

Quest 2018 – Splus 49

Swimming Teachers Association (STA)

Pool Water Management Quality Mark



Outcomes

- Listed below is the criteria that the assessor will be looking for and sampling for the facility to achieve compliance and gain the STA Pool Water Management Quality Mark

General Management of Health and Safety

Pool Safety Operating Procedures - Scoring Yes/ No

The facility has a Pool Safety Operating Procedure (PSOP) consisting of:

- Normal Operating Plan (NOP)
- Emergency Action Plan (EAP)
- Pool Technical Operation Plan (PTOP)
- Staff are instructed and trained to work in accordance with the PSOP.

The PSOP is reviewed at least annually, or earlier if there is a notable incident, or if there are major changes to the facility

Normal Operating Plan – Scoring Yes/No

The NOP sets out the way the pool operates on a daily basis, it includes:

- Layout
- Equipment
- Any hazards
- Activity related risks.

The procedure should be planned, implemented, reviewed and available to staff with a training process in place

Emergency Action Plan - (This will be assessed as part of the Health & Safety Declaration)

The EAP gives specific instructions on the action to be taken by all staff in the event of an emergency. Thorough and appropriate procedures are in place for dealing with the following pool plant related incidences:

- Faeces, blood or vomit entering the pool and pool surround
- Accidental mixing of incompatible chemicals
- Suction entrapment and suction entanglement
- Loss of water clarity or glare
- Microbiological contamination.

The procedure should be planned, implemented, reviewed and available to staff with a training process in place

Pool Technical Operation Plan - Scoring Banding

The PTOP provides specific instruction on how the pool water treatment system should be operated; it should consider the following:

- Names of the appropriately trained and qualified staff responsible for pool plant operations available on site during all hours of operation, including details of their pool plant qualifications and expiry dates
- Schematic drawing of the pool and pool plant
- Details of all pool plant equipment and machinery including manufacturer, installation date, required in house routine maintenance schedule and external service information
- Bather hygiene procedures
- Legionella control in hot and cold-water systems
- Cleaning and housekeeping
- Pool water testing and acceptable parameters
- Microbiological testing and when to close the pool
- Details of all chemicals on site including information on training, accepting deliveries, manual handling, storage, spillages, PPE, dosing
- Toxic gas leaks
- Emergency procedures for dealing with faeces, blood or vomit in or around the pool
- Appendices of records and logs stating frequency of tasks.

The procedure should be planned, implemented, reviewed and available to staff with a training process in place

Risk Assessments - (This will be assessed as part of the Health & Safety Declaration)

Risk assessments should be carried out and recorded in accordance with 'Management of Health & Safety at Work Regulations 1999' and available to all staff. They should be:

- Current
- Suitable and sufficient
- With all significant hazards recorded
- Effective control measures in place relevant to the facility
- Formally reviewed on a planned regular basis, as per 'INDG163' or after an accident, incident, near miss or the purchase of new equipment.

Risk assessments and safe systems of work are in place for:

- All plant room tasks
- Pool dosing chemical
- Filling the day tank
- Mixing or diluting chemicals
- Cleaning chemical injectors
- Manual handling risk assessments are in place for tasks involving the moving of items either by lifting, lowering, carrying, pushing or pulling.

Control of Substances Hazardous to Health (COSHH) Assessments – Scoring Yes/No

Processes and procedures should be created for the safe use, storage and handling of pool chemicals in accordance with 'Control of Substances Hazardous to Health 2002' (COSHH) regulations, including the following:

- Material safety data sheets (MSDS) documentation provided for all chemicals currently in use
- COSHH assessment documentation completed for all chemicals currently in use, including CAS and EINECS numbers and are displayed near each hazardous chemical
- Exposure to hazardous chemicals are prevented or controlled. The assessor has considered alternatives for substituting to the least harmful chemicals that are also compatible with other chemicals onsite. Or engineering control measures to reduce the risk
- Adequate 'Personal Protective Equipment' (PPE) available for appropriate staff:
 - Dust mask and face protection
 - Eye protection (to British Standard EN 166:200250)
 - Aprons or chemical suits
 - Protective boots
 - Gauntlets
 - Respirators
- The storage of PPE is in a suitable location, well maintained, personal to the intended user and monthly inspection regime is in place
- Bottles clearly labelled
- Training records in place for staff handling chemicals, including chemical use, PPE and emergency action.

Accident and RIDDOR Reporting – Scoring Yes/No

Accidents and incidents should be suitably recorded with an investigation process in place in accordance with 'Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)'. Staff should be trained in and fully understand:

- Accident and incident reporting
- Accident investigation
- What are RIDDOR reportable accident
- The reportable time frames
- How to correctly report to the Incident Contact Centre (ICC).

Accident reports should be regularly reviewed for trends; such as cuts to feet or an increased number of slips to assist in identifying concerns before they become issues

First Aid – Scoring Yes/ No

Relevant procedures are in place for the management of first aid when coming into contact with chemicals, including:

- First aid equipment includes equipment for dealing with consequences of direct chemical contact
- Eye wash facilities are located close to the hazard
- A wash basin with running water is accessible
- Emergency drench showers may be provided where staff are subject to severe exposure to a harmful chemical.

Legionella Risk Assessment - (This will be assessed as part of the Health & Safety Declaration)

A Legionella risk assessment should be carried out by a competent person and recorded in accordance with 'Legionella L8' and available to all staff. It should contain responsibilities (duty holders) and recommendations to reduce the risk of an outbreak which may include:

- Flushes of underused outlets
- Water temperature checks (less than 20° centigrade for cold, more than 50° centigrade for hot)
- Calorifier temperature checks
- Microbiological water tests
- Shower heads descaling
- Chlorination regime
- Tank inspections
- If emergency drench showers are provided, they are tested and ran daily
- Detailed/accurate schematic drawings of all hot and cold domestic water services.

Workforce Development

Level 3 Pool Plant Operations Qualification and Training – Scoring Yes/No

The facility has sufficient qualified staff, holding an appropriate in date level 3 pool plant operations qualification or equivalent. At least one of these staff members are available on site or on call during all hours of operation.

Water Testing Qualification and Training – Scoring Yes/No

Support staff with responsibility for water testing and basic pool plant maintenance as a minimum hold a water testing qualification or equivalent and understand what the results indicate.

Induction and Training - Scoring Banding

Induction procedures are in place with operators and supervisors attending and completing a full site-specific induction and are trained and competent to carry out their roles in relation to plant operation and use of chemicals including:

- Induction procedure in place, including a documented training and induction process that includes specific pool plant operation training in relation to the facility for all pool plant operators and supervisors
- Induction records in place and signed and dated by the inductee and inductor
- Health and Safety training records in place for all staff and signed and dated by the inductee and inductor for:
 - Pool Safe Operating Procedures
 - Normal Operating Plan
 - Emergency Action Plan
 - Pool Technical Operation Plan.

Training is reviewed annually or when there is a change in chemical, equipment or operation practices

Bather Hygiene

Exclusion Policy - Scoring Banding

Notices and posters are displayed in a prominent position informing customer not to use the pool if:

- They have an infection

- They have or have had diarrhoea in the last 48 hours
- They have been diagnosed with cryptosporidiosis and must not use the pool for at least 14 days after diarrhoea has stopped.

There is an understanding from all tiers of staff on this policy and staff are empowered to inform bathers of these practices

Pre-Swim Hygiene - Scoring Banding

Pre-swim hygiene processes are in place and include:

- Notices and posters are displayed in prominent positions to educate bathers on bather hygiene and enforce pre-swim bather hygiene
- Toilets are provided on route to the pool with washbasins, hand soap and hand drying facilities
- Pre-swim showers are provided, they are aesthetically pleasing, clean, in good working order and bathers are directed to use them before swimming.

There is an understanding from all tiers of staff on pre-swim hygiene and staff are empowered to advise bathers of these practices

Swimming Nappies and Swimming Pants – Scoring Banding

Processes are in place for the provision of swimming nappies and pant usage and include:

- Notices and posters are displayed in prominent positions to educate parents, guardians and carers on bather hygiene procedures and enforce the wearing of swimming nappies and pants and promote pre-swim hygiene of babies, children still using nappies and incontinent adults
- Swimming nappies that are designed to absorb and retain soiling whilst in the pool and tightfitting swimming pants should be available for purchase from reception
- Nappy disposal bins are provided and emptied regularly.

Cleaning and Housekeeping

Cleanliness – Scoring Banding

The level of cleanliness taking due account of customer expectations, is visibly acceptable with high standards of hygiene in critical areas including:

- Floors are kept clean and as dry as possible and thoroughly cleaned daily:
 - Pool hall
 - Changing rooms
 - Toilets
 - Shower areas daily
- The area above the water line in the pool tank is clean and cleaning regimes are in place to maintain the cleanliness of this area
- The deck level transfer channel is clean and cleaning regimes are in place ensuring that it is cleaned as required at least once a month with an appropriate solution of chlorinated water
- Grilles are clean and cleaning regimes are in place ensuring they are cleaned as required at least weekly with an appropriate solution of chlorinated water
- Cleaning regimes are in place and followed ensuring there is no build-up of hard water scaling or body grease in wet areas including the pool tank, pool surrounds, showers, changing rooms and toilets
- The pool bottom is kept clear of contamination, algae and general debris by sweeping, suction cleaning or pool vacuuming daily.

Appropriate Chemicals - Scoring Yes/ No

Sufficient and safe cleaning resources are allocated to meet the cleaning standards and programme, including staff and materials:

- Proprietary cleaning chemicals are avoided if possible and if proprietary cleaners are unavoidable, they are formulated for poolside use from a reputable supplier
- Every effort is made to prevent cleaning chemicals getting in to the pool water
- Chemical cleaning of the poolside or waterline does not take place when people are in the pool



- Cleaning of the pool and pool surrounds with chemicals is avoided when people are in the pool
- Pool surrounds are cleaned with an appropriate solution of chlorinated water daily, before opening to the public or after closing to the public.

Pool Covers – Scoring Banding

Procedures are in place to maintain and clean Pool Covers and include:

- Inspections are in place to regularly check for contamination with cleaning regimens in place as necessary
- Monitoring, inspection and maintenance inspections are in place with records maintained on site
- Serviced by a trained competent person in line with legislation and manufacturer’s instructions, with records maintained on site.

Pool Equipment - Scoring Banding

Procedures are in place to maintain and clean pool equipment and include:

- Any equipment used in the pool such as floats, armbands, inflatables, canoes etc, are checked prior to use to ensure they are clean and hygienic
- Pool equipment is regularly cleaned and disinfected with an appropriate solution of chlorinated water.

Balance Tanks - Scoring Yes/ No

Procedures are in place to maintain and clean balance tanks and include:

- The balance tank is inspected at least annually by a trained competent person in line with legislation and manufacturer’s instructions, with records maintained on site
- The balance tank is cleaned at least annually or as and when necessary by a trained competent person in line with legislation and manufacturer’s instructions, including:
 - Drained
 - Debris is removed
 - Inner surfaces scrubbed with an appropriate solution of chlorinated water.

Monitoring Water Quality

Pool Water Tests – Score Banding

Pool water tests are conducted according to the NOP and in line with best practice and include:

- The position of the sample point in the pool is representative of the overall conditions, from a depth between 100mm and 300mm
- Pool water in pools with automatic dosing systems is tested before the pool opens, after it closes and at least 3 times per day in between
- Pool water in pools which are manually dosing chemicals is tested at least every 2 hours including before the pool opens and after it closes
- Procedures are documented and followed for dealing with pool test results that are outside of parameters by a simple traffic light system explaining what action to take if results fall outside of parameters
- Pool test results are recorded on a log and kept for a minimum of 5 years.

Pool Test Equipment - Scoring Yes/ No

Procedures are in place for pool test equipment and include:

- Pool water tests are conducted using a suitable commercial test kit following manufacturers’ instructions
- Pool testing equipment is maintained in good order and glass vials are kept scrupulously clean
- Only test reagents compatible with the test kit are used, they are stored following manufacturers’ instructions and their shelf life is not exceeded
- Photometers have up to date calibration certificates
- Where comparators are used, staff are tested for colour blindness
- Stock control and spare equipment is in place.

Automatic Controllers - Scoring Banding

Procedures are in place to maintain and manage automatic controllers and include:

- Calibration tests for the automatic controllers are checked daily against the results of a manual test taken from the sample line
- Recalibration procedures are in place in line with manufacturer instructions and are undertaken by a competent person
- Readings are recalibrated for pH results that are more than 0.2 out compared to the manual test result and more than 15% out for free disinfectant levels
- Records for all calibration tests are recorded and maintained on site.

Microbiological Testing - Scoring Yes/ No

Pool microbiological tests are conducted in line with best practice and include:

- Monthly micro-bacteriological tests (hydrotherapy pools weekly) completed by a UKAS accredited laboratory
- The checks should be recorded, accessible and measure:
 - Total variable counts (TVC)
 - Aerobic colony count (ACC)
 - Total coliforms
 - *E. coli*
 - *Pseudomonas aeruginosa*
- The results should fall within the recommended limits and records maintained with any action taken following unsatisfactory results.

Balanced Water Tests - Scoring Yes/ No

Balanced water tests are conducted in line with best practice and include:

- Total alkalinity tests are carried out weekly, results are recorded and are maintained between 80 and 200 mg/l. Procedures are documented and followed for dealing with levels of alkalinity that are outside of parameters. Any actions taken are recorded
- Calcium hardness tests are carried out weekly, results are recorded and maintained between 80 and 200 mg/l. Procedures are documented and followed for dealing with levels of calcium hardness that are outside of recommended parameters. Any actions taken are recorded
- Total dissolved solids (TDS) tests are carried out weekly, results are recorded and are maintained no higher than 1000mg/l (or 1500mg/l for pools using electrolytically generated chlorine) above the TDS level of the source water. Procedures are documented and followed for dealing with levels of TDS that are above recommended levels
- Pools using stabilised chlorine test for cyanuric acid levels weekly, results are recorded and are maintained between 50mg/l to 100mg/l. Procedures are documented and followed for dealing with cyanuric acid levels that are out of recommended parameters. Any actions taken are recorded
- Sulphate levels are tested weekly, results are recorded and are maintained below 360mg/l. Procedures are documented and followed for dealing with sulphate levels that are above recommended levels. Any actions taken are recorded
- Balanced water / langelier tests are calculated weekly, results are recorded and maintain a set of conditions which will not cause corrosion but maintain the water in a slightly scale forming condition
- Procedures are documented and followed for dealing with results outside of acceptable parameters.

Water Treatment

Source Water - Scoring – Yes/ No

Water treatment practices and chemicals are suitable for the source water. Source water is tested monthly and results recorded.

Pool Water Clarity – Yes/ No

Procedures are in place for the monitoring of pool water clarity and include:

- The bottom of the pool can clearly be seen at its deepest point
- Procedures are recorded in the EAP and followed for what to do in the event of loss in water clarity or

glare

- All staff are trained on the procedure.

Bather Loads - Scoring Yes/ No

Procedures are in place for bather loads and include:

- The maximum bather load is appropriately worked out considering the length, width and depth(s) of the pool
- The operational daily maximum bather load is based on 25% to 50% of the maximum bather load multiplied by the number of hours' pool use per day
- The maximum bather load and operational daily maximum bather loads are recorded including details of how they were worked out
- The actual operational daily bather load is recorded and reviewed regularly to ensure circulation rate, turnover and plant are sufficient.

Circulation Rate - Scoring Yes/ No

The circulation rate is based on the maximum bather load multiplied by 1.7 and is recorded.

Turnover Period – Scoring Banding

Procedures are in place for the management of turnover periods and include:

- The turnover period is based on the water volume divided by the circulation rate and is recorded
- The pool turnover is within the parameters in the table below:

Facility	Turnover time
Leisure Pools (0.5 - 1.0 deep)	0.5 – 1.5 hours
Paddling Pools	0.5 hours
Hydrotherapy Pools	1.0 to 1.5 hours
Leisure Pools (1.0 to 1.5 deep)	1.0 to 3.0 hours
25m General Usage	2.5 to 3.0 hours
50m Competition Pool	3.0 to 4.0 hours
Diving Pool	4.0 to 8.0 hours
Spa Baths	0.08 -0.25 hours
Splash Zones / Interactive Play Features	0.5 - 0.75 hours
Shallow Leisure Pools (up to 0.5 deep)	0.25 - 0.5 hours
Teaching pools or similar	0.5 to 1.25 hours
Waterslide Pools	0.5 – 1.0 hours

- If applicable: For pools unable to meet the turnover periods listed in the table above the maximum bather load is reduced by dividing the water volume by the turnover period and multiplying by 1.7.

Dilution with Fresh Water - Scoring Yes/ No

Dilution rates are monitored and recorded ensuring that pool water is replenished with fresh water at a rate of 30 litres per bather

Inlets and Outlets - Scoring Yes/ No

Procedures are in place for the management and maintenance of inlets and outlets and include:

- Inlet and outlet grilles and cover apertures do not exceed 8mm. There is a minimum of two outlets spaced at least 2m apart and at least 3m from the side of the pool walls
- Inlet and outlet grilles and covers are visually inspected daily, and closer inspections take place monthly
- These inspections are recorded and procedures in place to ensure bathing does not take place if they are damaged or missing.

Filtration

Filtration and Backwash Rate - Scoring Yes/ No

Procedures are in place for the management and maintenance of filtration and backwash rates and include:

- Flow meters are fitted between the circulation pumps and the filters to monitor flow rates in normal

operation and whilst backwashing

- The filtration rate is in line with the manufacturers recommendations and between 10 to 30m³/m²/ph
- The backwash rate is fast enough to fluidise the filter bed, is in line with the manufacturers recommendations and at least 30m³/m²/ph
- Operations and maintenance regime in place that follows manufacturers and installers instructions.

Backwashing - Scoring Yes/ No

Procedures are in place for the management of backwashing and include:

- Each medium rate filter is backwashed at least once per week and whenever the pressure loss reaches the level recommended by the filter manufacturer
- In multiple filter installations backwashing is staggered
- Backwashing is scheduled to be carried out when there is nobody using the pool, allowing at least 8 hours between re-opening for the filters to settle
- The backwashing period follows the time specified in manufacturer guidelines or until the backwash water is clear (whichever is longer)
- The site has consent from the water board and a trade effluent waste agreement is in place for discharge of backwash water.

Filter Servicing - Scoring Yes/ No

The internal condition of the filters and the top up of the filter media bed is inspected annually by a competent person.

Flocculation/ Coagulation (Excluding membrane and ultrafiltration systems) - Scoring Yes/ No

Procedures are in place for the management of flocculation and coagulation and include:

- A flocculant/ coagulant is dosed continuously and precisely at a rate of 0.1ml/m³ of the flow rate via a chemical dosing pump
- The injection point is post circulation pump in the pipework as near to the filter inlet as accessible.

Plant Room

General – Score Banding

Plant rooms are maintained to a high standard, including:

- The plant room is a secure area for authorised personnel only
- The plant room is not used for general storage or for storing hazardous chemicals unless precautions are taken. There is no risk of fire or overheating
- Any chemicals stored are in containment structures to prevent spillages and are separated and segregated to prevent mixing of incompatible chemicals
- Temperature, humidity and ventilation are adequately controlled for the equipment and its use
- All plant equipment is inspected and maintained in accordance with a planned programme.

Chemical Spillage - Scoring Yes/ No

Procedures are in place to deal with specific chemical spillages and is included in risk assessments following guidance from the material safety data sheet.

Toxic Gas Leak - Scoring Yes/ No

Procedures are in place on action to take in the event of a toxic gas release and are included in the emergency action plan. The procedures include:

- Evacuation arrangements
- Co-ordination with emergency services, including communication of hazardous substances present.

Safety Systems – Score Banding

Relevant safety systems are in place in the plant room including:

- Chlorine gas detectors
- Fire, smoke and heat detectors
- First aid kits and equipment

- Safety equipment
- All safety systems are maintained in accordance with a planned programme.

Chemical Delivery – Score Banding

Procedures are in place for chemical delivery including:

- When chemicals are delivered, sufficient space for parking and manoeuvring is provided close to the chemical storage area
- Deliveries only proceed when appropriately trained staff are available to receive and check all the materials
- Materials are moved to the storage area as soon as possible and never left unattended in a public area
- Unloading is not done on a public highway. If unavoidable permission is granted by the local authority and appropriate warning signs displayed
- The safe working load of any lifting apparatus used is not exceeded. Lifting apparatus is regularly inspected, tested and appropriately certified
- For bulk deliveries, a delivery procedure is agreed with the supplier in accordance with hazard data sheets including:
 - Incompatible materials for example acids and alkalis, if delivered in the same vehicle, are effectively segregated
 - Pipework is clearly labelled specifically for the delivery of the intended chemical
 - For different chemical used the connections are separate and have a different size or type of connection
 - Pipework connections are locked when not in use
- Procedures, responsibilities and training for chemical deliveries are established and understood by all tiers of staff
- Training must include dealing with spillages and manual handling.

Chemical Storage – Score Banding

Procedures are in place for chemical storage including:

- Chemical stores have appropriate warning signs, is secure and only accessible by authorised personnel. It is at the same level as the delivery point and not situated close to public areas, doors, windows or ventilation intakes. There is adequate ventilation, providing at least four air changes per hour
- Planned storage is in place and followed. Each chemical is stored separately from other chemicals and acids and alkalis are never stored together
- The stores themselves are clean and dry and chemicals are stored in containment structures or devices designed to contain leaks
- All containers are kept securely closed, cool, dry and out of direct sunlight
- Liquid chemicals, whether in tanks or drums, are in separate bunds; each bund is capable of holding 110% of the chemical stored. Bunded areas are clearly marked, giving details of the contents
- Chemicals supplied in paper or plastic sacks are stored in labelled plastics bins with secure lids
- Safety data sheets are available in the storage area
- Empty containers are stored appropriately and collected by the chemical suppliers or disposed of correctly
- Procedures are in place to ensure chemical stock rotation to prevent chemicals surpassing expiry dates.
- Procedures are in place to deal with the safe disposal of chemicals that are no longer required or that have surpassed expiry dates.

Dosing Practice – Score Banding

Procedures are in place for dosing practices including:

- Automatic dosing of disinfectant and pH corrector is in place, with levels set to recommended values. These are backed up with manual water tests
- Hand dosing is only carried out as a last resort by qualified and competent operators and in line with written risk assessments and safe systems of work. No chemicals are added while bathers are in the pool



and no bathing takes place until all materials have been fully dissolved, dispersed and water tests confirm readings are within optimum parameters

- The disinfectant dosing injection point is pre-filter unless a non-residual disinfection system is in place in which case it is post non-residual disinfection system
- Circulation feeders are used following manufacturer instructions, with compatible chemicals and away from heat sources
- Chemical dosing systems are interlinked with circulation pumps so that dosing pumps stop if the circulation pump fails. The chemical dosing system requires manual restart in the event of circulation pump failure
- All chemical pipework, suction lines, delivery lines and tanks are labelled to identify the contents, as well as the direction of the flow
- All pipework used for the delivery of chemicals to the injection point is double sheathed
- Disinfectant and pH dosing systems are kept separate
- Risk assessments and safe systems of work are in place for preparing dosing chemicals, stating chemicals should be added to water and not the other way around when preparing solutions
- Procedures are documented on what to do if the plant were to be shut down for longer than 60 hours, valves in filling lines between the day and bulk tanks should not be closed. After such a shutdown the whole of the dosing system should be flushed through with low pressure water.

Heating and Air Circulation

Temperature and Humidity - Score Banding

The pool water temperatures are suitable for the intended user group between those set in the table below:

Recreational, conventional swimming	27-29°C
Competition swimming, diving, fitness swimming and training	26-28°C
Leisure waters	28-30°C
Teaching, children's pools	29-31°C
Babies, young children	30-32°C
Hydrotherapy	32-36°C

- The pool hall air temperature is set to 1°C above or below that of the pool water but a maximum of 30°C
- Water and air temperatures are displayed in prominent positions
- Relative humidity is maintained between 50% and 70%, ideally 60% throughout the pool hall
- Site staff daily check ventilation systems to ensure they are working correctly. They are inspected every three months and serviced at least annually by appropriately trained heating and ventilation engineers.