

Montgomery County Public Schools Lead in Drinking Water Testing 2018

May 3, 2018

Executive Summary:

Damascus High School

25921 Ridge Road

Damascus, Maryland 20872

Round of Testing:	Initial
# of Outlets Tested:	58
# of Outlets ≥ 20 ppb:	4
Low Value (ppb):	<1.0
High Value (ppb):	39.5
Follow-Up Testing Required (Samples ≥ 20 ppb):	Kitchen (39.5 ppb) Kitchen (29.6 ppb) Kitchen (20.8 ppb) Kitchen (30.5 ppb)

Round of Testing:	Follow-Up - 30 sec draw
# of Outlets Tested:	4

Project Status:

Testing Complete: Remediation Plan

Kitchen - Replace fixture (LW05075), in addition to supply line and valve located under sink

Kitchen - Replace fixture (LW0576), in addition to supply line and valve located under sink

Kitchen - Replace fixture (LW05077), in addition to supply line and valve located under sink

Kitchen - Replace fixture (LW05078), in addition to supply line and valve located under sink



May 3, 2018

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

Re: Drinking Water Testing

KCI Job #1214634191

Location: Damascus High School

25921 Ridge Road
Damascus, Maryland 20872

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 Damascus High School, located at 25921 Ridge Road in Damascus, Maryland 20872.

SCOPE OF SERVICES

KCI conducted lead in water testing at Damascus High 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 3/22/2018 and 3/23/2018 to collect samples from 58 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 4/20/2018, four 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.

RESULTS

There were four 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:

Barcode ID	Sample Location	Date Collected	Initial Sample Result (ppb)	Date Collected	30 Second Follow Up Sample Result (ppb)
LW05075	Faucet - Kitchen	3/23/2018	39.5	4/20/2018	1.1
LW0576	Faucet - Kitchen	3/23/2018	29.6	4/20/2018	ND
LW05077	Faucet - Kitchen	3/23/2018	20.8	4/20/2018	2.0
LW05078	Faucet - Kitchen	3/23/2018	30.5	4/20/2018	ND

The initial lead in water sample results (3/23/2018) and 30 second follow up results (4/20/2018) 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 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

Attachments:

A- Lead in Water Test Summary Table

ATTACHMENT A

Lead in Water Test Summary Table

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Lead in Water Test Summary Table

Contractor: KCI Technologies, Inc.

Certified Laboratory: Microbac Laboratories, Inc.

Initial Sample Results for Damascus High School

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
LW05048		Kitchen		Faucet	1.2	Pass	Testing Complete
LW05049		Kitchen		Faucet	1.5	Pass	Testing Complete
LW05050		Kitchen		Faucet	<1.0	Pass	Testing Complete
LW05051		Kitchen		Faucet	1.8	Pass	Testing Complete
LW05052		Kitchen		Faucet	1.3	Pass	Testing Complete
LW05053		Kitchen		Faucet	1.7	Pass	Testing Complete
LW05054		Kitchen		Faucet	6.9	Pass	Testing Complete
LW05055		Kitchen		Icemaker	<1.0	Pass	Testing Complete
LW05056		Kitchen		Faucet	1.9	Pass	Testing Complete
LW05057		Break Room Cafeteria		Faucet	<1.0	Pass	Testing Complete
LW05058		Hallway	Across From Café	Cooler	<1.0	Pass	Testing Complete
LW05062	104	Classroom		Cooler	2.9	Pass	Testing Complete
LW05063		Hallway	Across From Courtyard	Cooler	<1.0	Pass	Testing Complete
LW05064	118	Classroom		Faucet	7.1	Pass	Testing Complete
LW05065		Hallway	Outside Of 111	Cooler	1.4	Pass	Testing Complete
LW05066	115	Classroom		Faucet	8.1	Pass	Testing Complete
LW05067	115	Kitchen Classroom		Faucet	1.2	Pass	Testing Complete
LW05068	115	Kitchen Classroom		Faucet	1.6	Pass	Testing Complete
LW05070	115	Kitchen Classroom		Faucet	3.3	Pass	Testing Complete
LW05071	115	Kitchen Classroom		Faucet	3.0	Pass	Testing Complete
LW05072	115	Kitchen Classroom		Faucet	1.7	Pass	Testing Complete
LW05073	115	Kitchen Classroom		Faucet	3.0	Pass	Testing Complete
LW05074	113	Kitchen		Faucet	4.8	Pass	Testing Complete
LW05075	113	Kitchen		Faucet	39.5	Fail	Follow-Up Testing Needed
LW05076	113	Kitchen		Faucet	29.6	Fail	Follow-Up Testing Needed
LW05077	113	Kitchen		Faucet	20.8	Fail	Follow-Up Testing Needed

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
LW05078	113	Kitchen		Faucet	30.5	Fail	Follow-Up Testing Needed
LW05079	113	Kitchen		Faucet	5.5	Pass	Testing Complete
LW05080	112	Classroom		Faucet	4.3	Pass	Testing Complete
LW05081		Hallway	Outside Of Main Office	Cooler	1.3	Pass	Testing Complete
LW05082		Health Room		Faucet	1.4	Pass	Testing Complete
LW05083		Work Room Office	Main Office	Faucet	4.6	Pass	Testing Complete
LW05084		Hallway	Across From Main Office	Cooler	<1.0	Pass	Testing Complete
LW05085	150	Classroom		Faucet	4.7	Pass	Testing Complete
LW05086		Hallway	Outside Of 160	Cooler	1.9	Pass	Testing Complete
LW05087		Hallway	Outside Of 154	Cooler	1.5	Pass	Testing Complete
LW05088		Hallway	Across From Elevator	Cooler	<1.0	Pass	Testing Complete
LW05089	154	Classroom		Faucet	3.5	Pass	Testing Complete
LW05090		Locker Room - Girls		Cooler	<1.0	Pass	Testing Complete
LW05091		Hallway	Across From 241	Cooler	<1.0	Pass	Testing Complete
LW05092	243	Office		Faucet	5.0	Pass	Testing Complete
LW05093		Hallway	Across From 254	Cooler	<1.0	Pass	Testing Complete
LW05094	226	Office		Faucet	6.0	Pass	Testing Complete
LW05095		Hallway	Across From 222	Cooler	1.0	Pass	Testing Complete
LW05097		Hallway	Beside 209	Cooler	<1.0	Pass	Testing Complete
LW05098	213	Office		Faucet	7.6	Pass	Testing Complete
LW05099		Hallway	Across From 005	Cooler	<1.0	Pass	Testing Complete
LW06388		Weight Room Gymnasium		Cooler	<1.0	Pass	Testing Complete
LW06389		Locker Room - Boys		Cooler	1.0	Pass	Testing Complete
LW06390		Office Locker Room - Boys		Icemaker	<1.0	Pass	Testing Complete
LW06391		Hallway	Across From Main Gym	Cooler	<1.0	Pass	Testing Complete
LW06392		Hallway	Across From Main Gym	Cooler	<1.0	Pass	Testing Complete
M10116		Training Room Boys Locker Room	in BLR	Faucet	3.9	Pass	Testing Complete
M10329	148	Classroom		Faucet	2.7	Pass	Testing Complete
M10342	152	Work Room Media Center		Faucet	2.4	Pass	Testing Complete
M10350		Break Room		Faucet	9.0	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
M10351	171	Ice Rm		Ice Maker	<1.0	Pass	Testing Complete
M23339	103	Classroom		Cooler	1.9	Pass	Testing Complete

*PPB = parts per billion

Contractor: KCI Technologies, Inc.

Certified Laboratory: Microbac Laboratories, Inc.

Follow Up Sample Results for Damascus High School

Barcode ID	Room #	Location	Equipment Type	Initial Draw (2nd) (PPB)	Initial Draw (3rd) (PPB)	30 Second Draw (PPB)*	Status
LW05075	113	Kitchen	Faucet	N/A	23.3	1.1	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW05076	113	Kitchen	Faucet	N/A	19.3	ND	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW05077	113	Kitchen	Faucet	N/A	23.6	2.0	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW05078	113	Kitchen	Faucet	N/A	30.7	ND	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.