

GUIDELINES FOR PERSONAL PROTECTION WHEN WORKING ON OR NEAR THE COOLING TOWERS

Purpose: This guideline is intended for those persons working on or near the cooling towers at the University of Ottawa. The cooling towers are located at the Power Plant, New Sports Complex, Roger Guindon and SITE. The controls are aimed at minimizing any risk of infection by *Legionella pneumophila* or commonly known as *Legionnaire's disease* or *Pontiac fever*.

Background Information: Legionnaire's disease is a lung infection precipitated by inhalation of the bacterium. Like the flu, the possibility of infection and the severity of effects depend on the health of the recipient. Smokers and the elderly who have a weakened gag reflex are more likely to aspirate any bacterium. As well, people with a weakened immune system are more likely to suffer the severest consequence of the disease. Persons who work on or near the cooling towers who develop prolonged colds or pneumonia should report to the University's Occupational Health, Disability and Leave Sector (Lise Griffith ext. 1472, rm. 017 Tabaret). Identify yourself as at legionella risk.

Prevention: Controls are the most effective measure of protection against infection; managers and staff have excellent control procedures in place to ensure there is minimal danger of the bacterium being present in active cooling towers. Good design, regular maintenance and treatment of the water with approved biocides or chlorination will kill the bacterium and inhibit any growth. These methods of treatment are also excellent as they continue to exert a residual effect on treated water in a non-active cooling tower. The last and most effective control is breathing protection for those working on or near the cooling towers.

The route of entry is aspiration, therefore personal protection other than respiratory equipment is not required. Meetings with the workers and managers and a review of the types of work procedures have produced the following **required** protective measures.

Procedure:

- **In all cases listed below the required personal protection is breathing protection. PRS has a supply of face cartridge mask available with required P-100 filters.**
- **Before beginning any work on or near the towers check with the Power Plant or lead hand of that section that the last tested chlorine levels were satisfactory**

Protection is to be worn when:

- Performing the inspection of cooling towers (ex. Inspection of gear boxes, water levels in basins, fan and reservoir operation).
- Shutting down towers for maintenance. The standing water must also be completely drained.
- Performing any cleaning procedure on the towers.
- Emergency maintenance is required and there is not sufficient time to drain out the reservoir before working on the motor or fans.

Tour groups or others in the spray of "treated water" do not require personal protection. However, please advise any visitors with weakened immune systems of the potential dangers and consequences.