

Mr. LOGAN. Let me answer your question about progress in the inorganic area, with two examples. I referred earlier to the problem on the river in Virginia. This has been substantially minimized by additional impounding facilities, by additional control of waste in the plant and by improved discharge of waste in relation to stream conditions. This has resulted in substantial improvement in terms of the waste content of the water.

In regard to air pollution, this report that the Public Health Service and MCA jointly developed is a survey of operating techniques in sulfuric acid plants.

Sulfuric acid is the largest inorganic chemical produced today, that is, the largest in terms of tonnage. It is the bellwether of the industry; it is an indicator of general economic and industrial activity.

Now, this report shows that various types of operations, indeed particular plants, are attaining certain results with regard to the discharge of sulfur oxides into the atmosphere. This information is already known now by every operator of a plant, and I can only presume that each and every operator is now attempting to solve his own problems in terms of the information that has been made available as a result of this study. To the extent that it can be accomplished, this may represent substantial improvement in any particular case, in regard to air pollution control.

Mr. WILKENFELD. May I interject this point? This whole matter of in-process control is a very important one in pollution abatement. To get back to differentiation between inorganic and organic wastes from industrial operations, there was a tendency to slide over organic waste disposal for industrial operations because this is the same as other secondary and tertiary treatments. This isn't necessarily so because industrial organic materials can be handled in many ways.

In many organic processes, you may be able to correct the problem in many cases by going back into the process as you cannot do in domestic sewage; changes can be made to reduce quite considerably the amount of material that is discharged, and this has been done in many cases; and a large share of the funds spent by the chemical industry has been for this type of control. In many instances it isn't necessary to install secondary treatment to further reduce organic wastes because of the considerable reduction made over the years in in-house modifications.

To be specific—

Mr. CONABLE. This makes it difficult to pin down your statistics, doesn't it?

Mr. WILKENFELD. That is right, it is very difficult to decide where to draw the line on what is an expenditure for pollution control.

Mr. CONABLE. And what is a salvage operation?

Mr. WILKENFELD. Yes; but this is the best type of control if you never generate a waste, but this has to be recognized as a legitimate method of control.

Mr. LOGAN. I think the economic pressures of competition are forcing constantly what we call in the industry tight systems, closed cycles.

Now, this is practiced to a much greater degree in the organic business. You are generally working with higher unit value materials.