

DISCUSSION

The following questions (Q) were raised at the symposium presentation of this paper, and the author's answers (A) follow:

Q: Have you investigated the use of recirculating nebulizers that could, in principle, eliminate the generation of liquid waste and therefore eliminate radioactive liquid waste disposal problems?

A: I have discussed this with people from Aldermaston, where such a nebulizer has been constructed. They believe that the *only* use for a recycling nebulizer is to analyze samples that can only be obtained in very restricted quantities. In normal operation, a conventional nebulizer is a once-through system. With a recycling nebulizer, everything that ends up on the walls goes back into the sample and there is a major wash-out problem between samples that leads to the generation of large volumes of liquid waste. They do not use their recycling nebulizer with a contained plasma source to look at trace elements in radioactive solutions.

Q: I have a general question. If one intends to set up an instrument that will operate with radioactive materials in a building that already possesses a large-capacity central HEPA system for air filtration, why should one install another HEPA filter onto or near the new instrument?

A: At present, I regard the HEPA filter installed near my instrument as being possibly more protection for my laboratory from the building exhaust system than protection for the building exhaust system from my laboratory! Also, more seriously, when one plans to construct a contained ICP system, the eventual decommissioning of that system must be considered. It is preferable to avoid creating a maze of radioactive exhaust ductwork, especially when the radioactivity can be easily localized.