

## Montgomery County Public Schools Lead in Drinking Water Testing 2018

June 19, 2018

### Executive Summary:

#### Darnestown Elementary School

15030 Turkey Foot Road

Darnestown, Maryland 20878

Round of Testing:	Initial
# of Outlets Tested:	69
# of Outlets $\geq 20$ ppb:	5
Low Value (ppb):	<1.0
High Value (ppb):	32.9
Follow-Up Testing Required (Samples $\geq 20$ ppb):	Classroom 002 (20.8 ppb) Classroom 115 (25.5 ppb) Classroom 113 (24.0 ppb) Classroom 102 (20.2 ppb) Kitchen (32.9 ppb)

Round of Testing:	Follow-Up - 30 sec draw
# of Outlets Tested:	5

### Project Status:

#### Testing Complete: Remediation Plan

Classroom 002 - Replace fixture (LW10496), in addition to supply line and valve located under sink

Classroom 115 - Replace fixture (LW09922), in addition to supply line and valve located under sink

Classroom 113 - Replace fixture (M16438), in addition to supply line and valve located under sink

Classroom 102 - Replace fixture (LW09919), in addition to supply line and valve located under sink

Kitchen - Replace fixture (M16455), in addition to supply line and valve located under sink



June 19, 2018

Mr. Brian Mullikin, MS  
Environmental Team Leader  
Montgomery County Public Schools  
Division of Maintenance  
Gaithersburg, Maryland 20879

Re: Drinking Water Testing

KCI Job #1214634193

**Location: Darnestown Elementary School**

15030 Turkey Foot Road  
Darnestown, Maryland 20878

Dear Mr. Mullikin:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of initial and follow-up lead in water testing at Darnestown Elementary School, located at 15030 Turkey Foot Road in Darnestown, Maryland 20878.

**SCOPE OF SERVICES**

KCI conducted lead in water testing at Darnestown Elementary School in accordance with the Environmental Protection Agency (EPA) and Maryland House Bill (HB) 270. State regulation established an action level of 20 parts per billion (ppb) to evaluate lead levels in school buildings, a concentration EPA recommends that schools take action to reduce lead below this action level. Maryland requires periodic testing for the presence of lead in drinking water in occupied public and nonpublic school buildings. EPA developed the 3T's (Training, Testing, and Telling) to assist schools in reducing the lead concentrations in their drinking water. More information about 3T's can be found on the EPA website.

KCI visited the site on 4/19/2018 and 4/20/2018 to collect samples from 69 drinking water outlets in accordance with current criteria described by the Maryland Department of the Environment (MDE) Draft Lead in Drinking Water - Public and Nonpublic Schools, Title 26, Subtitle 16 Lead, Chapter 07. On 5/24/2018, five 30 second follow-up samples were collected.

Samples were submitted to a laboratory for lead in water analysis using current US EPA methodology. The laboratory has been certified by the Maryland Department of the Environment to analyze drinking water for lead.

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## **RESULTS**

There were five results of the lead in water analysis at or above 20 parts per billion (ppb) and subsequent follow up 30 second results are highlighted in the summary table below:

<b>Barcode ID</b>	<b>Sample Location</b>	<b>Date Collected</b>	<b>Initial Sample Result (ppb)</b>	<b>Date Collected</b>	<b>30 Second Follow Up Sample Result (ppb)</b>
LW10496	Bubbler - Indoor - Classroom 002	4/20/2018	20.8	5/24/2018	1.5
LW09922	Faucet - Classroom 115	4/20/2018	25.5	5/24/2018	1.5
M16438	Faucet - Classroom 113	4/20/2018	24.0	5/24/2018	1.5
LW09919	Faucet - Classroom 102	4/20/2019	20.2	5/24/2018	1.3
M16455	Faucet - Kitchen	4/20/2018	32.9	5/24/2018	12.4

The initial lead in water sample results (4/20/2018) and 30 second follow up results (5/24/2018) are shown in Attachment A.

## **DISCUSSION**

Lead is a naturally occurring element that can be harmful to humans when ingested or inhaled, particularly to children under the age of six. Lead can adversely affect the development of children's brain potentially leading to detrimental alterations in intelligence and behavior. Lead has been historically used in plumbing, paint and other building materials. Lead is released into the environment from industrial sources and fuel combustion. Lead may also be found in consumer products (imported candy, medicines, toys, dishes, etc.).

Most lead leaches into drinking water from contact with plumbing components such as faucets and valves made of brass or lead-containing solder. The physical and chemical interaction that occurs between the plumbing and water directly contributes to the amount of lead that is released into the water. Although plumbing components installed prior to the 1990's could contain more lead than newer materials, the amount of lead in the drinking water cannot be predicted by the age of building. The purpose of this regulation is to establish a program to minimize the risk of exposure to lead in drinking water outlets at schools.

Simple steps like keeping your home clean and well-maintained will go a long way in preventing lead exposure. These steps include inspecting and maintaining all painted surfaces to prevent paint

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deterioration, using only cold water to prepare food and drinks, flushing water outlets used for drinking or food preparation, and cleaning around painted areas where friction can generate dust, such as doors, windows, and drawers. Wipe these areas with a wet sponge or rag to remove paint chips or dust, and wash children's hands, bottles, pacifiers and toys often.

Respectfully Submitted,  
KCI Technologies, Inc.



Kamau McAbee  
MDE Certified Water Sampler #8281KM

Attachment:

A- Lead in Water Test Summary Table

# ATTACHMENT A

## Lead in Water Test Summary Table

ATTACHMENT A

Lead in Water Test Summary Table

**Contractor:** KCI Technologies, Inc.

**Certified Laboratory:** Microbac Laboratories, Inc.

Initial Sample Results for Darnestown Elementary School

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
LW09919	102	Classroom		Faucet	20.2	Fail	Follow Up Testing Needed
LW09920	113	Classroom		Bubbler - Indoor	12.5	Pass	Testing Complete
LW09922	115	Classroom		Faucet	25.5	Fail	Follow Up Testing Needed
LW09923	115	Classroom		Bubbler - Indoor	3.8	Pass	Testing Complete
LW09924	104	Classroom		Faucet	7.8	Pass	Testing Complete
LW09925	104	Classroom		Bubbler - Indoor	2.9	Pass	Testing Complete
LW09926	117	Classroom		Faucet	3.8	Pass	Testing Complete
LW09927	117	Classroom		Bubbler - Indoor	2.0	Pass	Testing Complete
LW09928	106	Classroom		Faucet	8.7	Pass	Testing Complete
LW09929	106	Classroom		Bubbler - Indoor	1.7	Pass	Testing Complete
LW09930	132	Classroom		Bubbler - Indoor	5.4	Pass	Testing Complete
LW09931	136	Classroom		Bubbler - Indoor	4.4	Pass	Testing Complete
LW10491	138	Classroom		Bubbler - Indoor	3.9	Pass	Testing Complete
LW10492		Kitchen		Faucet	8.1	Pass	Testing Complete
LW10493		Hallway	Outside Of Gym	Cooler	<1.0	Pass	Testing Complete
LW10496	002	Classroom		Bubbler - Indoor	20.8	Fail	Follow Up Testing Needed
LW10497		Hallway	Next To Cr 008	Cooler	<1.0	Pass	Testing Complete
M16401	002	Classroom		Faucet	6.3	Pass	Testing Complete
M16413	132	Classroom		Faucet	6.8	Pass	Testing Complete
M16415	136	Classroom		Faucet	5.8	Pass	Testing Complete
M16417	138	Classroom		Faucet	7.9	Pass	Testing Complete
M16423		Girls Bathroom	Across CR 11	Cooler	<1.0	Pass	Testing Complete
M16427		Hallway	Outside of CR 7	Cooler	<1.0	Pass	Testing Complete
M16438	113	Classroom		Faucet	24.0	Fail	Follow Up Testing Needed
M16452		Hallway	Across from Boiler Next to BBR	Cooler	<1.0	Pass	Testing Complete
M16454		Kitchen		Faucet	7.3	Pass	Testing Complete
M16455		Kitchen		Faucet	32.9	Fail	Follow Up Testing Needed

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
M31029	146	Classroom		Faucet	<1.0	Pass	Testing Complete
M31030	146	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31031	150	Classroom		Faucet	<1.0	Pass	Testing Complete
M31032	150	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31033	123	Break Room		Faucet	<1.0	Pass	Testing Complete
M31034	123	Break Room		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31035	154	Classroom		Faucet	<1.0	Pass	Testing Complete
M31036	154	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31037		Hallway	Across from CR 154	Cooler	<1.0	Pass	Testing Complete
M31038		Hallway	Across from CR 154	Cooler	<1.0	Pass	Testing Complete
M31045	164	Classroom		Faucet	<1.0	Pass	Testing Complete
M31046	164	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31047	166	Classroom		Faucet	<1.0	Pass	Testing Complete
M31048	166	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31049	131	Classroom		Faucet	<1.0	Pass	Testing Complete
M31050	131	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31052	135	Classroom		Faucet	<1.0	Pass	Testing Complete
M31053	135	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31055	182	Art		Faucet	<1.0	Pass	Testing Complete
M31056	182	Art		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31059	188	Inst Music		Faucet	1.3	Pass	Testing Complete
M31060	188	Inst Music		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31061	190	Band		Faucet	<1.0	Pass	Testing Complete
M31062	190	Band		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31063	137	Classroom		Faucet	<1.0	Pass	Testing Complete
M31064	137	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31066	141	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31067	141	Classroom		Faucet	<1.0	Pass	Testing Complete
M31069	008	Classroom		Faucet	1.1	Pass	Testing Complete
M31070	008	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
M31076	18	Classroom		Faucet	<1.0	Pass	Testing Complete
M31077	18	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31079		Hallway	Across from CR 018	Cooler	<1.0	Pass	Testing Complete
M31080		Hallway	Across from CR 018	Cooler	<1.0	Pass	Testing Complete
M31081	22	Classroom		Faucet	<1.0	Pass	Testing Complete
M31082	22	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31083	26	Classroom		Faucet	2.6	Pass	Testing Complete
M31084	26	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31446	100D	Work Room Admin		Faucet	<1.0	Pass	Testing Complete
M31447	100D	Work Room Admin		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31449	100C	Health		Bubbler - Indoor	<1.0	Pass	Testing Complete
M31450	100C	Health		Faucet	<1.0	Pass	Testing Complete

\*PPB = parts per billion



**Contractor:** KCI Technologies, Inc.  
**Certified Laboratory:** Microbac Laboratories, Inc.

Follow Up Sample Results for Darnestown Elementary School

Barcode ID	Room #	Equipment Type	Initial Draw (2nd) (PPB)	Initial Draw (3rd) (PPB)	30 Second Draw (PPB)*	Status
LW09919	102	Faucet	N/A	14.3	1.3	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW09922	115	Faucet	N/A	12.5	1.5	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW10496	002	Bubbler - Indoor	N/A	14.6	1.5	Remediation required – replace fixture, in addition to supply line and valve located under sink
M16438	113	Faucet	N/A	8.7	1.5	Remediation required – replace fixture, in addition to supply line and valve located under sink
M16455		Faucet	N/A	ND	12.4	Remediation required – replace fixture, in addition to supply line and valve located under sink

\*PPB = parts per billion

Note: Fixture(s) with elevated test results were immediately removed from service. Subsequent 2nd and 3rd round testing was performed on these fixture(s) for further diagnostics for remediation. Because the fixture was shut off after the first test, the subsequent test results may not be representative of an in-use fixture because of stagnant water in the supply line and the operation of shut off valves prior to the tests. All fixtures with elevated test results are to be remediated. After remediation, post remediation testing will be conducted before the fixture is returned to service.