

Treating *Pseudomonas Aeruginosa* in Hot Tubs

Pseudomonas Aeruginosa can survive in a hot pool and associated filtration equipment.

This micro-organism is largely responsible for eye and ear infections and skin rashes contacted from pool use. It enters the pool water through infected persons.

The conditions in a hot pool, including the high water temperature, turbulence, concentrations of hair, skin, body oils, pieces of clothing, organic matter, ammonia and other substances introduced by the users promote the growth of *Pseudomonas Aeruginosa*. These conditions also create a high chlorine demand and it becomes difficult to maintain an adequate free chlorine residual in the pool water to combat pathogens entering the pool.

Once *Pseudomonas Aeruginosa* has established its presence in a pool, the pool basin and recirculation system need to be cleaned and disinfected. The filter sand also becomes a growth area for pathogens.

Cleaning Procedure

- Turn off the pool water heater and clean the hair and lint screens.
- Back wash the filter and drain the pool.
- Fill the pool with fresh water and lower the pH to below 7.0.
- Add enough sodium hypochlorite to the pool water to obtain a free chlorine residual of about 20 mg/L.
- Operate the recirculation system, passing all the pool water through the filter 3 or 4 times.
- Operate the hydro pump, if present, for a short time.



- Back wash the filter and drain the pool.
- Wipe down the whirlpool basin with a chlorine solution.
- Fill the pool with fresh water and chemically balance the water for pH, alkalinity, hardness, and free chlorine residual.
- Operate the recirculation system and adjust the pool water balance.
- **Contact your local Health Unit for Sampling.**

Should the above method fail to eliminate *Pseudomonas Aeruginosa* from the recirculation system, the operator will need to remove all the sand from the filter, clean the filter contain and either physically clean or replace the sand.

PRECAUTION: When cleaning hot tubs contaminated with *Pseudomonas Aeruginosa*, precautions should be taken to avoid contact with contaminated surfaces. It is recommended that rubber gloves be worn, as well as appropriate clothing, so as to avoid skin contact.

March 2009