NRC FORM 374
(7-94)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Amendment No. 72

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.

Licensee	
1. St. Francis Hospital & Medical Center 2. 114 Woodland Street Hartford, Connecticut 06105	In accordance with the letter dated August 19, 1996, 3. License Number 06-00854-03 is amended in its entirety to read as follows: 4. Expiration Date April 30, 2004 5. Docket or Reference No. 030-01246/06-14734-01

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. 500 millicuries
D. Any byproduct material identified in 10 CFR 35.400	D. Any brachytherapy source identified in 10 CFR 35.400	D. 1150 millicuries
E. Uranium depleted in the isotope Uranium 235	E. Metal	E. 160 kilograms
F. Cesium 137	F. Sealed sources (Amersham Corp. Model CDC-SP1)	F. 1000 millicuries
G. Iridium 192	G. Sealed sources (BYK Mallinckrodt Model CI L BV)	G. 2 sources not to exceed 10 curies each
H. Hydrogen 3	H. Any	H. 150 millicuries
I. Carbon 14	I. Any	I. 30 millicuries
J. Phosphorus 32	J. Any	J. 25 millicuries
K. Sulfur 35	K. Any	K. 20 millicuries
L. Calcium 45	L. Any	L. 20 millicuries
M. Iodine 125	M. Any	M. 40 millicuries
N. Strontium 90	N. Sealed source	N. 1 millicurie
O. Cesium 137	O. Sealed sources (Technical Operations Model No. 77302)	O. 200 millicuries
P. Any byproduct material identified in 10 CFR 31.11	P. Prepackaged Kits	P. 5 millicuries

ML 10 0/1

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number 06-00854-03

Docket or Reference Number 030-01246/06-14734-01

Amendment No. 72

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. Shielding in a linear accelerator.
F. For use in a Nucletron Corporation Model SEL 103 and SEL 106 remote afterloading device for interstitial, intracavitary, or bronchial therapy.
G. One source to be used in a Nucletron Corporation Model Microselectron High Dose Rate Remote Afterloading Brachytherapy Device for interstitial, intracavitary, or bronchial therapy. One source in its shipping container to be in possession of the licensee as necessary for replacement of the source in the irradiation device.
H. through M. Research and development as defined in 10 CFR 30.4.
N. Non-human use. For calibrations and checking of the licensee's instruments.
O. For use in a Nuclear Associates or Technical Operations Model 773 calibrator for calibrations and checking of the licensee's survey instruments.
P. In vitro diagnostic studies

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at 114 Woodland Street, Hartford, Connecticut and 500 Blue Hills Avenue, Hartford, Connecticut.

11. A. The Radiation Safety Officer for this license is Kenneth S. Schwartz, M.D.

B. The Medical Physicists for this license are Michael L. Caprio, Jr., M.S., J. Robin Rice, Ph.D., and Dayee Jacob, M.S.

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

Authorized Users	Material and Use
James D. Slavin, Jr., M.D.	35.100; 35.200; 35.300
Neal F. Epstein, M.D.	35.100; 35.200 Iodine 131 for treatment of hyperthyroidism and cardiac dysfunction
Harold Hawkins, M.D.	35.200
Richard Shumway, M.D.	35.300: 35.400 Depleted uranium; Strontium 90; Cesium 137; Iridium 192
Bruce Kaplan, M.D.	35.300; 35.400 Depleted uranium; Strontium 90; Cesium 137; Iridium 192

Eric Van Rooy, M.D.	35.300; 35.400
Ernesto M. Canalis, M.D.	Hydrogen 3; Carbon 14; Phosphorus 32; Sulfur 35; Calcium 45; and Iodine 125
Samuel Varghese, Ph.D.	Hydrogen 3; Carbon 14; Sulfur 35; Calcium 45; and Iodine 125
Robert D. Bona, M.D.	Calcium 45
George H. Barrows, M.D.	Phosphorus 32
Mozafareddin Karemeddini, M.D.	35.100; 35.200; 35.300 In vitro studies
Patricia Luhan, Ph.D.	Phosphorus 32 In vitro studies
Howard R. Shapiro, M.D.	35.100; 35.200; 35.300 In vitro studies
Richard P. Spencer, M.D.	35.100; 35.200; 35.300 In vitro studies

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. Prior to initiation of a treatment program, and subsequent to each source exchange for each high dose rate remote afterloading brachytherapy unit, a radiation survey shall be made of:

    A. The source housing, with the source in the shielded position. The maximum radiation levels at 10 centimeters from the surface of the main source safe shall not exceed 1 millirem per hour.

    B. All areas adjacent to the treatment room with the source in the exposed position. The survey shall clearly establish:

        (1) That radiation doses to occupationally exposed individuals do not exceed the limits specified in 10 CFR 20.1201(a), 20.1207 and 20.1208.

        (2) That radiation doses to individual members of the public do not exceed the limits specified in 10 CFR 20.1301(a).

16. A high dose rate afterloading brachytherapy unit shall be used in accordance with the following conditions:

    A. The unit may only be used in a permanently shielded treatment room.

    B. During all patient treatments, both the authorized user and either the medical physicist or radiation safety officer must be physically present. Physical presence, for this purpose, is defined as within audible range of normal human speech.

    C. The licensee shall have and post in the vicinity of the treatment console, written emergency procedures describing the actions to be taken, including surgical intervention, should the source not return to the shielded container at the conclusion of treatment. The licensee shall not begin any treatment procedure for which a decoupled or jammed source cannot be removed expeditiously from the patient and placed in a shielded condition.

    D. The licensee shall ensure that personnel are trained in both the routine use of the unit and emergency procedures necessary to return the source to a safe position.

    E. The licensee shall immediately, after implanting the source, visually check the permanently installed room radiation monitor to verify that it indicates an exposed radiation source.

    F. The licensee shall visually monitor the patient during treatment through a continuous observation system.

    G. The licensee shall permit no visitors in the treatment room.

17. In lieu of 10 CFR 35.404(a), immediately after retracting the source from the patient into its shielded position in the remote afterloading device, radiation survey shall be made of the patient and the remote afterloading device with a portable radiation detection survey instrument to confirm that the source has been removed from the patient. Records of the survey shall be maintained in lieu of the record required in 10 CFR 35.404(b).

18. In lieu of the source inventory described in 10 CFR 35.406, the licensee shall:

    A. Promptly determine that all sources have returned to the safe, shielded position at the conclusion of each high dose remote brachytherapy procedure.

    B. Promptly make a survey of the area of use to confirm that no sources have been misplaced.

    C. Make a record of the survey including survey instrument used, dose rate, time, date and name of the individual making the survey.

    D. Retain the record of the survey in lieu of the record required in 10 CFR 35.406(d).

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number: 06-00854-03

Docket or Reference Number: 030-01246/06-14734-01

Amendment No. 72

19. The following shall be performed only by persons specifically authorized by the Commission or an Agreement State to perform such service:

A. Installation, and replacement of the sealed sources contained in each high dose rate remote afterloading brachytherapy unit.

B. Maintenance or repair operations on any high dose rate remote afterloading brachytherapy unit and associated equipment involving work on the source safe, the source driving unit, or other mechanism that could expose the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.

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

21. Notwithstanding the requirements of 10 CFR 35.92(a), the licensee may hold any radioactive material authorized by this license with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal in ordinary trash, provided the licensee stores the material for decay in accordance with all other requirements of 10 CFR 35.92.

22. 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 26, 1993
B. Letter dated January 10, 1994
C. Letter dated April 14, 1994
D. Letter dated November 17, 1994
E. Letter dated December 23, 1994
F. Letter dated January 31, 1995
G. Letter dated March 1, 1995
H. Letter dated August 23, 1995
I. Letter dated September 20, 1995
J. Letter dated September 28, 1995
K. Letter dated July 2, 1996
L. Letter dated July 31, 1996
M. Letter dated August 19, 1996

For the U.S. Nuclear Regulatory Commission

Date SEP 13 1996

By Original Signed By:
Michelle Beardsley

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

SEP 13 1996

Ms. Mary Ellen Doyle
Vice President
St. Francis Hospital & Medical Center
114 Woodland Street
Hartford, CT 06105

Dear Ms. Doyle:

This refers to your license amendment request. Enclosed with this letter is the amended license.

Your license has been issued in the name of an institution, please ensure that all license amendment or renewal requests are signed by a representative of the institution's management. This will assure that management has concurred with all commitments.

Please be advised you presently have two amendments numbered 70 dated 9-29-95 and 7-30-96, Amendment No. 71 dated 8-16-96 and the enclosed amendment which has been corrected to read No. 72. All information has been updated to reflect your full program as requested by your correspondence.

Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5093 or 5239, so that we can provide appropriate corrections and answers.

Thank you for your cooperation.

Sincerely,

Original Signed By:
Michelle Beardsley

Michelle Beardsley
Division of Nuclear Materials Safety

License No. 06-00854-03
Docket No. 030-01246
Control No. 123599

Enclosure:

DOCUMENT NAME: 72R:\WPS\MLTR\L0600854.03

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	N	DNMS/RI			
NAME	Stambaugh/jvs		Beardsley			
DATE	09/13/96		09/13/96	09/ /96	09/ /96	

OFFICIAL RECORD COPY

ML 10

SAINT FRANCIS
Hospital and Medical Center

Department of Radiology

114 Woodland Street
Hartford, Connecticut
06105-1299

203-548-4830

030-01246

August 19, 1996

USNRC Region I
475 Allendale Road
King of Prussia, PA 19406

Gentlemen:

Attached is a copy of the Decommissioning Survey of the old Cardiac Stress Lab, which is part of the License Amendment we recently requested, License #06-00854-03.

Please release this area for general use.

Sincerely yours,

Stuart R. Korchin

Stuart R. Korchin, P.E., DABR
Medical Nuclear Physicist

SRK/f
Attachment

FEE NOT REQUIRED

123599

OFFICIAL RECORD COPY IML 10 AUG 22 1996

CONTINUATION OF 123540

Final Survey Exercise LAB

8/12/96

Date: 08/12/96 Initials: PDH

Efficiency Table:

Data File (worksheet) : ENTER FILENAME USED FOR STORAGE:

Area	Ga	Tc	Tl-201	I-131	Total MUC
1	102	56	28	73	259
2	103	41	34	68	245
3	91	34	23	41	189
4	132	46	19	88	285
5	115	35	34	39	223
6	0	0	0	0	0

Key: 1 =LAB1SINK
2 =LAB1DOOR
3 =LAB1FLOOR1
4 = LAB1FLOOR2
5 = LAB1FLOOR3
6 = NO WIPE DONE

Date: 08/12/96 Initials: PDH

Efficiency Table:

Data File (worksheet) : ENTER FILENAME USED FOR STORAGE:

Area	Ga	Tc	Tl-201	I-131	Total MUC
1	99	32	48	98	277
2	99	37	24	41	202
3	102	36	27	68	234
4	155	71	24	44	294
5	102	28	26	44	200
6	0	0	0	0	0

Key: 1 =LAB2SINK
2 =LAB2DOOR
3 =LAB2FLOOR1
4 = LAB2FLOOR2
5 = LAB2FLOOR3
6 = NO WIPE DONE

CLOSING OF LAB

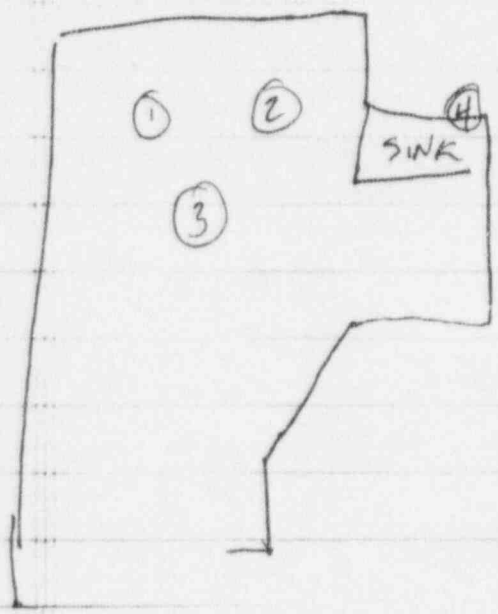
OLD EXERCISE

LABS SURVEY

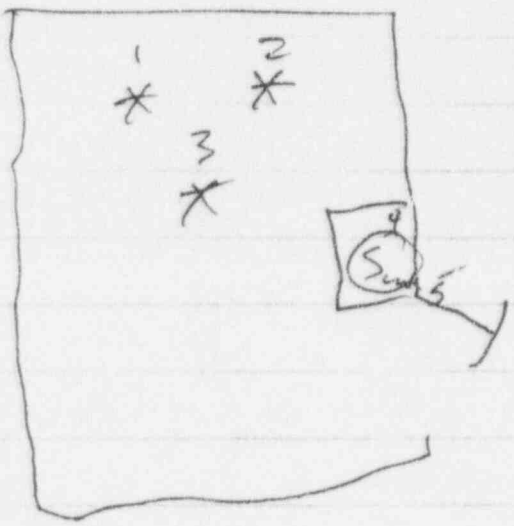
LOCATION	LAB #1 SURVEY METER	LAB #1 WIPE	LAB #2 BICRON 12 S	LAB #2 WIPE
DOOR #1	12 mR/HR	245	10 mR/HR	202
FLOOR #2 ①	14 mR/HR	199	14 mR/HR	234
SINK #3	14 mR/HR	259	12. mR/HR	277
FLOOR #4 ②	12 mR/HR	285	12 mR/HR	294
FLOOR #5 ③	11 mR/HR	223	14.5 mR/HR	200

Background 12.5 mR/HR

LAB #1



LAB #2



OLD
EXERCISE LAB
LAST SURVEY
8/12/96

Date: _____
surveyor: _____

Background Count
counting time : 10 min.

ROI #1 cts : 84
ROI #2 cts : 112
ROI #3 cts : 132
ROI #4 cts : 87
ROI #5 cts : 93
ROI #6 cts : 111

Location/ID : LAB1 Sink
counting time : 2 min.

ROI #1 cts : 12
ROI #2 cts : 22
ROI #3 cts : 22
ROI #4 cts : 20
ROI #5 cts : 17
ROI #6 cts : 20

Tot 259 dpm

Location/ID : LAB1 DOOR
counting time : 2 min.

ROI #1 cts : 12
ROI #2 cts : 20
ROI #3 cts : 25
ROI #4 cts : 17
ROI #5 cts : 20
ROI #6 cts : 27

Tot 245 dpm

Location/ID : LAB 1 FLOOR #1
counting time : 2 min.

ROI #1 cts : 8
ROI #2 cts : 20
ROI #3 cts : 14
ROI #4 cts : 13
ROI #5 cts : 11
ROI #6 cts : 19

Tot 189 dpm

Location/ID : #1 FLOOR 2
counting time : 2 min.

ROI #1 cts : 12
ROI #2 cts : 16
ROI #3 cts : 34
ROI #4 cts : 18
ROI #5 cts : 6
ROI #6 cts : 31

Tot 285 dpm

Location/ID : #1 FLOOR 3
counting time : 2 min.

ROI #1 cts : 14
ROI #2 cts : 25
ROI #3 cts : 22
ROI #4 cts : 14
ROI #5 cts : 20
ROI #6 cts : 16

Tot 223 dpm

Location/ID : _____
counting time : ____ min.

ROI #1 cts : _____
ROI #2 cts : _____
ROI #3 cts : _____
ROI #4 cts : _____
ROI #5 cts : _____
ROI #6 cts : _____

Location/ID : LAB 2 Sink
counting time : 2 min.

ROI #1 cts : 11
ROI #2 cts : 15
ROI #3 cts : 26
ROI #4 cts : 11
ROI #5 cts : 24
ROI #6 cts : 33

Tot 277 dpm

Location/ID : LAB 2 DOOR
counting time : 2 min.

ROI #1 cts : 13
ROI #2 cts : 20
ROI #3 cts : 19
ROI #4 cts : 16
ROI #5 cts : 12
ROI #6 cts : 19

Tot 202 dpm

Location/ID : #2 FLOOR 1
counting time : 2 min.

ROI #1 cts : 14
ROI #2 cts : 13
ROI #3 cts : 27
ROI #4 cts : 15
ROI #5 cts : 16
ROI #6 cts : 27

Tot 234 dpm

Location/ID : #2 FLOOR 2
counting time : 2 min.

ROI #1 cts : 10
ROI #2 cts : 35
ROI #3 cts : 25
ROI #4 cts : 23
ROI #5 cts : 12
ROI #6 cts : 22

Tot 294 dpm

Location/ID : #2 FLOOR 3
counting time : 2 min.

ROI #1 cts : 17
ROI #2 cts : 17
ROI #3 cts : 20
ROI #4 cts : 8
ROI #5 cts : 14
ROI #6 cts : 22

Tot 200 dpm

Location/ID : _____
counting time : ____ min.

ROI #1 cts : _____
ROI #2 cts : _____
ROI #3 cts : _____
ROI #4 cts : _____
ROI #5 cts : _____
ROI #6 cts : _____

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)
INFORMATION FROM LTS

PROGRAM CODE: 02230
STATUS CODE: 0
FEE CATEGORY: 7C 2B
EXP. DATE: 20040430
FEE COMMENTS: ----------
DECOM FIN ASSUR REQD: N

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED
APPLICANT/LICENSEE: ST. FRANCIS HOSPITAL & MEDICAL CTR.
RECEIVED DATE: 960822
DOCKET NO: 3001246
CONTROL NO.: 123599
LICENSE NO.: 06-00854-03
ACTION TYPE: AMENDMENT

2. FEE ATTACHED
AMOUNT: ----/----
CHECK NO.: ----/----

3. COMMENTS

SIGNED M. A. Perkins
DATE 8/26/96

1996 AUG 27 PM 4:13

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED (__/))

1. FEE CATEGORY AND AMOUNT: (7C) 2B FEE NOT REQUIRED

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:
AMENDMENT ----✓----
RENEWAL ----------
LICENSE ----------

3. OTHER ----------

SIGNED SC
DATE 9/3/96

Log Aug 15 1
Remitter
Check No.
Amount
Fee Category 7C 2B
Type of Fee AMD
Date Check Rec'd
Date Completed 9/3/96
By: SC