

Garden State Environmental
555 Broad Street Ste K
Glen Rock, New Jersey 07452
Project: **#7129 WEST ORANGE REDWOOD**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 08/02/2018
Date Received: 08/03/2018
Date Analyzed: 08/10/2018
Date Reported: 08/13/2018
Project ID: 18027421
Page 1 of 4

Client Sample #: WORES-B-HWH-01
Sample Location: BASEMENT HOT WATER HEATER
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **<1 CFU/mL**

Lab Sample #: 18027421-001

Liquid Volume: **1000 (mL)**

Organism(s) Isolated:	Raw Count	CFU/mL	% Total	MRL
Legionella pneumophila Serogroup 1	5	<1	100	0.1 CFU/mL
	5	<1	~100%	

Client Sample #: WORES-B-S-01
Sample Location: BASEMENT SINK
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-002

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-B-WM-01
Sample Location: BASEMENT WATER MAIN
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-003

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-T-S-02
Sample Location: TRAILER 700/701 GIRLS SINK
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-004

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-T-S-03
Sample Location: TRAILER 700/701 BOYS SINK
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-005

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-T-S-04
Sample Location: TRAILER 702/703 BOYS SINK
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-006

Liquid Volume: **1000 (mL)**

Garden State Environmental
555 Broad Street Ste K
Glen Rock, New Jersey 07452
Project: **#7129 WEST ORANGE REDWOOD**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 08/02/2018
Date Received: 08/03/2018
Date Analyzed: 08/10/2018
Date Reported: 08/13/2018
Project ID: 18027421
Page 2 of 4

Client Sample #: WORES-T-S-05
Sample Location: TRAILER 702/703 GIRLS SINK
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-007

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-1-S-06
Sample Location: FIRST FLOOR GIRLS BATHROOM B/W 121 + 122
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-008

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-1-S-07
Sample Location: FIRST FLOOR BOYS SINK ROOM NEXT TO 501
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-009

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-1-S-08
Sample Location: 1ST FLOOR FACULTY BATHROOM SINK
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-010

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-1-S-09
Sample Location: KITCHEN SINK ADJACENT TO OVEN
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **4 CFU/mL**

Lab Sample #: 18027421-011

Liquid Volume: **1000 (mL)**

Organism(s) Isolated:	Raw Count	CFU/mL	% Total	MRL
Legionella pneumophila Serogroup 1	40	4	100	0.1 CFU/mL
	40	4	~100%	

Garden State Environmental
555 Broad Street Ste K
Glen Rock, New Jersey 07452
Project: **#7129 WEST ORANGE REDWOOD**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 08/02/2018
Date Received: 08/03/2018
Date Analyzed: 08/10/2018
Date Reported: 08/13/2018
Project ID: 18027421
Page 3 of 4

Client Sample #: WORES-1-S-10
Sample Location: NURSE SINK
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **1 CFU/mL**

Lab Sample #: 18027421-012

Liquid Volume: **1000 (mL)**

Organism(s) Isolated:	Raw Count	CFU/mL	% Total	MRL
Legionella pneumophila Serogroup 1	11	1	100	0.1 CFU/mL
	11	1	~100%	

Client Sample #: WORES-1-S-11
Sample Location: GIRLS BATHROOM T-6
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-013

Liquid Volume: **1000 (mL)**

Client Sample #: WORES-1-S-12
Sample Location: ART ROOM
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **28 CFU/mL**

Lab Sample #: 18027421-014

Liquid Volume: **1000 (mL)**

Organism(s) Isolated:	Raw Count	CFU/mL	% Total	MRL
Legionella pneumophila Serogroup 1	275	28	100	0.1 CFU/mL
	275	28	~100%	

Client Sample #: WORES-1-WC-01
Sample Location: WATER COOLER BY MAIN OFFICE AND GYMNASIUM
Test: 1015.7, WATER, Legionella Analysis, CDC Method: SOP 2.35/SOP 2.22
- 1 LITER
Results: **No Legionella isolated**

Lab Sample #: 18027421-015

Liquid Volume: **1000 (mL)**

Garden State Environmental
 555 Broad Street Ste K
 Glen Rock, New Jersey 07452
 Project: **#7129 WEST ORANGE REDWOOD**
 Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 08/02/2018
 Date Received: 08/03/2018
 Date Analyzed: 08/10/2018
 Date Reported: 08/13/2018
 Project ID: 18027421
 Page 4 of 4

Legionella Facts

1. TESTING METHODOLOGY: Culture remains the recommended method for Legionella monitoring. Standardized culture procedures include ISO 11731: *Detection and Enumeration of Legionella* and CDC: *Procedures for the Recovery of Legionella from the Environment*.

Ref: BSR / ASHRE Standard 188P

2. *Legionella* species recovered from culture method include *Legionella pneumophila* and *Legionella* species not pneumophila. All *Legionella pneumophila* isolates are run against Serogroup 1 reagent and Serogroup 2-15 reagent. *Legionella* species not pneumophila isolates are screened in *Legionella* species reagent. (This species reagent includes *micdadei*, *bozemanii*, *dumoffi*, *longbeachae*, *jordanis*, *gormanii*, *anisa* and *feeleyi*)

3. If the final quantitative result is corrected for contamination based on the blank, the blank correction is stated in the sample comments section of the report.

Action Criteria for Legionella

<i>Legionella</i> / ml	Cooling Towers and Evaporative Condensers	Suggested Remedial Action: Potable Water	Humidifier/Fogger
Detectable, but <1	1	2	3
1 - 9	2	3	4
10 - 99	3	4	5
100 - 999	4	5	5
≥ 1,000	5	5	5

Remedial Actions:

Level 1:

Review routine maintenance program recommended by the manufacturer of the equipment to ensure that the recommended program is being followed. The presence of barely detectable number of Legionella represents a low level of concern.

Level 2:

Implement action 1. Conduct follow-up analysis after a few weeks for evidence of further Legionella amplification. This level of *Legionella* represents little concern, but the number of organisms detected indicates that the system is a potential amplifier of *Legionella*.

Level 3:

Implement action 2. Conduct review of premises for the direct and indirect bioaerosols contact with occupants and health risk status of people who may come in contact with bioaerosols. Depending on the results of the review of the premises, action related to cleaning and/or biocide treatment of the equipment may be indicated. This level of *Legionella* represents a low but increased level of concern.

Level 4:

Implement action 3. Cleaning and/or biocide treatment of the equipment is indicated. This level of *Legionella* represents a moderately high level of concern, since it is approaching levels that may cause outbreaks. It is uncommon for samples to contain number of *Legionella* that fall in this category.

Level 5:

Immediate cleaning and/or biocide treatment of the equipment is definitely indicated. Conduct post treatment analysis to ensure effectiveness of the corrective action. The level of *Legionella* represents a high level of concern, since it poses the potential for causing an outbreak. It is very uncommon for samples to contain number of *Legionella* that fall in this category.

Ref: *Legionella*: Current Status and Emerging Perspectives: Barbaree, Breiman, Dufour: ASM



Suzanne S. Blevins

Suzanne S. Blevins, B.S., SM (ASCP)
 Laboratory Director