KILL LEGIONNELLA BEFORE LEGIONNAIRES DISEASE KILLS YOU

SAFETY ALERT

Legionnaires Disease is a bacterial disease which may cause pneumonia. Legionnella bacteria are commonly found in soil and do not usually present a risk. It is when the bacteria is inhaled that it can infect humans.

It does not spread from person to person. Legionnaires Disease can be a mild respiratory illness or it can be severe enough to cause death.

The disease most often affects middle-aged or older people, particularly those who drink or smoke heavily or already have an illness. The incubation period is between 2 and 10 days, but is usually 5 or 6. The early symptoms of Legionnaires Disease may be flu-like with muscle aches, headache, tiredness and dry cough, followed by shortness of breath, high fever, chills and occasionally diarrhoea, mental confusion and kidney failure.

Research shows that while the disease is usually spread through drift from the water towers, the bacteria is often concentrated in the heat exchanger, or in slime or sludge in another part of the system.

NEW COOLING TOWER SYSTEMS

Systems must be designed and installed with drift eliminators for total over-spray reduction. There should be easy and safe access for maintenance and the circulating water must be easily drainable. Before commissioning starts all components of the circulating system, including the pumps and heat exchangers must go through a total decontamination process.

PREVENTATIVE MAINTENANCE

Preventative maintenance procedures must be fully documented and must include the initial chemical start-up dosage and independent material safety data sheets (MSDS's) for any chemicals used.

All components of the circulating system must be tested at least monthly and this must include specific tests for legionella, TBC, iron, zinc and chromium. The testing must be done by a suitably trained and qualified person.

Maintenance procedures must include appropriate anti-biological treatment, which should be tested in a field situation as some are more effective than others. One recommended method involves an oxidising biocide.

Maintenance procedures must include the testing and removal of slime,

sludge and sediments. Water samples should be taken in a variety of places in towers with large sumps as pockets of the bacteria can remain after treatment. Any corrosion should also be removed. Drift eliminators must be checked for damage or algae and wet areas should be protected from sunlight to prevent the growth of algae.

Legionella bacteria can live at extreme temperatures but do not reproduce ay below 16.5^{o}C, so basin water must be kept below this temperature.

Every two months an independent, appropriately qualified consultant must perform the above tests,

A person should be nominated to be responsible for the maintenance of the systems and the results of all tests should be made available to occupational health & safety representatives.

If there is concern regarding possible legionella contamination, testing should be done daily.

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