

January 16, 1981

U.S. Nuclear Regulatory Commission
Region III Licensing Branch
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Gentlemen:

Approval is requested to amend byproduct license 12-509-3 to permit disposal of certain radioactive materials by the "decay in storage" method as outlined in the NRC letter to licensees dated June 25, 1980. The information required in enclosure 1 to the letter is as follows.

1. Very short-lived isotopes decay in the laboratories in which they are used. This decay takes place in fume hoods or shielded caves or the lead shipping containers in which the materials are received from the suppliers. The laboratories are monitored regularly by the users and also by the Radiation Protection Service. Other short-lived materials with half lives up to and including 60 days would be stored in a central facility. A drawing of the facility is attached. The floor is two feet reinforced concrete with an additional three inches of wearing surface, the walls are constructed of four inches stone plus eight inches concrete block, and the area above is open. Since this is a one-story building, there are no occupied areas above. The space below is occupied by Radiation Therapy and the 50MeV linear accelerator. Note that the shielding is more than adequate to provide for the levels of activity commonly used under the University's license.
2. Security for the storage facility is provided by locked doors.
3. Radiation levels of the waste area will be monitored weekly.
4. Waste will be monitored to assure that it has decayed to background levels prior to disposal according to the following procedure:
a) waste will be monitored in a low background area. b) a low level Geiger-Mueller type survey instrument will be used for monitoring I-125. c) all shielding will be removed prior to monitoring. d) a record of these surveys will be maintained as required pursuant to 10CFR20.
5. Used Tc-99m generators will not be disposed of in this manner.

8506060060 850517
REG3 LIC30
12-00509-08 PDR

U.S. Nuclear Regulatory Commission
Page 2
January 16, 1981

Enclosed please find University of Chicago check for \$40.00 to cover the license amendment fee specified in 10CFR170. We will be glad to provide additional information concerning this license amendment request.

Sincerely,

Kenneth W. Dam

Enc. NRC encl #1
Drawing dated 1/16/81
Check

bcc: Mr. Edward Mason ✓
Mr. Norman Nachtrieb
Mr. Nathan Sugarman



CONTROL NO. 78903