

September 8, 1982

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



SUBJ: Amendment of Material License 26-00138-10

Gentlemen:

1. We request that you amend our Material License to include the following:

137Cs sealed source of 1,500 curies contained in the
J. L. Shepherd Associates Mark I Model 22 Irradiator.

2. Additional information that is not in our original application dated November 11, 1978, and letters dated September 6, 1979, and September 24, 1980, is as follows:

- A. Individual who will directly supervise the use of the licensed material: A. J. Blotcky, Radiation Safety Officer.
- B. Use of Licensed Material: For irradiation of biological samples, chemicals and small animals.
- C. Radiation Detection Instruments
 - 1) Instruments as described in Item 9, letter of November 11, 1978.
 - 2) An area radiation monitor 5-50 mR/hr, with audible alarm set at 5mR/hr will be supplied by J. L. Shepherd and Associates and installed on wall in irradiator room.
- D. Facilities and equipment.
 - 1) Irradiator will be installed in Room R-122 (drawing attached as Attachment I).
 - 2) Exposure to personnel and animals in the adjacent rooms will be such that it will be less than 125 mrems per 13 weeks.
 - 3) Mark I 137Cs Irradiator is on the NRC Sources and Services list.
- E. Radiation Protection Program

In Reply Refer To: 00/151C

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1) Organization and administrative procedures.

- a. The Radiation Safety Officer will directly supervise the use of the irradiator.
- b. Users will be approved by the Hospital Radiation Safety Committee.
- c. Only approved users will be issued a key to the power switch which controls all functions of the irradiator. In addition, the door to the room containing the irradiator will be kept locked and only approved users will be issued a key.
- d. Written administrative procedures that govern the responsibility for the safe use of the irradiator are enclosed as Attachment II.

2) Operating and Emergency Procedures.

- a. Operating Procedures - See Attachment III.
- b. Emergency Procedures - See Attachment V.

F. Training Program.

1) The training program for personnel who work with or in the vicinity of the irradiator will cover the following:

- a. Area where source is located.
- b. Potential hazards associated with the source.
- c. Radiological safety procedures appropriate to their respective duties.
- d. Pertinent NRC regulations, including those that pertain to employee rights as specified in 10 CFR Part 19.
- e. Pertinent rules and regulations of the license.
- f. Pertinent conditions of the license, including specific conditions of operation and the application itself that is incorporated as part of the license.
- g. Their obligation to report unsafe conditions, and the individual to whom unsafe conditions should be reported.
- h. Appropriate response to emergencies or unsafe conditions.
- i. Their right to be informed of their radiation exposure.

3.

- j. Location where the licensee has posted notices and where pertinent regulations and copies of pertinent licenses and license conditions (including applications and applicable correspondence) is available.
- k. In addition, each employee will receive that portion of the facilities training program as outlined in Item 12 of our application dated November 11, 1978, that are deemed necessary for that employee's duties and responsibilities.

2) Schedule for training.

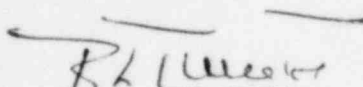
Training will be provided:

- a. Before a new employee assumes duties with or in the vicinity of the irradiator.
- b. During the annual refresher training for all employees.
- c. Whenever a significant change in duties, regulations, or the terms of the license occurs.

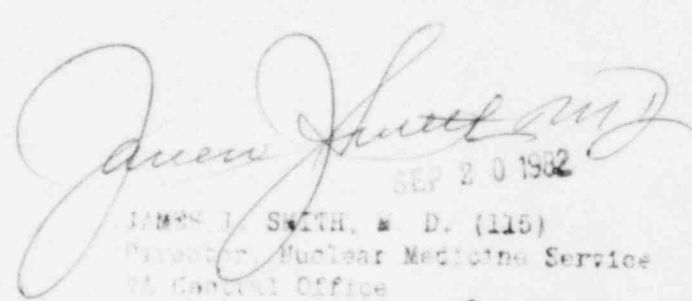
G. Source leak testing.

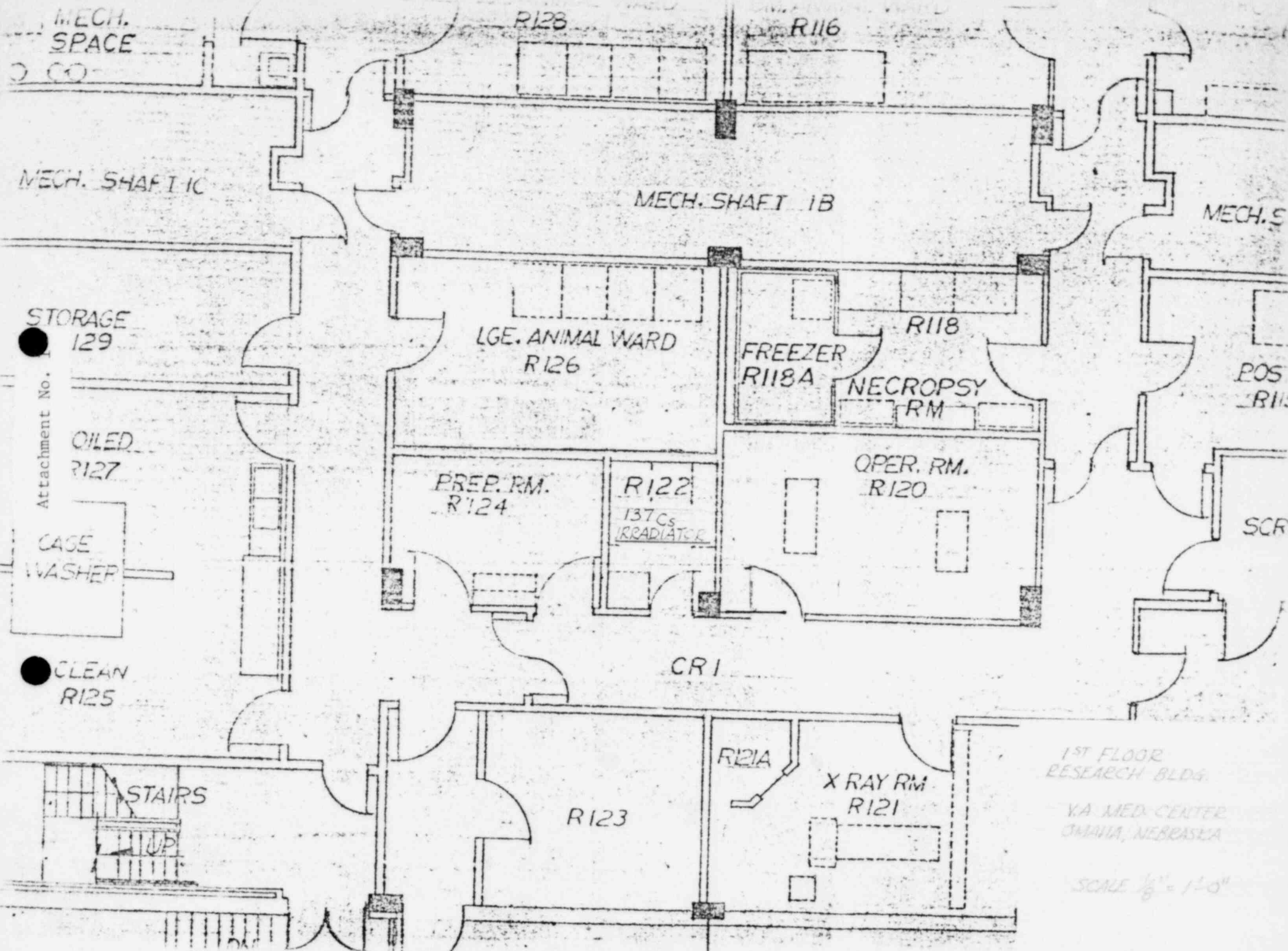
- 1) Leak testing of the source by taking test samples from appropriate accessible surfaces of the irradiator will be performed every 6 months.
- 2) Test samples will be assayed using a 0.0049 μCi calibrated ^{99}Tc Beta Standard (Eberline Instruments Corp.) and a Nuclear Measurements Corp. PCC-11T Gas Flow Counter.

Sincerely,


R. L. TURCOTTE
Director

Enclosures: 5


SEP 20 1982
JAMES L. SMITH, M.D. (115)
Director, Nuclear Medicine Service
Ft. Campbell Office
Washington, D.C. 20422-5000



Attachment II

Administrative Procedures for the use of the Mark I ^{137}Cs Irradiator

1. The irradiator is to be operated only by those who have had adequate training in the use of the unit and who have been approved in writing by the Hospital Radiation Safety Committee.
2. The Radiation Safety Officer is designated by the Radiation Safety Committee to have direct supervision over the operation of the unit and will be responsible for the semi-annual leak test of the source.
3. Each approved operator is responsible for assuring that both the irradiator and/or the room door are locked when the unit is not attended.

Attachment III

Operating Procedures for the use of the Mark I ¹³⁷Cs Irradiator

FILM BADGES MUST BE WORN BY ALL PERSONNEL OPERATING IRRADIATOR

1. Insure that the source is in the off position by noting that the source handle is completely down.
2. Insert power key and note that the down light is on.
3. Open door and insert sample to be irradiated.
4. Close door and make sure it is secured.
5. If pre-set time is desired (0-999.99 minutes) set the mode selector switch to pre-set time and set the desired time on the timer.
6. If irradiation time longer than 999.99 minutes is desired set the mode selector switch to manual.
7. Raise the source from the OFF position to the IRRADIATE position by means of the operating handle. A latch will hold the source in the IRRADIATE position.
8. Insure that the ON light is lit.
9. The source will be returned immediately to the OFF position.
 - a. At the end of the predetermined time as set on the pre-set timer.
 - b. By pushing the OFF button on the control panel or by power interruption.
10. Before opening door, be sure that the source rod is down.
11. Record the time of use of irradiator and the user on the form posted in the room.
12. The primary user, designated by the Hospital Radiation Safety Committee, will be responsible for performing and authenticating the weekly safety checks on the "Safety Check List" (Attachment IV) and informing the Radiation Safety Officer of any malfunctions.
13. When the safety device malfunctions the irradiator will not be operated until approval is given by the Radiation Safety Officer.

NOTIFY IMMEDIATELY OF ANY MALFUNCTION:

RADIATION SAFETY OFFICER, A. J. Blotcky
Office: Extension 432
Page: 138
Home: 397-9292

Check if operational

[illegible]

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Attachment V

EMERGENCY PROCEDURES FOR MARK I ¹³⁷Cs IRRADIATOR

IF ANY OF THE FOLLOWING OCCUR:

1. Light signal on control box indicates that source control mechanism has failed to terminate the exposure at desired time;
2. Source lever does not indicate source down position at end of desired irradiation time;
3. Source lever will not manually move to the down position;

THE SOURCE MAY STILL BE IN THE ON POSITION or

If the area radiation monitor alarms, the following steps are to be carried out promptly and in a calm manner.

1. Turn off the key-operated power switch.
2. Leave the room and secure the area by locking the room door.
3. Conspicuously post a sign in the area to warn others of the problem.
4. Notify the radiation safety officer at once.

RADIATION SAFETY OFFICER: A. J. Blotcky

Phone number: on duty : Extension 432

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off duty: 397-9292

Veterans
Administration

September 24, 1980

Director (115)
Nuclear Medicine Service
Veterans Administration Central Office
810 Vermont Avenue N.W.
Washington, D.C. 20420



SUBJ: Amendment of U.S. N.R.C. Material License #26-00138-10

1. Enclosed please find the original and two copies of a letter application for amendment of our material license #26-00138-10.
2. If this meets with your approval, will you please forward the original and one copy to the License Management Branch, Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

R. L. Turcotte
R. L. TURCOTTE
Director

Enclosures

RECEIVED

SEP 29 1980

NUCLEAR MEDICINE SERVICE
(115)

James J. Smith M.D.
29 Sept 80

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INSPECTION AND ENFORCEMENT

In Reply Refer To: 151C

JAMES J. SMITH, M. D. (115) 05361
Director, Nuclear Medicine Service
VA Central Office
Washington, D.C. 20420