



U.S. CONSUMER PRODUCT SAFETY COMMISSION

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Ms. Bonnie Snow, Owner/CEO and Ms. Teri Snow
BeeSafe Systems
795 W. Center Street, #2
Provo, UT 84601

Dear Meses. Bonnie and Teri Snow:

On February 13, 2012, you submitted a petition requesting that the Commission initiate rulemaking to determine that BeeSafe Systems, Models 1 and 2 (BeeSafe products), are equally effective as, or better than, the other systems enumerated in the Virginia Graeme Baker Pool and Spa Safety Act, 15 U.S.C. § 8001 et seq. (VGB Act). For the reasons set forth below, the Commission has denied your petition.

The VGB Act is designed to prevent drain entrapments and eviscerations in pools and spas. The law became effective on December 19, 2008. The VGB Act requires that public pools and spas have drain covers that meet the ASME/ANSI A112.19.8-2007 standard, or any successor standard, on every drain/grate. Section 1404(c)(1)(A)(i) of the VGB Act. (In August 2011, the Commission incorporated ANSI/APSP-16 2011 as the successor standard to ANSI/ASME A112.19.8.) In addition to compliant drain covers, if the public pool or spa has a single main drain (other than an unblockable drain), the pool/spa must be equipped, at a minimum, with one or more of the following devices or systems:

- Safety vacuum release system;
- Suction-limiting vent system;
- Gravity drainage system;
- Automatic pump shut-off system;
- Drain disablement; or
- Other systems.

Section 1404(c)(1)(A)(ii) of the VGB Act. The VGB Act defines “other systems” as “any other system determined by the Commission to be equally effective as, or better than, the systems described in subparagraphs (I) through (V) of this clause at preventing or eliminating the risk of injury or death associated with pool drainage systems.” Id. Therefore, the determination that a product or system constitutes an “other system” requires that the product or system be determined to be equally effective as, or better than, the systems described in the VGB Act.

In brief, the BeeSafe products are large circular devices intended to be mounted permanently over an existing sump or other suction outlet. They are installed using an industrial adhesive as well as stainless steel screws, which are included with the product when it is purchased. Both models function by collecting water from a large number of small tubes located around the periphery of the device and channeling it toward what is, in effect, an integral centralized sump where the water is collected. The Model 2 is a smaller version of the Model 1.

The petition provides that the most defining feature of the BeeSafe Systems is the presence of long tubes, which, the petition claims, empty if they become blocked. The petition asserts that “for this reason, the “BeeSafe System is better alone than with an SVRS [suction vacuum release system] or back-up breaker.” The petition also states that the BeeSafe system eliminates the possibility that the entire cover will go missing, and provides that if the smaller, winterizing lid were to go missing, any tubes that become blocked would empty the water into the built-in sump and any suction at the surface would be released when this happened. The petition compares this action to a hydraulic switch, claiming that the action is “as fast or faster than any of the breaker secondary systems currently on the market.”

Commission staff evaluated the design and performance of the two products. The Commission staff found that a distinguishing feature of the anti-entrapment devices and systems enumerated in the VGB Act is that each of them limits the suction available to the drain cover, functioning as a “back up” should the drain cover break or go missing. In contrast, the BeeSafe products function not by limiting the available suction, but by denying bathers access to the suction outlet. Therefore, they function more as primary, rather than secondary, anti-entrapment devices. Yet, should the BeeSafe systems be deemed “other systems,” there would be no requirement under the VGB Act that a secondary anti-entrapment system be present.

As mentioned, the petition states that the design of the products eliminates the possibility that the entire cover of the BeeSafe products will go missing. Yet, materials describing the product provide that the smaller winterizing cover *is* removable and is designed to be removed in order to winterize the pool or spa. The petition claims that if the winterizing cover in the center of the device were to go missing, any tubes that became blocked would empty the water into the built-in sump and any suction at the surface would be released when this happened. Specifically, the petition states:

But what would happen if the winterizing lid were to go missing? The answer is simple: mostly likely, nothing. There would be no body entrapment because the tubes would still be functioning and there would be no possibility of blocking them to create a suction entrapment. The lid opening is small enough and the rise of the BeeSafe System off the floor of the pool high enough that even if the cover were gone there would not be a risk of an evisceration. As there is no grate, if the winterizing cover were damaged or missing there would be no risk of a hair or mechanical entrapment with the BeeSafe system.

Testing by Commission staff found that when all parts are installed properly, both products effectively prevent all types of hazards addressed by the VGB Act when used at their

rated water flow rates. Contrary to what is asserted in the petition, however, Commission testing found that if the winterizing covers of the BeeSafe products are missing, both of the BeeSafe products effectively become blockable drains, exposing bathers to suction hazards in excess of the limits prescribed in the applicable standard. As stated in the briefing package:

Without the winterizing covers installed, both the Model 1 and the Model 2 failed to meet the requirements of ANSI/APSP-16 at their rated flows.

The petitioner claims that its products will meet the standard even without the winterizing cover installed. CPSC staff, however, found that the pull-off forces for the body-block tests exceeded the forces allowed by the standard. When CPSC staff conducted the full-head-of-hair tests, the simulated human head that was used to conduct the test was pulled completely into the winterizing cover opening, stopped only by the plumbing underneath the product.

Staff Briefing Package, Petition CP12-1, "Petition for Classification of 'BeeSafe System' as an Anti-Entrapment System Under the Virginia Graeme Baker Pool and Spa safety Act," November 28, 2012, page 15. Many of the injuries associated with drain covers occur when the cover, or a portion of the cover, is missing. Were the BeeSafe products deemed "other systems" under the VGB Act, there would be no legal requirement for a public pool or spa containing such a product to contain a "back-up," secondary anti-entrapment device. Such a situation does not provide the protection contemplated by the VGB Act.

Based on this analysis and testing, the Commission has determined that BeeSafe products are not as effective as the anti-entrapment systems listed in the VGB Act at preventing suction entrapment and therefore do not qualify as "other systems" under the VGB Act.

Sincerely,



Todd A. Stevenson