DISCUSSION by Samuel M. Clarke, Greeley and Hansen

In this excellent paper there is only one statement with which the writer has serious disagreement.

The unfortunate experience in the early operation of the second Alexandria incinerating plant has led me to conclude, contrary to Mr. Hall's statement, that construction specifications should not place responsibility for initial operation of the plant on the furnace builder, except as regards the mechanical operation and maintenance of equipment furnished by him. Under present-day procedures in design and construction, there is no need to place more responsibility on the furnace contractor than on any other. It is far better for the municipality to arrange directly for any necessary experienced operating personnel, either temporary or permanent. The day is past when a furnace builder needs skills or experience peculiar to incinerator furnaces.

Under Mr. Hall's supervision the present staff has shown resourcefulness in solving problems and has consistently maintained a model incinerator operation.

DISCUSSION by A. B. Favor, Delaware County Disposal Dept.

It is quite true that proper operation can have a lot to do with satisfactory incineration of municipal refuse. However, the best operation can be no better than the capabilities of the furnaces, and I am of the opinion that the average furnace in operation today needs a lot of improvement.

Personnel selection and training is very important, but most operators are handicapped by the necessity of using politically selected employees and having to train them.

Preventive maintenance is excellent, if your system has the capacity to schedule down time to do it. Plant modification is important in order to keep up to new regulations and hold down costs.

Good housekeeping and safety programs will always pay off well. I always have been in favor of good record keeping, because it is the only way you can really know what is going on.

As for contractors instructing personnel how to operate a new plant, it has been my experience in the past that they do not know enough about it to do the job well. Some of this is due to the old story that designers do not follow up on their offspring enough to find out how it really does work.

Mr. Hall's comments on preventive maintenance fall into what we call normal maintenance. Preventive maintenance, as we see it, calls for taking equipment (such as crane, motors, etc.) out of service long enough to put them in top condition before putting them back in service. I wish I had the capacity to allow this, but, unfortunately, I do not.

Plant upkeep comments are generally good, but in some cases where furnace settings are not tight and natural draft is sometimes light, the furnace room will get smoke stained to the extent that it is too costly to maintain light colored painting.

We have all observed conditions in existing plants which do not work as well as desired. If remedies can be applied to existing equipment, they should be carried out. The money for such work can usually be obtained by explaining to the commissioners or governing body what the benefits will be. Other conditions should be kept in mind for correction in the next plant.

We have found that acid conditions created by introducing water to the hot gas stream can be neutralized by mixing with the solid ash quench water which becomes very alkaline. This eliminates the use of chemicals which we tried, and found expensive.

We still have trouble with our water-cooled feed chutes and have not found a good solution.

Record keeping will help supervisory forces who have to make out the reports, will point out where
costs may be reduced, and often provide eye-opening figures to persons who may be skeptical of incineration operations. Our crane manufacturers were amazed to find that our cranes made 75,000 to 100,000 lifts per year.

We all have operating problems, which keeps the job interesting, but good personnel, housekeeping and record keeping will reduce the headaches.