

Legionella Risk Management

Legionella in the Workplace

Compliance with the new Legionella laws will help employers meet their legal general duty of care obligations to employees under the *Victorian Occupational Health and Safety Act 1985* relating to control of Legionnaires' disease. Employees and Health and Safety Representatives elected under the Act can use this sheet as a guide for discussions about *Legionella* in the workplace.

Here are some important details about the Health (*Legionella*) Regulations 2001, symptoms of Legionnaires' disease and about managing the risk of *Legionella* in cooling towers.

Despite *Legionella* being widespread in the environment, the number of people who contract Legionnaires' disease is very low. Only about one in a thousand people exposed to the bacteria become ill.

Legionella Regulations

In March 2001 new regulations came into force to control *Legionella* in cooling tower systems. Under the new regulations, owners of cooling tower systems are required to:

- register their systems with the Building Control Commission;
- develop, implement and review risk management plans;
- implement improved maintenance programs; and
- keep records of maintenance and test results for audit/inspection purposes.

Managing the Risks of Legionnaire's Disease

Legionella can be managed like any other workplace risk, through a process of risk identification, assessment and control. The new *Legionella* regulations support this approach:

- **Identification.** The new *Legionella* laws require that CTS be regularly tested for Heterotrophic Colony Count (HCC). It is recommended that *Legionella* testing also form a part of the risk management plan for all cooling tower systems, as a performance indicator.

- **Assessment.** It is suggested that organisations develop plans for assessing and responding to high HCC levels and the detection of *Legionella* test results. Health and safety representatives should be consulted when developing these response plans.
- **Control.** Key elements for *Legionella* control in a cooling tower system include cleaning, control of water quality, regular maintenance, programmed system upgrading, regular inspection and record keeping.

Risk management plans must be reviewed on a regular basis, to reflect changes to the system and the surrounding environment that may alter the risks of spreading *Legionella*.

Heterotrophic Colony Counts and Legionella

Bacteria levels in these systems, measured as Heterotrophic Colony Count, can range from zero into the millions of colony forming units per ml (cfu/ml). The new laws require regular bacterial testing and that action be taken if a HCC level exceeds 100,000 cfu/ml.

It is important to note that a high bacteria count does not indicate the presence of *Legionella* and is not a public health risk.

Conversely, the detection of any *Legionella* in a system is a potential public health risk that requires rectification. Effective communication strategies also need to be implemented. High bacteria counts merely signal that the system requires intervention to lower the bacterial levels.

When a High HCC Level and/or Legionella Is Detected

Action. The Regulations set out processes to be followed in the event of high HCC levels or the presence of *Legionella* being detected. This includes additional water treatment, sampling and review of operations. Maintenance programs must also be reviewed.

Communication. This is an important tool for managing *Legionella* in the workplace. Test results, management plans and response protocol should be made available to all staff. In some workplaces, this information is openly displayed in a prominent place. It is good practice to provide information to employees on the number and location of cooling towers and what action plans are to be followed if high HCC levels and/or *Legionella* are detected.

It should be noted that employers have an obligation under the Victorian Occupational Health and Safety Act 1985 to permit health and safety representatives, where present, to have access to information relating to workplace hazards and the health and safety of employees.

Cooling Tower Systems on Neighbouring Properties

Even if your workplace does not have a cooling tower system, you may be exposed to aerosols from those on other sites nearby. Owners are not obligated to communicate test results with neighbouring landowners or occupiers. While available data shows workers at adjacent sites are not at increased risk of illness, your company management may take a proactive approach by:

- Developing a rapport with neighbours, so that they are comfortable communicating with your organisation if problems occur.
- Reducing dust generation on your site, as this will assist nearby organisations to manage their systems properly (dust provides nutrients for bacteria).
- Checking that their cooling tower system is registered with the Building Control Commission.
- Maintaining communication with workers on the status of neighbouring CTS

Employers and self-employed persons on neighboring properties do also have a duty of care to ensure that the health and safety of persons other than their employees is not affected adversely by their business activities.

Legionnaires' Disease (Legionellosis)

People catch Legionnaires' disease (Legionellosis), a rare form of pneumonia, from breathing in aerosols of water contaminated with *Legionella* bacteria. There has been no reported person-to-person spread of the disease. Most people exposed to *Legionella* do not become infected.

The risk of disease increases with age, especially amongst smokers. People with chronic medical conditions that weaken the body's immune system (such as cancer, lung disease, diabetes and transplant patients) may be at increased risk of Legionnaires' disease. Young people, especially children, rarely get Legionnaires' disease. Pregnant women are not at any greater risk than the general population.

The number of cases of Legionnaires' disease being notified to the Department of Human Services has increased over the last few years. This is probably due to improved diagnosis and testing and increased awareness of the symptoms of Legionnaires' disease amongst doctors and the general community. Despite this, the illness rate for Legionnaires' disease is still very low, approximately 0.1 per cent of people exposed.

Symptoms of Legionnaires' Disease

Early symptoms of Legionnaires' disease are often like a severe 'flu' infection:

- Fever (up to 40°C)
- Headache (often severe)
- Shortness of breath
- Sometimes a dry cough
- Chills, muscle aches and pains.

In severe cases, other systems of the body may be affected, leading to diarrhoea, vomiting, mental confusion and even kidney failure.

Further Information

Anyone concerned about *Legionella* in the workplace can contact the Legionella Risk Management Project via the Internet at <http://www.dhs.vic.gov.au/phd/lrmp> or on the *Legionella* Hotline 1800 284 898.