



West Orange Public Schools
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Superintendent of Schools

J. Scott Cascone, Ed. D.

October 15, 2019

Dear Edison Parents, Guardians, and Caregivers,

The district administration and Omega Environmental have worked to develop a water management plan at Edison Middle School as it relates to legionella. I am glad to provide you with details concerning:

- Remediation measures taken to date
- Water management plan moving forward
- Conclusions
- All test results including most recent

This information should serve to put your minds at ease and bring some closure to this matter. There is nothing more important than the health and safety of our students and staff and I thank you for your patience and understanding during the remediation process.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Scott Cascone", is positioned below the word "Sincerely,".

J. Scott Cascone, Ed. D.
Superintendent

Enclosures

JSC/eah

Edison Central Six School

Legionella Remediation and Water Management Plan

Remediation

Legionella identified in the building plumbing system through testing in August 2019.

Chlorination of the plumbing system and follow up lab testing with results in October and November 2018.

Filters installed on water fountains and showers in November 2018.

Lab testing and results in November 2018.

Chlorination of the plumbing system and follow up lab testing with results in August 2018.

Legionella bacteria in the plumbing system is at a minimum.

Legionella bacteria in the water fountain is non detected.

Water Management Plan

Maintain hot water tank temperature at 140 degrees. Monitor and ensure that water supply temperatures are at the 140-degree set point. Flush and clean the hot water tank annually.

Continue plumbing system inspections. Identify dead-end piping and make repairs by eliminating dead-end piping.

Maintain removal of aerators from sink faucets. Where aerators must remain clean the aerators on an annual basis.

Maintain existing filters on shower heads. Filters will be changed according to the manufacturer's recommendations.

Maintain existing filters on water fountains. Filters will be changed according to the manufacturer's recommendations.

Flush the hot and cold domestic water system during inactive periods (school shut down). Flushing will be done twice a week during these shut down periods.

Summer once a month (July and August)

Christmas break

Spring break

Conclusion

The West Orange School District has remediated legionella bacteria in the plumbing piping in the Edison Central Six school down to a minimal level. Legionella in the water fountains is non detected.

The District will maintain the Water Management Plan that is designated for Edison school.

Follow up legionella bacteria testing will be conducted annually to ensure that the Water Management Plan is working and that we are maintaining non detected or minimal levels of the legionella bacteria in the plumbing system.

Edison Middle School Legionella Results Summary									
Sample ID	Location	Initial Sampling Results in CFU/ml	Chlorination	First Post Remediation Results in CFU/ml	Additional Remediation	Second Post Remediation Results in CFU/ml	Additional Remediation	Third Post Remediation Results in CFU/ml	Chlorination Sampling Results in CFU/ml
		GSE - Sampled on 8/29/18	Clarity chlorinated the entire system on 10/6/18	GSE sampled on 10/10/18	Clarity - Second Chlorination on 11/1/18	GSE Sampled on 11/5/18	Nephros filters - installed 11/30/18	OMEGA Sampled on 1/3/19	OMEGA Sampled on 8/28/19
EMS-B-WM-01	Room B4 Water Main	ND		Legionella (b-m) Species: 0.3		ND		ND	ND
EMS-B-HWH-01	Boiler Room Hot Water Heater	ND		Legionella pneumophila SG-1: 0.1		Legionella pneumophila SG-1: 0.4		Legionella pneumophila SG-6: 0.3	ND
EMS-B-HWH-02	Kitchen Hot Water Heater	Legionella pneumophila SG-6: 0.8 Legionella (b-m) Species: 0.6 Total: 1.4		Legionella pneumophila SG-6: 0.8 Legionella (b-m) Species: 0.6 Total: 1.4		Legionella pneumophila SG-1: 23		ND	Fountain Removed 5/4/19. Being replaced.
EMS-1-S-01	Room 116 - Cluster of Sinks by door, second from the left	Legionella pneumophila SG-6: 16.0		Legionella pneumophila SG-6: 1.1 Legionella (b-m) Species: 2.8 Total: 3.9		Legionella (b-m) Species: 5.7	Yes		
EMS-1-S-02	Girls Restroom - First Floor - first sink, right side	Legionella pneumophila SG-6: 1.6		Legionella pneumophila SG-6: 0.6		Legionella pneumophila SG-6: 1.5	Yes		
EMS-1-S-03	Faculty Restroom sink next to the Stage	Legionella pneumophila SG-6: 0.9 Legionella (b-m) Species: 0.2 Total: 1.1		ND					

EMS-2-S-04	Girls RestRoom - Second Floor - second sink, left side	<i>Legionella pneumophila</i> SG-6: 0.8		<i>Legionella pneumophila</i> SG-6: 0.2 <i>Legionella</i> (b-m) Species: 2.2 Total: 2.4		<i>Legionella pneumophila</i> SG-6: 0.3 <i>Legionella</i> (b-m) Species: 1.7 Total: 2.0	Yes	<i>Legionella pneumophila</i> SG-6: 80		
EMS-2-S-05	Room 216 Sink	<i>Legionella pneumophila</i> SG-1: 0.2 <i>Legionella</i> (b-m) Species: 1.3 Total: 1.5		<i>Legionella pneumophila</i> SG-6: 0.1		<i>Legionella pneumophila</i> SG-1: 2.5	Yes	<i>Legionella pneumophila</i> SG-6: >42		ND
EMS-2-S-06	Room 201, Sink closest to Prep Room	ND		<i>Legionella pneumophila</i> SG-1: 0.3 <i>Legionella</i> (b-m) Species: 0.2 Total: 0.5		<i>Legionella</i> (b-m) Species: 1.5	Yes	<i>Legionella pneumophila</i> SG-1: 1.2 <i>Legionella</i> (b-m) Species: 3.6 Total: 4.8		
EMS-2-S-07	Room 205	<i>Legionella pneumophila</i> SG-6: 13.0		<i>Legionella pneumophila</i> SG-6: 0.6 <i>Legionella</i> (b-m) Species: 1.2 Total: 1.8		<i>Legionella</i> (b-m) Species: 2.4	Yes	<i>Legionella pneumophila</i> SG-6: 0.2 <i>Legionella</i> (b-m) spp *: >43 Total: >43		
190104-05-034	Room B4 Water Main after Sprinkler Branch CW							<i>Legionella</i> (b-m) spp *: 4		
190104-05-036	Boiler Room Hot Water Heater Return							<i>Legionella pneumophila</i> SG-6: 0.8 <i>Legionella</i> (b-m) spp *: 0.1 Total: 0.9		ND
190104-05-038	Art Rm 116 Left Sink by American Flag HW							<i>Legionella pneumophila</i> SG-6: >44		ND

190104-05-039	Girls Locker Rm Coaches Off sink by Gym HW							<i>Legionella pneumophila</i> SG-6: >43		ND
190104-05-040	Boys Locker Rm Coaches Off sink HW							<i>Legionella pneumophila</i> SG-6: 6.7 <i>Legionella</i> (b-m) spp. *: >43 Total: >50		ND
190104-05-041	Main FI Water Fountain Bottle Fill by Gym CW							<i>Legionella</i> (b-m) spp. *: 0.4		
190104-05-042	Main FI Girls RR HW/CW Sink from Right HW							<i>Legionella pneumophila</i> SG-6: >43		
190104-05-043	Main FI Principal Sink Bottom HW							<i>Legionella pneumophila</i> SG-6: 21 <i>Legionella</i> (b-m) spp. *: 0.3 Total: 21.3		ND
190104-05-044	2nd FI Nurse Off Sink HW							<i>Legionella pneumophila</i> SG-6: >44		<i>Legionella</i> (b-m) spp. *: 0.1
190104-05-046	2nd FI Men Fac RR across Rm 216 Right Sink HW							<i>Legionella pneumophila</i> SG-6: 15 <i>Legionella</i> (b-m) spp. *: 0.4 Total: 15.4		<i>Legionella pneumophila</i> SG-6: 0.1 <i>Legionella</i> (b-m) spp. *: 0.1 Total: 0.2
190104-05-047	2nd FI Water Fountain adj to Mens Fac RR CW							<i>Legionella</i> (b-m) spp. *: 0.3		
190104-05-049	2nd FI Room 200 Prep Off HW							<i>Legionella pneumophila</i> SG-6: 18		

West Orange Edison School Water Cooler Legionella Results Summary						
Sample ID	Location	Initial Sampling Results in CFU/mL	Chlorination	First Post Remediation Results in CFU/mL	WF Replace	Second Post Remediation Results in CFU/mL
		OMEGA - Sampled on 3/25/19	Clarity chlorinated the water coolers (9) on 5/4/19	OMEGA sampled on 5/8/19	J. Valente Plumbing 7/22/19	OMEGA sampled on 8/28/19
190327-08-045	Basement by Rm 108 Unit 1 of 2	<i>Legionella (b-m) spp 0.2</i>		<i>Legionella (b-m) spp 0.099</i>	7/22/2019	ND
190327-08-046	2nd Fl Hallway by Copy Rm	<i>Legionella (b-m) spp 1.6</i>		<i>Legionella (b-m) spp 0.270</i>	7/22/2019	ND
190327-08-047	2nd Fl Hallway across Rm 210	<i>Legionella (b-m) spp 4.6</i>		<i>Legionella (b-m) spp 0.090</i>	7/22/2019	ND
190327-08-048	2nd Fl Hallway across Rm 216	<i>Legionella (b-m) spp 23</i>	Fountain Removed 5/4/19. Being replaced.	WF Removed		
190327-08-049	1st Fl Hallway by Main Office	ND		ND	7/22/2019	
190327-08-050	1st Fl Hallway by Guidance Office Rm 110	<i>Legionella (b-m) spp 2.3</i>		ND		
190327-08-051	1st Fl Hallway outside Gym	<i>Legionella (b-m) spp 0.1</i>		ND		
190327-08-052	1st Fl Gym Girls Side	ND		ND		
190327-08-053	1st Fl Gym Boys Side	<i>Legionella (b-m) spp 0.2</i>		<i>Legionella (b-m) spp 0.096</i>	7/22/2019	ND
190829-01-001	Room 4 C/W Supply Hose Bib					<i>Legionella (b-m) spp 0.1</i>