Procedure: Prevention of Legionnaires' disease from cooling towers

Purpose

To inform staff of the process associated with cooling towers and the prevention of Legionnaires’ disease.

Procedure

Principles

1. This procedure aims to ensure that cooling towers within the Australian National University are well managed and maintained, thus preventing bacteria (including Legionella) from reaching concentrations that may result in adverse health effects.

2. Legionella bacteria occur naturally in low concentrations in rivers, ponds, and soil. When inhaled, airborne Legionella bacteria may cause Legionnaires' disease. Legionnaires' disease is an infection of the lung that produces pneumonia that can lead to death.

3. Water-based cooling towers associated with large air-conditioning systems can provide the conditions necessary for Legionella bacteria to proliferate and be released as an inhalable mist or aerosol.

Control of risk of Legionnaires' disease

4. Minimising Legionnaires' disease risk from cooling towers shall include the following actions.

   • All cooling towers shall be under the control of Facilities and Services.

   • Where reasonably practicable, air-cooled heat exchangers shall replace water-based cooling towers. Mist eliminators should be fitted to all water cooling towers.

   • Each water-based cooling tower shall have in place engineering, chemical, maintenance and administrative control regimes in accordance with the requirements of Comcare and ACT Health, including monitoring of legionella bacteria and heterotrophic microorganisms.
• Levels of bacteria over allowed limits require notification as a dangerous occurrence through the University's OHS incident notification system. Potentially exposed staff shall then be notified by the Director.

• Maintenance schedules for each cooling tower must consider location, seasons and contamination etc.

• Cooling tower risk control procedures, including monitoring results shall be made available for inspection by relevant people including inspectors, Work Environment Group (Human Resources Division), Building and Facility managers, local OHS committees and local Health and Safety Representatives.