

MATERIALS LICENSE

Amendment No. 07

CORRECTED COPY

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

"OFFICIAL RECORD COPY"

Licensee

1. Fairleigh Dickinson University
School of Dentistry
2. 110 Fuller Place
Hackensack, New Jersey 07601

In accordance with application dated
June 20, 1984,
3. License number 29-16049-01 is amended in its
entirety to read as follows:

4. Expiration date April 30, 1990

5. Docket or
Reference No. 030-10279

6. Byproduct, source, and/or
special nuclear material7. Chemical and/or physical
form8. Maximum amount that licensee
may possess at any one time
under this license

A. Barium 133
B. Carbon 14
C. Calcium 45
D. Hydrogen 3
E. Phosphorus 32
F. Rubidium 86
G. Selenium 75
H. Sulfur 35
I. Chromium 51
J. Iodine 125
K. Iodine 131
L. Iron 59
M. Niobium 95
N. Ruthenium 103
O. Scandium 47
P. Tin 113
Q. Iron 55
R. Strontium 85
S. Zinc 65
T. Molybdenum 99
U. Titanium 44
V. Calcium 47
W. Chlorine 36

A. Any
B. Any
C. Any
D. Any
E. Any
F. Any
G. Any
H. Any
I. Any
J. Any
K. Any
L. Any
M. Any
N. Any
O. Any
P. Any
Q. Any
R. Any
S. Any
T. Any
U. Any
V. Any
W. Chloride

A. 20 millicuries
B. 20 millicuries
C. 5 millicuries
D. 100 millicuries
E. 5 millicuries
F. 5 millicuries
G. 5 millicuries
H. 10 millicuries
I. 5 millicuries
J. 5 millicuries
K. 5 millicuries
L. 10 millicuries
M. 10 millicuries
N. 10 millicuries
O. 10 millicuries
P. 10 millicuries
Q. 10 millicuries
R. 5 millicuries
S. 5 millicuries
T. 5 millicuries
U. 5 millicuries
V. 5 millicuries
W. 5 millicuries

9. Authorized use

A. through W. Laboratory research including animal studies.

CONDITIONS

10. Licensed material shall be used only at the licensee's facility at 110 Fuller Place, Hackensack, New Jersey.

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29-16049-01 PDR

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MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

29-16049-01

Docket or Reference number

030-10279

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Amendment No. 07

(Continued)

CONDITIONS

11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions, and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation."
12. Licensed material shall be used by, or under the supervision of, Thomas S. Freund, Ronald D. Carlin, Hulon W. McCain, Walter A. Orlowski, Louis J. Ramazzotto, Buddhi M. Shrestha, George Warchalowski, or Rosemary D. Mandella. Barium 133, Carbon 14, Calcium 45, Hydrogen 3, Selenium 75, Sulfur 35, Chromium 51, Scandium 47, Tin 113, Iron 55, and Chlorine 36 may be used by, or under the supervision of, Frederick A. Curro, Clinton A. Hertzberg, Ira B. Lamster, Elaine M. Rancatore, Robert M. Singer, or William Fordham.
13. 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, except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three 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) Except for alpha sources, 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 5 days of the test with the U. S. Nuclear Regulatory Commission, Region I, 631 Park Avenue, King of Prussia, Pennsylvania 19406, 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.

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Amendment No. 07

(Continued)

CONDITIONS

14. Sealed sources containing licensed material shall not be opened.
15. The licensee shall not use licensed material in or on human beings or in field applications where activity is released except as provided otherwise by specific condition of this license.
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 June 20, 1984, and letters dated December 21, 1984 and April 4, 1985. 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.



For the U.S. Nuclear Regulatory Commission

Original Signed By:

Laurence F. Friedman, Ph.D.

By

Nuclear Materials Safety and
Safeguards Branch, Region I
King of Prussia, Pennsylvania 19406

Date JUL 10 1985