

Mr. MOORE. I think the point that needs to be made is—and I personally feel rather strongly on this point—the ultimate has to be complete treatment. There is no alternative to this. But the point I think that is important is that you don't get from raw sewage to full secondary treatment just by constructing the facility. It is extremely important that the facilities be properly operated. This is like driving an automobile. Most of us drive one that is probably not operating at its optimum efficiency. If you were to take it into a crew of racing experts, they would probably do all kinds of things to it to make it operate at its optimum efficiency. And one of the things that has to be done in the course of time is to assure that the plants are operated at their designed capacity, if you want to think of it that way. But what they get is merely a third-hand car working up to one that will operate at optimum efficiency when the time comes. But you have to begin with the primary treatment process, where you don't have it. You have to go on to the secondary process of treatment beyond the primary treatment before you achieve what it is that you are after.

Mr. FELTON. But is this raw sewage the primary cause of pollution in the Hudson River?

Mr. MOORE. Dr. Hirsch will have to answer that. I don't know the primary cause.

Dr. HIRSCH. I am afraid I would have to say that I don't know the primary cause either, but I think of the population you are talking about it would be a major cause. Do you know what the other sources are there, Jack?

Mr. FELTON. If we assumed that this plant was in full operation in 1972, which I hope, how many more years before the Hudson would then be fit for recreational type enjoyment?

Mr. CARPENTER. Or any use that it is not now usable for.

In other words, I gather from your statement that you felt that the lower Hudson should not receive any sewage that had not had full secondary treatment.

Mr. MOORE. I will extend that and say it is my opinion that none of the waters of the country, as a general proposition, should receive any municipal sewage that has not received secondary treatment. I feel that secondary treatment is one of the things which is technologically possible and, therefore, it is one of the things that ought to be achieved. Now you can get into some isolated cases that pose a hard question, and I have had them posed to me just in the time I have been here: Should a city with a population of 500 on the Mississippi River go to secondary treatment in terms of the volume of water that exists in the receiving stream? And there I will admit you get to a hard question. But as a general proposition, it seems to me that secondary treatment has to be recognized at this point in time as an absolute must, regardless of where the discharge is made.

Now with regard to the Hudson, your answer dodged what must be part of the problem, and that is this question in any receiving water. There are bound to be upstream discharges and probably industrial in the Hudson. There is an industrial stretch above the city of Manhattan.

Dr. HIRSCH. I am sure in the Hudson you also have heavy discharges from commercial shipping and so on. But there is another problem