



## MONTGOMERY COUNTY PUBLIC SCHOOLS DRINKING WATER TESTING 2018

June 15, 2018

**Executive Summary:**  
**Diamond Elementary School**  
4 Marquis Dr,  
Gaithersburg, MD 20878

Round of Testing:	Initial
# of Outlets Tested:	86
# of Outlets $\geq$ 20 ppb:	1
Low Value (ppb):	< 1.0
High Value (ppb):	163.0
Follow-Up Testing Required (Samples $\geq$ 20 ppb):	Room 122 (163.0 ppb)

Round of Testing:	Follow-Up – 30 sec draw
# of Outlets Tested:	1

**Project Status**  
**Testing Complete: Remediation Plan**

Classroom 122– Replace fixture (M29110), in addition to supply line and valve located under sink



June 15, 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: Diamond Elementary School  
4 Marquis Drive,  
Gaithersburg, MD 20878

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 Diamond Elementary School, located at 4 Marquis Drive, Gaithersburg, MD 20878.

**Scope of Services:**

PSI conducted lead in water testing at Diamond 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 4/17/18 and 4/18/18 to collect samples from 86 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. One 30 second follow-up sample was collected on 5/16/18.

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 was one result 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)
M11045	Classroom 122	4/18/18	163.0	5/16/18	<1.0

\*ppb = parts per billion  
ND = Non Detect

The initial lead in water sample results (4/18/18) and 30 second follow up results (5/16/18) 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

## Diamond ES Water Test Summary Table

**Contractor:** Professional Services Industries, Inc.

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

Initial Sample Results for Diamond Elementary School (4/18/18)

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
LW01510	109	Classroom		Faucet	7.4	Pass	Testing Complete
LW01512	104	Classroom		Faucet	<1.0	Pass	Testing Complete
LW01513	104	Classroom		Bubbler - Indoor	2.1	Pass	Testing Complete
LW01514	140	Classroom		Faucet	3.3	Pass	Testing Complete
LW01515	140	Classroom		Bubbler - Indoor	1.4	Pass	Testing Complete
LW02375		All Purpose Room		Cooler	<1.0	Pass	Testing Complete
LW02376	147	Music		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02377	100A	Health Room Administration		Faucet	5.3	Pass	Testing Complete
LW02378	100A	Health Room Administration		Bubbler - Indoor	10.4	Pass	Testing Complete
LW02379		Hallway	Right Of 156B	Cooler	<1.0	Pass	Testing Complete
LW02380		Hallway	Next To 160	Cooler	<1.0	Pass	Testing Complete
LW02381		Hallway	Next To 160	Cooler	<1.0	Pass	Testing Complete
LW02382	164	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02383	164	Music		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02384	174	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02385	174	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02386	176	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02387	176	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02388	179	Office		Faucet	<1.0	Pass	Testing Complete
LW02389	179	Office		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02390	183	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02391	183	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
LW02392		Hallway	In Front Of 132	Cooler	<1.0	Pass	Testing Complete
LW02393	170	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02394	178	Language Office		Faucet	<1.0	Pass	Testing Complete
LW02395	178	Language Office		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02396	181	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02397	181	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02398	187	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02399	187	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02400	189	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02401	189	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02402	129	Classroom		Faucet	7.7	Pass	Testing Complete
LW02404	131	Classroom		Faucet	3.7	Pass	Testing Complete
LW02405		Hallway	Across From Cr 109	Cooler	<1.0	Pass	Testing Complete
LW02406	126	Classroom		Faucet	7.6	Pass	Testing Complete
LW02407	126	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02408	128	Classroom		Faucet	5.3	Pass	Testing Complete
LW02409	130	Classroom		Faucet	11.7	Pass	Testing Complete
LW02410	130	Classroom		Bubbler - Indoor	2.1	Pass	Testing Complete
LW06778	108	Classroom		Faucet	3.0	Pass	Testing Complete
LW06779	108	Classroom		Bubbler - Indoor	4.8	Pass	Testing Complete
LW06780	105	Classroom		Faucet	4.3	Pass	Testing Complete
LW06781	105	Classroom		Bubbler - Indoor	6.6	Pass	Testing Complete
LW06782	141	Classroom		Faucet	11.9	Pass	Testing Complete
LW06783		Hallway	Next To 142	Cooler	<1.0	Pass	Testing Complete
LW06784	142	Classroom		Faucet	<1.0	Pass	Testing Complete
LW06785	142	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW09065	150	Kitchen		Faucet	1.1	Pass	Testing Complete
LW09066	150	Kitchen		Faucet	18.7	Pass	Testing Complete

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
LW09067	150	Kitchen		Faucet	1.3	Pass	Testing Complete
LW09068	150	Kitchen		Faucet	3.5	Pass	Testing Complete
LW09069	150	Kitchen		Faucet	2.1	Pass	Testing Complete
LW09071	166	Break Room		Faucet	<1.0	Pass	Testing Complete
LW09072	166	Break Room		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW09073	170	Classroom		Faucet	<1.0	Pass	Testing Complete
M10999	100C	Work Room Administration		Faucet	5.7	Pass	Testing Complete
M11009	106	Classroom		Faucet	3.1	Pass	Testing Complete
M11010	106	Classroom		Bubbler - Indoor	2.3	Pass	Testing Complete
M11011	107	Classroom		Faucet	1.1	Pass	Testing Complete
M11012	107	Classroom		Bubbler - Indoor	2.2	Pass	Testing Complete
M11029	116	Classroom		Faucet	7.8	Pass	Testing Complete
M11031	113	Classroom		Faucet	18.2	Pass	Testing Complete
M11033	115	Classroom		Faucet	5.5	Pass	Testing Complete
M11034	115	Classroom		Bubbler - Indoor	3.6	Pass	Testing Complete
M11035	117	Classroom		Faucet	4.4	Pass	Testing Complete
M11036	7	Classroom		Bubbler - Indoor	4.4	Pass	Testing Complete
M11037	118	Classroom		Faucet	12.6	Pass	Testing Complete
M11038	118	Classroom		Bubbler - Indoor	2.7	Pass	Testing Complete
M11039	121	Classroom		Faucet	10.9	Pass	Testing Complete
M11041	123	Classroom		Faucet	6.2	Pass	Testing Complete
M11042	123	Classroom		Bubbler - Indoor	6.7	Pass	Testing Complete
M11043	120	Classroom		Faucet	6.4	Pass	Testing Complete
M11044	120	Classroom		Bubbler - Indoor	4.7	Pass	Testing Complete
M11045	122	Classroom		Faucet	<1.0	Pass	Testing Complete
M11045	122	Classroom		Faucet	7.5	Pass	Testing Complete
M11045	122	Classroom		Faucet	163.0	Fail	Follow-Up Testing Needed
M11054	128	Classroom		Bubbler - Indoor	2.7	Pass	Testing Complete

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
M11069	132	Classroom		Faucet	1.1	Pass	Testing Complete
M11070	132	Classroom		Bubbler - Indoor	3.0	Pass	Testing Complete
M11071	133	Classroom		Faucet	5.6	Pass	Testing Complete
M11072	133	Classroom		Bubbler - Indoor	4.9	Pass	Testing Complete
M11075	135	Classroom		Faucet	3.9	Pass	Testing Complete
M11076	135	Classroom		Bubbler - Indoor	4.9	Pass	Testing Complete
M11080	139	Support Room		Faucet	18.1	Pass	Testing Complete
M11083	143	Classroom		Faucet	2.5	Pass	Testing Complete
M11095		Music		Faucet	7.0	Pass	Testing Complete

\*ppb = parts per billion

**Contractor:** Professional Services Industries, Inc.

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

Follow Up Sample Results for Diamond Elementary School (5/16/18)

Barcode ID	Room Number	Location	Equipment Type	Initial draw (2 <sup>nd</sup> ) (PPB)	30 Second Draw (PPB)	Status
M11045	122	Classroom	Faucet	7.5	<1.0	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.