NRC FORM 374
(7-94)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

CORRECTED COPY

Amendment No. 76

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, 36, 39, 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. Hartford Hospital	In accordance with the letter dated October 30, 1996,
2. 80 Seymour Street Hartford, Connecticut 06115	3. License Number 06-00253-04 is amended in its entirety to read as follows:
	4. Expiration Date September 30, 2004
	5. Docket or Reference No. 030-01239

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
A. Any byproduct material identified in 10 CFR 35.100	A. Any radiopharmaceutical identified in 10 CFR 35.100	A. As needed
B. Any byproduct material identified in 10 CFR 35.200	B. Any radiopharmaceutical identified in 10 CFR 35.200	B. As needed
C. Any byproduct material identified in 10 CFR 35.300	C. Any radiopharmaceutical identified in 10 CFR 35.300	C. 1.0 curies
D. Any byproduct material identified in 10 CFR 35.400	D. Any brachytherapy source identified in 10 CFR 35.400	D. 2.5 curies
E. Any byproduct material identified in 10 CFR 35.500	E. Any diagnostic source identified in 10 CFR 35.500	E. 1.5 curies per source and 4.5 curies total
F. Gadolinium 153	F. Sealed sources (North American Scientific Model MED 3601)	F. Not to exceed 300 millicuries per source and 800 millicuries total
G. Depleted Uranium	G. Metal	G. 160 kilograms
H. Hydrogen 3	H. Any	H. 50 millicuries
I. Carbon 14	I. Any	I. 20 millicuries
J. Phosphorus 32	J. Any	J. 100 millicuries
K. Sulfur 35	K. Any	K. 20 millicuries
L. Chromium 51	L. Any	L. 20 millicuries
M. Technetium 99m	M. Any	M. 200 millicurie
N. Iodine 125 130027	N. Any	N. 20 millicuries
O. Iodine 131	O. Any	O. 20 millicuries
P. Ytterbium 169	P. Any	P. 20 millicuries
Q. Nickel 63	Q. Foil contained in Hewlett-Packard Model 18724A detector cell	Q. Not to exceed 15 millicuries per source and 150 millicuries total

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R. Cesium 137	R. Sealed sources (Oak Ridge National Laboratories Model ISO-1000)	R. 720 curies
S. Cesium 137	S. Sealed source (J. L. Shepherd Model 6810)	S. 225 millicuries
T. Strontium 90	T. Sealed source (Nuclear Enterprises Model 2503/3)	T. 10 millicuries

9. Authorized use

A. Any uptake, dilution and excretion procedure approved in 10 CFR 35.100.
B. Any imaging and localization procedure approved in 10 CFR 35.200.
C. Any radiopharmaceutical therapy procedure approved in 10 CFR 35.300.
D. Any brachytherapy procedure approved in 10 CFR 35.400.
E. Medical use of sealed sources included in 10 CFR 35.500 in compatible devices registered pursuant to 10 CFR 30.32(g).
F. For use in an ADAC Laboratories Model Vantage device for patient attenuation correction during S.P.E.C.T. imaging.
G. Shielding in a linear accelerator.
H. through P. Research and development as defined in 10 CFR 30.4; animal studies.
Q. For use in gas chromatographs for sample analysis.
R. For use in an AECL Gammacell, Model 1000A Irradiator for the irradiation of material except explosives, flammables, or corrosives.
S. and T. Non-human use. For calibrations and checking of licensee's survey instruments.

CONDITIONS

10. A. Licensed material may be used only at the licensee's facilities located at Hartford Hospital, 80 Seymour Street, Hartford, Connecticut.

B. Only licensed material listed in 6.A., 6.B., 6.C. and 6.D. may be used at Connecticut Childrens Medical Center (CCMC), 282 Washington Street, Hartford Connecticut.

11. The Radiation Safety Officer for this license is Peter J. Mas, M.S.

12. A. Licensed material listed in Item 6.A. through 6.G above is authorized for use by, or under the supervision of, the following individuals for the materials and uses indicated:

Authorized Users	Material and Use
William J. Aberizk, M.D.	35.300; 35.400 Depleted Uranium
Bruce F. Bower, M.D.	35.100; 35.300
Judith A. Buckley, M.D.	35.300; 35.400 Depleted Uranium
Edward Bowen Cronin, M.D.	35.100; 35.200; 35.300

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Robert J. Dowsett, M.D.	35.300; 35.400 Depleted Uranium
Gary V. Heller, M.D.	35.100 35.200 for cardiovascular clinical procedures Gadolinium 153 for patient attenuation correction during S.P.E.C.T. imaging
Allan S. Kratzer, M.D.	35.300; 35.400 Depleted Uranium
Richard M. Linburg, M.D.	35.500
Jacqueline M. Lyon, M.D.	35.300; 35.400 Depleted Uranium
Ronald J. Rosenberg, M.D.	35.100; 35.200; 35.300; 35.500
Andrew L. Salner, M.D.	35.300; 35.400 Depleted Uranium
Paul R.C. Sullivan, M.D.	35.100; 35.300

B. Licensed material listed in Item 6.H through 6.T above is only authorized for use by, or under the supervision of, the following individuals for non-human use for the materials and uses indicated:

Authorized Users	Material and Use
Raymond C. Bartlett, M.D.	Nickel 63
Laurine M. Bow, Ph.D.	Hydrogen 3; Carbon 14; Phosphorus 32; Sulfur 35; Chromium 51; Iodine 125
Peter J. Mas, M.S.	Cesium 137 for instrument calibration
Robert E. Moore, Ph.D.	Hydrogen 3; Carbon 14; Phosphorus 32; Sulfur 35; Chromium 51; Nickel 63; Technetium 99m; Iodine 125; Iodine 131; Cesium 137; Ytterbium 169
Robert E. Rice, M.S.	Strontium 90 for instrument calibration
Ronald J. Rosenberg, M.D.	Hydrogen 3; Carbon 14; Phosphorus 32; Sulfur 35; Chromium 51; Nickel 63; Technetium 99m; Iodine 125; Iodine 131; Cesium 137; Ytterbium 169
Robert Schweizer, M.D.	Hydrogen 3; Carbon 14; Phosphorus 32; Sulfur 35; Chromium 51; Nickel 63; Technetium 99m; Iodine 125; Iodine 131; Cesium 137; Ytterbium 169
Herbert Silver, M.D.	Hydrogen 3 Cesium 137 for irradiation of material

Gregory J. Tsongalis, Ph.D. Hydrogen 3; Phosphorus 32; Sulfur 35

Charles L. Woronick, Ph.D. Chromium 51; Iodine 125

13. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d), 40.36(b), and 70.25(d) for establishing financial assurance for decommissioning.

14. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material at a single location to quantities below the limits specified in 10 CFR 30.72 which require consideration of the need for an emergency plan for responding to a release of licensed material.

15. The licensee shall not use licensed material in or on human beings except as provided otherwise by specific condition of this license.

16. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.

B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months.

C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.

D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.

E. Sealed sources and detector cells need not be leak tested if:

(i) they contain only hydrogen-3; or

(ii) they contain only a radioactive gas; or

(iii) the half-life of the isotope is 30 days or less; or

(iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or

(v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source or detector cell involved, the test results, and corrective action taken.

G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.

17. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.

18. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.

19. The licensee shall conduct a physical inventory every three months to account for all sealed sources and devices containing licensed material received and possessed pursuant to 10 CFR 35.59, 35.400 and 35.500 and every six months for all other sealed sources and devices.

20. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the Commission or an Agreement State to perform such services.

21. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.

22. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days and Sulfur 35 for decay-in-storage before disposal in ordinary trash, provided:

A. Waste to be disposed of in this manner shall be held for decay a minimum of ten half-lives.

B. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.

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C. A record of each such disposal permitted under this License Condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.

23. Radioactive waste generated shall be stored in accordance with the statements, representations, and procedures included with the waste storage plan described in the licensee's letter dated September 1, 1994.

24. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

25. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Application dated October 5, 1990
B. Letter dated April 23, 1991
C. Letter dated June 11, 1993
D. Letter dated June 14, 1993
E. Letter dated June 21, 1993
F. Letter dated August 11, 1993
G. Letter dated August 19, 1993
H. Letter dated August 31, 1993
I. Letter dated March 11, 1994
J. Letter dated May 31, 1994
K. Letter dated September 1, 1994
L. Letter dated January 13, 1995
M. Letter dated April 15, 1996
N. Letter dated June 24, 1996
O. Letter dated October 30, 1996

For the U.S. Nuclear Regulatory Commission

Date APR - 2 1997

By ORIGINAL SIGNED BY: MOHAMED M. SHANBAKY

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

APR - 2 1997

John J. Meehan, Jr.
President and Chief Executive Officer
Hartford Hospital
80 Seymour Street
Hartford, CT 06115

Dear Mr. Meehan:

Enclosed is the Corrected Copy of Amendment No. 76 for License No. 06-00253-04. During an internal audit of your file, it was discovered that your letter dated May 31, 1994 was incorrectly omitted from your license. Condition No. 25 has now been corrected to include this correspondence.

We apologize for any inconvenience this error may have caused.

Sincerely,

ORIGINAL SIGNED BY:
MOHAMED M. SHANBAKY

Mohamed Shanbaky, Ph.D., Chief
Nuclear Materials Safety Branch 1
Division of Nuclear Materials Safety

License No. 06-00253-04
Docket No. 030-01239
Control No. 123916

Enclosure:
Corrected Copy of Amendment No. 76

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