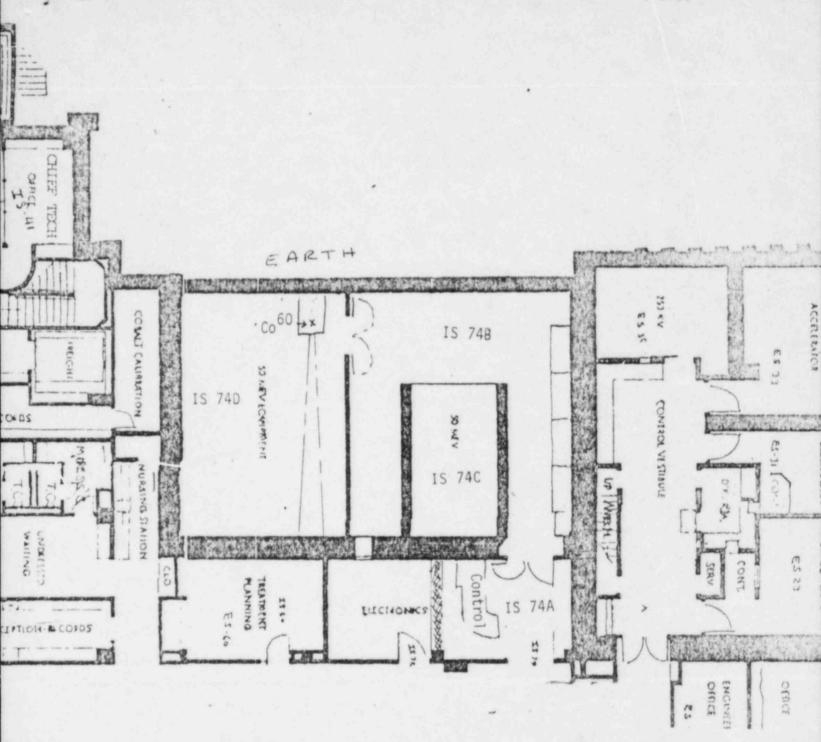
THE UNIVERSITY OF CHICAGO RADIATION PROTECTION SERVICE 950 EAST 59TH STREET CHICAGO · ILLINOIS 60637 LABORATORY: BH ROOM G-B5 OPPICE: BH ROOM O 55 312/947-5037 962-6299 4+3/947-3048 August 22, 1983 Ms. Pat Vacca U. S. Nuclear Regulatory Commission Washington, D. C. 20555 Dear Ms. Vacca: Enclosed please find a license renewal application for license 12-1721-2 along with supporting documentation and schedules. Amendment 01, dated April 8, 1983, provides authorization to place the modified cobalt unit in the transformer room of the linear accelerator. The license renewal application herewith transmitted incorporates several additional requests: 1. Approval for new use. This new use does not involve patient therapy but rather the device will be used for instrument calibration and irradiation of small specimens for training and teaching purposes. 2. A change in condition 12b to read, "Source transfers, source exchanges and/or inspection and servicing activities authorized on condition 9a shall be performed by, or under the supervision of and in the physical presence of, Edward Mason, Radiation Protection Officer and Franca T. Kuchnir, Head, Medical Physics Section." Please refer any questions concerning this application to the undersigned. Sincerely. Edward W. Mason, Director Radiation Protection Service 8603060469 860115 REG3 LIC30 12-01721-02 PD PDR 61: 14 6Z 9NY E8. EWM/gh

encs.

Step-by-step Procedure for using the Co^{-60} irradiator.

- 1. In the "beam off" position, the user must remove the key from the control panel before entering the irradiation area to set-up the item to be irradiated. He can turn on/off the light field in the irradiation room to help him in the set-up.
- 2. Coming out of the irradiation room, he must close two doors (see attached diagram) that are interlocked to the on-off switch mechanism. In addition, he must insert and turn the key on the control panel before the beam can be turned on. The pre-set time for exposure mechanism also has to be activated for the beam to come on.
- 3. During exposure an audible alarm will be turned on behind the interlocked doors, in addition a red sign labled "Beam On" on top of the doors will be turned on.



Proposed Location and Interlock System

There will be three interlocks all of which will be required to be closed simultaneously for the shutter to be opened.

1. A removable key will be installed on the control panel. This key will be under the control of the person that uses the irradiation room.

2. The door between IS 74D and IS 74B will be interlocked.

3. The door between IS 74A and IS 74B will also be interlocked.

In addition, if so required, we will install an alarm audible in rooms IS 74B, C and D when the shutter is open. A battery powered radiation monitor will be installed in IS 74D with a visible safe/unsafe indicator displayed on the control panel.