

Cleaning a Fouled Swimming Pool

Introduction

In a properly operated pool, the residual of free available chlorine which is routinely present can be expected to safeguard the health of the bathers by disinfecting the water and oxidizing traces of dirt, mucus, urine and similar contaminants. Normal chlorine levels, however, cannot cope with a pool grossly fouled by vomitus or feces. An accidental discharge of such materials into a public swimming pool requires special measures for cleansing and disinfecting the pool--and, incidentally, for cleansing and disinfecting all equipment used in the clean-up.

Cleansing Procedure

When an emission of either vomitus or feces occurs in a swimming pool, the visible matter should be removed as quickly as possible and the water stilled, in order to prevent dispersal. The method the pool supervisor uses to remove the discharge should be governed by the actual conditions, but speedy action is essential. Both skimming and vacuum cleaning may be required. Fecal matter may float on the surface or may sink, depending on the composition, which will be approximately one-quarter roughage and three-quarters bacteria. Vomit, however, tends to sink.

1. As soon as fouling is observed, get everyone out of the pool and stop the recirculation pump and the disinfectant feeder. (Continuing recirculation would disperse the material by water motion and might draw some of it into the piping system, and this should be avoided. Removing the bathers, besides preventing possible infection, keeps them from stirring up the water and spreading the discharge.)
2. Remove as much of the material as possible by means of the vacuum hose (without the sweeping attachment) or by a leaf skimmer or similar hand-held scoop, whichever is appropriate. Where the vacuum equipment is used, direct the discharge to the sewer. All equipment used must be flushed clean and sanitized by immersion in disinfectant solution having a strength equivalent to at least 50 parts per million chlorine.
3. Open the quick-fill line from the public water supply, close the valve on the main drainline, and direct the discharge from the skimmers or overflow gutters to the sewer. (If, for this procedure, it is necessary to operate the recirculation pump, then protect the filter from contamination by by-passing it.).

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4. Prepare a hypochlorite solution sufficient for a shock dose of 4 parts per million chlorine. This would require 6 lbs. of H.T.H.70 dissolved in 10 gallons of water for a 100,000 Imperial gallon capacity pool, proportionally more or less for a larger or smaller pool.
5. When about five percent of the pool water volume has been discarded and replaced by fresh make-up water from the supply, resume normal recirculation by starting the recirculation pump, but do not start the disinfectant feeder.
6. Now shock-dose the pool by ladling the prepared hypochlorite solution uniformly into all parts of the pool.
7. If necessary, clean the pool and deck surfaces and sanitize them with a disinfectant solution having a strength-equivalent of at least 50 parts per million chlorine.
8. After shock-dosing the pool, keep bathers out of the pool for at least two hours, while maintaining normal recirculation. The chlorine residual will gradually decline. Two hours after shock-dosing, determine the free available chlorine residual in three representative portions of the pool.

Bathers may again be admitted to the pool when the free available chlorine residual is down to about 2 p.p.m. When it is down to about 1 p.p.m., re-start the disinfectant feeder and operate it in the usual manner.

Aftermath

Later, thoroughly cleanse all equipment used in the emergency, including the vacuum lines, and disinfect it, using an appropriate sanitizer.

NOTES:

1. The procedure described above is recommended over the alternative of merely applying a local shock treatment, such as pouring calcium or sodium hypochlorite solutions into the water at the point of fouling--a procedure which is at best only partially effective.
2. It is recommended that written instructions based on this bulletin be issued to all pool owners in your jurisdiction, with the suggestion that they be posted in the pool equipment room for the convenience of the operator.