

# POST-FILTER INSTALLATION SAMPLING RESULTS REPORT Cummings/Great Expectations



## INTRODUCTION

During the month of September, 2016, the Department of Licensing and Regulatory Affairs (DLARA) began replacement of drinking water fixtures at Cummings/Great Expectations Early Childhood Center. 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.

For the protection of public health, DLARA started offering the installation of filters at schools and daycare facilities. This work began in September, 2016.

## TIMELINE

### Post-Fixture Replacement

- On Thursday, September 15, 2016, the DLARA and the Department of Environmental Quality (DEQ) sampled the new fixtures at the school, without filters.
- On Friday, September 16, 2016, the DLARA continued fixture replacement work. Flushing continued to improve this system.
- On Saturday, September 17, 2016, after filter installation, the departments went back and sampled.

## SAMPLING METHODS

### Fixture Sampling

Each operational drinking water fixture was identified and sampled. After a minimum six-hour stagnation period, one sample was collected immediately after turning on the tap at each of the fixtures identified. 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 - September 15, 2016

- Before fixture replacement was completed for 25 fixtures, 18 replaced fixtures were sampled (18 samples) and 4 fixtures for deep plumbing assessment (40 samples) were collected. A total of 58 samples were sent to the lab for analysis.

### Sampling Notes - September 17, 2016

- Nineteen replaced fixtures with filters were sampled (19 samples) and sent to the lab for analysis.
- Six replaced fixtures did not have water service and were not sampled.

## SAMPLING RESULTS

### Post-Fixture Replacement

September 15, 2016

Of the 58 samples:

- Lead Range: Non-Detected (ND) to 13 parts per billion (ppb).
- Copper Range: ND to 1480 ppb

### Post-Filter Installation

September 17, 2016

Of the 19 samples:

- Lead Range: All samples were ND
- Copper Range: ND to 450 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.

Cummings or Great Expectations Early Childhood Center  
September 15, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	01KS001 LOUNGE BY BOILER RM	P1	Copper	110
Lead	ND	01DW002 GYM	P1	Copper	ND
Lead	ND	01WC004 OFF GYM	P1	Copper	600
Lead	2	01CF005 CLASSROOM BY GYM	P1	Copper	230
Lead	7	01CF006 CLASSROOM RIGHT OF GYM	P1	Copper	250
Lead	ND	01WC007 MAIN CORRIDOR	P1	Copper	340
Lead	ND	01CF008 1 CLSRM PAST H2O COOLER	P1	Copper	220
Lead	ND	01CF009 ROOM 104	P1	Copper	210
Lead	1	01CF010 ROOM 105	P1	Copper	410
Lead	13	01CF011 ROOM 106	P1	Copper	1480
Lead	ND	01CF012 ROOM 107	P1	Copper	260
Lead	1	01CF013 ROOM 108	P1	Copper	210
Lead	ND	01CF014 ROOM 109	P1	Copper	190
Lead	ND	01CF015 ROOM 110	P1	Copper	210
Lead	ND	01CF016 ROOM 111	P1	Copper	190
Lead	1	01CF017 ROOM 112	P1	Copper	280
Lead	1	01CF018 ROOM 114	P1	Copper	200
Lead	ND	01CF019 ROOM 113	P1	Copper	220
Lead	1	01KS001	A1	Copper	130
Lead	1	01KS001	A2	Copper	70
Lead	ND	01KS001	A3	Copper	ND
Lead	ND	01KS001	A4	Copper	ND
Lead	ND	01KS001	A5	Copper	ND
Lead	ND	01KS001	A6	Copper	ND
Lead	ND	01KS001	A7	Copper	ND
Lead	ND	01KS001	A8	Copper	ND
Lead	ND	01KS001	A9	Copper	ND
Lead	ND	01KS001	A10	Copper	ND
Lead	ND	01CF005	B1	Copper	290
Lead	ND	01CF005	B2	Copper	240
Lead	ND	01CF005	B3	Copper	220
Lead	ND	01CF005	B4	Copper	220
Lead	ND	01CF005	B5	Copper	230
Lead	ND	01CF005	B6	Copper	210
Lead	ND	01CF005	B7	Copper	200
Lead	ND	01CF005	B8	Copper	200
Lead	ND	01CF005	B9	Copper	190
Lead	ND	01CF005	B10	Copper	200
Lead	ND	01CF009	C1	Copper	180
Lead	ND	01CF009	C2	Copper	110
Lead	ND	01CF009	C3	Copper	110
Lead	ND	01CF009	C4	Copper	100

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.

Cummings or Great Expectations Early Childhood Center  
September 15, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	01CF009	C5	Copper	90
Lead	ND	01CF009	C6	Copper	90
Lead	ND	01CF009	C7	Copper	100
Lead	ND	01CF009	C8	Copper	100
Lead	ND	01CF009	C9	Copper	100
Lead	ND	01CF009	C10	Copper	100
Lead	ND	01CF019	D1	Copper	190
Lead	ND	01CF019	D2	Copper	160
Lead	ND	01CF019	D3	Copper	160
Lead	ND	01CF019	D4	Copper	160
Lead	ND	01CF019	D5	Copper	160
Lead	ND	01CF019	D6	Copper	130
Lead	ND	01CF019	D7	Copper	120
Lead	ND	01CF019	D8	Copper	110
Lead	ND	01CF019	D9	Copper	100
Lead	ND	01CF019	D10	Copper	100

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.

Cummings or Great Expectations Early Childhood Center  
September 17, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	01KS001 LOUNGE BY BOILER ROOM	P1	Copper	ND
Lead	ND	01DW002 GYM	P1	Copper	ND
Lead	ND	01WC003 OFF GYM	P1	Copper	60
Lead	ND	01WC004 OFF GYM	P1	Copper	450
Lead	ND	01CF005 CLASSROOM BY GYM	P1	Copper	ND
Lead	ND	01CF006 CLASSROOM RIGHT OF GYM	P1	Copper	ND
Lead	ND	01WC007 MAIN CORRIDOR	P1	Copper	440
Lead	ND	01CF008 1 CLSRM PAST WATER COOLER	P1	Copper	ND
Lead	ND	01CF009 ROOM 104	P1	Copper	ND
Lead	ND	01CF010 ROOM 105	P1	Copper	ND
Lead	ND	01CF011 ROOM 106	P1	Copper	ND
Lead	ND	01CF012 ROOM 107	P1	Copper	ND
Lead	ND	01CF013 ROOM 108	P1	Copper	ND
Lead	ND	01CF014 ROOM 109	P1	Copper	ND
Lead	ND	01CF015 ROOM 110	P1	Copper	ND
Lead	ND	01CF016 ROOM 111	P1	Copper	ND
Lead	ND	01CF017 ROOM 112	P1	Copper	ND
Lead	ND	01CF018 ROOM 114	P1	Copper	ND
Lead	ND	01CF019 ROOM 113	P1	Copper	ND

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.