DISCUSSION by F. E. Wisely, Vice President, Horner & Shifrin, Inc.

The empirical comparison of sanitary landfill, incineration and co-combustion presented in the paper are of particular interest because of the significant economic difference between co-combustion and the other two processes. This difference apparently is far greater in Italy than it normally would be in the United States.

One element which may at least partially have an effect upon the economics of landfill is the rather high cost assigned to land. It would appear that the land would have some appreciable value after the landfill is completed. The economic tabulations apparently do not recognize this value.

The waste preparation process diagrammed in Figure 4 does not include an air classification step. Unless extensive hand picking of undesirable material from raw wastes were practiced, it is probable that the pneumatic transfer systems would not operate reliably. Experience with the St. Louis-Union Electric prototype project demonstrated that air classification was mandatory, at least with the pneumatic systems available in the United States.

It will be of further interest to compare performance of the test facility contemplated at the Mercure Power Plant with the Union Electric results. Variation in the quality of refuse in Italy and in the United States could dictate different design parameters.

AUTHORS' REPLY

Our paper must be considered as a first predicting approach to the economic aspects of the problem, based on reasonable hypotheses.

Perhaps our predictions can be improved further on, examining closely the very important elements, like the cost assigned to land, that affect the economics of landfill.

Our main task was however to underline the economic differences among the processes considered, showing up the advantages of co-combustion.

Referring to the refuse processing, we consider very useful the advice of fitting up an air classifier to solve the problems risen during the St. Louis — Union Electric prototype experience.

We agree that the Italian experience can be very interesting for a comparison with the American tests.

Nevertheless we must point out that at present this experience is only at the state of project.

In case it will be carried out, two distinct phases are foreseen:

— refuse processing tests, using the existing facilities for lignite, after their overhaul; these trials will be preceded by chemical and composition analyses of the refuse collected in the nearby area;
— in case the existing facilities, with some eventual modification, are suitable, the second stage may consist in burning refuse in the furnace, together with the main combustible fuel oil.

The process will be carried out after having appropriately modified the interested parts of the boiler.