

May 20, 1985

James R. Mullauer  
Materials Licensing Section  
United States Nuclear Regulatory Commission  
Region III  
799 Roosevelt Rd.  
Glen Ellyn, IL 60137

Reference Control Number 77833:

The following information is additional information  
and not a new amendment request.

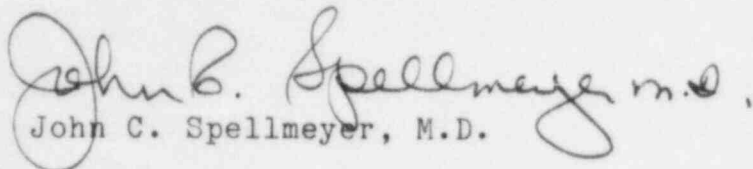
In response to the letter received April 26, 1985:

1. The gas chromatograph has been transferred to Earlham College, National Rd. West, Richmond, IN 47374. The  $^{63}\text{Ni}$  source has been transferred from NRC License Number 13-03284-02, (Reid Memorial Hospital, Richmond In.) to NRC License Number 13-057-3701 (Earlham College, Richmond, In.)
2. Enclosed copy of procedure, Appendix F of 10.8.
3. All Nuclear Technologists attend the enclosed in-service education program initially and at least annually thereafter.
4. Ancillary personnel who have access to the Nuclear area are given an in-service initially, and at least annually thereafter. Copy enclosed.
5. Victoreen Thyac 389C gm survey meter will be used to measure radiation levels from solid waste generated by in-vitro laboratory. In-vitro material is received in pre-packaged kits.
6. Dr. John Dehner, M.D., is responsible for overseeing the inventory control of Group VI sealed sources.
7. For  $\text{I}^{131}$  therapeutic liquid, personnel are instructed to wear gloves and to open vials in fume hood.
8. Personnel thyroid counts are obtained 24 hours after handling therapeutic liquid  $\text{I}^{131}$  (as per bioassay guide). Picker uptake scintillation probes have been calibrated for contact thyroid gland counts.

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9. Doses assayed in the dose calibrator that are 10% higher than prescribed dose will not be used. Doses assayed in the dose calibrator that are 10% lower than prescribed dose will be left up to the discretion of the physician as to its use.
10. Enclosed is supporting material for Dr. Thomas R. Glynn, Jr., M.D. for appointment as Radiation Safety Officer for our license (replacing Dr. John Cooke, M.D.).

  
John C. Spellmeyer, M.D.

JCS/jkc

REID MEMORIAL HOSPITAL  
NUCLEAR MEDICINE DEPT.  
RICHMOND, INDIANA

PROCEDURES FOR SAFELY OPENING PACKAGES  
CONTAINING RADIOACTIVE MATERIAL

1. Special requirements will be followed for packages containing quantities of radioactive material in excess of the Type A quantity limits as specified in paragraphs 20.205(a)(1) and (c)(1) of 10 CFR Part 20 (more than 20 Ci for Mo-99 and Tc-99m). They will be monitored for surface contamination and external radiation levels within 3 hours after receipt if received during working hours or within 18 hours if received after working hours, in accordance with the requirements of paragraphs 20.205(a) through (c). All shipments of liquids greater than exempt quantities will be tested for leakage. The NRC Regional Office will be notified in accordance with the regulations if removable contamination exceeds  $0.01 \mu\text{Ci}/100 \text{ cm}^2$  or if external radiation levels exceed 200 mR/hr at the package surface or 10 mR/hr at 3 feet (or 1 m).
2. For all packages, the following additional procedures for opening packages will be carried out:
  - a. Put on gloves to prevent hand contamination.
  - b. Visually inspect package for any sign of damage (e.g., wetness, crushed). If damage is noted, stop procedure and notify Radiation Safety Officer.
  - c. Measure exposure rate at 3 feet (or 1 m) from package surface and record. If  $>10 \text{ mR/hr}$ , stop procedure and notify Radiation Safety Officer.
  - d. Measure surface exposure rate and record. If  $>200 \text{ mR/hr}$ , stop procedure and notify Radiation Safety Officer.
  - e. Open the package with the following precautionary steps:
    - (1) Open the outer package (following manufacturer's directions, if supplied) and remove packing slip.
    - (2) Open inner package and verify that contents agree with those on packing slip. Compare requisition,\* packing slip, and label on bottle.
    - (3) Check integrity of final source container (i.e., inspect for breakage of seals or vials, loss of liquid, and discoloration of packaging material).
    - (4) Check also that shipment does not exceed possession limits.
  - f. Wipe external surface of final source container and remove wipe to low background area. Assay the wipe and record amount of removable radioactivity (e.g.,  $\mu\text{Ci}/100 \text{ cm}^2$ , etc.). Check wipes with a thin-end-window G-M survey meter, and take precautions against the spread of contamination as necessary.
  - g. Monitor the packing material and packages for contamination before discarding.
    - (1) If contaminated, treat as radioactive waste.
    - (2) If not contaminated, obliterate radiation labels before discarding in regular trash.
3. Maintain records of the results of checking each package, using "Radioactive Shipment Receipt Record" (see next page) or a form containing the same information.

\* In the case of special orders (e.g., therapy doses), also compare with physician's written request.

Enclosure  
for  
Hern #2

~~XXXX~~

In-Service Education

Date:

Location: Nuclear Medicine

Topic: Review of Radiation Safety Procedures

Time: 10:30 - 11:15 a.m.

Participants: Carla DeVito, Supervisor Nuclear Medicine,  
Debbie Wolfenbarger, Nuclear Medicine technologist

Session Leader: John Cooke, M.D.

Objective:

Upon completion of this session, the participants will be able to do the following:

1. Maintain complete records of personnel exposure.
2. Properly store, transfer and dispose of radioactive isotopes.
3. List the steps necessary to contain a radioactive spill.
4. List the steps to be taken in the event of the loss of any radioactive material.
5. List the procedure for reporting contamination and exposure incidents to appropriate regulatory bodies.
6. List the exposure potentials in the environmental working conditions; recommend a time limit personnel exposure and minimal working distances.
7. List the procedures for surveying the storage and working areas, to include the frequency of survey.
8. List the steps in radioactive decontamination of all spills and/or personnel contamination; to include the disposal of radioactive waste.
9. Demonstrate the proper method of surveying incoming-outgoing shipments of radioisotopes, and the distribution of such shipments.
10. Demonstrate that appropriate posting of warning signs is available in areas in which radioisotopes are used or stored.

Enclosure  
for  
stem #3

11. Demonstrate the proper procedure of checking the Squibb Capintec dose calibrator using a cobalt-57 source to check the technetium-99m setting and the cesium 137 source to check the Molybdenum 99 setting.
12. Demonstrate the proper procedure for the chromatography quality control.
13. Demonstrate the proper method for the gamma camera flood source check.
14. Demonstrate the proper method for the gamma camera bar phantom check for resolution and linearity.

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JH:dt

1. Receipt and surveys of incoming packages
2. Lab surveys- was there any contamination found and where, why?
3. New procedure discussion
4. Review of new NRC publications received
5. Review of decontamination and emergency procedures
6. Review of safe handling procedures
7. Review of badge reports.
8. Quarterly review of radiation safety committee minutes.
9. Any patient problems
10. Equipment problems?
11. Open discussion of monthly case load and anything else.



IN-SERVICE NUCLEAR MEDICINE DEPARTMENT

PARTICIPANTS; Bill Gray, Chief Security Officer, Marvin Esham,  
Director, Environmental Services

SESSION LEADER; Carla DeVito, N.M.T., Supervisor Nuclear Medicine

OBJECTIVES;

1. To tour the new nuclear medicine facilities.
2. To emphasize the off limits regions.
3. To show what areas may be cleaned by housekeeping personnel.
4. To demonstrate what areas (hot lab) must be locked.
5. To re-introduce the radiation warning signs.

*Enclosure  
for Item  
#4*

## 8. Training and Experience

Tom Glynn, M.D.

<u>Type of Training</u>	<u>Where Trained</u>	<u>Duration of Training</u>	<u>On the Job</u>	<u>Formal Course</u>
A. Diagnostic Radiology Nuclear Medicine Radioisotopes Radiation Therapy	Ohio State University Hospital Columbus, Ohio	3 years 1972-75	Yes	Yes
B. Radiation Therapy Superficial voltage Orthovoltage Megavoltage: C9-60, 4 MeV Rotational Linear Accelerator, Betatron, Electron Therapy	Ohio State University Hospital Radiation Therapy Department Columbus, Ohio  Frank Batley, M.D. Director, Division of Radiotherapy	9 months 1972-73-74	Yes	Yes

### Experience with Radiation

	<u>Experience Gained</u>	<u>Duration of Experience</u>	<u>Type of Use</u>
A. Superficial Voltage, Orthovoltage, Megavoltage	Ohio State University Hospital Columbus, Ohio	9 months	Therapy of Human Disease
B. Superficial Voltage, Orthovoltage	Mercy Hospital Hamilton, Ohio	3 years	Therapy of Human Disease
C. Radioactive Cesium, Radon Seeds	Ohio State University Hospital Columbus, Ohio	9 months	Interstitial and Intracavitary Application

### Isotopes

	<u>Experience Gained</u>	<u>Duration of Experience</u>	<u>Type of Use</u>
Tc-99m Cr-51 Hg-197 Hg-203 Sr-85 Radioactive Xenon Selling Methionine	Ohio State University Columbus, Ohio  Mercy Hospital Hamilton, Ohio (all except selling Methionine)	2 months  3 years 2 months	Diagnosis of Human Disease
I-131 I-123	Ohio State University Hospital  Mercy Hospital Hamilton, Ohio	2 months  3 years 2 months	Treatment of Human Disease  Treatment of Human Disease

## Curriculum Vitae

High School - St. Xavier High School, Cincinnati, Ohio

Undergraduate - College of the Holy Cross, Worcester, Mass.

Medical School - Ohio State University, Columbus, Ohio  
M. D. degree, June, 1971

Internship - Straight Medical, Ohio State University Hospital  
July 1971 - June 1972  
Dept. Director - J. V. Warren, M.D.

Residency - General Radiology, Ohio State University  
July 1972 - June 1975  
Dept. Director - Sidney W. Nelson, M.D.

Certified in Radiology by the American Board of Radiology, 12/13/75  
99th percentile - physics  
97th percentile - radiology

Awards - First place, unknown case clinical radiological cases presentation,  
Harvard Medical School; Chest Disease, 1977,  
Oct. 17-21, 1977

Additional Training - Ultrasound, Episcopal Hospital, Phila., Pa.  
Nov. 1975  
Dept. Director - Barry Goldberg, M.D.

Medical Experience - 1975-1978 - General Radiology, Mercy Hospital, Hamilton, Ohio, and McCullough-Hyde Memorial Hospital, Oxford, Ohio  
  
1975-1978 - Director, Ultrasound Department, Mercy Hospital  
  
1978-present - Staff radiologist, Reid Memorial Hospital, Richmond, Indiana

Publications - Marked Gallium Accumulation in Neurogenic Arthropathy, Journal of Nuclear Medicine, 22: 1016-1017, 1981

Other Experience - Ultrasound representative, Radiology Task Force, CORVA (Central Ohio River Valley Association), H.S.A. for southwestern Ohio