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U.S. CONSUMER PRODUCT SAFETY COMMISSION

WASHINGTON, D.C. 20207

8 JUL 1975

MGR/PRVLBR NOTIFIED
✓ No comments made
___ Comments attached
___ Excisions/Revisions
✓ Firm has not requested further notice 9111184

Mr. John H. Schmid
Vice President
Product Development
Zurn Industries, Inc.
Erie, Pennsylvania 16512

Dear Mr. Schmid:

This is in response to your April 16, 1975 request for advice on Consumer Product Safety Commission requirements for a water purifier which your company plans to manufacture and market. You also inquired about testing and/or approval of the Commission with regard to the product.

The Consumer Product Safety Act (CPSA) (copy enclosed) provides the Commission with jurisdiction over all "consumer products," including those used in recreation. However, the definition of this term specifically excludes "food" (section 3(a)(1)(I)) which is regulated by the Food and Drug Administration. Courts have interpreted "food," for the purposes of FDA regulation, to include anything which could migrate into food substances. Since water is a food, this office believes that the FDA has jurisdiction over water purifiers to the extent that any potential risk of injury involves contamination of water, the failure of the purifier to remove dangerous substances in water, or any other hazard relating to the water acted on by a purifier. In that regard, we suggest that you contact Mr. Taylor Quinn (BF-310), Bureau of Foods, 200 C Street, SW, Washington, D.C. 20204 for further information in this area.

To the extent that water purifiers present potential risks of injury unrelated to the water, such as sharp edges, it is this office's opinion that the "food" exclusion would not apply and that this Commission would have jurisdiction under the CPSA. The Commission has thus far neither proposed nor issued any consumer product safety rules

ADVISORY OPINION

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applicable to water purifiers. In addition, no "premarket" testing, approval, or evaluation procedures are included in the CPSA. However, if your company becomes aware that a hazard over which we have jurisdiction "could create a substantial product hazard" (section 15(b)(2) of the CPSA), the reporting requirements of section 15 would be applicable. Clarifying regulations to these requirements appear in the Federal Register at 39 FR 6061, February 19, 1974.

While the views expressed in this letter are based on the most current interpretation of the law by this office, they could subsequently be changed or superseded by the Commission or its staff.

We hope that this information is helpful to you. If you have further questions, do not hesitate to contact us again.

Sincerely,

Michael A. Brown
General Counsel

Enclosure

ZURN a step ahead of tomorrow

JOHN H. SCHMID
VICE PRESIDENT - PRODUCT DEVELOPMENT

April 16, 1975

Hon. Richard O. Simpson, Chairman
Consumer Products Safety Commission
1750 K Street, N. W.
Washington, D. C. 20207

Dear Chairman Simpson:

We are preparing to manufacture and market a small water purifier designed primarily for use by back-packers, picnicers and travelers to improve the quality of water for potable use. We ask your advice on the requirements of your Commission and any testing and/or approval you can provide for us in relation to this product.

The device, called Aqua-Shield, as illustrated on Page 20, Item 8 of their current catalog (attached), will be marketed by our Leisure Products Group. Its primary function is to kill and filter out bacteria and reasonable quantities of particulates from water for potable use. The user selects a reasonable source of water (stream, lake, pond, etc.), pours a quart of the water into the upper plastic bag, which he has hung from a suitable support, and lets the water run through the cartridge into the lower collector bag (approximately 30 minutes) from which he pours it for use. In the final design, the plastic (polyethylene) bags are wider and shorter than those shown in the catalog illustration.

The polyethylene treatment cartridge is cylindrical (1-5/8" dia. x 3½" long), closed at each end except for five 1/8" dia. evenly-spaced holes in the top and a single central .042" dia. metering hole in the bottom. The cartridge is filled with silver impregnated activated carbon (Ionics, Inc. or Yardney Electric Co.) retained between two ½" thick resilient Bermel Foam discs;

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the discs serve to distribute the flow uniformly over the cross section of the carbon filler and as they are compressed they also serve to keep the carbon compacted. In use water flows from the top bag through the carbon, where taste and odor components will be adsorbed and more importantly will be exposed to silver and pick up a very low concentration of silver ions, and then into the lower bag for use. The process thus relies on the germicidal effect of silver ions for the bacterial kill. It is pertinent that this oligodynamic action with silver is not new and has been used for many years for water disinfection and, in fact, there are several products somewhat similar to the Aqua-Shield that use this process now on the market.

The only standards for reference of which we are aware that are in any way applicable are the U.S. Public Health Service Drinking Water Standards 1962 and the standard for Bottled Water covered in Paragraph 11.7 under Title 21-Food and Drugs, of the Code of Federal Regulations as Revised April 1, 1974. The original design of the Aqua-Shield was developed and tested by Calspan Corp., Buffalo, N. Y. To further insure a safe product, a test program has been completed by the Biology Dept. of Gannon College, Erie, Pa., on the final design prototypes; these tests in all cases produced a product water biologically superior to that required by the above standards, even when the contaminated test water contained coliform concentration several orders of magnitude greater than that to be expected in the usual stream or surface water sources one would expect to encounter in the field. In addition, the instructions provided on the device (see attached) will advise the user regarding proper procedures.

Your advice and comment will be greatly appreciated.

Sincerely,

John H. Schmid

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encl.

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INSTRUCTIONS FOR AQUA-SHIELD

IMPORTANT

On Upper Bag - PLEASE READ

CAREFULLY

The Aqua-Shield Filter is simple but effective. It kills bacteria, parasites, and germs, and removes dirt, particulates, tastes and odors from most natural fresh water sources.

OPERATING INSTRUCTIONS

1. Unfold the upper and lower bags from around filter cartridge.
2. Utilizing the brass grommet, hang the unit from a convenient tree, bush, or coat hangar.
3. Open the upper bag and fill with cleanest* water available (capacity - 1 quart).
4. Water collects in lower bag at approximately 2 oz. per minute.
5. Tip lower bag to empty into container for use.

We recommend rinsing any sediment out of the upper bag after each use. When unit is to be stored, it is advisable to reverse flow about 2 oz. of water through the cartridge. Capacity of unit - 50 gal. - or replace yearly.

On Lower Bag - CLEAN WATER COMPARTMENT

Pour Filtered Water From Here

PLEASE NOTE

For maximum safety we recommend double filtration of the water. *The bactericidal efficiency of the Aqua-Shield is entirely adequate for suitable treatment of most waters; however, water containing large amounts of solids can plug the filter, and grossly contaminated water presents the possibility of contaminant leakage and therefore should not be used.

In cases of extreme need presettling and decanting to reduce sediment will aid in reducing plugging of the filter, and recycling the water through the Aqua-Shield one, two or more times will increase the bactericidal effect.

MODEL WPF-1

ZURN LOGO

ZURN INDUSTRIES, INC.
Erie, Pa. 16509