



## MONTGOMERY COUNTY PUBLIC SCHOOLS DRINKING WATER TESTING 2018

September 20, 2018

**Executive Summary:**  
**MacDonald Knolls Elementary School**  
10611 Tenbrook Drive  
Silver Spring, MD 20901

Round of Testing:	Initial
# of Outlets Tested:	29
# of Outlets $\geq$ 20 ppb:	1
Low Value (ppb):	< 1.0
High Value (ppb):	29.7
Follow-Up Testing Required (Samples $\geq$ 20 ppb):	Conference Room (29.7 ppb)

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

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

Conference Room – Replace fixture (LW07107), in addition to supply line and valve located under sink



September 20, 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: MacDonal Knolls Elementary School  
10611 Tenbrook Drive  
Silver Spring, MD 20901

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 MacDonal Knolls Elementary School, located at 10611 Tenbrook Drive, Silver Spring, MD 20901.

**Scope of Services:**

PSI conducted lead in water testing at MacDonal Knolls 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 8/31/18, 9/1/18, 9/13/18, and 9/14/18 to collect samples from 29 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 9/14/18.

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)
LW07107	Conference Room	9/1/18	29.7	9/14/18	ND

\*ppb = parts per billion  
ND = Non Detect

The initial lead in water sample results (9/1/18 and 9/14/18) and 30 second follow up results (9/14/18) 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  
[Nand.Kaushik@psiusa.com](mailto:Nand.Kaushik@psiusa.com)

Attachments:            A – Lead in Water Test Summary Table

# ATTACHMENT A

## Fox Chapel ES Water Test Summary Table

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

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

Initial Sample Results for MacDonald Knolls Elementary School (9/1/18)

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
LW07103	1	Classroom		Bubbler - Indoor	5.5	Pass	Testing Complete
LW07104	1	Classroom		Faucet	3.9	Pass	Testing Complete
LW07105	2	Kitchen		Faucet	7.7	Pass	Testing Complete
LW07106	2	Kitchen		Faucet	1.4	Pass	Testing Complete
LW07107		Conference Room		Faucet	29.7	Fail	Follow-Up Testing Needed
LW07108	3	Classroom		Bubbler - Indoor	2.6	Pass	Testing Complete
LW07109	3	Classroom		Faucet	3.1	Pass	Testing Complete
LW07110	4	Classroom		Faucet	6.4	Pass	Testing Complete
LW07111	5	Classroom		Bubbler - Indoor	2.5	Pass	Testing Complete
LW07112	5	Classroom		Faucet	7.0	Pass	Testing Complete
LW07113	6	Classroom		Bubbler - Indoor	3.0	Pass	Testing Complete
LW07114	6	Classroom		Faucet	3.3	Pass	Testing Complete
LW07115	7	Classroom		Bubbler - Indoor	4.9	Pass	Testing Complete
LW07116	7	Classroom		Faucet	9.7	Pass	Testing Complete
LW07117	8	Classroom		Bubbler - Indoor	1.8	Pass	Testing Complete
LW07118	8	Classroom		Faucet	6.2	Pass	Testing Complete
LW07119	9	Classroom		Bubbler - Indoor	5.1	Pass	Testing Complete
LW07120	9	Classroom		Faucet	1.8	Pass	Testing Complete
LW07121	10	Classroom		Bubbler - Indoor	2.7	Pass	Testing Complete
LW07122	10	Classroom		Faucet	8.3	Pass	Testing Complete
LW07123		Hallway	Right Of Room 16	Cooler	<1.0	Pass	Testing Complete
LW07125	11	Classroom		Faucet	2.6	Pass	Testing Complete
LW07126	12	Classroom		Faucet	1.0	Pass	Testing Complete

Barcode ID	Room Number	Location	Location Notes	Equipment Type	Result (PPB)*	Pass/Fail	Status
LW07127	13	Classroom		Faucet	1.4	Pass	Testing Complete
LW07128	16	Classroom		Faucet	1.2	Pass	Testing Complete
LW08099		Hallway	In Front of Conference	Cooler	1.7	Pass	Testing Complete
LW09461	14	Classroom		Faucet	2.3	Pass	Testing Complete
LW09462	15	Classroom		Faucet	1.6	Pass	Testing Complete
LW09463	17	Classroom		Faucet	2.2	Pass	Testing Complete

\*ppb = parts per billion

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

Follow Up Sample Results for MacDonald Knolls Elementary School (9/14/18)

Barcode ID	Room Number	Location	Equipment Type	Initial draw (2 <sup>nd</sup> ) (PPB)	30 Second Draw (PPB)	Status
LW07107		Conference	Faucet	1.6	ND	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.