

POST-FIXTURE REPLACEMENT SAMPLING RESULTS REPORT

Eagles Nest Academy



September 16, 2016

INTRODUCTION

During the month of January, the Department of Licensing and Regulatory Affairs (DLARA) began replacement of drinking water fixtures at Eagles Nest Academy. 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, January 16, 2016, the DLARA and the Department of Environmental Quality conducted a *pre*-fixture sampling assessment of the plumbing system at Eagles Nest Academy. On Saturday, April 16, 2016 the departments went back and conducted a *post*-fixture sampling assessment.

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

An inspection of the water main from inside the building yielded a three-inch ductile iron water main, soldered to a three-inch copper water main. There is an electric ground wire connected to the water main service pipe as it comes out of the floor.

SAMPLING METHODS

Fixture Sampling

There are four drinking water fixtures that were identified and replaced 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 was used to determine the impact of any lead sources deep in the building's supply plumbing. During this method, ten bottles were 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 (April 16, 2016)

- Four fixtures (16 samples) were collected and sent to the lab for analysis.
- Three fixtures (30 samples) were selected to test the deeper part of the plumbing system and sent to the lab for analysis.

SAMPLING RESULTS

Pre-Fixture Replacement

On January 16, 2016
Of the 32 samples:

- Lead Range: Non-Detected (ND) to 24 parts per billion (ppb)
- Copper Range: ND to 1,740 ppb

Post-Fixture Replacement

On April 16, 2016
Of the 46 samples:

- Lead Range: ND to 5 ppb
- Copper Range: ND to 710 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.

Pre-Fixture Replacement - Eagles Nest Academy

January 16, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	24	DW 001 HALLWAY NEAR GYM	P1	Copper	760
Lead	21	DW 001 HALLWAY NEAR GYM	P2	Copper	1740
Lead	3	DW 001 HALLWAY NEAR GYM	F01	Copper	80
Lead	ND	DW 001 HALLWAY NEAR GYM	F02	Copper	ND
Lead	24	DW002 HALLWAY NEAR GYM	P1	Copper	490
Lead	1	DW002 HALLWAY NEAR GYM	P2	Copper	80
Lead	ND	DW002 HALLWAY NEAR GYM	F01	Copper	ND
Lead	ND	DW002 HALLWAY NEAR GYM	F02	Copper	ND
Lead	6	CF003 TEACHERS LOUNGE	P1	Copper	360
Lead	24	CF003 TEACHERS LOUNGE	P2	Copper	330
Lead	2	CF003 TEACHERS LOUNGE	F01	Copper	70
Lead	ND	CF003 TEACHERS LOUNGE	F02	Copper	60
Lead	ND	DW002 HALL BY GYM	CA1	Copper	60
Lead	ND	DW002 HALL BY GYM	CA2	Copper	ND
Lead	ND	DW002 HALL BY GYM	CA3	Copper	ND
Lead	ND	DW002 HALL BY GYM	CA4	Copper	ND
Lead	ND	DW002 HALL BY GYM	CA5	Copper	ND
Lead	ND	DW002 HALL BY GYM	CA6	Copper	ND
Lead	ND	DW002 HALL BY GYM	CA7	Copper	ND
Lead	ND	DW002 HALL BY GYM	CA8	Copper	ND
Lead	ND	DW002 HALL BY GYM	CA9	Copper	ND
Lead	ND	DW002 HALL BY GYM	CA10	Copper	ND
Lead	1	CF003 TEACHERS LOUNGE	CB1	Copper	70
Lead	ND	CF003 TEACHERS LOUNGE	CB2	Copper	60
Lead	ND	CF003 TEACHERS LOUNGE	CB3	Copper	60
Lead	ND	CF003 TEACHERS LOUNGE	CB4	Copper	60
Lead	ND	CF003 TEACHERS LOUNGE	CB5	Copper	60
Lead	ND	CF003 TEACHERS LOUNGE	CB6	Copper	60
Lead	ND	CF003 TEACHERS LOUNGE	CB7	Copper	60
Lead	ND	CF003 TEACHERS LOUNGE	CB8	Copper	60
Lead	ND	CF003 TEACHERS LOUNGE	CB9	Copper	60
Lead	ND	CF003 TEACHERS LOUNGE	CB10	Copper	60

- 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

Post-Fixture Replacement - Eagles Nest Academy

April 16, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	DW001	P1	Copper	370
Lead	ND	DW001	P2	Copper	710
Lead	ND	DW001	F01	Copper	60
Lead	ND	DW001	F02	Copper	50
Lead	ND	DW002	P1	Copper	340
Lead	ND	DW002	P2	Copper	80
Lead	ND	DW002	F01	Copper	50
Lead	ND	DW002	F02	Copper	ND
Lead	3	CF003	P1	Copper	140
Lead	5	CF003	P2	Copper	270
Lead	2	CF003	F01	Copper	80
Lead	1	CF003	F02	Copper	70
Lead	2	KS004	P1	Copper	200
Lead	ND	KS004	P2	Copper	ND
Lead	3	KS004	F01	Copper	80
Lead	ND	KS004	F02	Copper	50
Lead	ND	DW002	A1	Copper	90
Lead	ND	DW002	A2	Copper	ND
Lead	ND	DW002	A3	Copper	ND
Lead	ND	DW002	A4	Copper	ND
Lead	ND	DW002	A5	Copper	ND
Lead	ND	DW002	A6	Copper	ND
Lead	ND	DW002	A7	Copper	ND
Lead	ND	DW002	A8	Copper	ND
Lead	ND	DW002	A9	Copper	ND
Lead	ND	DW002	A10	Copper	ND
Lead	2	CF003	B1	Copper	100
Lead	1	CF003	B2	Copper	70
Lead	2	CF003	B3	Copper	70
Lead	1	CF003	B4	Copper	70
Lead	1	CF003	B5	Copper	70
Lead	1	CF003	B6	Copper	70
Lead	1	CF003	B7	Copper	70
Lead	1	CF003	B8	Copper	70
Lead	1	CF003	B9	Copper	70
Lead	1	CF003	B10	Copper	70

* Non-detected (ND) means; for lead the amount in water is less than 1 pbb,

and for copper the amount in water is less than 50 pbb.