

Cooling Towers and Water Systems

Start-up After Gas or Electricity Restrictions

Prevention of Legionnaire's Disease

This fact sheet provides information and advice on Legionnaire's Disease for industries running cooling towers and water systems.

Warm water may encourage the growth of bacteria and other micro-organisms and, in some circumstances, may also accumulate chemical contaminants. Some systems, such as spa pools and hot tubs, may become reservoirs for infection if not treated regularly with biocide or disinfectant. Some systems, such as industrial cooling towers, have been shown to grow the bacteria which can cause Legionnaire's disease (a form of pneumonia), if not treated regularly.

a) Domestic warm water

The risk of Legionnaire's disease in domestic situations, after a system shut-down, is negligible. However, if warm water lies stagnant in pipes for days, copper (blue) or rust may begin to accumulate. It is advised as a precaution, that domestic hot water pipes be flushed for about 15–30 seconds each day, and prior to first use after gas or power is restored.

b) Commercial accommodation and hotels

Long lengths of piping holding stagnant hot/warm water have been implicated in cases of Legionnaire's disease overseas. To prevent stagnation of warm water in pipes, it is recommended that hot water taps be flushed before use, for 15–30 seconds daily and after re-start of hot water heaters.

c) Industrial systems

Cooling towers associated with industrial processes and air-conditioning units dependant on gas or electricity may be rendered inoperative in the event of a disruption to a public utility supply. This may lead to:

- the complete closure of water cooling systems; or
- the disconnection of the cooling tower from the system, with the water still being re-circulated.

Depending on the system for biocide dosing and the method of application, some industrial cooling water systems may not have been dosed with biocide. Users should consult 'Guidelines for Control of Legionnaire's Disease 1989' for advice on regular dosing of towers with biocide. It is advisable to treat cooling towers with disinfectant prior to resuming cooling tower operation, after a shut-down.