

relatively devoid of moisture, so that the movement of ground water which worried us a good deal, is at a minimum.

We have, however, as your nuclear powerplants expand, an increasing problem with low-level liquids, or we will have, because of the sheer multiplication of their volume. For the moment those are released to the environment with great care, with continuous monitoring, and I would say, from my own point of view, with safety. But they will be multiplied, obviously, manifold. And this poses a problem, again of regulatory management. It is a management issue.

I come to No. 7—I am a little slow in this, Mr. Chairman, but I think the detail is warranted from the testimony.

No. 7 is the disposal of inorganic wastes. This includes inorganic wastes from industry, from the demineralization now being proposed for irrigation waters, from the demineralization of brackish waters, and the byproducts of the desalting of sea water. I put all of these in the total complex of demineralization of the waste resulting from current and emerging processes.

The testimony indicates very clearly, particularly in the case of Mr. Warne from California, that very little is said about this problem, largely because nobody knows what to say about it, because nobody knows where to put it.

If you were to take a brief measurement of the amount of salt to be removed from irrigation water, where you are dealing as you know in tremendous quantities of water, quite unlike anything else that you deal with in municipal waste, you surround yourself with tons and tons—well literally thousands of tons of salt. Then the dilemma becomes one of where do you put it?

The new 150-million-gallon-a-day sea water desalting plant for southern California, which will be removing something of the order of 35,000 parts per million of salt, will result in a massive tonnage of salt thus taken out. Mr. Warne points out, it must then be discharged somewhere, in hot brine. This led him to the suggestion that the amount of research on the coastal behavior of the oceans is almost nil. If we are to proceed with many of these demineralizations, many of which of course ultimately would be on the ocean fronts, we should begin to find out what is to be said or done with these waste products. For example, even the minor salt accumulation in the demineralization of brackish water, by brackish I mean something less than 5,000 parts per million—there are long controversies as to where you put that. Obviously, the State engineers have objected to putting it back into somebody's well, because you are trying to get it out. He does not like you to carry it by pipeline into some surface body of water.

What I am merely recording from the testimony is this emerging issue of tremendous research implications. Bound up with it is detailed inquiry into the whole ecology of the ocean front, where most of these wastes would be likely to find their destination.

Removal of salts from irrigation water which carries a great deal, and incidentally on the Colorado is getting worse year by year—as you go downstream the drainage from the irrigated farm picks up the salts. By the time you get down to Imperial Valley the record indicates clearly an increased concentration of sodium and magnesium chlorides and sulfates.