



UNIVERSITY OF SOUTHERN MAINE

A UNIT OF THE UNIVERSITY OF MAINE

Office of the President

February 6, 1986

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RECEIVED 96 Falmouth Street
Portland, Maine 04103

United States Nuclear Regulatory
Commission
Nuclear Materials Section
Division of Engineering and
Technical Programs
Washington, D.C. 20555

U.S. N.R.C.
LIC. FEE MGMT. BRANCH

Ref: N.R.C. License Number 18-19430-01
Expiration Date: 02/28/86
Program Code: 03510

Gentlemen:

Our Renewal Application for this license is in process but probably will not be completed before mid-February, which will be too late for your processing before the License expiration date. The Renewal Application will result from a thorough review of applicable N.R.C. Regulations and of the present License and procedures, will detail changes we would like to make in operator training and safety, and will describe a remote-operating and shut-down mechanism attached to the source which we have developed after well over a year of effort.

The basic items of the Renewal Application will relate to the following:

1. Our intention to abide by all applicable N.R.C. Regulations.
2. As in the original Application, persons under the age of 18 and pregnant persons of any age will be refused access to the source.
3. The pre-experiment drill of calculating the maximum expected total dose to the most heavily exposed member of an experiment team, and the modification of planned experiments to conform to the ALARA concept will be continued.
4. The wearing by all persons in an experiment-team of both a film badge and self-reading dosimeter.
5. A request that complete calibration of personnel dosimeters and survey instruments to traceable references be put on an annual basis, as described in Paragraph 10.2(3) of N.R.C. "Regulatory Guide, Second Proposed Revision 1."
6. Experience during the first licensing period has shown that use of the source can be expected by two distinct groups, (a) those students who are majoring in physics, engineering, or other "hard" science,

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who have had at least a year of calculus-based physics, and who are using the source as part of a "Modern Physics," or equivalent, laboratory experiment sequence; (b) students in other areas, such as the life sciences, who wish to use the source as an irradiator in experiments in their disciplines, as distinguished from students who are studying explicitly the properties of radiation. The Renewal Application will request that group (a) students be exempted from a separate formal training in the use of the source on the grounds that it is redundant and thus an inefficient use of their time. The Renewal Application will state that group (b) students will be allowed access only after a specific formal training period and the passing of a written examination. A request will be made to use whatever training time is necessary to complete the training and testing, according to the nature of the students in the group.

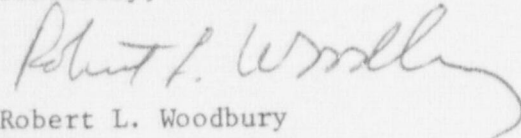
7. The source will continue to be operated, as before, only under the direct supervision of Professor Armentrout, the licensed operator.
8. The Renewal Application will describe the remotely-operated attenuator operator/annunciator, and redundant fail-safe shut-down, which Professor Armentrout and a student have designed and are in the final stages of installing.

This letter is to advise you of the current status of the Renewal Application, and to request the issuing of a temporary License for storage only, according to Paragraph 13-5.5 of N.R.C. "Regulatory Guide, Second Proposed Revision 1," with added permission for Professor Armentrout only to operate the source as necessary to complete installation of the remote operator.

Finally, you should know that during the past year while the remote operator has been in development, the entire laboratory and vault occupied by the irradiator has been newly painted, wired, and equipped with permanent furniture. These improvements necessarily have interfered with the remote source operator development and, therefore, with the completion of the Renewal Application.

Please advise if you should require further information.

Sincerely,


Robert L. Woodbury
President

RLW/e

cc: Professor Armentrout

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Date 2/18/86
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