SPRINGFIELD MEDICAL IMAGING CENTER

BALTIMORE PIKE & ANDREW ROAD, P.O. BOX 247 SPRINGFIELD, PA 19064

215/328-1068

10 September 1985

MS 16
KO

Francis M. Costello
Nuclear Materials Safety Section A
Division of Radiation Safety & Safeguards
U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Costello:

With reference to your Control No. 104175, we submit the additional material that you requested to support our request for a medical byproduct materials license.

With reference to your item numbers:

1. a) We will have (24) 2" x 4" x 8" lead bricks arranged in a square, 3 bricks high (lead fort), where we will store some radio pharmaceuticals. Other radiopharmaceuticals will be stored in (2) 1/2"-leaded Saf-T-Station lead-drawer modular units (one with sink).

   b) Refrigerated radiopharmaceuticals will be stored in our refrigerator in their original lead shipping containers.

   c) Storage of waste radioactive material will be in a plastic bag in a corner of our lead fort in the hot lab. Spent syringes and vials from the radiopharmacy will be stored in original lead containers in ammo box or attache while awaiting pick-up. These attaches, etc. to be kept in the hot lab at all times. The hot lab is large enough to store shielded generators for 1-2 weeks easily. They would be returned to the manufacturer weekly. We will survey the hot lab areas weekly.

2. Personnel in the vicinity of radioactive materials will be instructed initially of the hazards and safeguards. They will be reinstructed when there is a significant change in their duties, regulations or terms of the license.

3. During working hours the courier delivers the attache or box of radiopharmaceuticals directly to the hot lab and picks up the outgoing attache or box. The nuclear medicine technologist then monitors the package and checks the lading papers to confirm the accuracy of shipment, and to assure possession limits are not exceeded. These measurements are logged daily or as deliveries are made. In the event that the technologist must leave sight of the hot lab, the door will be locked to assure authorized access. Radiation exposures in unrestricted and restricted areas will not exceed 10CFR 20.105.

4. With regard to our request for Gd-153 we submit the following:
   a) All manufacturer's instructions will be followed in the use of the dual photon absorptionetry equipment, both clinically and at source replacement.

   b) The following source manufacturer and models may be used: Gulf Nuclear GD-1, NEN (NR-476-5-153-5), and comparable Amersham source. We wish a possession limit of 1500mCi of Gd-153, and we confirm we will leak test the sealed source semi-annually.

   c) In the event of shutter failure or significant degradation of the source holder, the unit will not be used until service has been performed to return it to optimal integrity.

   d) Sources will either be returned to supplier or decayed on site in a lead pig capable of reducing exposures below 20.105.

If there are any questions with regard to this application, please direct them to and through our consultant radiation physicist, Walter L. Robinson, 717/397-2569.

Sincerely,

DONALD J. KASPER, M. D.

WLR:J