

periods of time. I would anticipate that the New York City area is surely going to have troubles. I have no idea how soon and what types of trouble. The total volume of materials flowing out of New York as you know, is awe-inspiring. I gather you have some studies of the ecology of the Pacific Ocean along the coast of California.

Mr. WARNE. We have limited studies but they are not nearly extensive enough and I doubt if they are going to get us enough answers in time. I think we need an additional concentration of this kind of effort.

Mr. VIVIAN. Is any of this work being conducted with California funds?

Mr. WARNE. Yes, some through the University of California, the Oceanography Institute at La Jolla, and through our department of fish and game. We are doing some of this, and we are presently planning additional programs which we hope to bring forward in the next session of the legislature.

Chairman MILLER. The ocean is a very big place and people feel that you can dump anything into it. But I think we have learned that this is a fallacy. Back about 1948, you might remember we had some pretty lean water years in California. One chemical plant that produced chlorine did so by using the dump power that was generated under normal conditions. Since this surplus power was not present, they couldn't supply the chlorine that the city of Los Angeles needed to sterilize its sewage. This resulted in southern California beaches being posted and no swimming was allowed because of the contamination.

Then again, sharks have appeared in waters off southern California where they never previously appeared, and the studies made indicated that the slight rise in temperature through the disposal of sewage changed the ecology and caused the water to become suitable for the sharks to exist. These are the things that we don't know very much about. We have just begun to scratch the surface in this field. Some years ago when the Atomic Energy Commission issued a report on the disposal of atomic waste along the Atlantic and gulf coasts, the Subcommittee on Oceanography, which I then had the privilege to head, made some studies and wanted to publish a study of the disposal of these wastes on the Pacific coast. When the Atomic Energy Commission was alerted, no such report was ever rendered. Is that correct?

Mr. WARNE. I don't think so.

Chairman MILLER. As I understand it, the people, in the three west coast States wanted to deposit the atomic waste in the ocean. It just didn't work out even though this was to be a very slight concentration. They were supposed to dump the waste in a thousand fathoms of water. The material was deposited in steel drums covered with concrete and was supposed to sink to the bottom of the ocean. The division of fish and game in California duplicated these drums, sunk them, and found that they were floating at 400 fathoms rather than a thousand.

Off the shore of New Jersey two of these drums had been supposedly dumped in a thousand fathoms of water, but became snagged in the nets of some fishermen. This was very low level waste and I presume did no damage, but what will happen if there is a high level of damage?