NRC Form 374A (5-84) U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 21-02187-01

Docket or Reference number: 030-02016

Amendment No. 26

Mercy Hospital
Departments of Radiology
and Clinical Laboratory
Muskegon, MI 49443

In accordance with letter dated August 29, 1985, License Number 21-02187-01 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
F. Iodine-125	F. Sealed sources (AECL Model C-324 or C-235 in Model C-236 source holder or Amersham Corp. Model IMC.P2 contained in a Lunar Radiation Corp. source holders)	F. 600 millicuries (2 sources not to exceed 300 millicuries per source)
G. Gadolinium-153	G. Sealed sources (Lunar Radiation Corp. GD Series)	G. 2 curies (Not to exceed 1.5 curies per source)

9. Authorized Use

F. For use in Lunar Radiation Corp. Model SP2 "Forearm Scanner" for analysis of human bone mineral content.

G. For use in Lunar Radiation Corp. Model DP3 "Spine Scanner" for analysis of human bone mineral content

Conditions 12. and 16. 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:

Ronald L. Stuk, M.D.	Groups I, II, III and IV Xenon-133 In vitro studies Gadolinium-153 and iodine-125 in bone mineral analyzers
Donald W. Hack, M.D.	Groups I, II, III and IV Xenon-133 In vitro studies Gadolinium-153 and iodine-125 in bone mineral analyzers

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N. L. Welch, M.D.	Groups I, II and III In vitro studies Xenon-133
C. T. Kelso, M.D.	Groups I, II and III In vitro studies Xenon-133
Richard W. Peters, M.D.	In vitro studies
Bruce Lynn Melrose, M.D.	Groups I, II and III Xenon-133 In vitro studies Iodine-131 for treatment of hyperthyroidism and cardiace dysfunction Soluable phosphorus-32 for therapy Gadolinium-153 and iodine-125 contained in bone mineral analyzers
Mark E. Meengs, M.D.	Groups II and III, limited to cardiac imaging and studies of cardiac function
Robert J. Fles, Jr., M.D.	Groups I, II and III Xenon-133 In vitro studies Iodine-131 for treatment of hyperthyroidism and cardiac dysfunction Soluable phosphorus-32 for therapy Gadolinium-153 and iodine-125 contained in bone mineral analyzers

16. 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 April 27, 1983; letters dated August 3, 1983, March 18, 1985 and August 29, 1985; and Model ALARA Program as contained in Appendix O of Regulatory Guide 10.8, October 1980. 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.

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Conditions 17., 18. and 19. are added:

17. A. Each sealed source containing licensed material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas 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.

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.

18. Sealed sources containing licensed material shall not be opened or removed from their respective source holders by the licensee.

19. The licensee shall have available and follow the instructions contained in the manufacturer's manual for the bone densitometers.

For the U.S. Nuclear Regulatory Commission

Date OCT 1 1985

Original Signed
By George M. McCann
Materials Licensing Section, Region III

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