

POST-FILTER INSTALLATION SAMPLING RESULTS REPORT

St. Paul Lutheran School



INTRODUCTION

The Department of Licensing and Regulatory Affairs completed replacement of drinking water fixtures at the school in early April 2016. 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. A little later in the year, during the month of June, the St. Paul Lutheran School installed filters on all drinking water fixtures and requested the Department of Environmental Quality to again sample the facility's drinking water.

Sampling Assessment Timeline

On Saturday, April 23, 2016, the Department of Environmental Quality performed a post-fixture replacement sampling assessment of the plumbing system at the facility.

On Saturday, June 18, 2016, the Department of Environmental Quality conducted a post-filter installation sampling assessment of the fixtures at the facility.

SAMPLING METHODS

Fixture Sampling

There are 12 drinking water fixtures that were identified at the school after post-fixture replacement. 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.

For post-filter testing, the sampling assessment focused on the fixture and filter. Sampling consisted of two samples, which were collected through the filter immediately after turning on the tap.

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 - April 23, 2016

- Forty-eight samples from 12 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 Notes - June 18, 2016

- Twenty-four samples from 12 fixtures were collected and sent to the lab for analysis.

SAMPLING RESULTS

Post-Fixture Replacement

April 23, 2016
Of the 98 samples:

- Lead Range: Non-Detected (ND) to 158 parts per billion (ppb)
- Copper Range: ND to 2,910 ppb

Post-Filter Installation

June 18, 2016
Of the 24 samples:

- Lead Range: ND to ND
- Copper Range: ND to 620 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.

St. Paul Lutheran School
April 23, 2016

Lead	Lead Result (ppb)	Sample Description	Site Code	Copper	Copper Result (ppb)
Lead	4	01KC001 CHURCH OFFICE/PASTOR	P1	Copper	180
Lead	7	01KC001 CHURCH OFFICE/PASTOR	P2	Copper	410
Lead	ND	01KC001 CHURCH OFFICE/PASTOR	F01	Copper	130
Lead	ND	01KC001 CHURCH OFFICE/PASTOR	F02	Copper	100
Lead	5	01DW002 CHAPLIN/CHURCH OFC	P1	Copper	2910
Lead	3	01DW002 CHAPLIN/CHURCH OFC	P2	Copper	1870
Lead	12	01DW002 CHAPLIN/CHURCH OFC	F01	Copper	1650
Lead	ND	01DW002 CHAPLIN/CHURCH OFC	F02	Copper	340
Lead	3	02KC003 FELLOWSHIP HALL/MUSIC	P1	Copper	250
Lead	ND	02KC003 FELLOWSHIP HALL/MUSIC	P2	Copper	470
Lead	ND	02KC003 FELLOWSHIP HALL/MUSIC	F01	Copper	340
Lead	ND	02KC003 FELLOWSHIP HALL/MUSIC	F02	Copper	120
Lead	2	01DW004 PRESCHOOL 3	P1	Copper	420
Lead	ND	01DW004 PRESCHOOL 3	P2	Copper	640
Lead	ND	01DW004 PRESCHOOL 3	F01	Copper	150
Lead	ND	01DW004 PRESCHOOL 3	F02	Copper	150
Lead	2	01KC005 PRESCHOOL 3	P1	Copper	290
Lead	6	01KC005 PRESCHOOL 3	P2	Copper	170
Lead	ND	01KC005 PRESCHOOL 3	F01	Copper	110
Lead	ND	01KC005 PRESCHOOL 3	F02	Copper	100
Lead	158	01KC006 TEACHER`S LOUNGE	P1	Copper	240
Lead	3	01KC006 TEACHER`S LOUNGE	P2	Copper	410
Lead	1	01KC006 TEACHER`S LOUNGE	F01	Copper	450
Lead	1	01KC006 TEACHER`S LOUNGE	F02	Copper	270
Lead	5	01DW007 ACR FROM MRS HANS	P1	Copper	300
Lead	4	01DW007 ACR FROM MRS HANS	P2	Copper	390
Lead	ND	01DW007 ACR FROM MRS HANS	F01	Copper	60
Lead	ND	01DW007 ACR FROM MRS HANS	F02	Copper	80
Lead	12	GDW008 ACR FROM LACHKEY RM	P1	Copper	1570
Lead	6	GDW008 ACR FROM LACHKEY RM	P2	Copper	920
Lead	1	GDW008 ACR FROM LACHKEY RM	F01	Copper	140
Lead	ND	GDW008 ACR FROM LACHKEY RM	F02	Copper	130
Lead	ND	GKC009 KITCHEN ALONG WALL	P1	Copper	160
Lead	ND	GKC009 KITCHEN ALONG WALL	P2	Copper	340
Lead	ND	GKC009 KITCHEN ALONG WALL	F01	Copper	350
Lead	ND	GKC009 KITCHEN ALONG WALL	F02	Copper	150
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	P1	Copper	190
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	P2	Copper	220

* The result of non-detected (ND) means; for lead the amount in water is less than 1 ppb, for copper the amount in water is less than 50 ppb.

Lead	Lead Result (ppb)	Sample Description	Site Code	Copper	Copper Result (ppb)
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	F01	Copper	120
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	F02	Copper	110
Lead	ND	GDW011 NEXT TO GYM	P1	Copper	1710
Lead	1	GDW011 NEXT TO GYM	P2	Copper	580
Lead	2	GDW011 NEXT TO GYM	F01	Copper	140
Lead	ND	GDW011 NEXT TO GYM	F02	Copper	130
Lead	ND	01DW012 ACR FROM MRS GRIM	P1	Copper	2110
Lead	25	01DW012 ACR FROM MRS GRIM	P2	Copper	760
Lead	ND	01DW012 ACR FROM MRS GRIM	F01	Copper	150
Lead	ND	01DW012 ACR FROM MRS GRIM	F02	Copper	130
Lead	1	01KC001 CHURCH OFFICE/ PASTOR	CA1	Copper	140
Lead	ND	01KC001 CHURCH OFFICE/ PASTOR	CA2	Copper	100
Lead	ND	01KC001 CHURCH OFFICE/ PASTOR	CA3	Copper	100
Lead	ND	01KC001 CHURCH OFFICE/ PASTOR	CA4	Copper	90
Lead	ND	01KC001 CHURCH OFFICE/ PASTOR	CA5	Copper	90
Lead	ND	01KC001 CHURCH OFFICE/PASTOR	CA6	Copper	80
Lead	ND	01KC001 CHURCH OFFICE/ PASTOR	CA7	Copper	80
Lead	ND	01KC001 CHURCH OFFICE/ PASTOR	CA8	Copper	80
Lead	ND	01KC001 CHURCH OFFICE/ PASTOR	CA9	Copper	70
Lead	ND	01KC001 CHURCH OFFICE/ PASTOR	CA10	Copper	70
Lead	1	01KC005 PRESCHOOL 3	CB1	Copper	100
Lead	ND	01KC005 PRESCHOOL 3	CB2	Copper	90
Lead	ND	01KC005 PRESCHOOL 3	CB3	Copper	90
Lead	ND	01KC005 PRESCHOOL 3	CB4	Copper	80
Lead	ND	01KC005 PRESCHOOL 3	CB5	Copper	80
Lead	ND	01KC005 PRESCHOOL 3	CB6	Copper	80
Lead	ND	01KC005 PRESCHOOL 3	CB7	Copper	80
Lead	ND	01KC005 PRESCHOOL 3	CB8	Copper	80
Lead	ND	01KC005 PRESCHOOL 3	CB9	Copper	80
Lead	ND	01KC005 PRESCHOOL 3	CB10	Copper	80
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC1	Copper	270
Lead	1	GDW008 ACR FROM LACHKEY RM	CC2	Copper	120
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC3	Copper	110
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC4	Copper	120
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC5	Copper	120
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC6	Copper	120
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC7	Copper	120
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC8	Copper	120
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC9	Copper	120
Lead	ND	GDW008 ACR FROM LACHKEY RM	CC10	Copper	130
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD1	Copper	130

* The result of non-detected (ND) means; for lead the amount in water is less than 1 ppb, for copper the amount in water is less than 50 ppb.

Lead	Lead Result (ppb)	Sample Description	Site Code	Copper	Copper Result (ppb)
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD2	Copper	100
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD3	Copper	100
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD4	Copper	100
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD5	Copper	100
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD6	Copper	90
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD7	Copper	90
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD8	Copper	90
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD9	Copper	90
Lead	ND	GKC010 KITCHEN BUTCHER BLOCK	CD10	Copper	90
Lead	ND	01DW012 ACR FROM MRS GRIM	CE1	Copper	260
Lead	ND	01DW012 ACR FROM MRS GRIM	CE2	Copper	130
Lead	ND	01DW012 ACR FROM MRS GRIM	CE3	Copper	120
Lead	ND	01DW012 ACR FROM MRS GRIM	CE4	Copper	120
Lead	ND	01DW012 ACR FROM MRS GRIM	CE5	Copper	120
Lead	ND	01DW012 ACR FROM MRS GRIM	CE6	Copper	120
Lead	ND	01DW012 ACR FROM MRS GRIM	CE7	Copper	120
Lead	ND	01DW012 ACR FROM MRS GRIM	CE8	Copper	120
Lead	ND	01DW012 ACR FROM MRS GRIM	CE9	Copper	120
Lead	ND	01DW012 ACR FROM MRS GRIM	CE10	Copper	120

* The result of non-detected (ND) means; for lead the amount in water is less than 1 ppb, for copper the amount in water is less than 50 ppb.

St. Paul Lutheran School
June 18, 2016

Lead	Lead Result (ppb)	Sample Description	Site Code	Copper	Copper Result (ppb)
Lead	ND	01KC001	P1	Copper	ND
Lead	ND	01KC001	P2	Copper	ND
Lead	ND	01DW002	P1	Copper	620
Lead	ND	01DW002	P2	Copper	170
Lead	ND	02KC003	P1	Copper	ND
Lead	ND	02KC003	P2	Copper	ND
Lead	ND	01DW004	P1	Copper	ND
Lead	ND	01DW004	P2	Copper	ND
Lead	ND	01DW005	P1	Copper	ND
Lead	ND	01DW005	P2	Copper	ND
Lead	ND	01KC005	P1	Copper	ND
Lead	ND	01KC005	P2	Copper	ND
Lead	ND	01KC006	P1	Copper	180
Lead	ND	01KC006	P2	Copper	ND
Lead	ND	GDW008	P1	Copper	590
Lead	ND	GDW008	P2	Copper	150
Lead	ND	GKC009	P1	Copper	ND
Lead	ND	GKC009	P2	Copper	ND
Lead	ND	GKC010	P1	Copper	ND
Lead	ND	GKC010	P2	Copper	ND
Lead	ND	GDW011	P1	Copper	380
Lead	ND	GDW011	P2	Copper	70
Lead	ND	01DW012	P1	Copper	460
Lead	ND	01DW012	P2	Copper	70

* The result of non-detected (ND) means; for lead the amount in water is less than 1 ppb, for copper the amount in water is less than 50 ppb.