

Health and Safety Executive		Sector Information Minute	
Commercial and Consumer Services, Transportation and Utilities Sector (CACTUS)		SIM 05/2003/13	
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Target Audience:
FOD Inspectors dealing with Public Service Issues

RISKS ASSOCIATED WITH MOVEABLE SWIMMING POOL FLOORS AND BULKHEADS

This SIM alerts inspectors to the potential for entrapment under moveable swimming pool floors. This risk arises when moveable bulkheads are used to divide the swimming pool floor. The photograph at [Appendix 1](#) illustrates this scenario.

BACKGROUND

1 Moveable swimming pool floors and moveable bulkheads have been manufactured and installed in swimming pools throughout the UK for many years. In order to service and maintain the moveable floors, there is a need for access to the underside of the floor. This should only be done by trained and certified divers, and allows them to inspect the integrity of the structure and the mechanical features installed below the floor. Access to the underside of the floor is usually achieved by allowing one side of the floor to rise whilst keeping the other side lowered, essentially using the lowered side as a hinge.

2 The various positions of the floor and bulkhead are usually determined automatically through a control panel, though some bulkheads that do not automatically raise and lower can be manually manoeuvred into position. Both automatic and manually raised installations are increasing in popularity because the different configurations available allow different user groups to use the pool simultaneously.

3 A manufacturer of such floors has raised the issue of entrapment under a floor in the raised position. To substantiate this concern, he produced a photograph (see [Appendix 1](#)) showing an arrangement of a swimming pool floor and a moveable bulkhead.

4 The manufacturer's photograph shows a moveable pool floor that covers one quarter of a pool. It is in the raised position, "hinged" at the centre of one side of the pool and the pool centre. There is also a moveable bulkhead used in this pool that runs from the centre of one side of the pool to the centre of the pool. The photograph shows the bulkhead lowered and the floor in a raised position, with a gap large enough for a person to swim below the floor. At the time the photograph was taken, children were using the other half of the pool, separated from the danger area only by a floating pool rope.

5 It is the Sector's view that it is reasonably foreseeable that a person could swim below the floor and become entangled in one of the mechanical features under the floor, become trapped if the floor were lowered, or be trapped if the bulkhead were raised whilst the floor remained in the raised position, with the attendant increased risk of drowning.

ENFORCEMENT RESPONSIBILITY

6 Swimming pools are found in both HSE (e.g. schools, LA leisure centres) and LA (e.g. hotels and holiday centres) enforced premises. Pools with moveable floors can range from very small spa type pools to very large (e.g. Commonwealth pool, Manchester) competitive swimming pools.

RESPONSIBILITY OF DUTY HOLDERS

7 At any swimming pool or leisure facility where there is a moveable floor and bulkhead, the duty holder should carry out a risk assessment to determine if any arrangement of the moveable floor and/or bulkhead could result in a person becoming trapped beneath the floor or bulkhead.

8 If such an entrapment hazard is identified, the duty holder should put in place suitable control measures, such as ensuring that the floor and/or bulkhead are controlled by an interlocked system that prevents such an arrangement of the floor and bulkhead occurring *unless* a control key, integrally safe coded control panel, or some other safe system of work has been instituted to allow overriding of the interlock system.

9 If a control key or code is used to over ride the interlock system, they should be kept secure, and should only be issued or used as part of a formal written system of work for the inspection, maintenance or repair of the floor and/or bulkhead.

10 During inspection and maintenance of the underside of the moveable pool floor, the pool should be closed to members of the public if access to the danger area cannot be prevented by other means (e.g. access may be prevented by using an additional solid bulkhead).

ACTION BY INSPECTORS

11 Inspectors visiting swimming pools with moveable floors and bulkheads should ensure that a suitable and sufficient risk assessment has been carried out, that identifies any significant entrapment risk, and that details the appropriate control measures as necessary.

12 If a captive key or code is used as a control measure, it should be accompanied by a written system of work that effectively controls the issuing of keys and/or codes. Members of staff and others who may work in the premises should be aware of the dangers of misuse of the code or key.

13 If a captive key or code is used, the control panel controls system should be tested in accordance with an inspection regime to ensure that a configuration of the floor and bulkhead cannot occur without the control key or code being used. Duty holders should keep a record of these tests.

ENFORCEMENT MANAGEMENT MODEL

14 The potential consequence of entrapment under a moving swimming pool floor is a drowning incident. The risk gap between the benchmark and the actual risk is extreme, and the requirement for a risk assessment is defined. The initial enforcement expectation is an Improvement Notice, but appropriate enforcement action should be determined by Inspectors discretion, dependant, among other things, on duty-holder and strategic factors at the location. If circumstances reflect those depicted by the photograph, then Prohibition

(of the use of the pool and/or of unsafe bulkhead arrangements) should be considered until the risk is adequately controlled.

15 The Sector is willing to support enforcement action in these circumstances.

FURTHER INFORMATION

16 Further information on formal written systems for controlling hazardous activities can be found in the HSE booklet INDG98, Permit-to-work systems.

17 Further Guidance on safety in swimming pools can be found in HSG179, Managing Health and Safety in Swimming Pools.

18 Further guidance for those who are servicing or maintaining movable pool floors underwater can be found in the HSE Book L104, Commercial Diving Projects Inland/Inshore, Diving at Work Regulations 1997 and Approved Code of Practice, ISBN 0717614956

ENQUIRIES

19 Within FOD, the Entertainment Section of CACTUS has the lead responsibility for swimming pools. Enquiries about this SIM should be directed to the Entertainment Section of CACTUS at the Glasgow Office, email Area 21, FOD Entertainment Section.

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APPENDIX 1
(Para 3)



Boom in lowered position

The picture above shows a moveable swimming pool floor in the raised position, and bulkhead in the lowered position. The gap can be clearly seen, as can the children swimming in the background. This is clearly a dangerous situation as the children are separated from the danger area only by a floating rope.

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