LOG OF MEETING

DIRECTORATE FOR ENGINEERING SCIENCES

SUBJECT: Texas Public Pool Council Entrapment Seminar

DATE OF MEETING: January 6-7, 2000 **PLACE:** Hilton College Station & Conference Center College Station

LOG ENTRY SOURCE: Troy Whitfield, Mechanical Engineer, CPSC

DATE OF ENTRY: January 20, 2000

ATTENDEES:

SUMMARY OF MEETING:

The entrapment committee met to discuss swimming pool entrapment issues and requirements for old and new swimming pools, wading pools, spas and hot tubs. Issues discussed were: the types of entrapments: body, limb, hair, and evisceration; and the proposed Texas state code changes to address these issues. The discussions centered around how to implement changes to existing pools; what retrofit changes would be acceptable; and what requirements were to be made for new pool construction. Other means to increase public awareness were discussed; namely, an entrapment course for inspectors and public awareness campaigns through radio and television advertisements.

The committee defined the intent of anti-vortex covers as follows: 1) a cover that meets ASME/ANSI A112 requirements and is properly attached per manufacturer's instruction and does not exceed the recommended flow; or, 2) a cover (grate) that has a diagonal measure of at least 24 inches, is properly attached, and does not exceed a flow velocity of 1.5 feet per second through the grate. A safety vacuum release device (SVRD) was defined as a device or construction method which prevents entrapment by removing suction from the drain sump.

The following is a summary of the issues discussed and the conclusions reached by the entrapment committee:

- An outline for an entrapment inspector's course was presented and approved. A course of standard content presentation and testing will be developed to provide a certification program for potential inspectors.
- A public awareness program will be developed to increase the public understanding of the potential problem and introduce prevention methods.

- The immediate installation of ASME/ANSI approved anti-vortex covers on pools to effectively address body, limb and evisceration entrapment hazards.

- Properly installed grates with a diagonal measurement of at least 24 inches and a flow velocity that does not exceed 1.5 feet per second would be acceptable in lieu of the anti-vortex cover.

- As long as flow velocities at the drain do not exceed 1.5 feet per second, the requirement for flow in the suction piping not to exceed 6 feet per second in the suction pipe outside the drain sump will be dropped for existing pools.

- For existing pools with a depth of three feet or less above the drain, an acceptable level of protection is either 1) a properly installed grate with a diagonal measure of at least 24 inches with a flow velocity not to exceed 1.5 feet per second and an SVRD, or 2) hydraulically balanced dual main drains with properly installed anti vortex covers and an SVRD.

- For spas, the acceptable level of protection is at least one main drain with a properly attached anti-vortex cover (or a cover with a diagonal measurement not less than 24 inches and flow velocity not exceeding 1.5 feet per second) and an SVRD.

- For depths greater than three feet above the drain, the pool shall be protected with either hydraulically balanced dual main drains with properly installed anti-vortex covers or a single main drain with an anti-vortex cover and an SVRD.

- New pool construction shall consist of hydraulically balanced dual main drains with properly installed anti-vortex covers and an SVRD.

Additionally, the committee discussed flow requirements for new and existing pools with multiple drains, disallowing check valves between the SVRD and the main drain(s), requirements for skimmer equalizer covers, and requirements for vacuum line covers.

The entrapment seminar was a three hour presentation on the entrapment issues. Attendees of the seminar were involved in various pool related activities from ownership, operation, maintenance, and inspection. The seminar provided insights into the hidden hazards, what to look for, and potential retrofit possibilities. The U.S. Consumer Product Safety Commission Guidelines were discussed and provided to all attendees.