030-01275

VOID SHEET

TO: License Fee Management Branch

FROM: Region I

SUBJECT: VOIDED APPLICATION

Jan 12 1996 12 2780

Control Number: 122780

Applicant: Lawrence and Memorial Hospital

Date Voided: 4/18/96

Reason for Void: Licensee requested Void of this amendment application for License No. 06-09261-01 (030-01275). They will resubmit when they find a supplier of an NRC approved Sr-90 sealed source. After review.

M. A. Perkins 4/18/96
Signature Date

Attachment:
Official Record Copy of
Voided Action

FOR LFMB USE ONLY

Final Review of VOID Completed:

Refund Authorized and processed

No Refund Due

Fee Exempt or Fee Not Required

Comments: After review

Log completed

Processed by: BS

130025

OFFICIAL RECORD COPY ML 10

9607190011 960418
PDR ADOCK 03001275
C PDR

TELEPHONE CONVERSATON RECORD	Date: 4-18-96	Time: 10:00
Mail Control No.: 122780	License No.: 06-09261-01	Docket No.: 030-01275
Person Called: Peter Malloy, M.D.	Licensee: Lawrence & Memorial Hospital	Telephone Number: 203-442-0711
Person Calling: Tara Weidner 337-5272		
Subject: License amendment		
Summary: Based on my research, the source that is being requested is not registered and therefore I cannot put the sealed source on the license. I will try to have the action voided. Dr. Malloy agreed to the voiding of the action and will send a letter stating that.		
Action Required/Taken: Void action and place Dr. Malloy's letter in the file		
Signature: Tara Weidner	Date: 4-18-96	

OFFICIAL RECORD COPY ML 10

VICTOREEN, Inc.

VICTOREEN
6000 Cochran Road, Cleveland, Ohio 44139-3395
(216) 248-9300 FAX (216) 248-9301

Fax Transmission
Please Deliver Immediately

Date: 4/17/96 Ref. No.:

Fax No.: 86103375269

Company: NRC

Attention: TARA WEIDNER

From: CLARE GRETHOFSKY Ext.: 286

Title:

This fax contains _____ pages including this cover sheet.

06-09261-01

Message: ENCLOSED PLEASE FIND

(1) AMENDMENT WHICH AUTHORIZES REDISTRIBUTION OF 30-657 Sr-90 SOURCE

(2) LETTER ACCOMPANYING AMENDMENT REFERENCING 32.74

(3) COPY OF SOURCE CERTIFICATE FROM AMERSHAM (I WAS WRONG ABOUT ISOTOPE PRODUCTS)

I HOPE THIS IS ALL YOU NEED - BUT IF YOU WOULD LIKE ENTIRE COPIES OF OUR LICENSES PLEASE CALL ME AT 216-248-9300

HAVE A GOOD DAY!

OFFICIAL RECORD COPY ML 10 /22780

FAX REC'D APR 17 1996

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

PAGE 1 OF 1 PAGES

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 34-25957-01

Docket or Reference number: 030-30736

Amendment No. 13

398326

RECEIVED IN RESPONSE TO A TELEPHONE REQUEST BY W.H. MILLER FOR ACCELERATED ACTION ON PARA X OF ITEM #5 OF OUR RENEWAL APPLICATION DATED 8/16/94

Victoreen, Inc. (Delaware)
6000 Cochran Road
Cleveland, OH 44139-3395

In accordance with letter dated August 16, 1994, License Number 34-25957-01 is amended as follows:

Items 6., 7., 8., and 9. are amended to add:

GG. Any byproduct material with Atomic Nos. 1 through 83, inclusive	GG. Sealed sources (which have been registered pursuant to Section 32.210 of 10 CFR Part 32 or equivalent Agreement State regulations)	GG. Not to exceed 250 millicuries per source. Total possession not to exceed 500 millicuries.

9. Authorized Use:

GG. For redistribution of Nuclear Associates sources to persons authorized to receive licensed material pursuant to the terms and conditions of a general license or a specific license issued by the Nuclear Regulatory Commission or an Agreement State.

Condition 28. is added:

28. The licensee shall submit periodic material transfer reports as specified in 10 CFR 32.52.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date MAY 8 1995

By Patricia D. Lee
Materials Licensing Section, Region III

COPY 5

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

MAY 10 1995

Victoreen, Inc. (Delaware)
ATTN: Clare E. Grehofsky
Radiation Safety Officer
6000 Cochran Road
Cleveland, OH 44139-3395

Dear Ms. Grehofsky:

Enclosed is Amendment No. 13 to your NRC Material License No. 34-25957-01 in accordance with your request.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office so that we can provide appropriate corrections and answers.

At this time, we have authorized you to redistribute only Nuclear Associates sources to general and specific licensees. In order to authorize redistribution of any registered source, it will be necessary for you to submit the following additional information:

1. Specify that the sealed sources to be redistributed will have been obtained from a manufacturer authorized to distribute sealed sources in accordance with a specific license issued pursuant to Section 32.74 of 10 CFR Part 32 or under equivalent regulations of an Agreement State.

2. Specify that the manufacturer's packaging, labeling, and shielding (if applicable) will not be altered in any way and that the redistributed sources will be accompanied by the manufacturer-supplied package insert, leaflet, brochure, or other document that provides radiation safety instructions for handling and storing the sources.

3. Confirm that you will ensure that the labeling on redistributed sealed sources conforms to the requirements of Section 20.1904 of 10 CFR Part 20.

Received 5/9/95
per Clare's 5:9

Information submitted in response to this letter should be referenced as additional information to Control No. 98326.

Sincerely,

Patricia J. Pelke

Patricia J. Pelke
Nuclear Materials Licensing Section

License No. 34-25957-01
Docket No. 030-30736

Enclosures:
1. Amendment No. 13
2. 10 CFR Part 32

27 June 1995 Men/wo
Page 1 of 2 pages, Issue 8/93

Amersham Buchler
GmbH & Co KG
Gieselweg 1
D-38110 Braunschweig
Postfach 11 49
D-38001 Braunschweig

Tel. (05307) 930-0
Fax (05307) 930-293
Fax-Zentrale 930-237

Amersham
The Health Science Group

CERTIFICATE

No. 106020-4

for a Sealed Radioactive Source

Source Type: Checking Source(s)

Product Code	SIRB1612
Drawing	VZ-241/5
Quantity	10 off
Source No(s).	EN 441, EN 442, EN 443, EN 444, EN 445, EN 446, EN 447, EN 448, EN 449, EN 450
Nuclide	Strontium-90

Measurement Data

Nominal Activity	each 33 MBq
Reference Date	13 June 1995
Traceability*	Not applicable

Leakage and Contamination Test(s)

Test Method(s)*	II
Test(s) passed on	26 June 1995

Additional Information

ISO Classification*	C.64444
Recommended Working Life*	---
Remark	---

* see page 2 for explanation

Amersham Buchler

(Production Manager)

Lawrence & Memorial Hospital
365 Montauk Ave.
New London Ct 06320
Mail Control #
122780

US NRC
c/o Tara Widner
475 Allendale Rd
King of Prussia, Pa 19406

April 18, 1996

06-09261-01

Dear Ms Widner:

As per our conversation today please void the above referenced license ammendment application. We will resubmit when we find a supplier of an NRC approved Ar^{90} sealed source.

Truly yours,

Peter Mallory MD
RSO

OFFICIAL RECORD COPY ML 10

122780
FAX REC'D APR 17 1996

MS-16
J9

ATLANTIC NUCLEAR CORPORATION FAX 617-828-1319
1020 Turnpike Street, #9, Canton, Ma. 02021 617-828-9118

06-09261-01

FAX MESSAGE

TO Eileen Robarge, Nuclear Medicine
Lawrence Memorial Hospital

DATE 04-01-96

FROM John P. Anderson

8 PAGES TO FOLLOW

SUBJECT Model 30-657 and info

The Model 30-657 ion chamber check source is manufactured by PTW Freiburg and has been distributed by Victoreen/Nuclear Associates for many years to radiation therapy departments.

I am faxing a typical Leak Test Report by PTW, a copy of Victoreen's materials license, and a copy of the catalog sheet for the 30-657 so you my fax or send them to the NRC as requested.

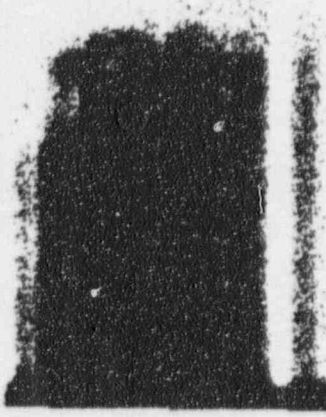
Please call me directly if you need more information.

Sincerely,

John

122780

APR 1 1996



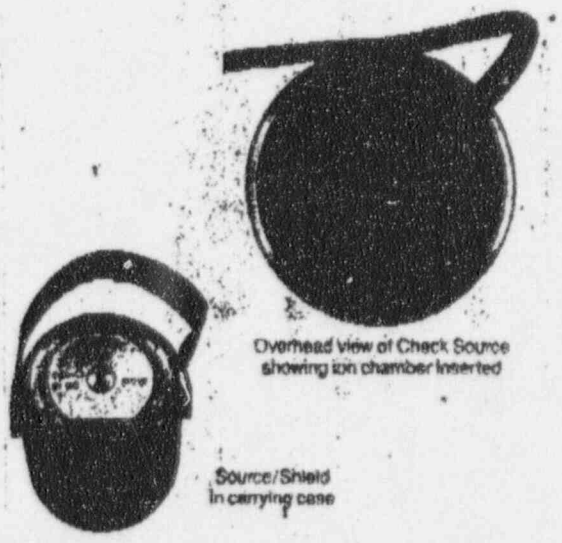
Ionization Chamber Check Source

- "Transfer Value" provided when instrument is calibrated.
- Checks any ion chamber up to 0.48" D. and 0.7" active length.
- Shutter mechanism centers chamber automatically. Assures reproducible geometry.
- Simple operation. Measurements take only seconds.

The performance of therapy dose or dose-rate measuring instruments should be checked constantly. Typically, the department's teletherapy system is used for this, but it is satisfactory only if the source and instruments are set up in a precise geometry. The Ion Chamber Check Source eliminates the need for such tedious and possibly inaccurate measurements.

Compatible with most ion chambers (PTW, Farmer, Victoreen, Capintec, etc.). Can be sent to N.B.S. or a Regional Calibration Laboratory with your ion chamber and electrometer. With the calibration certificate, they also provide a dose or dose rate value of the check source with your dosimetry system.

Consists of a cast iron and aluminum shield with an annular $^{90}Sr—^{90}Y$ sealed source. When two spring-mounted flanges are squeezed, the shutter opens to accept an ion chamber for calibration. As the pressure is released, the shutter closes and clamps the chamber in position. Its active area is automatically centered in the well, assuring reproducible geometry. The source is always shielded, even during measurement. Surface radiation levels are equivalent to background.



Overhead view of Check Source showing ion chamber inserted

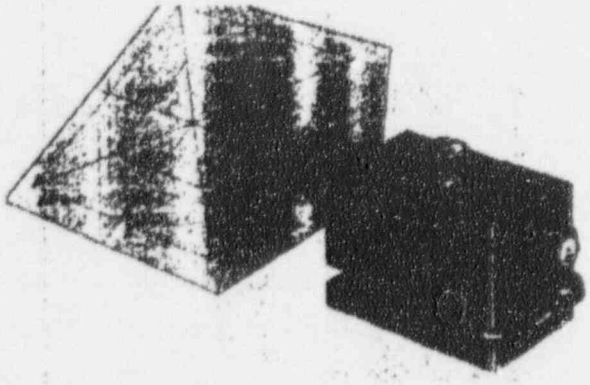
Source/Shield in carrying case

4" high x 3" D., with 1¼" steel jacket. Accepts chambers up to 0.48" D. and 0.7" active length. Uncalibrated, annular $^{90}Sr—^{90}Y$ source, 900 μCi (license is required). Screw-on cap protects shutter. Carrying case included. Weighs 6 lbs.

Precision Beam Checker

Easily and accurately checks...

- Collimator field size indicators.
- Isocenter rotational stability.
- Backpointer alignment.
- Patient positioning lights.
- Radiation and light field congruence.



The Precision Beam Checker consists of a screen holder and a removable screen with tungsten markers that precisely define the corners, edges and center of the screen's 5 x 5 cm and 10 x 10 cm fields. The screen holder has a bubble level

NRC Form 374 (4-94)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

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.

Licensee	
1. Victoreen, Inc. (Delaware)	3. License number 34-25957-01
2. 6000 Cochran Road Solon, OH 44139	4. Expiration date October 31, 1993
	5. Docket or Reference No. 030-30736, 34-00486-10

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 with Atomic Numbers 1 through 83, inclusive	A. Any	A. Not to exceed 2 millicuries per radionuclide except as noted below: Carbon-14 35 millicuries Xenon-133 100 millicuries Nickel-63 900 millicuries Total possession not to exceed 2 curies
B. Cesium-137	B. Sealed sources	B. 100 millicuries total
C. Cobalt-60	C. Sealed sources	C. 100 millicuries total
D. Strontium-90	D. Sealed sources	D. 30 millicuries total
E. Krypton-85	E. Sealed sources	E. 20 millicuries total
F. Californium-252	F. Sealed sources	F. 0.22 microcuries total
G. Plutonium-239	G. Any	G. 2.0 microcuries total
H. Hydrogen-3	H. Any	H. 8.2 curies total
I. Krypton-85	I. Any	I. 85 millicuries total

COPY

NRC Form 374A (6-83) U.S. NUCLEAR REGULATORY COMMISSION

PAGE 2 OF 8 PAGES

License number: 34-25957-01

Docket or Reference number: 030-30736, 34-00486-10

MATERIALS LICENSE
SUPPLEMENTARY SHEET

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
J. Americium-241	J. Sealed sources (which have been evaluated and registered with the NRC or an Agreement State)	J. 20 millicuries total
K. Cesium-137	K. Sealed sources (Amersham Corp. Model CDC.710 or sources which have been evaluated and registered with the NRC or an Agreement State for use in Victoreen, Inc. High Range Field Calibrator Model 878-10)	K. 20 sources not to exceed 250 millicuries each
L. Cesium-137	L. Sealed sources (which have been evaluated and registered with the NRC or an Agreement State for use in Victoreen, Inc. Model 681A Instrument Calibrator or J. L. Shepherd Model 28-5 or Technical Operations, Inc. Model 773)	L. 3 sources not to exceed 165 millicuries each
M. Cobalt-60	M. Sealed source (Atomic Energy of Canada Mod.1 C-132)	M. One source not to exceed 1 curie
N. Strontium-90	N. Sealed sources. (Interex Model 844-28-1 or sources which have been evaluated and registered with the NRC or an Agreement State for use in Victoreen, Inc. Model 540D Constancy Standard)	N. 75 sources not to exceed 500 microcuries each

COPY

NRC Form 374A (9-89) U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Page 3 of 8 PAGES

License number: 34-25957-01

Docket or Reference number: 030-30736, 34-00486-10

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
O. Cesium-137	O. Sealed sources (Amersham/Searle No. X-7 or sources which have been evaluated and registered with the NRC or Agreement State for use in Victoreen, Inc. Field Calibration Kit Model 848-8)	O. 25 sources not to exceed 100 millicuries each
P. Cesium-137	P. Sealed source (Atomic Energy of Canada)	P. 1 source not to exceed 86 curies
Q. Cobalt-60	Q. Sealed source (Atomic Energy of Canada)	Q. 1 source not to exceed 35 millicuries
R. Cobalt-60	R. Sealed source (Atomic Energy of Canada)	R. 1 source not to exceed 8.4 curies
S. Cobalt-60	S. Sealed sources (Atomic Energy of Canada Model A-CP-17C and Victoreen Dwg. dated February 10, 1959)	S. 126 sources not to exceed 305 millicuries each
T. Cesium-137	T. Sealed source (Amersham Model X.19)	T. One source not to exceed 1.08 curies
U. Cobalt-60	U. Sealed source (Advanced Medical Systems Model AMS3802)	U. One source not to exceed 2,000 curies
V. Cesium-137	V. Sealed sources (3M Co. Model Nos.4P6E, 4F6B, 4F6S, 4F6M, 4D6L, or 4P6T; Isotope Products Model No. 193; IRL Model CS 2-4 or CS 2-10; ORNL Model SK 193D; or J. L.Shepherd Model No. 6810)	V. One source not to exceed 12 curies

COPY

NRC Form 374A (9-94) U.S. NUCLEAR REGULATORY COMMISSION

PAGE 4 OF 8 PAGES

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 34-25957-01

Docket or Reference number: 030-30736, 34-00486-10

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
W. Cesium-137	W. Sealed sources (3M Co. Model Nos. 4P6E, 4F6B, 4F6S, 4F6H, 4D6L, or 4P6T; Isotope Products Model No. 193; IRL Model CS 2-4 or CS 2-10; ORNL Model SK 193D; or J. L. Shepherd Model No. 6810)	W. One source not to exceed 67 curies
X. Chlorine-36	X. Sealed sources (New England Nuclear Model 9018)	X. No single source to exceed 200 microcuries. Total possession not to exceed 100 millicuries.
Y. Cesium-137	Y. Sealed source (3M Company Models 4P6E, 4F6H, 4D6L, or 4F6S; U.S. Nuclear Model 375; Isotope Products Lab. Model 193; Amersham Corp. capsules X.9 or X.8; Ind. Reactor Labs., Inc. Models 2-4 or 2-10; or J. L. Shepherd and Associates Model 6810)	Y. One source not to to exceed 400 millicuries

9. Authorized Use

A. through G. and J. For research and development as defined in 30.4(q), 10 CFR Part 30, with regard to radiation detection instruments, radiation measuring systems and electron tubes. To be used in manufacture, packaging for shipment and distribution to persons authorized to possess the licensed material pursuant to the terms and conditions of a specific license issued by the Nuclear Regulatory Commission or an Agreement State.

H. and I. For storage only.

K. For use and instal ation in Victoreen Model 878-10 Field Calibrator. For distribution to pe sons authorized to receive licensed material pursuant to the terms and conditions of a specific license issued by the Nuclear Regulatory Commission or an Agreement State (NR-666-D-107-U). For commercial calibration of radiation instrumentation.

COPY

COPY

NRC Form 374A (2-89) U.S. NUCLEAR REGULATORY COMMISSION

PAGE 5 OF 6 PAGES

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 34-25957-01

Docket or Reference number: 030-30736, 34-00486-10

9. (Continued)

L. For receipt, storage and repackaging of external packages only of Technical Operations, Inc. Model 773 (NR-628-D-132-S), Victoreen, Inc. Model 681A (NR-666-D-105-U) and J. L. Shepherd Model 28-5 instrument calibrator. For distribution to persons authorized to receive licensed material pursuant to the terms and conditions of a specific license issued by the Nuclear Regulatory Commission or an Agreement State. For use in commercial calibration of radiation instrumentation.

M. For use in Victoreen custom made irradiator for the testing and calibration of radiation measuring instrumentation. Source replacement for this device is not authorized by the licensee. Source replacement shall be by persons specifically licensed by the NRC or an Agreement State to perform such services.

N. For use and installation in Victoreen Model 540D Constancy Standard. For distribution to persons authorized to receive licensed materials pursuant to a specific license issued by the NRC or an Agreement State.

O. For use and installation in Victoreen Model 848-8 (NR-666-D-102-U) Field Calibration Kit. For distribution to persons authorized pursuant to the terms and conditions of a specific license issued by the NRC or an Agreement State. For commercial calibration of radiation survey meters.

P., Q. and R. To be used in Victoreen custom made "Tri-Source" instrument calibrator for commercial testing and calibration of radiation measuring instruments and irradiation of radiation instrumentation and associated components, excluding flammable and explosive materials. Source replacement for this device is not authorized by the licensee. Source replacement shall be by persons specifically licensed by the NRC or an Agreement State to perform such services.

S. To be used in Victoreen Model 770 "Radcell" for study of radiation effects on radiation instrumentation and associated components, excluding flammable or explosive material.

T. To be used in Victoreen custom made irradiator for commercial testing and calibration of direct reading dosimeters. Source replacement for this device is not authorized by the licensee. Source replacement shall be by persons specifically licensed by the NRC or an Agreement State to perform such services.

U. For use in Picker Model 6096B teletherapy head (#581) for commercial testing and calibration of radiation detection and measurement instrumentation, and for irradiation of radiation detection instrumentation and associated components, excluding flammable or explosive materials.

Y. To be used in J. L. Shepherd Mark IV TL Dosimeter Irradiator for irradiation of thermoluminescent dosimeters or direct reading dosimeters.

W. To be used in J. L. Shepherd Custom made Model A-0070 (similar to the Mark IV TL Dosimeter Irradiator) for irradiator of thermoluminescent dosimeters.

COPY

27 June 1995 Men/wo

Amersham Buchler
GmbH & Co KG
Gieselweg 1
D-38110 Braunschweig
Postfach 11 49
D-38001 Braunschweig
Tel. (05307) 930-0
Fax (05307) 930-293
Fax-Zentrale 930-237

Amersham
The Health Science Group

CERTIFICATE

No. 106020-4

for a Sealed Radioactive Source

Source Type: Checking Source(s)

Product Code	SIRB1612
Drawing	VZ-241/5
Quantity	10 off
Source No(s).	EN 441, EN 442, EN 443, EN 444, EN 445, EN 446, EN 447, EN 448, EN 449, EN 450
Nuclide	Strontium-90

Measurement Data

Nominal Activity	each 33 MBq
Reference Date	13 June 1995
Traceability*	Not applicable

Leakage and Contamination Test(s)

Test Method(s)*	II
Test(s) passed on	26 June 1995

Additional Information

ISO Classification*	C 64444
Recommended Working Life*	---
Remark	---

* see page 2 for explanation

Amersham Buchler

(Production Manager)

PTW FREIBURG
D-79115 Freiburg, Lörracherstr. 7
☎ (0761) 49055-0 FAX (0761) 49055-70

Certificate

It is hereby certified that the radioactive check devices listed below have been tested for leakage. A wipe test according to DIN 25426, part 4, has been done. The test result was below 200 Bq (5 nCi).
In accordance with the German radiation protection directive (Strahlenschutzverordnung), § 75, PTW-Freiburg is authorized by permission U/103/91 of 29. January 1991 with annex of 9. October 1991 to perform leakage tests on radioactive check devices.

Number of radio-active check device	Number of radioactive source enclosed	Isotope	Activity
2324-751504	EN 441	Sr - 90	33.3 Mbq

Enclosure:
In case of a first delivery of a radioactive check device please find enclosed a copy of the leakage test certificate of the enclosed radioactive source by the source manufacturer..

Freiburg, 21. Sep. 1995

PTW - FREIBURG
Physikalisch - Technische
Werkstätten Dr. Pychlau GmbH

122780

TELEPHONE CONVERSATON RECORD	Date: 3-27-96	Time: 2:00
Mail Control No.: 122780	License No.: 06-09261-01	Docket No.: 030-01275
Person Called: Eileen Robarge	Licensee: Lawrence & Memorial Hospital	Telephone Number: 203-444-5197
Person Calling: Tara Weidner 337-5272		
Subject: License amendment		
Summary: Ms. Robarge will check to see who is the distributor of this device. If it is distributed by a distributor who is licensed under 10 CFR 32.74 then they can have the check source without it being on the license. 10 CFR 35.57 allows them to have calibration check sources without it being listed on the license, as long as they are less than 15 millicuries.		
Action Required/Taken: Wait for info		
Signature: Tara L Weidner	Date: 3-28-96	

OFFICIAL RECORD COPY **ML 10**

LAWRENCE & MEMORIAL HOSPITAL
365 Montauk Avenue, New London, CT 06320 (203) 442-0711

030-01275

January 4, 1996

US Nuclear Regulatory Commission, Region I
Division of Radiation Safety and Safeguards
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Dear Sirs:

Please amend our US NRC License No. 06-09261-01 to permit the possession and use of a 900 microCurie ^{90}Sr-^{90}Y ionization chamber check source. The source is manufactured by Baldwin Industrial Controls, Dartford, Kent, England, and is described in the attached enclosure. It is used for calibration and testing of the ionization chamber of a linear accelerator used for radiation therapy.

This source will be added to our inventory of other sealed sources, and subject to inventory checks every three months, and to wipe testing every six months, as required for sealed sources currently possessed under our license.

A check for $430.00 is enclosed to cover the cost of the amendment.

Sincerely,

Peter Malloy, M.D.
Radiation Safety Officer

enc.

122780

OFFICIAL RECORD COPY ML 10 JAN 19 1996

Ionization Chamber Check Source

- "Transfer Value" provided* when instrument is calibrated.
- Checks any ion chamber up to 0.48" D. and 0.7" active length.
- Shutter mechanism centers chamber automatically. Assures reproducible geometry.
- Simple operation. Measurements take only seconds.

The performance of therapy dose or dose-rate measuring instruments should be checked constantly. Typically, the department's teletherapy system is used for this, but it is satisfactory only if the source and instruments are set up in a precise geometry. The Ion Chamber Check Source eliminates the need for such tedious and possibly inaccurate measurements.

Compatible with most ion chambers (PTW, Farmer, Victoreen, Capintec, etc.) Can be sent to N.B.S. or a Regional Calibration Laboratory with your ion chamber and electrometer. With the calibration certificate, they also provide a dose or dose rate value of the check source with your dosimetry system.

Consists of a cast iron and aluminum shield with an annular $^{90}Sr—^{90}Y$ sealed source. When two spring-mounted flanges are squeezed, the shutter opens to accept an ion chamber for calibration. As the pressure is released, the shutter closes and clamps the chamber in position. Its active area is automatically centered in the well, assuring reproducible geometry. The source is always shielded, even during measurement. Surface radiation levels are equivalent to background.

Overhead view of Check Source showing ion chamber inserted

Source/Shield in carrying case

4" high x 3" D., with 1¼" steel jacket. Accepts chambers up to 0.48" D. and 0.7" active length. Uncalibrated, annular $^{90}Sr—^{90}Y$ source, 900 μCi (license is required). Screw-on cap protects shutter. Carrying case included. Weighs 6 lbs.

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)
INFORMATION FROM LTS

PROGRAM CODE: 02120
STATUS CODE: 0
FEE CATEGORY: 7C
EXP. DATE: 19990228
FEE COMMENTS: ----------
DECOM FIN ASSUR REQD: N

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED
APPLICANT/LICENSEE: LAWRENCE & MEMORIAL HOSPITAL
RECEIVED DATE: 960119
DOCKET NO: 3001275
CONTROL NO.: 122780
LICENSE NO.: 06-09261-01
ACTION TYPE: AMENDMENT

2. FEE ATTACHED
AMOUNT: $430.00
CHECK NO.: 039398

3. COMMENTS

SIGNED M. A. Perkins
DATE 1/24/96

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

1. FEE CATEGORY AND AMOUNT: 7C $430

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

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

SIGNED Brenda Brown
DATE 1/30/96

1996 JAN 29 AM 11:18

I (96)

Log Jan. 12
Remitter
Check No. 039398
Amount $430
Fee Category 7C
Type of Fee Amd
Date Check Rec'd 1/30/96
Date Completed
By: B Brown