

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number

12-10094-01

Docket or Reference number

030-01517

Amendment No. 36

St. Francis Hospital
Department of Radioisotopes
12935 South Gregory Street
Blue Island, IL 60406

In accordance with letter dated August 22, 1985, License Number 12-10094-01 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 sources
(Lunar Radiation Corp.
Model GD Series)

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 17. 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:

Luke Pascale, M.D.

Groups I, II, III, IV and V
Xenon-133

In vitro studies
Gadolinium-153 in bone mineral
analyzer

Richard Wallyn, M.D.

Groups I, II, III, IV and V
Xenon-133

In vitro studies

Shankar Sanwalani, M.D.

Groups I, II, III, IV, V and VI
Xenon-133

In vitro studies

S. J. Shirazi, M.D.

Group VI

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John W. Laude, M.D.

Groups I, II and III

Xenon-133

In vitro studies

Iodine-131 as iodide for treatment
of hyperthyroidism, cardiac
dysfunction, and thyroid carcinoma
Gadolinium-153 in bone mineral
analyzer

G. M. Tolentino, M.D.

Group VI

Jayant Ginde, M.D.

Group VI

17. 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 September 20, 1983; letters dated January 12, 1984, July 23, 1984, May 8, 1985, and August 22, 1985; and ALARA Program dated August 13, 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.

Conditions 20., 21., 22. and 23. are added:

20. Sealed sources containing licensed material shall not be opened or removed from their respective source holders by the licensee.
21. 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.
22. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days for decay-in-storage before disposal in ordinary trash provided:
- A. Radioactive waste to be disposed of in this manner shall be held for decay a minimum of ten (10) half-lives.
 - B. Prior to disposal as normal waste, radioactive waste shall be monitored to determine that its radioactivity cannot be distinguished from background with typical low-level laboratory survey instruments. All radiation labels will be removed or obliterated.
 - C. Generator columns shall be segregated so that they may be monitored separately to ensure decay to background levels prior to disposal.

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23. 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.
- 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.

For the U.S. Nuclear Regulatory Commission

SEP 24 1985

Date _____

Original Signed
By Evelyn R. Matson
Materials Licensing Section, Region III