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

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 13-16457-01

Docket or Reference number: 030-11072

Amendment No. 14

Union Hospital
1606 North 7th Street
Terre Haute, IN 47804

In accordance with letter dated July 19, 1985, License Number 13-16457-01 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
H. Gadolinium-153	H. Sealed source (Gulf Nuclear Model GD-1)	H. Two sources not to exceed 1.5 curies each

9. Authorized Use

H. One source to be used in a Lunar Radiation Corp. Model DP3 bone mineral analyzer for determination of bone mineral content in humans. One source to be stored in its shipping container for source replacement purposes.

Conditions 12. and 23. 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:

Raymond N. Sweeney, M.D.	Groups I, II, III, IV and VI Xenon-133 In vitro studies
Michael R. Konowitz, M.D.	Groups I, II, III, IV and V Xenon-133 In vitro studies
J. G. Weinbaum, M.D.	Groups I, II, III, IV and V Xenon-133 In vitro studies Gadolinium-153 in bone mineral analyzer
D. D. Peterson, M.D.	Groups IV, V and VI
John Lambertus, M.D.	Groups I, II and III Xenon-133 Iodine-131 for treatment of hyperthyroidism and thyroid carcinoma In vitro studies

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James B. Kho, M.D.	Groups I, II and III Xenon-133 In vitro studies Gadolinium-153 in bone mineral analyzer
Michael J. Besozzi, M.D.	Groups I, II and III Xenon-133 In vitro studies
Roger Robison, M.D.	Group VI
David Bell, M.D.	Group VI
Abdurrahman Unal, M.D.	Group VI
M. Bashar Kashlan, M.D.	Groups I, II and III Xenon-133 In vitro studies Gadolinium-153 in bone mineral analyzer
George H. Kinnebrew, Jr., M.D.	Groups I, II and III Xenon-133 Iodine-131 for treatment of hyperthyroidism and cardiac dysfunction

23. 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 18, 1983; letters dated April 7, 1983, April 25, 1983, March 1, 1984, September 11, 1984 and July 19, 1985; and ALARA Program dated February 18, 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 24., 25., 26., and 27. are added:

24. A. (1) 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.

(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.

(3) The periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another person unless they have been leak tested within six months prior to the date of use or transfer.

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.

25. Servicing and maintenance of the bone mineral analyzer involving the source holder and/or shutter mechanism shall be performed by the manufacturer or by other persons specifically authorized by the Commission or an Agreement State to perform such services.

26. Installation, replacement and removal of the gadolinium-153 sealed source from the device shall be performed in accordance with the procedures contained in the manufacturer's instruction manual.

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

For the U.S. Nuclear Regulatory Commission

Original Signed
Date August 9, 1985 By Evelyn R. Matson
Materials Licensing Section, Region III

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