

Ref No: MCYS 132-27-42

1 April 2008

To: Pool Owners / Operators

Dear Sir/Madam

### **SWIMMING POOL / SPA POOL/ JACUZZI SAFETY AUDIT**

Safety of swimming pools and other aquatic facilities such as spa pools and Jacuzzis is an important concern. Improper design and construction, as well as operation and maintenance, can result in aquatic facilities becoming a source of injuries, which in some cases can lead to death by drowning. While aesthetics and practicality may sometimes be relevant considerations, safety in the design of swimming pools must be of paramount importance.

2. It is timely for owners / operators of aquatic facilities to conduct an audit of the aquatic facilities to ensure their safe operation. The Singapore National Water Safety Council, in a joint effort with the Building and Construction Authority (BCA) and in consultation with stakeholders, has come up with a list of guidelines to improve the safety of existing pools. To assist you to conduct an audit and thereafter carry out improvement work if necessary, attached at **Appendix I** is a recommended audit checklist and **Appendix II**, a list of safety recommendations.
3. To ensure that aquatic facilities continue to be operated safely, we recommend that operators regularly check and properly maintain their facilities. To help identify potential hazards that warrant attention, we advise that you maintain a record of any incidents and injuries reported to have occurred at the facility. A pool safety audit should be carried out at minimum annual intervals to ensure continued safety.
4. The Council also recommends that safety may be further improved by the deployment of lifeguards.

**The National Water Safety Council**

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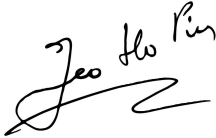
5. If you require any clarifications, please do not hesitate to call :

National Water Safety Council  
Attn: Miss Joscelyn Lin  
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Yours faithfully,



Dr Teo Ho Pin  
Chairman  
National Water Safety Council

cc. CEO, Building and Construction Authority

**SAFETY AUDIT CHECKLIST FOR AQUATIC FEATURES**

Pool name:	Date:
	Completed by:
	Pool Builder / Operator:
<b><i>Items to be checked for Filter Room &amp; Pool:</i></b>	
<input type="checkbox"/> Proper suction drain covers installed and inspected for breakage <i>(covers should comply to the Australian Code of Practice for Aquatic Facilities, American National Standard for pools ANSI/NSPI-1 2003, or European Union (EU) Regulations EN13451 for swimming pool equipment)</i>	
<input type="checkbox"/> Suction drain covers firmly and properly affixed using manufacturer's recommended parts  <input type="checkbox"/> If applicable, SVRS or other device tested and operational according to the manufacturer's instructions	
<input type="checkbox"/> On/Off switch to circulation pump identified and clearly and conspicuously labeled. Switch to be located near the pool if possible	
<input type="checkbox"/> Non-slip finishes installed at entrance and exit points of pool	
<input type="checkbox"/> Signages indicating depth installed for areas of pool depth > 1.2m, signages with emergency instructions and telephone numbers installed.	
<input type="checkbox"/> No sharp corners protruding into pool area	
<input type="checkbox"/> No infinity edge next to a drop >1m	
<input type="checkbox"/> Proper return covers installed	
<input type="checkbox"/> All valves and filter lines labeled and functional	
<input type="checkbox"/> Vacuum covers or fittings in place (if applicable)	

**APPENDIX I-2**

<b><i>Items to be checked for Filter Room &amp; Pool:</i></b>	
<input type="checkbox"/>	Skimmers checked (throats, baskets, weirs, lids & flow adjustors) for blockage
<input type="checkbox"/>	No cracked or loose tiles are present in or around the pool
<input type="checkbox"/>	Operations manuals for pool and equipment are present.
<input type="checkbox"/>	Emergency action plans for chemical or water incidents, drowning or other emergencies are documented.

**LIST OF SAFETY RECOMMENDATIONS FOR EXISTING POOLS**

The following are steps that owners / operators of aquatic facilities can take to improve the safety of their facilities:

- Reconfiguring the circulation system to include multiple main drains to prevent sole source of suction
- Installing Safety Vacuum Release System (SVRS) that responds to a sudden increase in pump suction and removes the suction forces
- Placing the power switches near the pool so they can be turned off quickly in emergencies
- Replacing the drain covers with standardized antivortex covers of appropriate sizes to prevent entrapment hazard
- Replacing gratings / covers (of inlet points only) with fittings tested according to approved standards to prevent failure under stress. Covers should comply with the Australian Code of Practice for Aquatic Facilities, American National Standard for Pools ANSI/NSPI-1 2003, or European Union (EU) Regulations EN13451 for swimming pool equipment.
- Replacing / overlaying finishes with anti slip finishes at entrance and exit points of pool, and around the entire pool
- Installing additional signages indicating depth, emergency instructions and telephone numbers
- Installing additional ribbon marker above infinity edges where there is a drop > 1000mm
- Provision of rescue equipment such as lifebuoys near the pool
- Provision of 1<sup>st</sup> aid kit and equipment near the pool
- Addition of safety features to address the danger caused by sharp corners protruding into pool area
- Separation of children's pools from main / adult pools by barriers or other physical means