

## LABORATORY REPORT

SWSS-Small Water Sys. Services  
Attn: Mr. Michael Woollam  
P.O. Box 2014  
Littleton, MA 01460

**Date Received:** 9/16/2019  
**Date Reported:** 9/25/2019  
**P.O. #:**

**Work Order #:** 1909-17418

**Project Name:** CARVER MIDDLE HIGH SCHOOL PWSID #4052064

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods and in accordance with Massachusetts Department of Environmental Protection regulations under 310 CMR 42.00, unless otherwise noted at the end of a given sample's analytical results or in a case narrative. Laboratory certification status for a given analyte and/or method may be referenced on the enclosed Certification Summary.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:



Dawne E. Smart  
Data Reporting Manager

Massachusetts Department of Environmental Protection Laboratory Identification Numbers:  
Warwick, RI M-RI015 Hudson, MA M-MA1117

**R.I. Analytical Laboratories, Inc**  
**Laboratory Report**

SWSS-Small Water Sys. Services

Work Order #: 1909-17418

Project Name/PWS ID: CARVER MIDDLE HIGH SCHOOL PWSID #4052064

**Sample Number:** 001  
**Sample Description:** NURSES OFFICE SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.404	0.0010	mg/l	EPA 200.8	9/23/19 19:19	AJD
Lead	0.012	0.0010	mg/l	EPA 200.8	9/23/19 19:19	AJD

**Sample Number:** 002  
**Sample Description:** TECH ROOM SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:02

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.592	0.0010	mg/l	EPA 200.8	9/23/19 19:24	AJD
Lead	0.001	0.0010	mg/l	EPA 200.8	9/23/19 19:24	AJD

**Sample Number:** 003  
**Sample Description:** MUSIC CORRIDOR BUBBLER  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:04

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.220	0.0010	mg/l	EPA 200.8	9/23/19 19:25	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:25	AJD

**Sample Number:** 004  
**Sample Description:** BOYS BATHROOM MUSIC ROOM  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.650	0.0010	mg/l	EPA 200.8	9/23/19 19:26	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:26	AJD

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Project Name/PWS ID: CARVER MIDDLE HIGH SCHOOL PWSID #4052064

**Sample Number:** 005  
**Sample Description:** MUSIC ROOM SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:06

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.223	0.0010	mg/l	EPA 200.8	9/23/19 19:30	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:30	AJD

**Sample Number:** 006  
**Sample Description:** ROOM 104 SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:09

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.222	0.0010	mg/l	EPA 200.8	9/23/19 19:31	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:31	AJD

**Sample Number:** 007  
**Sample Description:** ROOM 106 SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:12

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.386	0.0010	mg/l	EPA 200.8	9/23/19 19:32	AJD
Lead	0.002	0.0010	mg/l	EPA 200.8	9/23/19 19:32	AJD

**Sample Number:** 008  
**Sample Description:** TEACHERS ROOM SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:18

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.321	0.0010	mg/l	EPA 200.8	9/23/19 19:34	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:34	AJD

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**Sample Number:** 009  
**Sample Description:** 2ND FLOOR STAFF SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:19

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.068	0.0010	mg/l	EPA 200.8	9/23/19 19:35	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:35	AJD

**Sample Number:** 010  
**Sample Description:** 2ND FLOOR BUBBLER  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:22

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.228	0.0010	mg/l	EPA 200.8	9/23/19 19:36	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:36	AJD

**Sample Number:** 011  
**Sample Description:** ROOM 206 SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:24

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.700	0.0010	mg/l	EPA 200.8	9/23/19 19:37	AJD
Lead	0.006	0.0010	mg/l	EPA 200.8	9/23/19 19:37	AJD

**Sample Number:** 012  
**Sample Description:** C 2ND FLOOR BUBBLER  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:28

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.407	0.0010	mg/l	EPA 200.8	9/23/19 19:39	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:39	AJD

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**Sample Number:** 013  
**Sample Description:** B 2ND FLOOR BUBBLER  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.390	0.0010	mg/l	EPA 200.8	9/23/19 19:40	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:40	AJD

**Sample Number:** 014  
**Sample Description:** C TECH ROOM SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.213	0.0010	mg/l	EPA 200.8	9/23/19 19:41	AJD
Lead	0.002	0.0010	mg/l	EPA 200.8	9/23/19 19:41	AJD

**Sample Number:** 015  
**Sample Description:** LAB WORK SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:37

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.217	0.0010	mg/l	EPA 200.8	9/23/19 19:45	AJD
Lead	0.002	0.0010	mg/l	EPA 200.8	9/23/19 19:45	AJD

**Sample Number:** 016  
**Sample Description:** RM 232 SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.587	0.0010	mg/l	EPA 200.8	9/23/19 19:46	AJD
Lead	0.007	0.0010	mg/l	EPA 200.8	9/23/19 19:46	AJD

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**Sample Number:** 017  
**Sample Description:** GYM LOBBY BUBBLER  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:44

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.312	0.0010	mg/l	EPA 200.8	9/23/19 19:48	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:48	AJD

**Sample Number:** 018  
**Sample Description:** GYM REAR BUBBLER  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:46

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.410	0.0010	mg/l	EPA 200.8	9/23/19 19:49	AJD
Lead	0.001	0.0010	mg/l	EPA 200.8	9/23/19 19:49	AJD

**Sample Number:** 019  
**Sample Description:** GIRLS LOCKER ROOM SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:48

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.411	0.0010	mg/l	EPA 200.8	9/23/19 19:50	AJD
Lead	0.001	0.0010	mg/l	EPA 200.8	9/23/19 19:50	AJD

**Sample Number:** 020  
**Sample Description:** KITCHEN SINK  
**Sample Type :** GRAB  
**Sample Date / Time :** 9/16/2019 @ 07:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Total Metals Analyzed by ICPMS						
Copper	0.292	0.0010	mg/l	EPA 200.8	9/23/19 19:51	AJD
Lead	<0.0010	0.0010	mg/l	EPA 200.8	9/23/19 19:51	AJD

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION CERTIFICATION SUMMARY****MICROBIOLOGY****(Warwick and Hudson Laboratories)****Non-Potable Water**

<i>Warwick only</i> Fecal Coliform (Wastewater)	SM 9221E
Fecal Coliform (Wastewater) *	SM 9222D
<i>Hudson only</i> E. coli (Ambient, Waste Water)	SM 9223B
Enterococci (Ambient, Source Water) *	Enterolert

**Potable Water**

Heterotrophic Plate Count *	SM 9215B
Total Coliform - Water Treatment and Distribution (P/A) *	SM 9222B, SM 9223
<i>Hudson only</i> Total Coliform (Source Enumeration)	SM 9223B
E. coli - Treatment and Distribution (P/A), Source Enumeration *	SM 9223, SM 9222G, SM 9223B
Enterococci - Source (P/A) *	Enterolert

\* Indicates certification at both laboratory locations

**CHEMISTRY****(Warwick Laboratory Only)****Non-Potable Water**

Specific Conductivity	EPA 120.1
Iron, Titanium, Hardness (CaCO <sub>3</sub> ); Total, Calcium, Magnesium, Sodium, Potassium	EPA 200.7
Aluminum, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc	EPA 200.7, EPA 200.8
Mercury	EPA 245.1
Nitrate, Sulfate, Chloride, Fluoride	EPA 300.0
Ammonia	EPA 350.1, SM 4500-NH <sub>3</sub> -B,H
Phenolics, Total	EPA 420.1
Polychlorinated Biphenyls (Oil)	EPA 600/4-81-045
Chlordane, Toxaphene, Aldrin, Alpha-BHC, Beta-BHC, Gamma-BHC, Delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Sulfate, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, Polychlorinated Biphenyls (Water)	EPA 608.3
Volatile Halocarbons, Volatile Aromatics	EPA 624.1
SVOC- Acid Extractable, SVOC- Base/Neutral Extractable	EPA 625.1
Oil and Grease	EPA 1664
Alkalinity; Total	SM 2320B
Non-Filterable Residue	SM 2540D
Chloride	SM 4500-CL-B
Chlorine, Total Residual	SM 4500-CL-G
Cyanide, Total	SM 4500-CN,E
Fluoride	SM 4500-F-B,D
pH	SM 4500-H-B
Kjeldahl Nitrogen	SM 4500-NORG-D
Orthophosphate	SM 4500-P-E
Phosphorous, Total	SM 4500-P-B,E
Biochemical Oxygen Demand	SM 5210B
Chemical Oxygen Demand	SM 5220D
Total Organic Carbon	SM 5310C

**Potable Water**

Turbidity	EPA 180.1
Sodium, Calcium	EPA 200.7
Barium, Beryllium, Cadmium, Chromium, Copper, Nickel, Silver	EPA 200.7, EPA 200.8
Antimony, Arsenic, Lead, Selenium, Thallium	EPA 200.8
Mercury	EPA 245.1
Nitrate-N, Nitrite-N, Fluoride, Sulfate	EPA 300.0
Volatile Organic Compounds, Trihalomethanes	EPA 524.2
Haloacetic Acids	EPA 552.2
Alkalinity, Total	SM 2320B
Total Dissolved Solids	SM 2540C
Chlorine, Free Residual	SM 4500-CL-G
Cyanide, Total	SM 4500-CN-C,E
pH	SM 4500-H-B

*Please Note: MA DEP does not offer certification for the soil/solid matrices or SW-846 methods.*