POOL WATER TREATMENT
ADVISORY GROUP

TECHNICAL NOTE

5 – Dealing with sodium hypochlorite spillage

April 2011

Prevention is the first line of defence against spills and leaks. All storage tanks should be installed in a proper sized, sealed containment bund. There must be a mechanism for pumping out spillages from the bund. There should be a written procedure, (including an emergency action plan) for all supply deliveries and nominated staff trained and competent in the procedure. Dosing direct from a bulk tank (without an intermediate day tank) is a practice that should not be undertaken without a specific risk assessment.

In any emergency a quick but calm reaction is necessary. Personnel and the public must be protected. Only personnel that know the product and have been trained to handle spills should be allowed in the area. Appropriate protective equipment should be worn when dealing with a spill of sodium hypochlorite.

Whatever the cause, the approach to any spill is to:

- follow the emergency action plan
- protect the public
- protect staff
- contain the spill
- stop the leak
- clean up the spill
- protect the environment.

Large spillages

If the spillage is over 45 litres (10 gallons) immediately evacuate the area; remove sources of ignition; provide maximum ventilation. If the risk to people or environment is considerable, call the emergency services. Only personnel with proper respiratory and eye/skin protection should be permitted in the area.

Dam and absorb spillages with dry sand, soil or other inert material. Do not use combustible adsorbents such as sawdust. Then collect the absorbed material in containers, seal securely (with a vent) and deliver for disposal according to local regulations. Containers with collected absorbed material must be properly labelled with correct contents and hazard symbol.

Wash spillage site well with water and detergent; be aware of the potential for surfaces to become slippery. Continue to ventilate the site of the spillage. Spillages or uncontrolled discharges into watercourse, drains or sewers must be notified immediately to the National Rivers Authority or other appropriate regulatory body.

TECHNICAL NOTE

Small spillages
If the spillage is under 45 litres, it can be diluted with large quantities of water and then if local regulations allow, run to drain with copious amounts of water. Otherwise, absorb and dispose of as above.

Leaks in the piping or discharge hose
Close the primary valve at the base of the storage tank. In leaks in piping or hoses, closing a valve between the leak and the source of the material (tank) will minimise the loss.

Leak in the bulk storage tank, or its primary valve
Empty the tank as quickly as possible into other suitable containers – which might be intermediate bulk containers (IBCs). Call the supplier of the tank. Lowering the level of the product in the tank stops or reduces the amount leaking. Drum the material and return it to the supplier for recycling. Uncontaminated spillages may be able to be used in the pool.

Cleaning up other material in the containment bund
Sodium hypochlorite is best neutralised with sodium thiosulphate – after diluting by about 10 times. Heat is generated in all neutralisation reactions and the material can become quite hot.