



October 5, 2020

Mr. Tim Gehring
Director of Facilities Management
Worthington City School District
250 East Wilson Bridge Road
Worthington, Ohio 43085

**Re: Report of Findings for the *Legionella* Environmental Sampling
Facility: Worthington Park Elementary School
Address: 500 Park Rd, Westerville, OH 43081
Sample Date: September 24, 2020
L&A Project No: 20-0441**

Dear Mr. Gehring,

Lawhon & Associates, Inc. (L&A) performed environmental sampling to document concentrations of *Legionella* in the building's domestic water system. This testing was performed as a proactive measure to ensure *Legionella* concentrations are at acceptable levels following a period of reduced occupancy. L&A's conclusions and recommendations relevant to the sampling performed are presented in this document.

METHODOLOGY

L&A performed environmental sampling for *Legionella* at the site on September 24, 2020. Field activities included a visual assessment of conditions, documentation of water temperatures and the collection of representative water samples for analysis to document *Legionella* concentrations. All activities were performed in accordance with recommendations published by OSHA, AIHA, CDC and current infection control literature. The samples were sent cold, by overnight mail, to U.S. Micro-Solutions, Inc, Greensburg, Pennsylvania for analysis by culture method. This lab is certified to perform *Legionella* analysis through the Centers for Disease Control (CDC) Environmental *Legionella* Isolation Techniques Evaluation (Elite) Certification Program. U.S. Micro-Solutions, Inc. is also accredited by the American Industrial Hygiene Association (AIHA) through the Environmental Microbiology Proficiency Analytical Testing (EMPAT) Program.

FINDINGS

L&A collected nine (9) water samples from the domestic water system on this date. A summary of the analytical results is presented in Table 1. The comprehensive data set is presented in Appendix A. A copy of the laboratory report is included as Appendix B.

Table 1: Domestic Water Sampling Results

Location	Fixture	Water Source	Analytical Data (CFU/ml)
Boiler Room	Hot Water Tank	Hot	ND
Kitchen	Faucet	Hot	ND
Dining Room Corridor	Bottle Filling Station	Cold	ND
Classroom 29B	Faucet	Hot	ND
Restroom	Faucet	Hot	ND
Classroom 21B	Faucet	Hot	ND
Classroom 15B	Faucet	Hot	ND
Room 37 (Art Room)	Faucet	Hot	ND
Admin Nurse Station	Faucet	Hot	ND
1. ND. <i>Legionella</i> species were not present above detection limits for the analytical method used. 2. OSHA recommends <i>Legionella</i> concentrations be maintained below 10 CFU/ml at domestic water outlets.			

CONCLUSIONS

L&A conducted representative sampling of the domestic water system servicing Worthington Park Elementary School. As illustrated in Table 1, analytical results indicate that *Legionella* was not detected at the representative domestic water outlets sampled. No further action is recommended.

CLOSURE

L&A has prepared this report for your use in accordance with generally accepted inspection and testing practices. The information obtained in this report is site and time specific and pertains to this project only. This inspection evaluated the conditions that were readily accessible at the time of the investigation of the subject property and does not warrant against hidden conditions or future alteration of conditions at the site, as well as subsequent changes in regulations. The opinions expressed in this report are based on L&A's experience, relevant literature and available information.

This report was prepared for the exclusive use of the Worthington City School District. No other party may rely on this report unless expressly designated by the Client in writing. The use of the report is subject to the limitations and exceptions set forth in this report, as well as the terms and conditions contained in the original contract documents. L&A will not distribute or publish this report without the Client's consent, except as required by law or court order.

Thank you for the opportunity to assist you in this important matter. If you have any questions concerning this report, please contact Karrie Bontrager at (614) 481-8600, extension 136.

Sincerely,

A handwritten signature in black ink, appearing to read 'Karrie A. Bontrager', written in a cursive style.

Karrie A. Bontrager, LEED AP
Principal and Sr. Microbiologist

APPENDIX A
Comprehensive Data Set

Table A1: Summary of Water Sampling Data (September 24, 2020 Sampling Event)

Sample Information						Analytical Results	
Location	Concentration (CFU/ml)	Species	Sample ID	Sample Type	Temperature (°F)	Concentration (CFU/ml)	Species
Boiler Room	Hot Water Tank	Hot	W-WPE-1	First Draw	--	--	None Detected
Kitchen	Faucet	Hot	W-WPE-2	Flush	135.6	--	None Detected
Dining Room Corridor	Bottle Filling Station	Cold	W-WPE-3	First Draw	59.4	--	None Detected
Classroom 29B	Faucet	Hot	W-WPE-4	Flush	125.4	--	None Detected
Restroom	Faucet	Hot	W-WPE-5	Flush	69.4	--	None Detected
Classroom 21B	Faucet	Hot	W-WPE-6	Flush	120.4	--	None Detected
Classroom 15B	Faucet	Hot	W-WPE-7	First Draw	72.6	--	None Detected
Room 37 (Art Room)	Faucet	Hot	W-WPE-8	Flush	128.8	--	None Detected
Admin Nurse Station	Faucet	Hot	W-WPE-9	Flush	125.4	--	None Detected

1. Flush Samples. Sample was collected after the fixture had run for one minute.
2. First Draw. Sample was collected immediately after the fixture was turned on.
3. None detected. No *Legionella* species isolated at seven days of culture.

APPENDIX B
Laboratory Analytical Report



Customer Name:	Lawhon & Associates	Sample Date:	September 24, 2020
Customer Address:	1441 King Avenue Columbus, OH 43201	Date Received:	September 25, 2020
		Date of Report:	October 5, 2020
Customer Phone:	(614) 481-8600	Fax:	(614) 481-8610
PO Number:		Attention:	Matt Geiger
		Analysis Date:	September 25, 2020
Project Name/Number:	20-0441 Worthington CSD - Worthington Park Elementary School	Sample Time:	0830
		Analysis Time (hrs):	30.7

Customer sample numbers below are uniquely identified by prefixing Laboratory # 98160-20

Water/Liquid Sample(s) for Legionella Culture - Analytical Method MIC 06 MIC 07 (ISO 11731:2017)

Sample Number	Media	Sample Description	Results of Microbial Analysis
W-WPE-1	BCYE/GPCV	Boiler Room - Hot Water Tank - Hot - First Draw	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected
W-WPE-2	BCYE/GPCV	Kitchen - Faucet - Hot - Flush	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected
W-WPE-3	BCYE/GPCV	Dining Room Corridor - Bottle Filling Station - Cold - First Draw	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected
W-WPE-4	BCYE/GPCV	Classroom 29B - Faucet - Hot - Flush	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected
W-WPE-5	BCYE/GPCV	Restroom - Faucet - Hot - Flush	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected
W-WPE-6	BCYE/GPCV	Classroom 21B - Faucet - Hot - Flush	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected

Notes:

CFU/mL = colony forming units per milliliter, AS = analytical sensitivity.
 Results are reported as Positive or Not Detected.

A negative culture for *Legionella* spp. from a sample does not necessarily rule out its presence.
 Results relate only to the samples tested. Results are reported as calculated. For biological data, the first and/or second digit should be considered significant.

When providing duplicates of this report, the document should be provided in total and not in section in accordance with AIHA-LAP, LLC. Any unauthorized or improper disclosure, copying, distribution, use, or falsification of these results is prohibited. USMS shall have no liability to the Customer or the Customer's customer for opinions stated, recommendations made, actions taken, or conduct implemented based on the test results reported.

Technical Manager: Sharon Danko
 Sharon Danko, AS, MLT (ASCP)

Contact: Sharon Danko, Technical Manager: 724-853-4047



Customer Name:	Lawhon & Associates	Sample Date:	September 24, 2020
Customer Address:	1441 King Avenue Columbus, OH 43201	Date Received:	September 25, 2020
		Date of Report:	October 5, 2020
Customer Phone:	(614) 481-8600	Fax:	(614) 481-8610
PO Number:		Attention:	Matt Geiger
		Analysis Date:	September 25, 2020
Project Name/Number:	20-0441 Worthington CSD - Worthington Park Elementary School	Sample Time:	0830
		Analysis Time (hrs):	30.7

Customer sample numbers below are uniquely identified by prefixing Laboratory # 98160-20

Water/Liquid Sample(s) for *Legionella* Culture - Analytical Method MIC 06 MIC 07 (ISO 11731:2017)

Sample Number	Media	Sample Description	Results of Microbial Analysis
W-WPE-7	BCYE/GPCV	Classroom 15B - Faucet - Hot - First Draw	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected
W-WPE-8	BCYE/GPCV	Room 37 (Art Room) - Faucet - Hot - Flush	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected
W-WPE-9	BCYE/GPCV	Admin Nurse Station - Faucet - Hot - Flush	
AS = 0.5 CFU/mL (Volume examined: 100 mL)			Not Detected

Notes:

CFU/mL = colony forming units per milliliter, AS = analytical sensitivity.
 Results are reported as Positive or Not Detected.

A negative culture for *Legionella* spp. from a sample does not necessarily rule out its presence.
 Results relate only to the samples tested. Results are reported as calculated. For biological data, the first and/or second digit should be considered significant.

When providing duplicates of this report, the document should be provided in total and not in section in accordance with AIHA-LAP, LLC. Any unauthorized or improper disclosure, copying, distribution, use, or falsification of these results is prohibited. USMS shall have no liability to the Customer or the Customer's customer for opinions stated, recommendations made, actions taken, or conduct implemented based on the test results reported.

Technical Manager: Sharon Danko
 Sharon Danko, AS, MLT (ASCP)

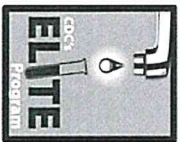
Contact: Sharon Danko, Technical Manager: 724-853-4047

End of Report



U.S. Micro-Solutions, Inc.

302 Unity Plaza
Latrobe, PA 15650
P: 724-853-4047 F: 724-853-4049
supplies@usmslab.com



LEGIONELLA / WATER TEST REQUEST - CHAIN OF CUSTODY

CUSTOMER NAME: Lawhon & Associates

PHONE #: 614-481-8600

FAX #: 614-481-8610

ADDRESS: 1441 King Avenue

CITY: Columbus

STATE: Ohio

ZIP: 43201

ATTENTION TO: Karrie Bontrager & Matt Geiger

E-MAIL: kbontrager@lawhon-assoc.com & mgeiger@

SAMPLE OBTAINED BY: Matt Geiger

RESULTS: FAX EMAIL

PROJECT NAME/NUMBER: 20-0441 Worthington CSD - Worthington Park Elementary School

PO#

SAMPLES: 9

Samples collected in New York state? Yes No

SAMPLE NUMBER	SAMPLE DATE / TIME	SAMPLE LOCATION AND DESCRIPTION	WATER		POTABLE WATER		TEST TYPE		LAB USE ONLY		
			SWAB	YES	NO	LEGIONELLA	Heterotrophic Plate Count	Chlorine (ppm)	Temperature (°C)		
W-WPE-1	9/24/2020 8:30am-10:30am	Boiler Room - Hot Water Tank - Hot - First Draw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
W-WPE-2	9/24/2020 8:30am-10:30am	Kitchen - Faucet - Hot - Flush	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
W-WPE-3	9/24/2020 8:30am-10:30am	Dinning Room Corridor - Bottle Filling Station - Cold - First Draw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
W-WPE-4	9/24/2020 8:30am-10:30am	Classroom 29B - Faucet - Hot - Flush	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
W-WPE-5	9/24/2020 8:30am-10:30am	Restroom - Faucet - Hot - Flush	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
W-WPE-6	9/24/2020 8:30am-10:30am	Classroom 21B - Faucet - Hot - Flush	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
W-WPE-7	9/24/2020 8:30am-10:30am	Classroom 15B - Faucet - Hot - First Draw	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
W-WPE-8	9/24/2020 8:30am-10:30am	Room 37 (Art Room) - Faucet - Hot - Flush	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
W-WPE-9	9/24/2020 8:30am-10:30am	Admin Nurse Station - Faucet - Hot - Flush	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

RELINQUISHED BY - CUSTOMER (MUST SIGN)
M. Geiger

DATE AND TIME
9/24/2020 @ 4:00pm

Analyst Initials

RECEIVED BY - LAB USE ONLY

DATE AND TIME

LABORATORY NUMBER

09155000 1045

08100020