Technical Note

Cooling Tower Systems Land and Business Owner Responsibilities

Under the new legislation to control Legionella, both owners of land on which a cooling tower system is located and the people who own, manage or control those cooling tower systems have responsibilities to comply with requirements.

New Laws to Make Cooling Tower Systems Safer

New laws are in place to reduce the number of cases of Legionnaires’ disease caused by cooling tower systems. Property owners and people who own, manage or control cooling tower systems must comply with the:

- Building (Legionella) Act 2000
- Health (Legionella) Regulations 2001
- Plumbing (Cooling Towers) Regulations 2001
- Building (Cooling Tower Systems Register) Regulations 2001

Cooling Tower Systems and Legionnaires’ disease

Cooling tower systems are used throughout Victoria for air conditioning, refrigeration and to cool materials in industrial processes. If not properly maintained, there is a very real risk that these systems may become contaminated with Legionella bacteria and infect people with Legionnaires’ disease, a potentially fatal form of pneumonia.

A cooling tower is a device for lowering

(a) the temperature of recirculated water by bringing the water into contact with fan forced or fan induced atmospheric air; or

(b) the temperature of water, a refrigerant or other fluid in a pipe or other container by bringing recirculated water and fan forced or fan induced atmospheric air into contact with the pipe or container.

Land Owner Responsibilities

The owners of land upon which there is a cooling tower system must comply with the Building (Legionella) Act 2000.

Register the System

Landowners must ensure that all cooling tower systems are registered with the Building Control Commission. The registration must be renewed each year. The number of cooling towers in the system determines the annual fee. To register a system, send a completed application form and prescribed fee to the Building Control Commission. Application forms are available on the Internet at www.buildcc.com.au or by telephoning (03) 9285 6400.

Prepare a Risk Management Plan

Landowners must take all reasonable steps to ensure that a risk management plan (RMP) is prepared and implemented for each cooling tower system on their land. This may be satisfied through commercial lease agreements with tenants/business owner/operators. The Department of Human Services has developed A Guide to Developing Risk Management Plans for Cooling Tower Systems to assist in this process. It can be obtained from the website: www.dhs.vic.gov.au/phd/lrmp

The RMP must specify how the five following critical risk factors will be managed:

- Stagnant water
- Nutrient growth
- Poor water quality
- Deficiencies in the cooling tower
- Location of and public access to a cooling tower system

The RMP must also address any other risks posed by the proximity of vulnerable people to the system. The RMP will determine the level of maintenance to be undertaken under the Health (Legionella) Regulations 2001 by the person who owns, manages or controls the cooling tower system.

More information about cooling tower systems can be found in the pamphlet titled “What Is a Cooling Tower?” located on the Legionella Risk Management Project website www.dhs.vic.gov.au/phd/lrmp
**Existing Systems**

Systems that were in use before 1 March 2001 must prepare an RMP before the first registration renewal in 2002.

**New Systems**

An RMP must be prepared for all new cooling tower systems prior to registration with the Building Control Commission. This must occur before the system is commissioned.

**Annual Audit of Risk Management Plans**

An independent person accredited by the Department of Human Services must audit RMPs in the three months before registration expires. If the audit is satisfactory, the auditor will provide a certificate stating that the Plan complied with the Building (*Legionella*) Act 2000 and is being implemented. If the Plan fails the audit, the auditor must notify the Department of Human Services, which will investigate why the audit has failed.

**Business Owner Responsibilities**

The Health (*Legionella*) Regulations 2001 set out the responsibilities of people who own, manage or control cooling tower systems. Note that depending on individual circumstances, the identity of these people may be different from the owner of the land on which the cooling tower system is located.

These include:

- Maintenance and cleaning requirements
- Record-keeping requirements
- Monthly water testing for heterotrophic colony counts (HCC).

The regulations also set out procedures for action when the HCC is higher than acceptable, or if *Legionella* is detected. The RMP for the system (established by the landowner) may indicate that additional maintenance procedures beyond the minimum requirements of the Health (*Legionella*) Regulations 2001 are required.

Land owners and people who own, manage or control cooling tower systems will need to develop a clear understanding of their respective roles to ensure that various requirements of the *Legionella* control package are met.

**Testing for Legionella**

*Legionella* testing should be part of every organization’s approach to risk management. In the RMP guide, it is recommended that the frequency for *Legionella* testing be determined by the overall risk classification for the system.

*Legionella* testing is a performance measure and not a control measure.

**Three Keys to Success:**

**Manage The Risk**

A cooling tower system presents a risk like any other aspect of business. It should be included as a component in an overall risk management or quality assurance process for the business with performance criteria for those employed or contracted to manage the system.

**Be Aware of the Environment**

Risks posed by a cooling tower system are influenced by the system’s location. If, for example, the area near your system contains walkways, meeting places or if the people near it are susceptible to illness, greater care is needed in managing and maintaining the cooling tower system. Likewise, if the system is in a dusty area the risk of *Legionella* growing in the system may be greater.

**Communicate**

Absentee landowners should ensure there are open and frequent communications between all parties involved in maintaining cooling tower systems on their property. These groups may include the:

- Land owner
- Tenant(s)
- Property management company
- Property maintenance company
- Mechanical services contractor
- Water treatment company or companies.

Communication may involve including performance measures and targets in leases or contracts between parties and ensuring that all parties are made aware of any adverse water testing results or the need to upgrade the system.

**Failure to Comply with the New Laws**

The maximum penalty for failing to register a cooling tower system is $12 000. The maximum penalty for failing to complete a Risk Management Plan is $6 000.

If an outbreak of Legionnaires’ disease is linked to your cooling tower system, it can have devastating effects on your business. Aside from the possibility of prosecution under the Building, Health and Occupational Health and Safety Acts, legal action against you for damages suffered by individuals or other companies is also possible.

**More Information**