Garratt CALLAHAN

What you need to know.

ASHRAE Standard 188 for Legionellosis Risk Management for Building Water Systems

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 188 establishes minimum legionellosis risk management requirements for building water systems. Compliance is based on certain criteria. If a building meets any of the listed criteria, development of a written plan, a Water Management Program ("Program"), is required.

What is Legionellosis?

Legionellosis is the term for any disease caused by *Legionella*, a common bacteria found in natural and man-made water systems. In humans, *Legionella* can cause two types of illness; Legionnaires' Disease and a less severe illness called Pontiac Fever. Collectively these are referred to as legionellosis. The bacterium was named after a 1976 outbreak of pneumonia-like respiratory infection that afflicted more than 200 people, killing 34, attending an American Legion convention in Philadelphia.

What is Standard 188?

Standard 188 defines a specific set of practices for analyzing, monitoring, and minimizing the risk of *Legionella* in building water systems.

Why does it matter?

ASHRAE Standard 188 is of crucial importance to building owners and facility managers and their water treatment service providers. Typically, such standards are used to judge accountability. Verified, documented adherence to Standard 188 can significantly reduce the liability of building owners and operators in cases of disease outbreak.

Program Elements:

Program Team

A group or individuals designated by the building owner or designee to be responsible for developing, implementing and maintaining the Program.

Building Survey

An inventory of the building water systems, water devices, and certain factors used to determine the compliance of requirements.

Control Location

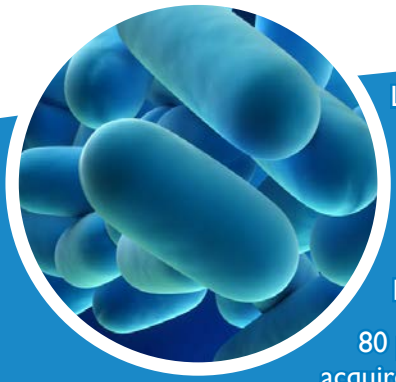
A point where a physical, mechanical, operational, or chemical control measure is required.

Verification

Initial and ongoing confirmation that the Program is being implemented as written.

Validation

Initial and ongoing confirmation that the Program, when implemented as written, effectively controls the hazardous conditions throughout the building water systems.



Legionellosis: Key Facts*

An estimated 8,000 to 18,000 people are hospitalized with Legionellosis each year in the U.S., and up to 30 percent of those cases prove to be fatal.

More than 90 percent of all cases go undetected, often misdiagnosed as common pneumonia, but with a mortality rate also thought to be in the 30 percent range.

80 percent of all cases are traced to potable water systems; 23 percent are hospital-acquired, and 77 percent are acquired in such settings as hotels, commercial and educational facilities, and industrial plants.

* Source: U.S. Centers for Disease Control

What you need to do.

The ASHRAE standard spells out the actions required in the development and documentation of your Program, as well as specific requirements for the various kinds of building water systems. The standard requires the implementation of the following elements and risk management principles to reduce the risk for legionellosis associated with building water systems.

Program Team

Identify persons responsible for Program development and implementation.

Describe Water Systems / Flow Diagrams

Describe the potable and non-potable water systems in the facility and develop water system schematics.

Analysis of Building Water Systems

Conduct a systematic analysis of hazardous conditions in the building water systems.

Control Locations

Determine the locations in the system where control measures are required.

Control Measures

Determine control measures to be applied to the control location.

Control Limits

For each control measure at each control location, establish and determine the limits including but not limited to a maximum value, minimum value or range within which a chemical or physical parameter must be monitored and maintained in order to reduce hazardous conditions to an acceptable level.

Monitoring

Establish a system for monitoring the parameters associated with the control limits established.

Corrective Actions

Establish the corrective action(s) to be taken when monitoring indicates that the control parameters are outside the established control limits.

Confirm Program Implementation (Verification)

Establish procedures to confirm that the Program is being implemented as designed.

Confirm Program Efficiency (Validation)

Establish procedures to confirm that the Program effectively controls the hazardous conditions.

Documentation and Recordkeeping

Establish documentation concerning all procedures and maintain records as appropriate:

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Water Treatment Expertise Since 1904

Content Source: 1 - Center of Disease Control, National Center for Immunization and Respiratory Diseases.

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