Discussion

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This paper presents an interesting approach for optimizing resource recovery plant design through simulation. The methodology presented has merit and hopefully will stimulate some creative thinking in engineering design.

Any improvement in optimizing plant size would be welcome. An oversized plant which processes less than optimum throughout will almost surely experience economic difficulties, especially in these days of high capital costs and interest rates. An undersized plant will disappoint a community seeking maximum waste volume reduction. As Rigo mentions, the sensitivity analyses used by many of us can vary only one parameter at a time, which certainly does not reflect the real world.

As the author points out, unfortunately there is a shortage of data from the resource recovery industry for testing the Monte Carlo simulation. As the industry matures and more data from operating plants are accumulated, some interesting work in this area could be done. Members of the ASME Solid Waste Processing Division are in a unique position to assist in this effort.

AUTHOR'S REPLY

The author concurs with Dr. Franklin's comments on the paper. There certainly is a lack of usable data presently available. It is hoped that making engineers and operators aware of the need for and value of suitable performance data will help make suitable information available. Having based the results in the paper on the best available data (acronym: BAD), I feel that the best results that can currently be produced are semi-quantitative so that an adequate safety margin should be applied. Considering the incredible price tags associated with waste-to-energy plants today, work needed to trim the safety margins seems to be justified.