



2150 Smithtown Ave., Suite 3, Ronkonkoma, NY 11779
T: 631.580.3191 • F: 631.580.3195 • W: envirohealth.org

November 24, 2020

Mr. Michael Falcone
Greenburgh Central School District
475 West Hartsdale Avenue
Hartsdale, NY 10530

Re: **Districtwide Legionella Water Testing**

Dear Mr. Falcone,

At the request of Greenburgh Central School District, Enviroscience Consultants, Inc. performed limited potable water testing of the district's various school buildings. The intent of the testing was to characterize the potential for the presence of Legionella within each building's water systems. Sampling was performed at up to five different locations within each building to screen for Legionella. Locations tested include;

- Last point on hot water system
- Ice machine
- Last point drinking water fountain/bottle filling station
- Kitchen hot water faucet
- Hot water storage tank(s)

Initial testing was performed on Tuesday, October 6th, by Drew Cheskin & Marvin Luccioni. 1000 ml, sterile containers were used to collect samples from each applicable outlet, which were then placed on ice for delivery to the laboratory for analysis. Testing was performed at six different facility buildings;

- Woodlands Middle/High School (Five samples)
- Early Childhood Program (Three samples - no ice machine, no drinking fountain/bottle filler)
- Welcome Center (Two samples - no ice machine, no drinking fountain/bottle filler, no kitchen)
- Richard J. Bailey Elementary School (Four samples - no ice machine)
- Lee F. Jackson Elementary School (Four samples - no ice machine)
- Highview Elementary School (Four samples - no ice machine)

Results from the initial testing revealed three samples which contained detectable levels of Legionella. After corrective actions were taken by the district, Drew Cheskin performed follow-up testing of the following locations on Wednesday, October 21st;

- Woodlands Middle/High School (retest of kitchen hot water faucet and last point on hot water system)
- Richard J. Bailey Elementary School (retest of hot water storage tank)

Results from the follow-up testing revealed a single location still contained detectable levels of Legionella. After an additional round of corrective actions by the district, Drew Cheskin performed a third round of testing at the following location on Monday, November 9th;

- Richard J. Bailey Elementary School (retest of hot water storage tank)



Results of this third round of testing did not identify any detectable level of Legionella in the hot water storage tank at Richard J. Bailey Elementary School.

Please see attached chains of custody and sample results for each building and round of sampling performed for this project.

Should you have any questions about these results, please do not hesitate to contact Glenn Neuschwender at 631-831-1648.

Sincerely,

A handwritten signature in blue ink, appearing to read "D Cheskin", with a long horizontal flourish extending to the right.

Drew Cheskin



EMSL Analytical, Inc.

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EMSL Order: 032018478
 Customer ID: EVRO50
 Customer PO:
 Project ID:

Attention: ANDREW CHESKIN
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Project: DISTRICT WIDE LEGIONELLA WATER TESTING/ 20251 Woodlands Middle School/High School

Legionella Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other *Legionella* species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
MSHS01 - KITCHEN - HOT WATER 032018478-0001	Potable	1000	1000	Concentrated (Acid)	<i>Legionella</i> sp. (not <i>L. pneumophila</i>)	2	0.50	2.50
MSHS02 - KITCHEN- ICE MACHINE 032018478-0002	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
MSHS03 - BOILER ROOM - HOT WATER TANK 032018478-0003	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
MSHS04 - GYM - BOTTLE FILLER 032018478-0004	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
MSHS05 - SPORTS LOCKER - SINK HOT WATER 032018478-0005	Potable	1000	1000	Concentrated (Heat)	<i>Legionella</i> sp. (not <i>L. pneumophila</i>)	20	0.05	0.05

Aaron Patak, Microbiology Laboratory Director
 or other Approved Signatory

Legionella identification is carried out using individual direct fluorescent antibodies (DFA) for 11 *Legionella* species and their serotypes: *L. anisa*, *L. bozemanii* (sero 1 & 2), *L. dumoffii*, *L. gormanii*, *L. jordanis*, *L. longbeachae* (sero 1 & 2), *L. maceachernii*, *L. micdadei*, *L. sainthelensi*, *L. feeleii* (sero 1 & 2) and each *Legionella pneumophila* serogroup (1-14). *Legionella* spp. (not *L. pneumophila*) have tested negative by DFA for the 11 species listed above but positive with a stain for 15 *Legionella* species. *Legionella* spp. have tested negative by DFA but are positive for growth on selective media. ND = None Detected/Below LOD. The limit of detection (LOD) is the lowest reportable CFU/mL count and is dependent on the sample volume processed and the dilutions used during testing. Volume processed may be lower than volume submitted if sample is turbid or contains components that restrict concentration of the sample. Volume examined is the calculated amount of the original sample that is plated for culture analysis. High bacterial counts (*Legionella* or otherwise) may require dilution of the sample that will lower the Volume Examined and raise the Limit of Detection.

Samples high in non-*Legionella* bacteria may obscure the detection of *Legionella*.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

NYS ELAP # 11506 - NYS ELAP certification is applicable to the enumeration of *Legionella* spp. (NYS ELAP certification does not apply to *Legionella* species identification); CDC ELITE certified; AIHA-LAP, LLC--EMLAP Lab 102581

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 Project: DISTRICT WIDE LEGIONELLA WATER TESTING / 20251 Early Childhood Program

Legionella Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other *Legionella* species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
ECP-01 - BOILER ROOM- HOT WATER TANK 032018481-0001	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
ECP-02 - KITCHEN - HOT WATER 032018481-0002	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
ECP-03 - MAIN OFFICE BATHROOM - HOT WATER 032018481-0003	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND

Aaron Patak, Microbiology Laboratory Director
 or other Approved Signatory

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Project: DISTRICT WIDE LEGIONELLA WATER TESTING/ 20251

Welcome Center

Legionella Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other *Legionella* species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
WC-01 - BASEMENT - HOT WATER TANK 032018482-0001	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
WC-02 - 2ND FLOOR - BATHROOM HOT WATER 032018482-0002	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND

Aaron Patak, Microbiology Laboratory Director
 or other Approved Signatory

Legionella identification is carried out using individual direct fluorescent antibodies (DFA) for 11 *Legionella* species and their serotypes: *L. anisa*, *L. bozemanii* (sero 1 & 2), *L. dumoffii*, *L. gormanii*, *L. jordanis*, *L. longbeachae* (sero 1 & 2), *L. maceachernii*, *L. micdadei*, *L. saintelensis*, *L. feeleii* (sero 1 & 2) and each *Legionella pneumophila* serogroup (1-14). *Legionella* spp. (not *L. pneumophila*) have tested negative by DFA for the 11 species listed above but positive with a stain for 15 *Legionella* species. *Legionella* spp. have tested negative by DFA but are positive for growth on selective media. ND = None Detected/Below LOD. The limit of detection (LOD) is the lowest reportable CFU/mL count and is dependent on the sample volume processed and the dilutions used during testing. Volume processed may be lower than volume submitted if sample is turbid or contains components that restrict concentration of the sample. Volume examined is the calculated amount of the original sample that is plated for culture analysis. High bacterial counts (*Legionella* or otherwise) may require dilution of the sample that will lower the Volume Examined and raise the Limit of Detection.

Samples high in non-*Legionella* bacteria may obscure the detection of *Legionella*.

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NYS ELAP # 11506 - NYS ELAP certification is applicable to the enumeration of *Legionella* spp. (NYS ELAP certification does not apply to *Legionella* species identification); CDC ELITE certified; AIHA-LAP, LLC-EMLAP Lab 102581

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Project: DISTRICT WIDE LEGIONELLA WATER TESTING/ 20257 Richard Bailey Elementary School

Legionella Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other *Legionella* species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
B-01 - BOILER ROOM- HOT WATER TANK 032018464-0001 Legionella Pneumophila serotype 5 detected but results not cumulative	Potable	1000	1000	Concentrated (Acid)	<i>Legionella pneumophila</i> (sero 10)	2	0.50	0.50
B-02 - KITCHEN - HOT WATER 032018464-0002	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
B-03 - 3RD FLOOR - BOTTLE FILLER 032018464-0003	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
B-04 - 3RD FLOOR - BOYS BATHROOM HOT WATER 032018464-0004	Potable	1000	1000	Concentrated (Heat)	None Detected	20	0.05	ND

Aaron Patak, Microbiology Laboratory Director
 or other Approved Signatory

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Project: DISTRICT WIDE LEGIONELLA WATER TESTING/ 20251

Lee Jackson Elementary School

***Legionella* Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other *Legionella* species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)**

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
J-01 - BOILER ROOM - HOT WATER TANK 032018470-0001	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
J-02 - KITCHEN - HOT WATER 032018470-0002	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
J-03 - READING ROOM - BOTTLE FILLER 032018470-0003	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
J-04 - ROOM 1 - SINK HOT WATER 032018470-0004	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND

Ann R. H.

Aaron Patak, Microbiology Laboratory Director
or other Approved Signatory

Legionella identification is carried out using individual direct fluorescent antibodies (DFA) for 11 *Legionella* species and their serotypes: *L. anisa*, *L. bozemanii* (sero 1 & 2), *L. dumoffii*, *L. gormanii*, *L. jordanis*, *L. longbeachae* (sero 1 & 2), *L. maceachernii*, *L. micdadei*, *L. saintheniensis*, *L. feeleei* (sero 1 & 2) and each *Legionella pneumophila* serogroup (1-14). *Legionella* spp. (not *L. pneumophila*) have tested negative by DFA for the 11 species listed above but positive with a stain for 15 *Legionella* species. *Legionella* spp. have tested negative by DFA but are positive for growth on selective media. ND = None Detected/Below LOD. The limit of detection (LOD) is the lowest reportable CFU/mL count and is dependent on the sample volume processed and the dilutions used during testing. Volume processed may be lower than volume submitted if sample is turbid or contains components that restrict concentration of the sample. Volume examined is the calculated amount of the original sample that is plated for culture analysis. High bacterial counts (*Legionella* or otherwise) may require dilution of the sample that will lower the Volume Examined and raise the Limit of Detection.

Samples high in non-*Legionella* bacteria may obscure the detection of *Legionella*.

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NYS ELAP # 11506 - NYS ELAP certification is applicable to the enumeration of *Legionella* spp. (NYS ELAP certification does not apply to *Legionella* species identification); CDC ELITE certified: AIHA-LAP, LLC--EMLAP Lab 102581

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Project ID:

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Project: DISTRICT WIDE LEGIONELLA WATER TESTING/ 20251 Highview Elementary School

Legionella Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other Legionella species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
H-01 - BOILER ROOM- HOT WATER TANK 032018475-0001	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
H-02 - KITCHEN- HOT WATER 032018475-0002	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
H-03 - ROOM 15 - SINK HOT WATER 032018475-0003	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
H-04 - 2ND FLOOR @ RM 4 - BOTTLE FILLER 032018475-0004	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND

Aaron Patak, Microbiology Laboratory Director
 or other Approved Signatory

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Project ID:

Attention: ANDREW CHESKIN
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Project: DISTRICT WIDE LEGIONELLA WATER TESTING/ 20251/ GREENBURGH MIDDLE SCHOOL/ HIGH SCHOOL/ NY

Legionella Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other *Legionella* species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
MSHS01-B - KITCHEN- HOT WATER 032019540-0001	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND
MSHS05-B - SPORTS LOCKER- SINK HOT WATER IN BATHROOM 032019540-0002	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND

Aaron Patak, Microbiology Laboratory Director
or other Approved Signatory

Legionella identification is carried out using individual direct fluorescent antibodies (DFA) for 11 *Legionella* species and their serotypes: *L. anisa*, *L. bozemanii* (sero 1 & 2), *L. dumoffii*, *L. gormanii*, *L. jordanis*, *L. longbeachae* (sero 1 & 2), *L. maceachernii*, *L. micdadei*, *L. sainthelensi*, *L. feeleii* (sero 1 & 2) and each *Legionella pneumophila* serogroup (1-14). *Legionella* spp. (not *L. pneumophila*) have tested negative by DFA for the 11 species listed above but positive with a stain for 15 *Legionella* species. *Legionella* spp. have tested negative by DFA but are positive for growth on selective media. ND = None Detected/Below LOD. The limit of detection (LOD) is the lowest reportable CFU/mL count and is dependent on the sample volume processed and the dilutions used during testing. Volume processed may be lower than volume submitted if sample is turbid or contains components that restrict concentration of the sample. Volume examined is the calculated amount of the original sample that is plated for culture analysis. High bacterial counts (*Legionella* or otherwise) may require dilution of the sample that will lower the Volume Examined and raise the Limit of Detection.

Samples high in non-*Legionella* bacteria may obscure the detection of *Legionella*.

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

NYS ELAP # 11506 - NYS ELAP certification is applicable to the enumeration of *Legionella* spp. (NYS ELAP certification does not apply to *Legionella* species identification); CDC ELITE certified; AIHA-LAP, LLC--EMLAP Lab 102581

Initial report from: 11/04/2020 10:14 AM

Printed 11/04/2020 10:15 AM



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EMSL Order: 032019539

Customer ID: EVRO50

Customer PO:

Project ID:

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Phone: (631) 580-3191
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Collected Date: 10/21/2020 10:22 AM
Received Date: 10/21/2020 12:03 PM
Processed Date: 10/22/2020 12:20 PM
Analyzed Date: 11/02/2020 08:45 AM

Project: DISTRICT WIDE LEGIONELLA WATER TESTING / 20251/ GREENBURGH RICHARD BAILEY ES/ NY

Legionella Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other *Legionella* species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
B01-B - BOILER ROOM- HOT WATER TANK 032019539-0001	Potable	1000	1000	Concentrated (Acid)	<i>Legionella pneumophila</i> (sero 1)	2	0.50	17.50

Aaron Patak, Microbiology Laboratory Director
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EMSL Order: 032020780

Customer ID: EVRO50

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Collected Date: 11/09/2020 11:57 AM

Received Date: 11/09/2020 02:06 PM

Processed Date: 11/10/2020 12:08 PM

Analyzed Date: 11/20/2020 08:00 AM

Project: DISTRICT WIDE LEGIONELLA WATER TESTING - 20251

R Bailey Elementary School

Legionella Detection - ID, Enumeration, & Serotyping of *L. pneumophila* plus 10 other *Legionella* species by ISO 11731:2017 Culture Method (EMSL Test Code M343 & Method MICRO-SOP-105)

Client Sample ID/Sample Location Lab Sample Number	Sample Type	Volume Submitted (mL)	Volume Filtered (mL)	Method Processed	Identification	Volume Examined (mL)	Limit of Detection (CFU/mL)	Final Results (CFU/mL)
B01-C - BOILER RM- HOT WATER TANK 032020780-0001	Potable	1000	1000	Concentrated	None Detected	20	0.05	ND

Aaron Patak, Microbiology Laboratory Director
or other Approved Signatory

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