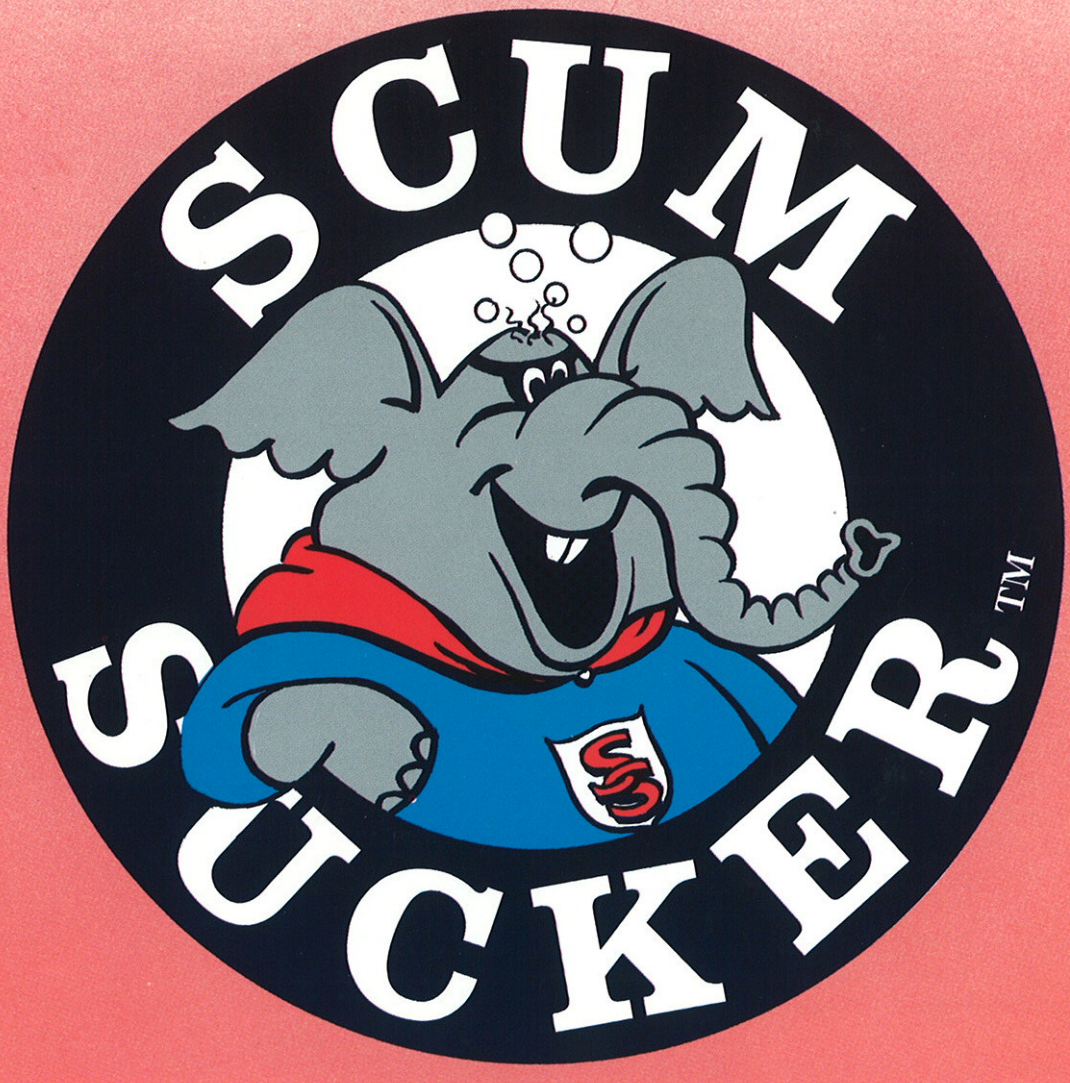


UNITED
Industries, Inc.

Innovative Water & Wastewater Technologies

THE SCUM SUCKER™

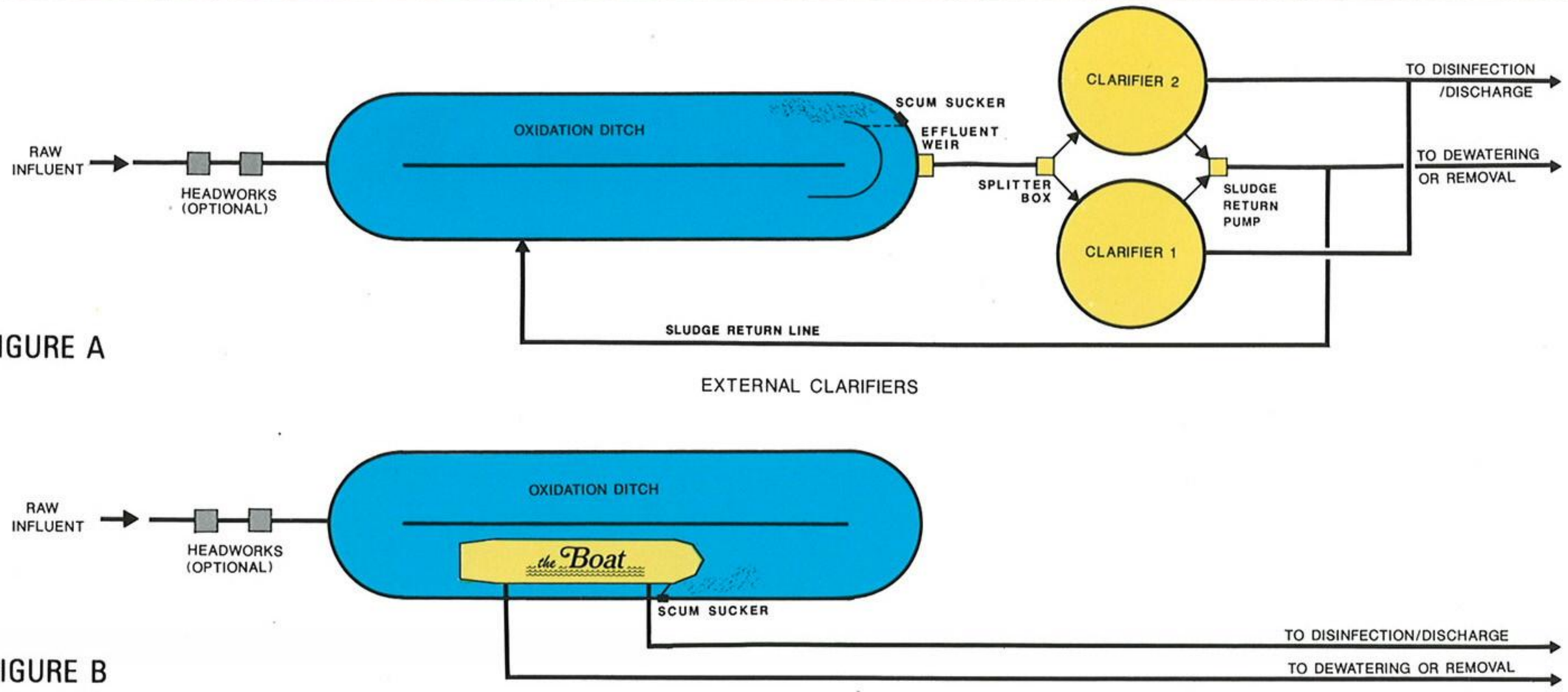


FIGURE A

EXTERNAL CLARIFIERS

FIGURE B

Floatable material often accumulates in an oxidation ditch system and becomes an unsightly nuisance. When external clarifiers are utilized, floating debris and scum will exit the ditch over the weir in the wall of the structure. Scraper mechanisms in the external clarifiers do not remove all of this debris because of the extremely slow velocity at which these scrapers rotate. Thus, much of this debris exits the clarifiers over the weirs, thereby detrimentally affecting the quality of the effluent. This may also require and increase in the maintenance time necessary to keep chlorination/disinfection facilities clean. The **SCUM SUCKER™** can be installed next to the effluent weir of the ditch, as shown in Figure A. Thus, a majority of floating material can be trapped in the oxidation ditch and removed from the mixed liquor.

If a designer desires a more cost-effective clarification system, then the intra-channel **BOAT CLARIFIER®** would be the logical selection. Shown in Figure B, the **BOAT CLARIFIER®** allows for all debris to float past the unit, next to the concrete walls. The **SCUM SUCKER™** can be used in conjunction with the **BOAT CLARIFIER®** to remove all floating debris on an "as needed" basis.

The **SCUM SUCKER™** is fabricated in 304 stainless steel and fits in the ditch wall, flush with both sides. A hand wheel can be turned manually which will swing a deflector out from the box as shown in Figure D. This deflector will extend from the ditch wall to either the **BOAT CLARIFIER®** (Figure B) or to the turning vane if external clarifiers are utilized (Figure A). This will effectively block off a portion of the channel's top surface. As indicated in Figures A and B, scum will collect on the top surface of the ditch in the area preceding the deflector. A telescopic valve can then be manually lowered to skim all floating debris off the top surface. This debris can then be transported out of the ditch to any disposal site. Figure C shows a section view of this device in the wall of the oxidation ditch.

Once all debris is removed, the deflector can be manually returned to a position flush with the ditch wall and the telescopic valve can be raised. This prevents scum from continually building up in the channel when used with the **BOAT CLARIFIER®**.

The **SCUM SUCKER™**, when combined with the **BOAT CLARIFIER®**, provides an efficient method of wastewater treatment without the use of complicated mechanical systems.

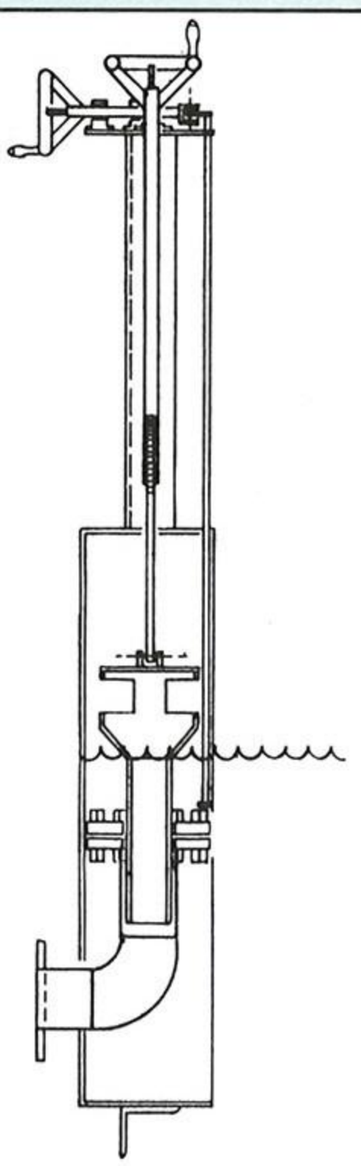


FIGURE C

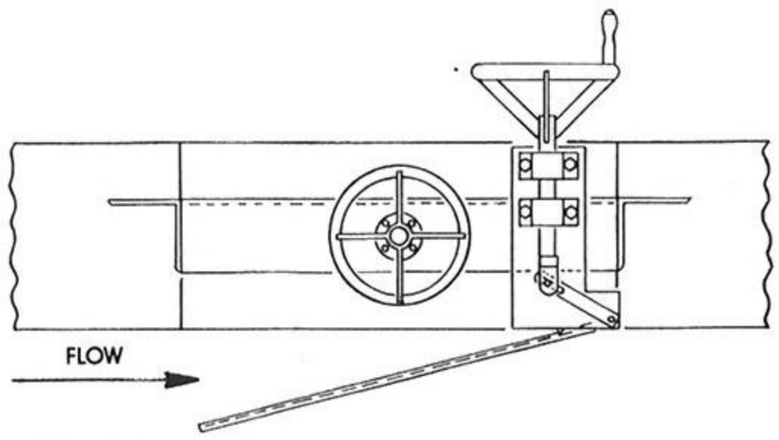


FIGURE D

A Unique Device For Removing Floating Debris from an Oxidation Ditch System.

Certain types of foam which occur in treatment plants contain filamented bacteria. This bacteria can adversely affect effluent quality. Using a microscope, this bacteria can be easily identified by its long filaments, as shown in Figure E. Spraying the foam back into the mixed liquor will create a poor settling sludge. The **SCUM SUCKER™** can remove this foam from the oxidation ditch and direct the waste to the proper removal facilities.

FIGURE E

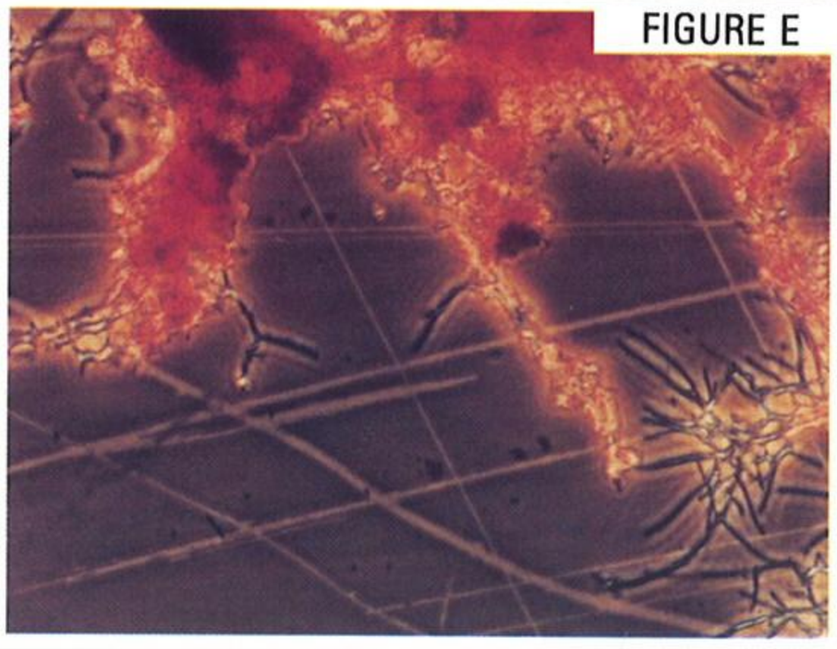


FIGURE F

The oxidation ditch facility (Figure F) illustrates the effectiveness of the **SCUM SUCKERs™**. All of the basins had foam problems. However, after lowering the telescopic valve in ditches No. 2 and 3, a majority of the water surface has been cleared of floating debris. The foam remains in ditch No. 1, illustrating the need for oxidation ditch facilities to use **SCUM SUCKERs™**. As illustrated in Figure G, each stainless steel unit can be mounted in the wall of the ditch.

FIGURE G

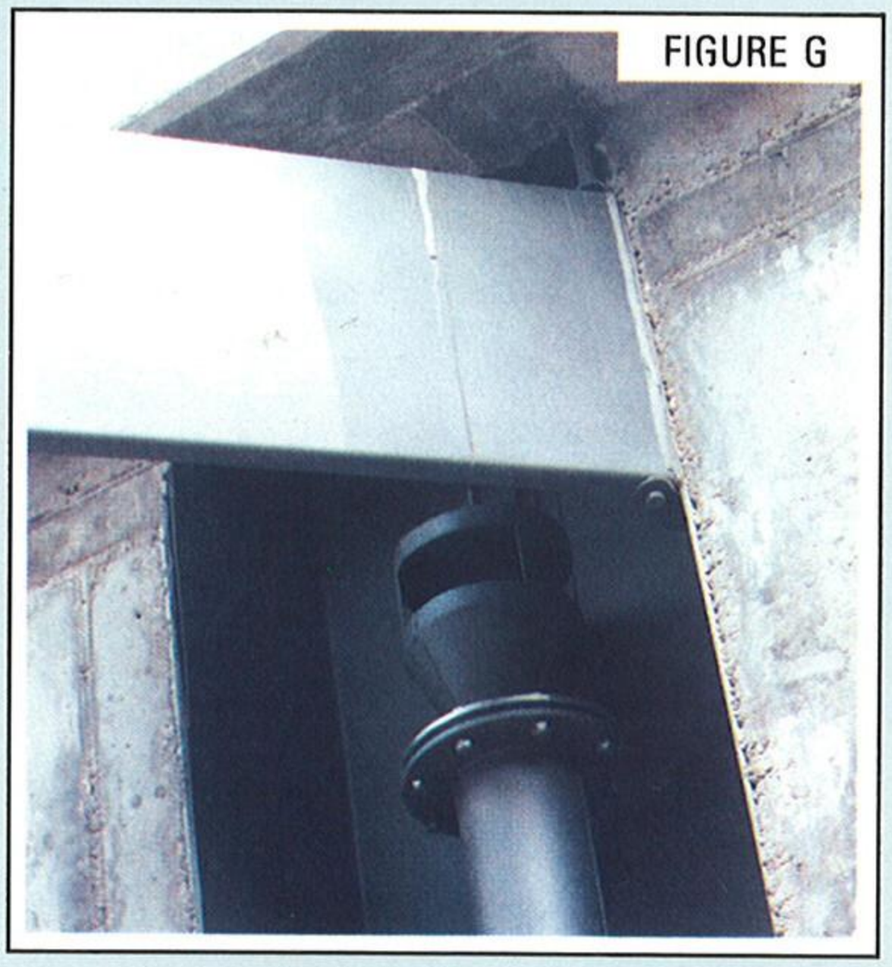
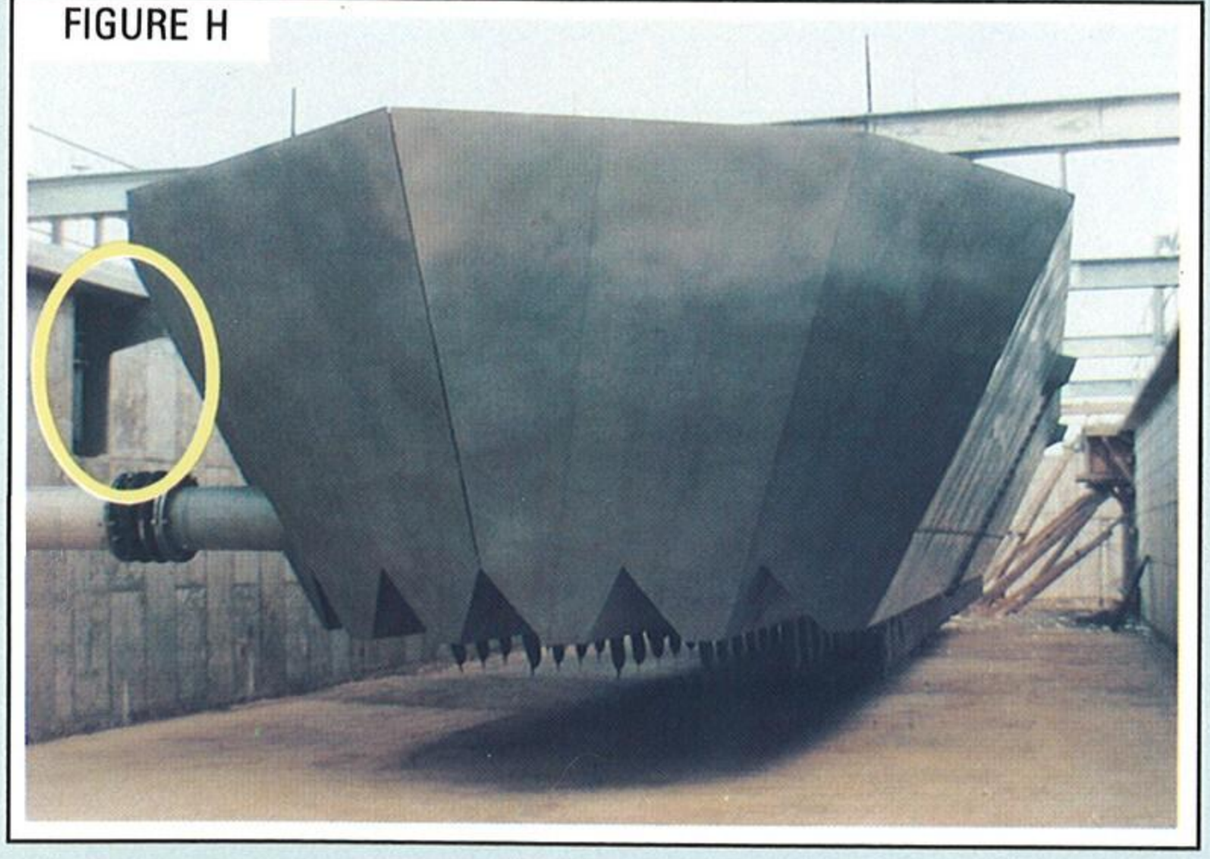
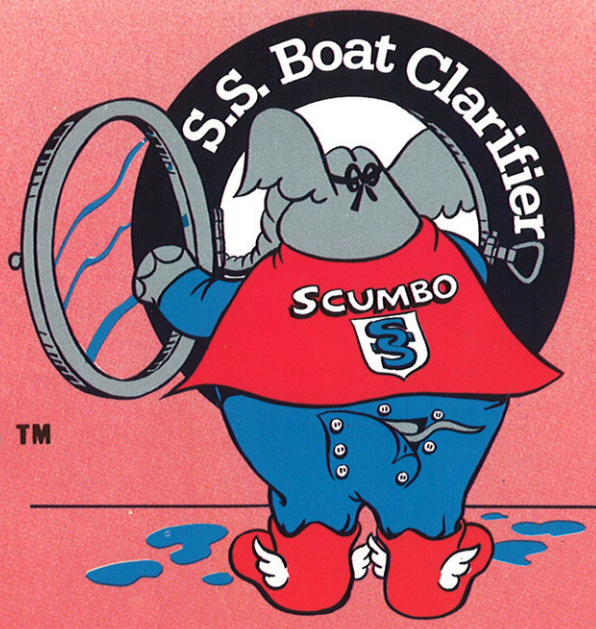


FIGURE H



Note the extended deflector in Figure H which uses the **BOAT CLARIFIER®** to block off a majority of the oxidation ditch. The **SCUM SUCKER™** creates an extremely cost-effective treatment process when combined with the **BOAT CLARIFIER®**.

A Great Combination!

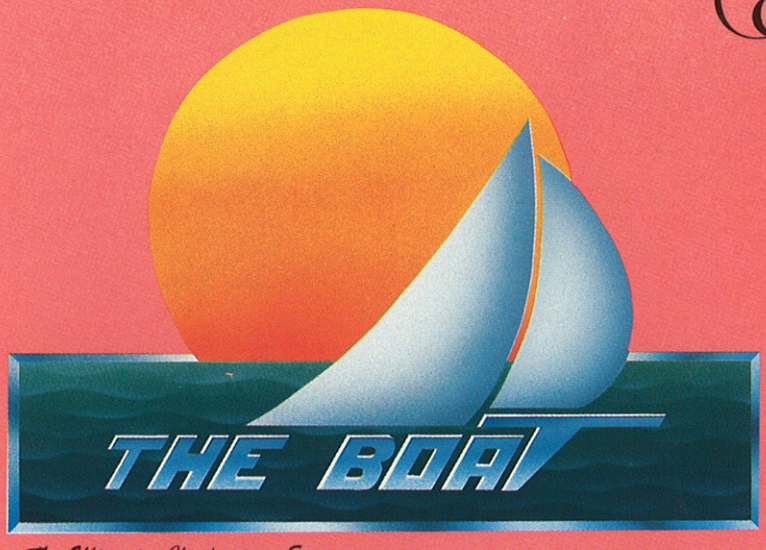


the

SCUM SUCKER™

&

BOATS®



The Ultimate Clarification System

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