LL01WC003 ACROSS MECH RM 5B	F02	Copper	150
Lead	ND	LL01WC004 ACROSS MECH RM 5B	P1	Copper	180
Lead	ND	LL01WC004 ACROSS MECH RM 5B	P2	Copper	180
Lead	ND	LL01WC004 ACROSS MECH RM 5B	F01	Copper	150
Lead	ND	LL01WC004 ACROSS MECH RM 5B	F02	Copper	150
Lead	ND	LL01KC005 WORK ROOM 8	P1	Copper	110
Lead	ND	LL01KC005 WORK ROOM 8	P2	Copper	150
Lead	ND	LL01KC005 WORK ROOM 8	F01	Copper	130
Lead	ND	LL01KC005 WORK ROOM 8	F02	Copper	120
Lead	ND	01WC006 ACROSS FROM ROOM 163	P1	Copper	680
Lead	ND	01WC006 ACROSS FROM ROOM 163	P2	Copper	490
Lead	ND	01WC006 ACROSS FROM ROOM 163	F01	Copper	180
Lead	ND	01WC006 ACROSS FROM ROOM 163	F02	Copper	140
Lead	ND	01WC007 ACROSS FROM ROOM 163	P1	Copper	220
Lead	ND	01WC007 ACROSS FROM ROOM 163	P2	Copper	160
Lead	ND	01WC007 ACROSS FROM ROOM 163	F01	Copper	140
Lead	ND	01WC007 ACROSS FROM ROOM 163	F02	Copper	130
Lead	ND	GF01DW008 ACROSS FROM RM 170	P1	Copper	150
Lead	ND	GF01DW008 ACROSS FROM RM 170	P2	Copper	70
Lead	ND	GF01DW008 ACROSS FROM RM 170	F01	Copper	50
Lead	ND	GF01DW008 ACROSS FROM RM 170	F02	Copper	ND
Lead	ND	GF01KC009 ROOM 183	P1	Copper	200
Lead	ND	GF01KC009 ROOM 183	P2	Copper	310
Lead	ND	GF01KC009 ROOM 183	F01	Copper	300
Lead	ND	GF01KC009 ROOM 183	F02	Copper	140
Lead	ND	GF01KC010 KITCHEN	P1	Copper	200
Lead	ND	GF01KC010 KITCHEN	P2	Copper	250
Lead	ND	GF01KC010 KITCHEN	F01	Copper	100
Lead	ND	GF01KC010 KITCHEN	F02	Copper	160
Lead	ND	GF01WC011 NEXT TO GIRL'S RESTROOM	P1	Copper	620
Lead	ND	GF01WC011 NEXT TO GIRL'S RESTROOM	P2	Copper	480
Lead	ND	GF01WC011 NEXT TO GIRL'S RESTROOM	F01	Copper	280
Lead	ND	GF01WC011 NEXT TO GIRL'S RESTROOM	F02	Copper	120
Lead	ND	GF01WC012 NEXT TO GIRL'S RESTROOM	P1	Copper	140

* 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	GF01WC012 NEXT TO GIRL`S RESTROOM	P2	Copper	130
Lead	ND	GF01WC012 NEXT TO GIRL`S RESTROOM	F01	Copper	110
Lead	ND	GF01WC012 NEXT TO GIRL`S RESTROOM	F02	Copper	110
Lead	ND	GF01DW013 ROOM 156	P1	Copper	160
Lead	ND	GF01DW013 ROOM 156	P2	Copper	180
Lead	ND	GF01DW013 ROOM 156	F01	Copper	140
Lead	ND	GF01DW013 ROOM 156	F02	Copper	120
Lead	ND	GF01CF014 ROOM 156	P1	Copper	100
Lead	ND	GF01CF014 ROOM 156	P2	Copper	110
Lead	ND	GF01CF014 ROOM 156	F01	Copper	110
Lead	ND	GF01CF014 ROOM 156	F02	Copper	90
Lead	ND	GF01DW015 ROOM 157	P1	Copper	160
Lead	ND	GF01DW015 ROOM 157	P2	Copper	160
Lead	ND	GF01DW015 ROOM 157	F01	Copper	130
Lead	ND	GF01DW015 ROOM 157	F02	Copper	130
Lead	ND	GF01CF016 ROOM 157	P1	Copper	100
Lead	ND	GF01CF016 ROOM 157	P2	Copper	120
Lead	ND	GF01CF016 ROOM 157	F01	Copper	120
Lead	ND	GF01CF016 ROOM 157	F02	Copper	110
Lead	ND	03WC017 ACROSS FROM ROOM 264	P1	Copper	580
Lead	ND	03WC017 ACROSS FROM ROOM 264	P2	Copper	580
Lead	ND	03WC017 ACROSS FROM ROOM 264	F01	Copper	290
Lead	ND	03WC017 ACROSS FROM ROOM 264	F02	Copper	140
Lead	ND	03WC018 ACROSS FROM ROOM 264	P1	Copper	210
Lead	ND	03WC018 ACROSS FROM ROOM 264	P2	Copper	180
Lead	ND	03WC018 ACROSS FROM ROOM 264	F01	Copper	140
Lead	ND	03WC018 ACROSS FROM ROOM 264	F02	Copper	130
Lead	ND	02WC019 NEXT TO GIRL`S RESTROOM	P1	Copper	680
Lead	ND	02WC019 NEXT TO GIRL`S RESTROOM	P2	Copper	450
Lead	ND	02WC019 NEXT TO GIRL`S RESTROOM	F01	Copper	140
Lead	ND	02WC019 NEXT TO GIRL`S RESTROOM	F02	Copper	120
Lead	ND	02WC020 NEXT TO GIRL`S RESTROOM	P1	Copper	150
Lead	ND	02WC020 NEXT TO GIRL`S RESTROOM	P2	Copper	130
Lead	ND	02WC020 NEXT TO GIRL`S RESTROOM	F01	Copper	120
Lead	ND	02WC020 NEXT TO GIRL`S RESTROOM	F02	Copper	170
Lead	ND	GF01WC021 NEXT TO RM 111	P1	Copper	170
Lead	ND	GF01WC021 NEXT TO RM 111	P2	Copper	110
Lead	ND	GF01WC021 NEXT TO RM 111	F01	Copper	160
Lead	ND	GF01WC021 NEXT TO RM 111	F02	Copper	120
Lead	ND	GF01WC022 NEXT TO RM 111	P1	Copper	110
Lead	ND	GF01WC022 NEXT TO RM 111	P2	Copper	120
Lead	ND	GF01WC022 NEXT TO RM 111	F01	Copper	120
Lead	ND	GF01WC022 NEXT TO RM 111	F02	Copper	120
Lead	ND	GF01KC023 CONCESSIONS	P1	Copper	140
Lead	ND	GF01KC023 CONCESSIONS	P2	Copper	120

* 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	GF01KC023 CONCESSIONS	F01	Copper	130
Lead	ND	GF01KC023 CONCESSIONS	F02	Copper	110
Lead	ND	GF01KC024 ROOM 101	P1	Copper	110
Lead	ND	GF01KC024 ROOM 101	P2	Copper	180
Lead	ND	GF01KC024 ROOM 101	F01	Copper	210
Lead	ND	GF01KC024 ROOM 101	F02	Copper	170
Lead	ND	6F01WC024A	P1	Copper	230
Lead	ND	6F01WC024A	P2	Copper	230
Lead	ND	6F01WC024A	F01	Copper	380
Lead	ND	6F01WC024A	F02	Copper	260
Lead	ND	02WC025 LEFT OF GIRL`S RESTROOM	P1	Copper	280
Lead	ND	02WC025 LEFT OF GIRL`S RESTROOM	P2	Copper	120
Lead	ND	02WC025 LEFT OF GIRL`S RESTROOM	F01	Copper	230
Lead	ND	02WC025 LEFT OF GIRL`S RESTROOM	F02	Copper	150
Lead	ND	02WC026 LEFT OF GIRL`S RESTROOM	P1	Copper	140
Lead	ND	02WC026 LEFT OF GIRL`S RESTROOM	P2	Copper	150
Lead	ND	02WC026 LEFT OF GIRL`S RESTROOM	F01	Copper	140
Lead	ND	02WC026 LEFT OF GIRL`S RESTROOM	F02	Copper	130
Lead	ND	LL01CF001 ROOM 9	A1	Copper	140
Lead	ND	LL01CF001 ROOM 9	A2	Copper	150
Lead	ND	LL01CF001 ROOM 9	A3	Copper	110
Lead	ND	LL01CF001 ROOM 9	A4	Copper	90
Lead	ND	LL01CF001 ROOM 9	A5	Copper	90
Lead	ND	LL01CF001 ROOM 9	A6	Copper	90
Lead	ND	LL01CF001 ROOM 9	A7	Copper	90
Lead	ND	LL01CF001 ROOM 9	A8	Copper	90
Lead	ND	LL01CF001 ROOM 9	A9	Copper	90
Lead	ND	LL01CF001 ROOM 9	A10	Copper	90
Lead	ND	GF01KC009 ROOM 183	B1	Copper	230
Lead	ND	GF01KC009 ROOM 183	B2	Copper	160
Lead	ND	GF01KC009 ROOM 183	B3	Copper	140
Lead	ND	GF01KC009 ROOM 183	B4	Copper	170
Lead	ND	GF01KC009 ROOM 183	B5	Copper	150
Lead	ND	GF01KC009 ROOM 183	B6	Copper	130
Lead	ND	GF01KC009 ROOM 183	B7	Copper	110
Lead	ND	GF01KC009 ROOM 183	B8	Copper	100
Lead	ND	GF01KC009 ROOM 183	B9	Copper	100
Lead	ND	GF01KC009 ROOM 183	B10	Copper	100
Lead	ND	03WC017 ACROSS FROM ROOM 264	C1	Copper	290
Lead	ND	03WC017 ACROSS FROM ROOM 264	C2	Copper	240
Lead	ND	03WC017 ACROSS FROM ROOM 264	C3	Copper	180
Lead	ND	03WC017 ACROSS FROM ROOM 264	C4	Copper	160
Lead	ND	03WC017 ACROSS FROM ROOM 264	C5	Copper	140
Lead	ND	03WC017 ACROSS FROM ROOM 264	C6	Copper	130
Lead	ND	03WC017 ACROSS FROM ROOM 264	C7	Copper	130

* 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	03WC017 ACROSS FROM ROOM 264	C8	Copper	130
Lead	ND	03WC017 ACROSS FROM ROOM 264	C9	Copper	130
Lead	ND	03WC017 ACROSS FROM ROOM 264	C10	Copper	130
Lead	ND	GF01CF014 ROOM 156	D1	Copper	130
Lead	ND	GF01CF014 ROOM 156	D2	Copper	110
Lead	ND	GF01CF014 ROOM 156	D3	Copper	110
Lead	ND	GF01CF014 ROOM 156	D4	Copper	120
Lead	ND	GF01CF014 ROOM 156	D5	Copper	120
Lead	ND	GF01CF014 ROOM 156	D6	Copper	120
Lead	ND	GF01CF014 ROOM 156	D7	Copper	110
Lead	ND	GF01CF014 ROOM 156	D8	Copper	110
Lead	ND	GF01CF014 ROOM 156	D9	Copper	110
Lead	ND	GF01CF014 ROOM 156	D10	Copper	100
Lead	ND	GF01KC023 CONCESSIONS	E1	Copper	150
Lead	ND	GF01KC023 CONCESSIONS	E2	Copper	120
Lead	ND	GF01KC023 CONCESSIONS	E3	Copper	120
Lead	ND	GF01KC023 CONCESSIONS	E4	Copper	120
Lead	ND	GF01KC023 CONCESSIONS	E5	Copper	120
Lead	ND	GF01KC023 CONCESSIONS	E6	Copper	120
Lead	ND	GF01KC023 CONCESSIONS	E7	Copper	110
Lead	ND	GF01KC023 CONCESSIONS	E8	Copper	110
Lead	ND	GF01KC023 CONCESSIONS	E9	Copper	110
Lead	ND	GF01KC023 CONCESSIONS	E10	Copper	110

* 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