

ever, you really have quoted the principal questions, and they are the following:

High capital cost for the processes involved. And, the answer is, "Some of the mills in my own district have not invested the capital," and second, even more important, next sentence, you say, "The units also have a tendency to clog due to the fibrous nature of the wastes applied," and so forth. My experience has been that if I go down to those plants when nobody knows I am coming the treatment system is turned off and the flow goes directly from the mill to the river. When I go on a formal visit, everything is working and the water is churning through.

Some improvement is needed because the river basin which is the dumping point—and this flows directly into Lake Erie—is so bad that when you go through on a powerboat, the paper wastes float up to the top of the river and the smell is extremely offensive.

In other words, there is no question about the pollution: There is no question about the level of trouble. There is no question about the fact that the BOD is out of sight. There is just simply no question about the fact that the papermills in that area have turned the river into a sewer. The question is, Who is going to do something about it? Part of the answer concerns the subject of technology which we are all discussing today. The question I have is, Why do you try to concentrate these wastes either in water or on land instead of dispersing them over land? Water is, in a sense, a very poor place for treatment of chemical waste, particularly when it is a stream or river. Why do you not dispose of this over acres of topsoil and let the natural biological work of the forest or farm take care of the waste?

Mr. KNOWLTON. Well, you pose several questions. Taking your last one first. Particularly in urban areas there aren't acres of ground necessary. A lot of work has been done in spray irrigation.

Mr. VIVIAN. You say in urban areas but the fact of the matter is there is no reason why you can't truck or pipe these wastes to nonurban areas. There's no necessity to solve the problem in the amount of acres owned by the papermills at the present moment.

Mr. KNOWLTON. Perhaps if the land is available, but this touches again on the cost element. I think we must not lose sight of the fact that the disposal of wastes in streams has been something that has gone on ever since the beginning of man on this planet and it has been only within the last 3 or 4 years that there has been this sudden realization that this has to stop and you just can't turn around there in a hurry. Now, going back to your individual case, the significance of the mill which all the valves were turned over.

I know nothing about this. If this was a deliberate situation, I find no excuse whatsoever for it. On the other hand, no piece of mechanical equipment is going to operate 100 percent of the time, 365 days of the year.

Once in a while, something breaks. You may have been there at the time when this happened.

A second point you raise, why water is a poor medium to use—that may be but water is the medium in which paper and pulp are made. It is the basis of the process, therefore, you have not only the waste that it carries but you have the water itself.