



MONTGOMERY COUNTY PUBLIC SCHOOLS DRINKING WATER TESTING 2018

May 25, 2018

Executive Summary:
Rachel Carson Elementary School
100 Tschiffely Square Road
Gaithersburg, MD 20878

Round of Testing:	Initial
# of Outlets Tested:	82
# of Outlets \geq 20 ppb:	2
Low Value (ppb):	< 1.0
High Value (ppb):	34.2
Follow-Up Testing Required (Samples \geq 20 ppb):	Room 131 (34.2 ppb) Room 127 (32.0 ppb)

Round of Testing:	Follow-Up – 30 sec draw
# of Outlets Tested:	2

Project Status
Testing Complete: Remediation Plan

Classroom 127– Replace fixture (LW07411), in addition to supply line and valve located under sink
Classroom 131– Replace fixture (M12036), in addition to supply line and valve located under sink



May 25, 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: Rachel Carson Elementary School
100 Tschiffely Square Road
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 Rachel Carson Elementary School, located at 100 Tschiffely Square Road in Gaithersburg, MD 20878.

Scope of Services:

PSI conducted lead in water testing at Rachel Carson 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 4/4/18 and 4/5/18 to collect samples from 82 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. Two 30 second follow-up samples were collected on 5/8/18.

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 two 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)
LW07411	Classroom 127	4/5/18	32.0	5/8/18	1.3
M12036	Classroom 131	4/5/18	34.2	5/8/18	2.2

The initial lead in water sample results (4/5/18) and 30 second follow up results (5/8/18) 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

Rachel Carson ES Water Test Summary Table

Contractor: Professional Services Industries, Inc.

Certified Laboratory: Microbac Laboratories, Inc.

Initial Sample Results for Rachel Carson Elementary School (4/5/18)

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW01654	234	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01655	236	Classroom		Faucet	5.3	Pass	Testing Complete
LW01656	236	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01721	126	Classroom		Faucet	8.1	Pass	Testing Complete
LW01722	126	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01723	124	Preschool		Faucet	<1.0	Pass	Testing Complete
LW01724	124	Preschool		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01725	206	Classroom		Faucet	8.5	Pass	Testing Complete
LW01726	224	Classroom		Faucet	4.8	Pass	Testing Complete
LW01727	224	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01728	225	Classroom		Faucet	1.1	Pass	Testing Complete
LW01729	226	Classroom		Faucet	4.8	Pass	Testing Complete
LW01730	226	Classroom		Bubbler - Indoor	7.9	Pass	Testing Complete
LW01731	227	Classroom		Faucet	4.9	Pass	Testing Complete
LW01733	228	Classroom		Faucet	9.8	Pass	Testing Complete
LW01734	228	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01735	229	Classroom		Faucet	4.2	Pass	Testing Complete
LW01736	229	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01737	230	Classroom		Faucet	<1.0	Pass	Testing Complete
LW01738	230	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01739		Hallway	Next to BBR 238	Cooler	<1.0	Pass	Testing Complete
LW01740	232	Classroom		Faucet	4.1	Pass	Testing Complete
LW01741	232	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW01742	234	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07363		Media Center		Faucet	4.9	Pass	Testing Complete
LW07364		Health Room		Faucet	1.9	Pass	Testing Complete
LW07365	103	Work Room		Faucet	<1.0	Pass	Testing Complete
LW07366		Break Room		Faucet	<1.0	Pass	Testing Complete
LW07367	120	Classroom		Faucet	3.8	Pass	Testing Complete
LW07368	121	Classroom		Faucet	2.5	Pass	Testing Complete
LW07369		Hallway	Across from Room 123	Cooler	<1.0	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW07370	123	Music		Faucet	<1.0	Pass	Testing Complete
LW07371		Hallway	Across from Girls Restroom 118	Cooler	<1.0	Pass	Testing Complete
LW07372	151	Classroom		Faucet	4.1	Pass	Testing Complete
LW07373	151	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07374	150	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07375	150	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07376	148	Classroom		Faucet	2.1	Pass	Testing Complete
LW07377	148	Classroom		Bubbler - Indoor	1.2	Pass	Testing Complete
LW07378	149	Classroom		Faucet	9.6	Pass	Testing Complete
LW07379	149	Classroom		Bubbler - Indoor	1.0	Pass	Testing Complete
LW07380	146	Classroom		Faucet	1.9	Pass	Testing Complete
LW07381	146	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07382	147	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07383	147	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07384	145	Classroom		Faucet	8.2	Pass	Testing Complete
LW07385	145	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07386	144	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07387	144	Classroom		Bubbler - Indoor	3.9	Pass	Testing Complete
LW07388		Hallway	Left of Girls Restroom Room 135	Cooler	<1.0	Pass	Testing Complete
LW07389		Kitchen All Purpose Room		Faucet	<1.0	Pass	Testing Complete
LW07390		Kitchen All Purpose Room		Faucet	5.1	Pass	Testing Complete
LW07391		Kitchen All Purpose Room		Faucet	1.8	Pass	Testing Complete
LW07392		Kitchen All Purpose Room		Faucet	1.7	Pass	Testing Complete
LW07393	143	Classroom		Bubbler - Indoor	1.2	Pass	Testing Complete
LW07394	143	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07395	142	Classroom		Faucet	5.5	Pass	Testing Complete
LW07396	142	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07397	141	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07398	140	Classroom		Faucet	4.7	Pass	Testing Complete
LW07399	140	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07400	139	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07401	139	Classroom		Bubbler - Indoor	1.3	Pass	Testing Complete
LW07402	138	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07403	138	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07404	131	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07405	131	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07406	132	Classroom		Faucet	3.2	Pass	Testing Complete
LW07407	132	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW07408	130	Classroom		Faucet	17.2	Pass	Testing Complete
LW07409	130	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07410	130	Classroom		Bubbler - Indoor	11.4	Pass	Testing Complete
LW07411	127	Classroom		Faucet	32.0	Fail	Follow-Up Testing Needed
LW07412	127	Classroom		Faucet	<1.0	Pass	Testing Complete
LW07413	127	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07414	126	Classroom		Faucet	14.1	Pass	Testing Complete
M11951		Hallway	Near BBR Rm 220	Cooler	<1.0	Pass	Testing Complete
M11979	225	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
M11988	204	Office		Bubbler - Indoor	4.9	Pass	Testing Complete
M11989	204	Office		Faucet	14.9	Pass	Testing Complete
M11994	208	Classroom		Faucet	1.7	Pass	Testing Complete
M12036	131	Classroom		Faucet	34.2	Fail	Follow-Up Testing Needed

*ppb = parts per billion

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

Follow Up Sample Results for Rachel Carson Elementary School (5/8/18)

Barcode ID	Room Number	Location	Equipment Type	Initial draw (2 nd) (PPB)	30 Second Draw (PPB)	Status
LW07411	127	Classroom	Faucet	33.6	1.3	Remediation required – replace fixture, in addition to supply line and valve located under sink
M12036	131	Classroom	Faucet	40.7	2.2	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 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.