

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License number  
34-01710-05

Docket or Reference number  
030-02685

Amendment No. 31

The Toledo Hospital  
2142 N. Cove Blvd.  
Toledo, OH 43606

In accordance with letter dated June 13, 1985, License Number 34-01710-05 is amended as follows:

Items 6., 7., 8. and 9. are amended to add:

6. Byproduct, source,  
and/or special nuclear  
material

7. Chemical and/or  
physical form

8. Maximum amount that  
licensee may possess  
at any one time  
under this license

J. Gadolinium-153

J. Sealed sources  
(Gulf Nuclear Model  
GD-1 contained in a  
Lunar Radiation Corp.  
lead-lined brass source  
holder)

J. 2 curies  
(2 sources not  
to exceed 1 curie  
each)

9. Authorized Use

J. One source to be used as a component of Lunar Radiation Corporation Model DP3 Spine/Femur Scanner for determining human bone mineral content. One source in its shipping container to be in possession of the licensee as necessary for replacement in the scanner.

Conditions 12. and 19. are amended to read:

12. Licensed material listed in Item 6 above is authorized for use by, or under the supervision of, the following individual(s) for the materials and uses indicated:

C. Douglass Ford, M.D.

Groups I, II, III, IV and V  
Xenon-133  
Technetium-99m reference standard  
Gadolinium-153  
In vitro studies

William F. Jeffries, M.D.

Groups I, II, III, IV and V  
Xenon-133  
Technetium-99m reference standard  
Gadolinium-153  
In vitro studies

William K. Mueller, M.D.

Groups IV and VI

William D. Eggleston, M.D.

Group VI

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34-01710-05 PDR

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Ralph R. Dobelbower, Jr., M.D.

Groups IV, V and VI

Steven R. Zeidner, M.D.

Group VI

Henry R. Silverman III, M.D.

Technetium-99m as a prepared  
radiopharmaceutical for cardiac  
imaging and studies of cardiac  
function

Shui Chin Chen, Ph.D.

In vitro studies

Phillip J. Silverman, M.D.

Groups I, II, III and IV

Michael R. Hay, M.D.

Groups I, II and III  
Xenon-133  
Iodine-131 for treatment of thyroid  
carcinoma

In vitro studies

Allan S. Kaufman, M.D.

Groups I, II and III  
Xenon-133

In vitro studies

Daniel Singer, M.D.

Groups I, II, III and IV  
Xenon-133  
Iodine-131 for treatment of thyroid  
carcinoma  
Gadolinium-153

William G. Novak, M.D.

Groups I, II and III  
Xenon-133

Harvey E. Muehlenbeck, M.D.

Groups I, II and III  
Xenon-133  
Soluble phosphorus-32 for treatment  
of polycythemia vera, leukemia  
and bone metastases  
Iodine-131 for treatment of  
hyperthyroidism and cardiac  
dysfunction

Warren Nordin, M.D.

In vitro studies

Gerald W. Narsa, M.D.

Group VI

Chun Il Mah, M.D.

Group VI

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19. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated February 9, 1983; letters dated March 15, 1984, June 5, 1985 (with attachments), October 30, 1984 and June 13, 1985; and ALARA Program dated February 9, 1983. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

Conditions 21., 22. and 23. are added:

21. A. (1) Sealed sources listed in Subitem 6.J. shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source received from another person shall not be put into use until tested.
- (2) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
- B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.
- C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within five (5) days of the test with the U. S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, describing the equipment involved, the test results, and the corrective action taken.
- D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
22. Sealed sources listed in Subitem 6.J. shall not be opened or removed from their respective source holders by the licensee.

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23. Maintenance or repair of the Lunar Radiation Corporation Spine/Femur Scanner involving the device shutter or other components that may compromise the safety of the unit shall be performed only by the device manufacturer or by other persons specifically authorized by the Commission or an Agreement State to perform such services.



For the U.S. Nuclear Regulatory Commission

Date July 25, 1985

Original Signed  
By B.J. Holt  
Materials Licensing Section, Region III

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