KCI TECHNOLOGIES
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

Montgomery County Public Schools
Lead in Drinking Water Testing 2018

April 30, 2018

Executive Summary:
Sherwood Elementary School
1401 Olney Sandy Spring Road
Sandy Spring, Maryland 20860

Round of Testing:	Initial
# of Outlets Tested:	77
# of Outlets ≥20 ppb:	3
Low Value (ppb):	<1.0
High Value (ppb):	90.9
Follow-Up Testing Required (Samples ≥ 20 ppb):	Work Room Admin (44.8 ppb) Classroom 134 (90.9 ppb) Kitchen (22.9 ppb)

Round of Testing:	Follow-Up - 30 sec draw
# of Outlets Tested:	3

Project Status:
Testing Complete: Remediation Plan

Work Room Admin - Replace fixture (LW05687), in addition to supply line and valve located under sink
Classroom 134 - Replace fixture (LW05703), in addition to supply line and valve located under sink
Kitchen - Replace fixture (M22878), in addition to supply line and valve located under sink

KCI TECHNOLOGIES
ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD • SPARKS, MD 21152 • 410-316-7800 • (FAX) 410-316-7935

April 30, 2018

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

Re: Drinking Water Testing

KCI Job #1214634189

Location: Sherwood Elementary School
1401 Olney Sandy Spring Road
Sandy Spring, Maryland 20860

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 Sherwood Elementary School, located at 1401 Olney Sandy Spring Road in Sandy Spring, Maryland 20860.

SCOPE OF SERVICES

KCI conducted lead in water testing at Sherwood 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 3/14/2018 and 3/15/2018 to collect samples from 77 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 4/12/2018, three 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 three 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)
LW05687	Faucet - Work Room Admin	3/15/2018	44.8	4/12/2018	ND
LW05703	Bubbler-Indoor - Classroom 134	3/15/2018	90.9	4/12/2018	1.9
M22878	Faucet - Kitchen	3/15/2018	22.9	4/12/2018	5.2

The initial lead in water sample results (3/15/2018) and 30 second follow up results (4/12/2018) 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

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 Sherwood Elementary School

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
LW05685	116	Music		Faucet	10.3	Pass	Testing Complete
LW05686	120	Break Room		Faucet	3.0	Pass	Testing Complete
LW05687	102	Work Room Administration		Faucet	44.8	Fail	Follow-Up Testing Needed
LW05688	100H	Health Room Administration		Faucet	<1.0	Pass	Testing Complete
LW05689		Hallway	Next To Staff Lounge	Cooler	3.2	Pass	Testing Complete
LW05690	109	Classroom Music		Faucet	7.8	Pass	Testing Complete
LW05691		Hallway	Across From Cr 132	Cooler	2.3	Pass	Testing Complete
LW05692	129	Classroom		Faucet	6.5	Pass	Testing Complete
LW05693	129	Classroom		Bubbler - Indoor	3.1	Pass	Testing Complete
LW05694	130	Classroom		Faucet	9.7	Pass	Testing Complete
LW05695	130	Classroom		Bubbler - Indoor	4.7	Pass	Testing Complete
LW05696	131	Classroom		Faucet	6.4	Pass	Testing Complete
LW05697	131	Classroom		Bubbler - Indoor	5.0	Pass	Testing Complete
LW05698	132	Classroom		Faucet	10.9	Pass	Testing Complete
LW05699	132	Classroom		Bubbler - Indoor	2.4	Pass	Testing Complete
LW05700	133	Classroom		Faucet	13.6	Pass	Testing Complete
LW05701	133	Classroom		Bubbler - Indoor	6.0	Pass	Testing Complete
LW05702	134	Classroom		Faucet	11.5	Pass	Testing Complete
LW05703	134	Classroom		Bubbler - Indoor	90.9	Fail	Follow-Up Testing Needed
LW05704	155	Classroom		Faucet	10.6	Pass	Testing Complete
LW05705	155	Classroom		Bubbler - Indoor	3.5	Pass	Testing Complete
LW05706	138	Classroom		Faucet	2.2	Pass	Testing Complete
LW05707	138	Classroom		Bubbler - Indoor	7.0	Pass	Testing Complete
LW05708	139	Classroom		Faucet	11.2	Pass	Testing Complete
LW05709		Hallway	Across From Cr 156	Cooler	1.8	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
LW05710	156	Classroom		Faucet	3.9	Pass	Testing Complete
LW05711	156	Classroom		Bubbler - Indoor	2.9	Pass	Testing Complete
LW05712	158	Classroom		Faucet	8.4	Pass	Testing Complete
LW05713	158	Classroom		Bubbler - Indoor	5.8	Pass	Testing Complete
LW05714	159	Classroom		Faucet	3.6	Pass	Testing Complete
LW05715	159	Classroom		Bubbler - Indoor	5.1	Pass	Testing Complete
LW05716	160	Classroom		Faucet	10	Pass	Testing Complete
LW05717	160	Classroom		Bubbler - Indoor	2.7	Pass	Testing Complete
LW05718	161	Classroom		Faucet	8.7	Pass	Testing Complete
LW05719	161	Classroom		Bubbler - Indoor	4.4	Pass	Testing Complete
LW05720	146	Classroom		Faucet	9.0	Pass	Testing Complete
LW05721	146	Classroom		Bubbler - Indoor	8.0	Pass	Testing Complete
LW05722	140A	Classroom		Faucet	1.5	Pass	Testing Complete
LW05723	140A	Classroom		Bubbler - Indoor	2.2	Pass	Testing Complete
LW05724	145	Classroom		Faucet	<1.0	Pass	Testing Complete
LW05725	145	Classroom		Bubbler - Indoor	1.2	Pass	Testing Complete
LW05726	144	Classroom		Faucet	10.6	Pass	Testing Complete
LW05727	147	Classroom		Faucet	9.5	Pass	Testing Complete
LW05729		Hallway	Next To Cr 144	Cooler	2.0	Pass	Testing Complete
LW05730	140	Classroom		Cooler	1.4	Pass	Testing Complete
LW05731	140	Classroom		Bubbler - Indoor	2.1	Pass	Testing Complete
M08972	177	Classroom		Faucet	<1.0	Pass	Testing Complete
M08973	177	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M08975	175	Classroom		Faucet	<1.0	Pass	Testing Complete
M08976	175	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M08978	169	Classroom		Faucet	<1.0	Pass	Testing Complete
M08979		Hallway	Between CR 169 & CR 168	Cooler	<1.0	Pass	Testing Complete
M08980		Hallway	Between CR 169 & CR 168	Cooler	<1.0	Pass	Testing Complete
M08983	168	Art		Faucet	<1.0	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results (PPB)*	Pass/Fail	Status
M08984	168	Art		Bubbler - Indoor	<1.0	Pass	Testing Complete
M08985	167	Classroom		Faucet	1.6	Pass	Testing Complete
M08986	167	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M09001	206	Classroom		Faucet	<1.0	Pass	Testing Complete
M09002	206	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M09003	208	Classroom		Faucet	<1.0	Pass	Testing Complete
M09004	208	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M09005	209	Classroom		Faucet	<1.0	Pass	Testing Complete
M09006	209	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M09007	211	Classroom		Faucet	<1.0	Pass	Testing Complete
M09008	211	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M09009	212	Classroom		Faucet	<1.0	Pass	Testing Complete
M09010	212	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M09011	214	Classroom		Faucet	<1.0	Pass	Testing Complete
M09012	214	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M22824	103	Office Media Center		Faucet	17.2	Pass	Testing Complete
M22860		Hallway	Across From Cr 132	Cooler	11.8	Pass	Testing Complete
M22876		Kitchen		Faucet	3.8	Pass	Testing Complete
M22877		Kitchen		Faucet	5.3	Pass	Testing Complete
M22878		Kitchen		Faucet	22.9	Fail	Follow-Up Testing Needed
M22879		Kitchen		Faucet	6.6	Pass	Testing Complete
M22880		Kitchen		Faucet	2.2	Pass	Testing Complete
M22886		Hallway	Next To Staff Lounge	Cooler	<1.0	Pass	Testing Complete

*PPB = parts per billion

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

Follow Up Sample Results for Sherwood Elementary School

Barcode ID	Room #	Location	Equipment Type	Initial Draw (2nd) (PPB)	Initial Draw (3rd) (PPB)	30 Second Draw (PPB)*	Status
LW05687	102	Work Room Administration	Faucet	70.8	11.3	ND	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW05703	134	Classroom	Bubbler - Indoor	6.8	5.3	1.9	Remediation required – replace fixture, in addition to supply line and valve located under sink
M22878		Kitchen	Faucet	39.0	26.6	5.2	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.