UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

JAN 2 0 1994

MEMORANDUM FOR: Norman L. McElroy, NMSS

FROM: John E. Glenn

SUBJECT: REGIONAL COMMENTS ON THE DRAFT PART 35 REVISIONS

I am enclosing commments from 4 Regions regarding revisions to Part 35. Region V will be sending comments shortly . In those cases where you have already made comments, I am enclosing the copy with your comments.

There are two areas where I wish to make further arguments for revision of the Draft Part 35:

GS 1. 35.310 Safety Instruction.
(3) Contamination control.

I disagree that licensees will interpret linens, eating utensils, and other items as radioactive waste. To the contrary, I fear that there will be a strong tendency to treat these items as the hospital staff would treat them for any other patient. At least, the NRC should require that reusable items be held for decay and surveyed prior to reuse.

GS 2. 35.60(b) Syringe shields.

I strongly disagree that little of the finger dose is from drawing the radiopharmaceutical dose. In Region I, we have had several Civil Penalties against Nuclear Pharmacies for hand overexposures. Recorded finger doses have beeen as high as 60 rem on the TLD badge. Although Nuclear Pharmacies draw many more doses than a hospital, it is also true that they do not inject any patients.

Quickness can not compensate for the extremely high contact doses at the lower end of an unshielded syringe. For 20 mCi of Tc-99m in a 2cc volume, the dose rate is about 22 rem/hr or 0.6 rem/min. If a technologist draws 10 doses at 10 seconds for each dose, the technologist could receive a 1 rem /day dose to the tip of the finger . Of course, much will depend on the technique used. However, syringe shields will reduce the contact dose by more than a factor of 100. Thus, if the use of syringe shields increases the time by a factor of 10, the potential finger dose is still at least a factor of 10 less than with using no syringe shield at all.

John E. Glenn

John E. Glenn, Chief
Nuclear Materials Section B

enclosures as stated

cc: w/enl
P. Chambless, RII
B. Mallett, RIII
G. Brown, RIV
R. Thomas, RV