

discharge of any untreated sewage. It would also give the user a positive indication, either visual or audible, that the device is nonoperative.

Working in cooperation with the Naval Ship Engineering Center, Naval Ship Research Development Center, the Army Corps of Engineers, and the Coast Guard has led to the development—at private expense—of the Mark 10 sewage treatment system for small ships and vessels. It has been tested successfully at the Marine Engineering Laboratory at Annapolis, and meets the requirements of military specification MIL-S-24201. Installations have been made and are currently being made on small naval ships.

The commercial marine industry—shipbuilders, operators of tugboats, barges, tankers, etc.—have all exhibited enthusiastic interest in doing their share in water pollution abatement. Even though several operators have made installation of the Mark 10 system, there is a growing hesitancy by this industry to take positive action now, for fear that future regulations may obsolete their investment.

We cannot assume the role of spokesman for the marine industry, but based on our contact with many of its members it appears that they are generally opposed to holding tanks, not only because of installation and servicing problems, but the hazard to safety due to gas formation in the tanks. Many have indicated, however, that they are prepared to make the expenditure to start combating water pollution now by installing treatment systems in existing vessels, provided they be given assurance that Government regulations to be established will not obsolete their effort and investment.

Obviously we are in no position, nor have we the authority to make such a guarantee. We, therefore, respectfully urge that the committee consider legislation which would assure that macerator/chlorinator treatment systems which meet the recommended standards of control set forth in the "Handbook of Sanitation and Vessel Construction," Public Health Service 1965, and are installed prior to the issuance of regulations to be established, would not be subject to removal or replacement.

PAPER ON WATER POLLUTION BY SEWAGE FROM WATERCRAFT

Now, Mr. Chairman, as I mentioned at the outset, Mr. William Smyers, chief research engineer of New Britain, is with me and prepared, with your indulgence, to briefly define, in layman's language, three technical terms that are used by many but understood by few.

Mr. BLATNIK. Is there an additional document here describing macerator/chlorinator production? Could we put this in the record at this point in its entirety and, Mr. Smyers, if you have any pertinent points, to give them attention, because we will consult with technical people in the pollution control agency and certainly double check back with both of you men, if necessary. But there has been a call for a quorum and there are four more witnesses still waiting. So submit the statement in its entirety rather than give us a long academic and technical chemical and engineering dissertation at this point. We certainly shall go over it as much as we understand it.

Mr. SMYERS. Mr. Chairman, I wonder if I might read a little bit on page 3 which I think has a bearing and a little more.