

Mayo Clinic

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Alan L. Orvis, Ph.D.  
Radiation Safety Officer

May 21, 1981



Director  
Division of Fuel Cycle and Materials Safety  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Reference: Byproduct Material  
License No. 22-00519-06

Dear Sir:

This is a request for an amendment to the referenced byproduct material license to provide for the procurement and use of an additional Cesium-137 irradiator. This will be the series 143 Cesium Irradiator manufactured by J. L. Shepherd Associates. As stated on NRC-313 (I), the irradiator will be located in the Mayo Clinic Blood Bank and will be mostly used for clinical purposes.

Sincerely yours,

A. L. Orvis  
Radiation Safety Officer

cc: J B Moore  
G J Thomas

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## 15. RADIATION PROTECTION PROGRAM

The general aspects of the program have been described in previous applications (22-00519-06 dated August 17, 1979; 22-00519-03 dated August 25, 1978).

Leak Testing: Specific to the presently requested device, the initial calibration and semi-annual leak tests will be done by personnel from the radiation safety office. For leak testing the accessible surface that is nearest to the source will be wiped with moistened gauze pads at intervals not greater than six months. The pads will be counted in a calibrated scintillation well counter to insure that applicable levels are not exceeded.

Training of operators: A special training course using the instruction manual as a guide will be required of all machine operators. The course will be given at appropriate times and will cover the operation of the irradiator, the features of its radiation protection and necessary emergency procedures. The course will be given to senior investigators, lead technician and paramedical users.

Facilities and equipment: The irradiator will be housed in a passageway between Rooms 126 and 136 in the Hilton Blood Bank. This location has been chosen partially because of floor loading capabilities. All buildings in the Mayo Clinic including the Hilton Building are under tight security. After-hours access is by coded card and central closed circuit television is used to monitor building entrances. Security guards maintain regular surveillance.

The enclosed floor plan shows the location of the irradiator.

Security provisions: The irradiator is supplied with two operating keys. One key will be kept by Dr. S. Breannan Moore in his office, Room 100A, and the other key will be kept in the red cell compatibility lab, Room 122. Other authorized users will be recognizable to the key custodian or to the lead technician.

Other aspects of the radiation protection program are common to all activities under license no. 22-00519-06 and were described in applications dated August 17, 1979, and December 28, 1979.

