



UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

This document has been electronically
approved and signed.

BALLOT VOTE SHEET

DATE: June 17, 2020

TO: The Commission
Alberta E. Mills, Secretary

THROUGH: Mary T. Boyle, Executive Director
John G. Mullan, General Counsel

FROM: Hyun S. Kim, Acting Assistant General Counsel
Barbara E. Little, Attorney, OGC

SUBJECT: Petition VGBA 19-1; Petition for Classification of “Vacuum Diffusion Technology” as an Anti-Entrapment System Under the Virginia Graeme Baker Pool and Spa Safety Act; Denial Letter

BALLOT VOTE Due: Tuesday, June 23, 2020

On May 20, 2020, CPSC staff forwarded a briefing package to the Commission regarding a petition submitted by PSD Industries, LLC (PSD Industries), requesting that the CPSC classify vacuum diffusion technology (VDT) as an anti-entrapment device or system under the Virginia Graeme Baker Pool and Spa Safety Act (VGBA). On June 1, 2020, the Commission voted (3-1) to deny the petition and direct staff to submit a draft denial letter for a vote by the Commission.¹

The Office of the General Counsel has drafted a letter to inform petitioner of the Commission’s action on the petition. According to section X(A) of the Commission’s Decision Making Procedures, a Commissioner who has dissented or abstained from a Commission decision on a matter must refrain from voting on a document implementing the Commission’s decision on that matter. Therefore, we have provided option V on the ballot vote sheet.

¹ Acting Chairman Adler, Commissioners Kaye and Baiocco voted to deny the petition. Commissioner Feldman voted to defer the petition.

Please indicate your vote on the following options:

I. Approve the draft letter denying Petition VGBA 19-1, as drafted.

Signature Date

II. Approve the draft letter denying Petition VGBA 19-1, with the following changes:

Signature Date

III. Do not approve the draft letter denying Petition VGBA 19-1.

Signature Date

IV. Take other action, as specified:

Signature Date

- V. Refrain from voting on draft letter because of dissenting vote, or abstaining from voting, on the Commission decision to deny Petition VGBA 19-1.

Signature

Date

Attachment: Draft Denial Letter for Petition VGBA 19-1



DRAFT

U.S. CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

Alberta E. Mills
Secretary

Tel: 301-504-7479
Fax: 301-504-0127
Email: cpsc-os@cpsc.gov

Date:

Mr. Paul C. McKain
Manager, PSD Industries, LLC
8781 Old Lloyd Road
#217
Lloyd, FL 32337

Dear Mr. McKain:

The U.S. Consumer Product Safety Commission (“Commission”) has considered your petition dated August 27, 2019, in which you request that the Commission classify vacuum diffusion technology (“VDT”), and the ProteKtor,TM as an example of VDT, as an anti-entrapment device or system under 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.¹

On June 25, 2015, you submitted a petition (Petition VGBA 15-1), requesting that the Commission classify VDT as an anti-entrapment device or system under the VGB Act. The Commission denied Petition VGBA 15-1, because the device did not protect against body entrapment and could be a potential source of hair and possibly mechanical entrapment.² On August 27, 2019, you resubmitted the petition with the same request, but with additional information, including letters of support from members of the pool and spa industry and testing and technical reports.

The VGB Act is designed to prevent drain entrapments and eviscerations in pools and spas. The VGB Act requires that public pools and spas have drain covers that meet

¹ The Commission voted (3-1) to deny the petition. Acting Chairman Adler, Commissioners Kaye and Baiocco voted to deny the petition. Commissioner Feldman voted to defer the petition. (<https://www.cpsc.gov/s3fs-public/RCA%20-%20Petition%20VGBA-%2019-1%20Petition%20for%20Classification%20of%20Vacuum%20Diffusion%20Technology%20as%20an%20Anti-Entrapment%20System%20under%20VGBA.pdf>).

² See <https://www.cpsc.gov/s3fs-public/PetitionDenialLetterVGBA151.pdf>.

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.³

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:

- (I) Safety vacuum release system;
- (II) Suction-limiting vent system;
- (III) Gravity drainage system;
- (IV) Automatic pump shut-off system;
- (V) Drain disablement; or
- (VI) Other systems.

Section 1404(c)(1)(A)(ii)(I)-(VI) 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 subclauses (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.

The petition offers information to support the claim that VDT is equally effective as, or better than, the systems designed to prevent entrapment listed in the VGB Act. The resubmitted petition includes some of the same information from Petition VGBA 15-1, including the definition of “VDT,” as well as claims regarding the deficiencies of the five enumerated systems in the VGB Act, and claims regarding VDT’s ability to protect against hair, mechanical, and limb entrapment.

The resubmitted petition contains additional information, including:

- Responses to issues identified in the VGBA 15-1 briefing package;
- Letters of support for Commission approval from the Association of Pool and Spa Professionals (APSP) and Stingl Safety Consulting;
- Three technical reports; and
- A copy of the Brazil CSSF Pool Safety Bill.

Staff prepared a briefing package discussing the petition, which was presented to the Commission on May 20, 2020.⁴ In the briefing package, staff found that each of the five codified entrapment protection devices or systems in the VGB Act protects against

³ In August 2011, the Commission incorporated ANSI/APSP-16 2011 as the successor standard to ANSI/ASME A112.19.8. In May 24, 2019, the Commission incorporated sections of ANSI/APSP-16 2017 as the successor standard to ANSI/APSP-16.

⁴ <https://www.cpsc.gov/s3fs-public/Petition%20VGBA%2019-1%20-%20Petition%20for%20Classification%20of%20Vacuum%20Diffusion%20Tec...pdf>

body entrapment. Staff’s analysis of incident data in the briefing package demonstrates that body entrapment is the most significant hazard within the scope of the VGBA. In contrast, as the petition acknowledges, VDT/ProteKtor™ does not provide body entrapment protection. If VDT/ProteKtor™ were approved as an “other system,” the Commission would be permitting a system that would not protect against body entrapment in place of the other secondary systems, all of which do afford body entrapment protection.

The staff briefing package analyzes the claims that a VDT/ProteKtor™ system protects against limb, hair, and mechanical entrapments. Staff concludes that VDT may afford some protection against limb entrapment when the pool drain cover over the sump is missing. However, staff assesses that hair and mechanical entrapment appear more likely when the drain cover is missing and the ProteKtor™ is in the sump, because the device presents additional obstructions that hair or other objects could become entangled, where no obstructions previously existed. In the briefing package, staff notes that the ProteKtor™ is similar in physical attributes to a drain cover in that they both are made of PVC material, are low cost, have no moving parts, and require no calibration or maintenance. One difference is the location of the device—a drain cover protects the top of the drain sump and the ProteKtor™ protects the opening to the sump pipe. Yet, drain covers have service life limits, wear out over time, need to be replaced and undergo extensive testing to ANSI/APSP-16 *Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs*. In contrast, there are no standards governing the design, installation, or operation of VDT/ProteKtor.™

The briefing package indicates that staff found only one of the three reports submitted with the petition to be relevant to petitioner’s claims related to VDT’s entrapment protection capabilities, “Test Report: ProteKtor Test Recording and Documentation.”⁵ Staff notes that the testing in the report was not performed using any standard test method, and the test flows used were about half that of typical drain cover flow rating tests; testing with lower flow rates reduces the likelihood of entrapment. The petition also includes a copy of the Brazilian National Pool Standard and notes the inclusion of suction diffusion technology in the standard. Staff’s analysis in the briefing package, however, indicates that, although the standard does define “suction diffuser,” the standard does not require the use of a suction diffuser.

The Commission has determined, based on staff’s review, that because VDT/ProteKtor™ does not protect against body entrapment, and may be a potential source of hair and mechanical entrapment, VDT/ProteKtor™ is not as effective as the anti-entrapment systems listed in the VGB Act at preventing entrapment, and therefore

⁵ The three technical reports in VGBA 19-1 include one from the University of Denver and two from Penn State University. The University of Denver report, “Device Performance Study of a Modified Suction Outlet in Pools and Spas,” presents research on the flow fields created by sump drains. One of the Penn State reports, “Preliminary Draft PSD Flow Adapter Flow Studies,” discusses pump noise and flow rate changes created by the ProteKtor.™ The other Penn State report, “Test Report: ProteKtor Test Recording and Documentation,” provides test results related to the ProteKtor’s™ ability to prevent limb entrapment and hair or mechanical entanglement.

does not qualify as an “other system” under the VGB Act. Accordingly, the Commission denied your petition.

Sincerely,

Alberta E. Mills