

COOLING TOWERS AND LEGIONELLA

Where does the Legionella bacteria come from?

How can you minimize risks of outbreaks and potential for litigation?

The Bugs

According to The NSW Code of Practice for the Control of Legionnaires' 2nd edition June 2004, Section 2.2 Habitat and proliferation:

Legionella bacteria is found naturally in moist environments such as lakes, rivers, mud and other water sources at temperatures ranging from about 5oC to 55oC. However, no case of legionnaires' has been proven to have been caused by Legionella present the natural environment. Water contaminated with Legionella presents a risk when it is dispersed into the air as an aerosol.

The major outbreaks of the disease in Sydney appear in autumn and to a slightly lesser extent in spring. This may be due to the cooling tower and water circulating pumps operating intermittently in incomplete circulation of chemicals in the system.

The research into the habitat and proliferation of the Legionella bacteria is ongoing. However. AS3666, The Public Health (Microbial Control) Regulations and The Public Health Act identifies hazards and ways they can be minimized. The measures include:

- . Proper design, installation, commissioning, operation & maintenance by experienced professionals.
- . Proper water filtration (side stream).
- . Minimising dead legs in cooling tower pipework.
- . Installation of drift eliminators.
- . Renewing outdated equipment

The Bucks

Whilst the foregoing primarily deals with minimising the bugs, there are still the ongoing costs of maintaining the cooling tower:

- Registration of the cooling tower with the local authority (local council)
- Regular mechanical maintenance.
- Regular testing of water for chemical levels, bacteria and Legionella concentrations.
- Regular washouts of the cooling tower.
- Updating operational and maintenance manuals.
- Proper record keeping and record keeping facilities.
- Safe work practices.
- Updating as installed drawings following building constructions and alterations.
- Annual certification by a properly qualified person that the disinfection meets the regulation requirements.