

**St. Mary's
Hospital**
Medical Center

June 15, 1987

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

Re: Amendment to NRC Radioactive Materials License #48-12786-01

Gentlemen:

We request amendment to our Nuclear Regulatory Commission radioactive materials license #48-12786-01 for the following:

1. Indicate James Robinson, M.D., as Radiation Safety Officer, and indicate Paul Bolich, M.D., as Alternate Radiation Safety Officer. For training and experience of Drs. Robinson and Bolich, please reference NRC License #48-12786-01.
2. Increase Group III possession limit from 2,000 to 3,000.
3. Addition of storage area. See attached facility sketch.
4. Indicate James Coller as Administrator, replacing Allison C. Laabs.
5. Update of license procedures. See attached.

We trust the above information is sufficient to grant our request for amendment and look forward to receipt of that document. Enclosed is our check for \$120 to cover the amendment processing fee.

Sincerely,

James Coller
Administrator

8801220642 870727
REQ3 LIC30
48-12786-01 PDR

:jms

Enclosures

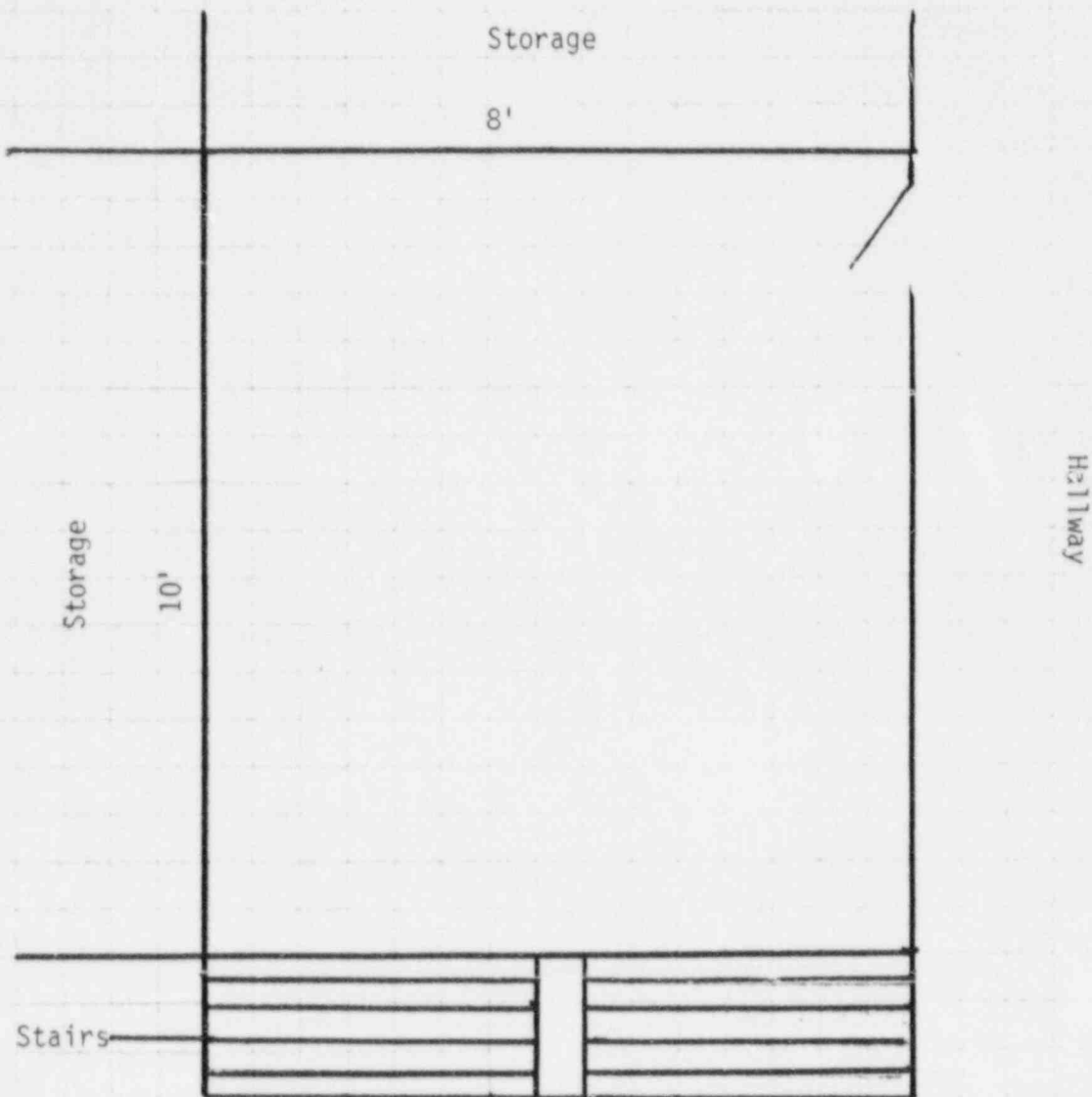


CONTROL NO 83742

JUN 22 1987

BASEMENT

St. Mary's Hospital Medical Center
1726 Shawano Avenue
Green Bay, Wisconsin 54303



CONTROL NO 83742

REF: NRC 313M - ITEM 9

INSTRUMENTATION

SURVEY METER(S)

One (1) Victoreen Model 493 G.M. survey meter
Ranges: 0-0.5, 0-5, 0-50 mR/hr

One (1) Victoreen Model 740 survey meter
Ranges: 0-25, 0-250, 0-2,500, 0-25,000 mR/hr

DOSE CALIBRATOR(S)

One (1) Capintec Model CRC 7 dose calibrator

DIAGNOSTIC INSTRUMENT(S) & OTHER(S)

One (1) Siemens Orbiter Model 3700 with Micro Delta Plus 60

One (1) Atomic Products Corporation Medical Spectrometer Model 187-290

CALIBRATION OF INSTRUMENTS

SURVEY METER(S)

The **survey meter(s)** will be calibrated at least annually, and after repairs, by any firm that is approved by the NRC for such calibrations. Instruments will be calibrated on at least two (2) points on each scale range. Currently, our calibration service firm is Stan A. Huber Consultants, Inc., of New Lenox, Illinois, whose radiation sources and procedures are on file with the NRC under License #12-17503-01.

The licensee shall perform operational constancy checks on survey instruments before each day's use to ensure proper functioning of the devices. For any infrequently used meters, these reference source operational checks shall be taken at least quarterly, per NRC Regulatory Guide 10.8 (October 1980) Appendix D, Section 1, Item B, as well as after repairs and battery changes to assure constancy within ±20% of expected readings.

DOSE CALIBRATOR(S)

We shall follow the calibration methods and frequencies for **dose calibrator(s)** as defined in the NRC Regulatory Guide 10.8, dated October 1980, Appendix D, Section 2, "Methods for Calibration of Dose Calibrator".

For the linearity test, we will use a vial of Tc-99m, whose activity is equivalent to the maximum anticipated activity to be assayed. For the accuracy test, Stan A. Huber Consultants, Inc., of New Lenox, Illinois, or other licensed calibration firms, will use the following sources under the authority of their NRC license:

Model NES-356, 200 microcuries of Cs-137 (high energy)

Model NES-352, 1 millicurie of Co-57 (low energy)
(Or other NRC approved Co-57 calibration sources of greater millicurie activity.)

Model NES-358, 250 microcuries of Ba-133 (medium energy)
(The minimum activities used for dose calibrator accuracy checks are 100 uCi each for Cs-137 and Ba-133, and 1 mCi for Co-57.)

We use a NEN Model NES-356, Cs-137 standard, 100 - 300 uCi, or any approved similar standard for our day-of-use dose calibrator constancy checks. Records of all tests and checks will be maintained.

We request use of the "Calicheck" (Calcorp) system or "Lineator" (Atomic Products) system as an alternate method of performing dose calibrator quarterly linearity checks. The product certifications for these devices are on file with the NRC.

APPENDIX F

PROCEDURES FOR SAFELY OPENING PACKAGES CONTAINING RADIOACTIVE MATERIAL

Only trained Nuclear Medicine personnel are to open radioactive material shipments. These personnel have been instructed in the, "Radioactive Shipment Receipt and Notification Procedures", which the Radiation Safety Officer has distributed to personnel who could possibly have contact with a radioactive shipment delivery.

The radioactive material shipments are to be opened in accordance with the NRC Regulatory Guide 10.8, dated October 1980, Appendix F, "Procedures for Opening Packages Containing Radioactive Material".

The basic steps are:

- a. Monitor the outside of the package and record the survey reading. The exterior reading limits and notification procedures are in the Appendix F Guide. (200 mR/hr at surface and 10 mR/hr at 3 feet from the package surface.)
- b. Wear gloves while opening the package behind the lead shield on the Hot Lab work bench.
- c. Check packing material in accordance with the Appendix F Guide referenced above. Record the inside package material survey readings.
- d. Report any leakage immediately to the Radiation Safety Officer who in turn will notify the supplier and/or NRC Division of Compliance.
- e. Detain the driver or courier of the radioactive shipment if any package is apparently damaged or suspected as leaking, until the shipment is pronounced safe by the Radiation Safety Officer or the proper authorities have been notified. If the driver insists on leaving prior to this time, obtain the driver's name, company name, and phone number for any follow-up that may be needed.

REF: NRC 313M - ITEM 17
APPENDIX I
AREA SURVEY PROCEDURES

1. All elution, preparation, and injection areas will be surveyed daily with an appropriately low-range survey meter and decontaminated if necessary.*
2. Laboratory areas where only small quantities of radioactive material are used (less than 200 uCi) will be surveyed monthly.
3. Waste storage areas and all other Laboratory areas will be surveyed weekly.
4. The weekly and monthly surveys will consist of:
 - a) A measurement of radiation level with a survey meter sufficiently sensitive to detect 0.1 mR/hr.
 - b) A series of wipe tests to measure contamination levels. The method for performing wipe tests will be sufficiently sensitive to detect 200 dpm per 100 cm² for the contaminant involved. Wipes of elution and preparation areas or other "high background" areas will be removed to a low background area for measurement.
5. A permanent record will be kept of all survey results, including negative results. The record will include:
 - a) Location, date, and identification of equipment used, including the serial number and pertinent counting efficiencies.
 - b) Name of person conducting the survey.
 - c) Drawing of area surveyed, identifying relevant features such as active storage areas, active waste areas, etc.
 - d) Measured exposure rates, keyed to location on the drawing (point out rates that required corrective action).
 - e) Detected contamination levels, keyed to locations on drawing.
 - f) Corrective action taken in the case of contamination or excessive exposure rates, reduced contamination levels or exposure rates after corrective action, and any appropriate comments.
6. Area will be cleaned if the contamination level exceeds 200 dpm per 100 cm².

*For daily surveys where no abnormal exposures are found, only the date, the identification of the person performing the survey, and the survey results will be recorded.

Alternate method of assaying wipe test (smear test) samples for detecting surface contamination. Because of the relatively small quantities of radioactive materials used at our hospital, we feel the following procedure is sufficient to detect surface contamination levels:

- a) Wipe test samples will be assayed by holding the smear immediately adjacent to the open window of our low level g.m. survey meter. Care will be taken to avoid contamination of the probe.
- b) The smear will be held adjacent to the probe for approximately 30 seconds to ensure that any contamination over normal background levels will be detectable.
- c) Normal background levels at our hospital are approximately 0.1 mR/hr. Any wipe test reading over that level will indicate the need to decontaminate the tested area.

REF: NRC 313M - ITEM 18

WASTE DISPOSAL

1. Unused sources and/or residues are decayed in the lead shielded Hot Lab storage area for a period of ten (10) half-lives (fifteen [15] half-lives in the case of Mo-99/Tc-99m generators) or until radiation levels, as determined with a low level survey meter, are found to be that of normal background readings (usually less than 0.05 mr/hr) before disposal as regular trash. In certain cases when the initial calibrated activity of a radionuclide is already low, the Radiation Safety Officer may authorize specific disposals before the ten half-lives have elapsed, as long as the surveyed source shows no detectable activity above background on the low level survey meter. Radiation labels are obliterated before such disposal. Surveys are performed with source shielding removed.

We may use any NRC/State licensed waste disposal service as a back-up method of disposal, especially if an accumulation of long lived waste would develop. We may transfer radioactive materials to any appropriately licensed recipient. We may also return unused radioactive materials or residues to licensed suppliers of these materials.

RADIATION SAFETY OFFICER: James Robinson, M.D.
On Duty Phone: (414) 498-4200
Off Duty Phone: (414) 432-5471

CONTROL NO 83742

REF: NRC 313M - ITEM 23

SEALED SOURCES

We confirm that sealed sources will be stored in their original lead shielded containers. Any readings above background would indicate the need for additional shielding.

Leak testing of sealed sources will be performed on a semi-annual frequency. We will use the leak test services of Stan A. Huber Consultants, Inc., New Lenox, Illinois, (NRC License #12-17503-01), using their Model LT-2 Leak Test Kit for sealed sources, or other firm specifically authorized by the U. S. Nuclear Regulatory Commission to perform these tests.