



MONTGOMERY COUNTY PUBLIC SCHOOLS DRINKING WATER TESTING 2018

August 13, 2018

Executive Summary:
Twinbrook Elementary School
5911 Ridgway Avenue
Rockville, MD 20851

Round of Testing:	Initial
# of Outlets Tested:	73
# of Outlets \geq 20 ppb:	5
Low Value (ppb):	< 1.0
High Value (ppb):	42.7
Follow-Up Testing Required (Samples \geq 20 ppb):	Classroom B5 (29.0 ppb) Classroom 400 (42.7 ppb) Classroom 303 (21.0 ppb) Classroom 205 (27.8 ppb) Classroom 204 (23.5 ppb)

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

Project Status **Testing Complete: Remediation Plan**

Classroom B5 – Replace fixture (LW06797), in addition to supply line and valve located under sink
Classroom 400 – Replace fixture (LW06809), in addition to supply line and valve located under sink
Classroom 303 – Replace fixture (LW09189), in addition to supply line and valve located under sink
Classroom 205 – Replace fixture (LW09446), in addition to supply line and valve located under sink
Classroom 204 – Replace fixture (LW09448), in addition to supply line and valve located under sink



August 13, 2018

Mr. Brian Mullikin
Environmental Team Leader
Montgomery County Public Schools
8301 Turkey Thicket Drive
Building A, First Floor
Gaithersburg, Maryland 20879

Re: Lead in Water Testing Service

Location: Twinbrook Elementary School
5911 Ridgway Avenue
Rockville, MD 20851

Dear Mr. Mullikin:

Professional Services Industries (PSI), Inc. is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of initial lead in water testing at Twinbrook Elementary School, located 5911 Ridgway Avenue, Rockville, MD 20851.

Scope of Services:

PSI conducted lead in water testing at Twinbrook 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.

PSI visited the site on 5/2/18 and 5/3/18 to collect samples from 73 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. Four 30 second follow-up samples were collected on 6/21/18 and one 30 second follow up sample was collected on 7/31/18.

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 five results of the initial 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)
LW06797	Classroom B5	5/3/18	29.0	6/21/18	13.8
LW06809	Classroom 400	5/3/18	42.7	6/21/18	10.7
LW09189	Classroom 303	5/3/18	21.0	7/31/18	1.1
LW09446	Classroom 205	5/3/18	27.8	6/21/18	ND
LW09448	Classroom 204	5/3/18	23.5	6/21/18	4.9

*ppb = parts per billion

The initial lead in water sample results (5/3/18) and 30 second follow up results (6/21/18 and 7/31/18) 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,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Nand Kaushik, P.E.
Department Manager, Environmental Services
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Attachments: A – Lead in Water Test Summary Table

ATTACHMENT A

Twinbrook Elementary School Water Test Summary Table

Contractor: Professional Services Industries, Inc.

Certified Laboratory: Microbac Laboratories, Inc.

Initial Sample Results for Twinbrook Elementary School (5/3/18)

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
LW06791		Hallway	Across From 109	Cooler	<1.0	Pass	Testing Complete
LW06792	B1	Classroom		Faucet	9.9	Pass	Testing Complete
LW06794	B3	Classroom		Faucet	2.5	Pass	Testing Complete
LW06795	B3	Classroom		Bubbler - Indoor	13.1	Pass	Testing Complete
LW06796		Hallway	Across From B5	Cooler	<1.0	Pass	Testing Complete
LW06797	B5	Classroom		Faucet	29.0	Fail	Follow-Up Testing Needed
LW06798	B5	Classroom		Bubbler - Indoor	14.3	Pass	Testing Complete
LW06799	B7	Classroom		Faucet	3.4	Pass	Testing Complete
LW06800	B7	Classroom		Bubbler - Indoor	5.8	Pass	Testing Complete
LW06801	406	Classroom		Faucet	1.7	Pass	Testing Complete
LW06802	406	Classroom		Bubbler - Indoor	8.0	Pass	Testing Complete
LW06803	404	Classroom		Faucet	2.4	Pass	Testing Complete
LW06804	402	Classroom		Faucet	14.2	Pass	Testing Complete
LW06805	402	Classroom		Bubbler - Indoor	4.9	Pass	Testing Complete
LW06806		Hallway	Left Of 311	Cooler	<1.0	Pass	Testing Complete
LW06807	307	Classroom		Faucet	4.7	Pass	Testing Complete
LW06808	400	Classroom		Faucet	2.0	Pass	Testing Complete
LW06809	400	Classroom		Bubbler - Indoor	42.7	Fail	Follow-Up Testing Needed
LW06810	311	Classroom		Faucet	6.8	Pass	Testing Complete
LW06811	311	Classroom		Bubbler - Indoor	7.8	Pass	Testing Complete
LW06813	310	Art		Faucet	3.3	Pass	Testing Complete
LW06816		Hallway	Left Of 302	Cooler	<1.0	Pass	Testing Complete

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
LW09181	308	Classroom		Faucet	11.1	Pass	Testing Complete
LW09182	308	Classroom		Bubbler - Indoor	2.0	Pass	Testing Complete
LW09183	305	Classroom		Faucet	7.7	Pass	Testing Complete
LW09185	306	Classroom		Faucet	<1.0	Pass	Testing Complete
LW09186	306	Classroom		Bubbler - Indoor	6.2	Pass	Testing Complete
LW09187	304	Classroom		Faucet	16.9	Pass	Testing Complete
LW09188	304	Classroom		Bubbler - Indoor	3.6	Pass	Testing Complete
LW09189	303	Classroom		Faucet	21.0	Fail	Follow-Up Testing Needed
LW09190	303	Classroom		Bubbler - Indoor	7.9	Pass	Testing Complete
LW09418	302	Classroom		Faucet	3.3	Pass	Testing Complete
LW09419	302	Classroom		Bubbler - Indoor	4.8	Pass	Testing Complete
LW09420	201	Classroom		Faucet	15.0	Pass	Testing Complete
LW09422	203	Classroom		Faucet	5.8	Pass	Testing Complete
LW09423	203	Classroom		Bubbler - Indoor	12.0	Pass	Testing Complete
LW09424	207	Classroom		Faucet	9.5	Pass	Testing Complete
LW09425	207	Classroom		Bubbler - Indoor	6.7	Pass	Testing Complete
LW09426	209	Classroom		Faucet	11.2	Pass	Testing Complete
LW09427	209	Classroom		Bubbler - Indoor	1.7	Pass	Testing Complete
LW09428	111	Classroom		Faucet	6.1	Pass	Testing Complete
LW09429	111	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW09430	104	Music		Faucet	8.1	Pass	Testing Complete
LW09432	102	Classroom		Faucet	2.2	Pass	Testing Complete
LW09433	102	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW09434	103	Classroom		Faucet	<1.0	Pass	Testing Complete
LW09435	103	Classroom		Bubbler - Indoor	8.0	Pass	Testing Complete
LW09436		Kitchen		Faucet	<1.0	Pass	Testing Complete
LW09437		Kitchen		Faucet	<1.0	Pass	Testing Complete
LW09438	301	Classroom		Faucet	3.5	Pass	Testing Complete

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
LW09439	301	Classroom		Bubbler - Indoor	1.1	Pass	Testing Complete
LW09440		Break Room		Faucet	1.2	Pass	Testing Complete
LW09441		Break Room		Instant Hot Water	<1.0	Pass	Testing Complete
LW09442		Hallway	Across From 201	Cooler	<1.0	Pass	Testing Complete
LW09443	202	Classroom		Faucet	2.6	Pass	Testing Complete
LW09444	202	Classroom		Bubbler - Indoor	1.2	Pass	Testing Complete
LW09445	205	Classroom		Faucet	6.8	Pass	Testing Complete
LW09446	205	Classroom		Bubbler - Indoor	27.8	Fail	Follow-Up Testing Needed
LW09447	204	Classroom		Faucet	10.9	Pass	Testing Complete
LW09448	204	Classroom		Bubbler - Indoor	23.5	Fail	Follow-Up Testing Needed
LW09449	109	Classroom		Faucet	<1.0	Pass	Testing Complete
LW09450	109	Classroom		Bubbler - Indoor	5.1	Pass	Testing Complete
LW09451	105	Classroom		Faucet	2.6	Pass	Testing Complete
LW09452	105	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW09453	100	Classroom		Faucet	2.3	Pass	Testing Complete
LW09454	100	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW09455	101	Classroom		Faucet	1.5	Pass	Testing Complete
LW09456	101	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW09457		Health Room Administration		Faucet	5.3	Pass	Testing Complete
LW09459		Work Room Administration		Faucet	6.4	Pass	Testing Complete
LW09464		Kitchen		Faucet	3.2	Pass	Testing Complete
M00943	112	Work Room Media Center		Faucet	2.7	Pass	Testing Complete
M00948		Hallway	Hall Across From Gym	Cooler	<1.0	Pass	Testing Complete

*ppb = parts per billion

Contractor: Professional Services Industries, Inc.
Certified Laboratory: Microbac Laboratories, Inc.

Follow Up Sample Results for Twinbrook Elementary School (6/21/18 and 7/31/18)

Barcode ID	Room Number	Location	Equipment Type	Initial draw (2 nd) (PPB)	30 Second Draw (PPB)	Status
LW06797	B5	Classroom	Bubbler - Indoor	1.7	13.8	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW06809	400	Classroom	Bubbler - Indoor	26.0	10.7	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW09189	303	Classroom	Faucet	22.9	1.1	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW09446	205	Classroom	Bubbler - Indoor	5.1	ND	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW09448	204	Classroom	Faucet	45.9	4.9	Remediation required – replace fixture, in addition to supply line and valve located under sink

*ppb = parts per billion
 ND = Non Detect

Note: Fixture(s) with elevated test results were immediately removed from service. Subsequent 2nd 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.