SHUTTING DOWN A SAND FILTRATION UNIT Protection against bacterial proliferation	EXP 03

Non-use of a sand filtration unit for long periods of time leads to the stagnation of water inside the apparatus. This may cause bacteria to proliferate inside the filtering environment.

It is advisable to disinfect the installation before turning it off in order to eliminate a maximum amount of bacteria which may be present (see disinfection procedure for ion-exchanging resins).

A solution of sodium bisulphite $NaHSO_3$ will be used for this purpose. Its bacteriological properties will protect against bacterial proliferation in the filtering environment.

OPERATING PROCEDURE

Prepare a sodium bisulphite solution at 1% (in weight),

- for a commercially available sodium bisulphite solution at 37.5%, dilute 1 litre of this solution in 60 litres of water.

Prepare a sufficient quantity to fill the **whole** filter frame.

The bacteriostatic product will be injected manually by operating the appropriate valves or electrovalves in such a way as to flush the solution through from top to bottom over the filter bed before being drained away.

Flush the bacteriostatic solution through by means of a pump or by using the raw water release pan situated upstream from the apparatus, if available.

Once the bacteriostatic solution appears in the apparatus' drain outlet (see testing methods), turn off the installation by isolating it hydraulically and electrically.

RESTARTING

Once the upstream installation has been restarted, restore the filter's hydraulic and electric supply. Switch the apparatus to the backwashing position and rinse out the filter until the bacteriostatic solution disappears.

TESTING METHODS

A number of ready-to-use products are commercially available for performing a quick test (VWR International strips, Orchidis comparators, etc.).

- VWR Internationa strips for low-grade sulphites Ref 11148.0001.

It is also possible to detect the presence or absence of bisulphite by using potassium permanganate N/50, with permanganate changing colour in the presence of bisulphite.