Pool Chemical Safety Seminar

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Today's Presenters

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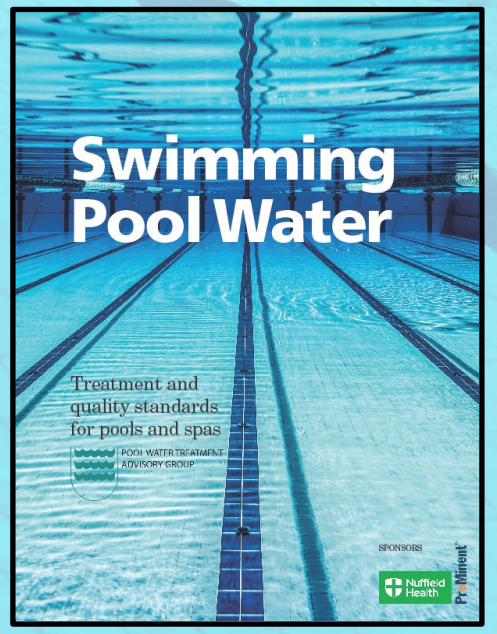
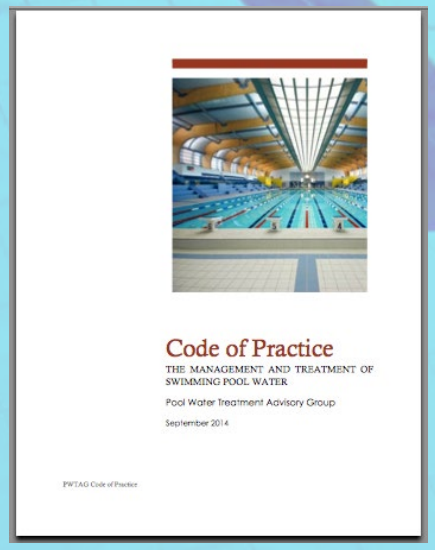
Who are PWTAG?

PWTAG – The Pool Water Treatment Advisory Group – was established as an independent entity in December 1984

Mission statement *- The Pool Water Treatment Advisory Group is dedicated solely to raising standards in the pursuit of excellent, healthy bathing conditions in swimming, spa, hydrotherapy, and other pools; also interactive water features.*

For more than 30 years, PWTAG has provided the industry's definitive guidelines in print and online. In the absence of statutory guidance, PWTAG's guidelines are widely viewed as best practice; they have been quoted in court where successful prosecutions under health and safety legislation has resulted following evidence that the guidelines have not been followed.





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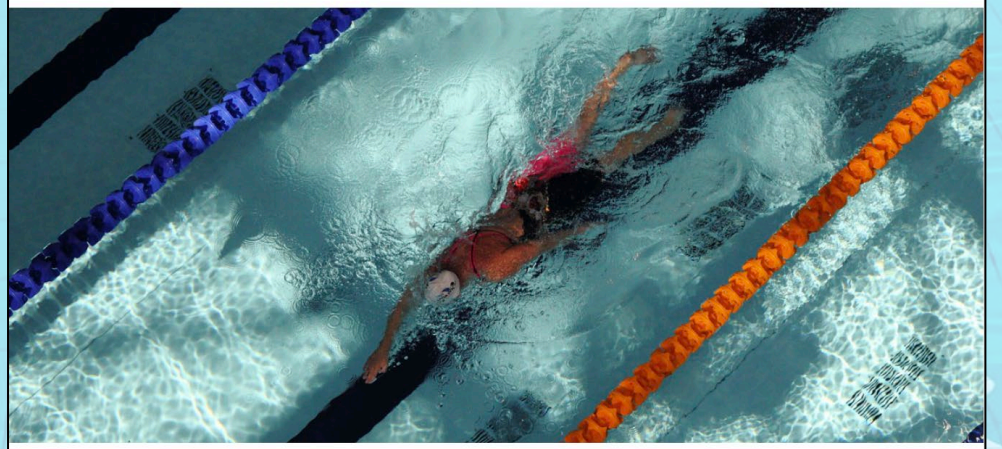

About PWTAG Membership

PWTAG collaborates throughout with government agencies and professional and technical specialist bodies.

Currently 20 of these form PWTAG's core membership. Their representatives are crucial in setting and maintaining standards for the management of safe pool water.

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TECHNICAL NOTE

2 – Faecal contamination

Version 2 – July 2020

If a pool is contaminated with faeces, the pool operator must decide quickly on an appropriate course of action in order to prevent any possible illness in users. This is particularly important with diarrhoea, which may contain the chlorine-resistant organism *Cryptosporidium* ('Crypto'). So it is crucial to be prepared. It is also important to do everything possible to prevent such contamination in the first place – see the Prevention section of this Technical note.

Preparation

Operators need to be aware of the potential health risks and have the necessary procedures, equipment and chemicals in place and accessible at all times. All pools should have a written procedure, as part of their emergency action plan, stating what action to take in the event of a faecal incident. Staff must be trained in these procedures, and the training recorded. There should also be a schematic drawing of the installed water treatment, which is vital for the informed operation of the pool and in the investigation of problems including outbreaks of infectious disease.

Operators should follow the PWTAG Code of Practice (on www.pwtag.org).

Dealing with a faecal incident

If faecal contamination has only been reported, and there is some doubt about the accuracy of the report, its presence should be confirmed by pool staff. If it cannot be confirmed, pool operators must assess the risk and may decide that the risk of harmful contamination is low and allow bathing to continue. This assumes that pH and disinfection are within normal limits. Pools should maintain a faecal accident log.

All faeces contain potentially harmful microorganisms. The actual risk to pool users depends on whether the faeces are solid or runny.

Solid faeces

Solid faeces are relatively easy to deal with. It is unlikely that the perpetrator is suffering from an acute gastrointestinal illness. And the microorganisms in it are relatively contained.

1. The stools should immediately be removed from the pool using a scoop or fine mesh net and flushed down the toilet (not put in any pool drains).
2. There must be certainty that all the faeces have been captured and disposed of. If not, and there is possible widespread distribution of the faeces in the pool, then the pool should be closed and the advice below for runny faeces considered.

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Chemical incident trends

16 major toxic gas incidents in 2022

Average is normally 5 per annum

Flag ship facility – London aquatic Centre Venue of 2012 Olympics

Police and firefighters are dealing with a suspected chemical incident at the Dome Leisure Centre

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Covid 19

Pools closed due to the pandemic.

Staff on extended holidays know as furlough.

Industry affected and the profile of staff working in swimming pool facilities has evolved

Employees leave the industry permanently as other industries continue to be open during the pandemic

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Skill fade

High staff turnover

Experienced and skilled team members have retired or moved on.

Economic pressures due to cost of living crisis and rising energy costs leading to challenges with recruitment and training staff

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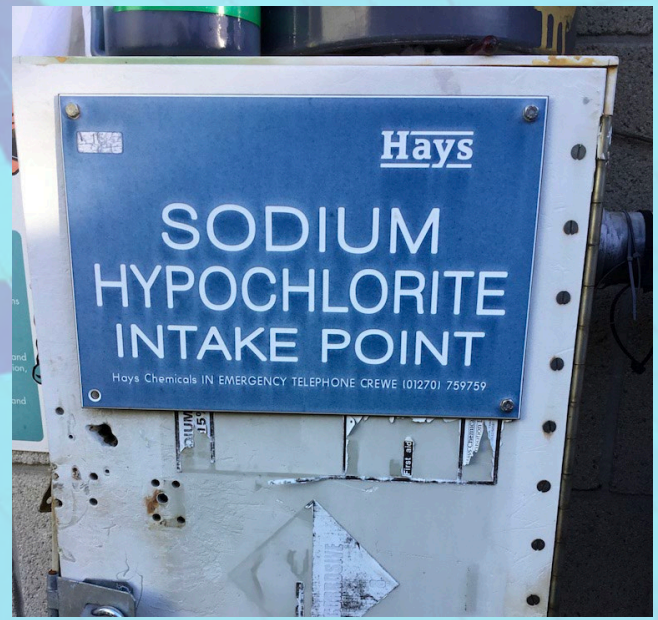
Chlorine shortages

Calcium Hypochlorite supply reduced due to transportation issues and logistics in the USA

Shipping issues as Shanghai in lockdown

Sodium hypochlorite shortages due to supply issues from plant closures



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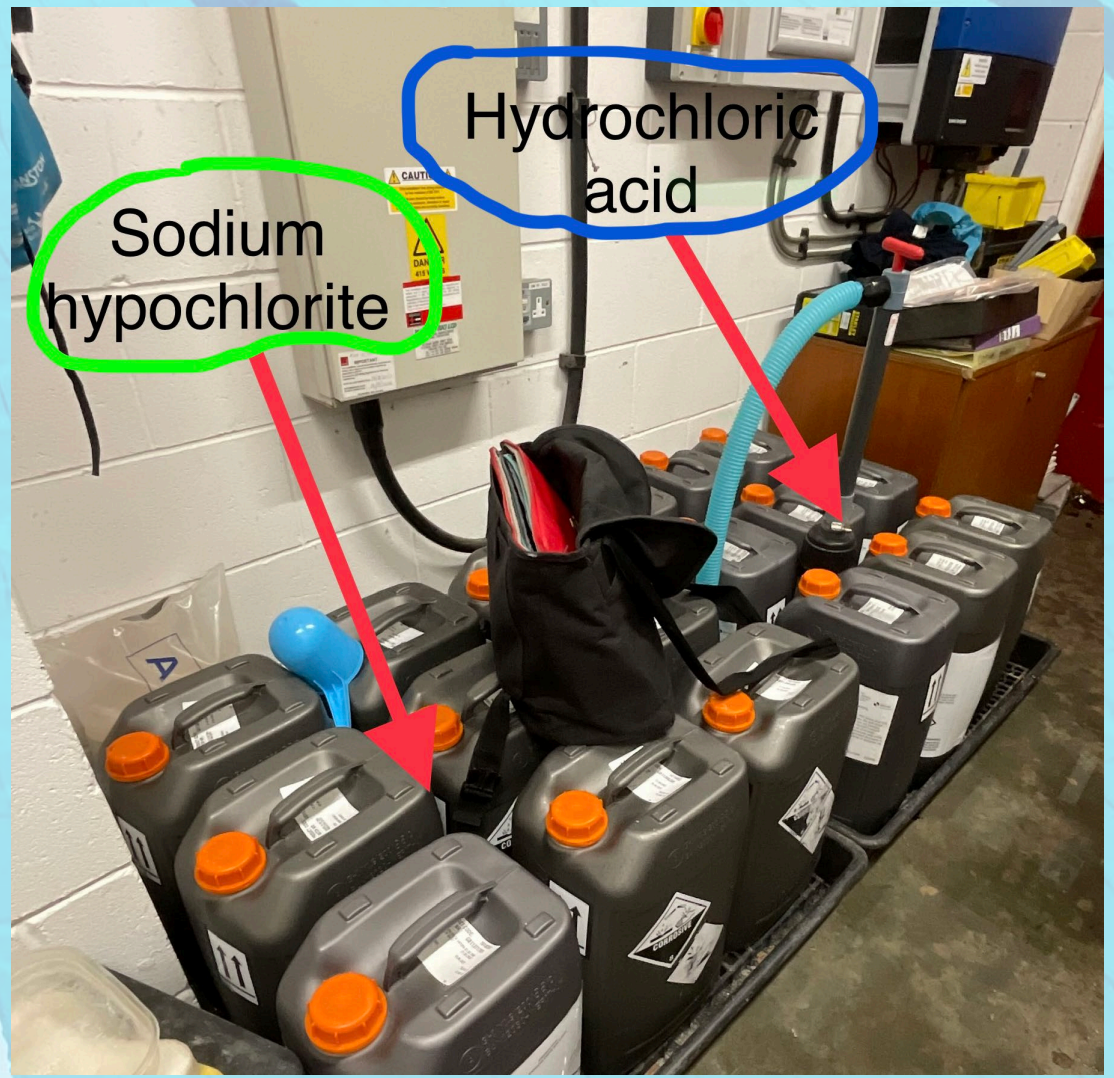
Chlorine shortage - CHALLENGES

Swimming pools using unfamiliar chemicals and products

Facilities purchasing products from any supplier.

Problems identifying chemicals due to unfamiliar packaging

Team members associating colours with chemicals



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Solutions

Chemical Business Association and industry partners collaborating on a system for gathering data from major chemical incidents to ascertain common denominators and factors involved in the toxic gas releases

Technical note to be created assisting swimming pool facilities with site specific safe storage and handling of chemicals training

Chemical Business Association

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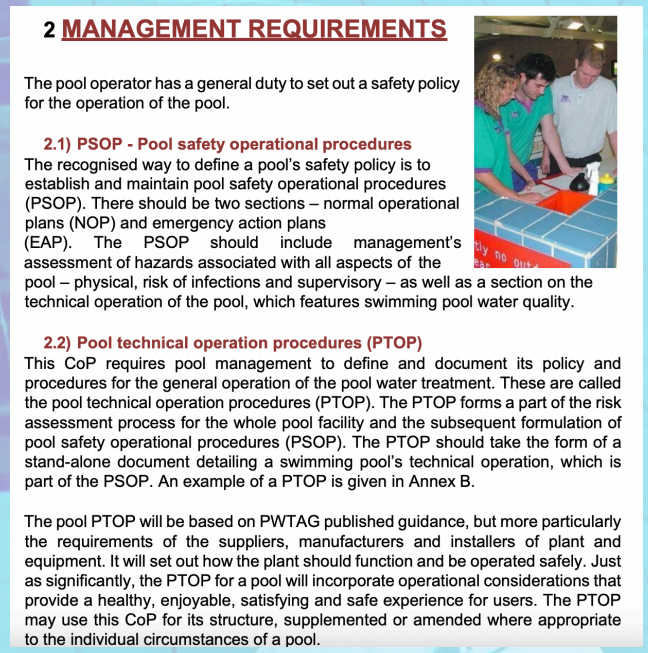
Solutions

PWTAG Code of Practice – PTOP

Encouraging facilities to create procedures that help raise standards and improve safety processes



2 MANAGEMENT REQUIREMENTS

The pool operator has a general duty to set out a safety policy for the operation of the pool.

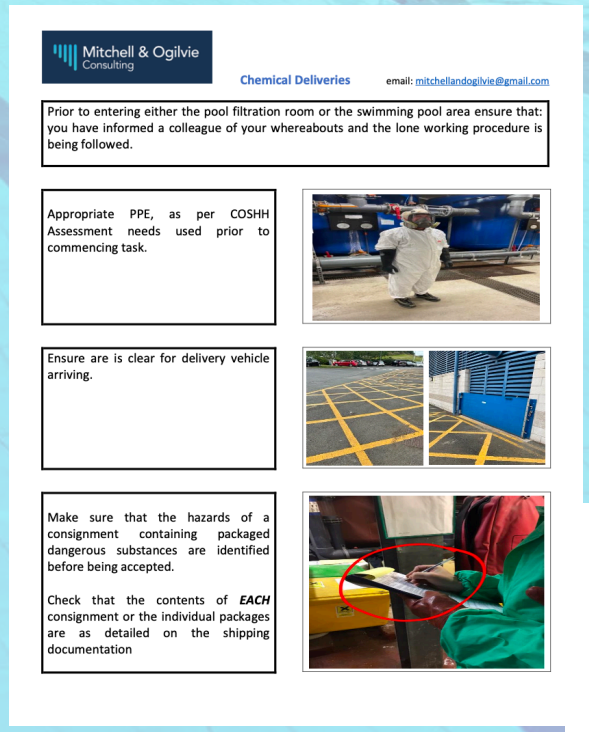
2.1) PSOP - Pool safety operational procedures

The recognised way to define a pool's safety policy is to establish and maintain pool safety operational procedures (PSOP). There should be two sections – normal operational plans (NOP) and emergency action plans (EAP). The PSOP should include management's assessment of hazards associated with all aspects of the pool – physical, risk of infections and supervisory – as well as a section on the technical operation of the pool, which features swimming pool water quality.

2.2) Pool technical operation procedures (PTOP)

This CoP requires pool management to define and document its policy and procedures for the general operation of the pool water treatment. These are called the pool technical operation procedures (PTOP). The PTOP forms a part of the risk assessment process for the whole pool facility and the subsequent formulation of pool safety operational procedures (PSOP). The PTOP should take the form of a stand-alone document detailing a swimming pool's technical operation, which is part of the PSOP. An example of a PTOP is given in Annex B.

The pool PTOP will be based on PWTAG published guidance, but more particularly the requirements of the suppliers, manufacturers and installers of plant and equipment. It will set out how the plant should function and be operated safely. Just as significantly, the PTOP for a pool will incorporate operational considerations that provide a healthy, enjoyable, satisfying and safe experience for users. The PTOP may use this CoP for its structure, supplemented or amended where appropriate to the individual circumstances of a pool.



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Prior to entering either the pool filtration room or the swimming pool area ensure that: you have informed a colleague of your whereabouts and the lone working procedure is being followed.

Appropriate PPE, as per COSHH Assessment needs used prior to commencing task.

Ensure are is clear for delivery vehicle arriving.

Make sure that the hazards of a consignment containing packaged dangerous substances are identified before being accepted.

Check that the contents of ***EACH*** consignment or the individual packages are as detailed on the shipping documentation

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Appropriate sack barrow to be used to transport the chemical.

Chemical to be deposited in lift and taken down to the lower level.

All chemical to be stored in appropriate area in plant room as per image.

Ensure all paperwork completed correctly.

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QUESTIONS

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