Integral

September 21, 2007

Tara Weidner
Health Physicist
Division of Nuclear Materials Safety
US NRC Region I
475 Allendale Road
King of Prussia, PA 19406-1415

03033417

Re: Amendment Request for Radioactive Materials License Number 37-28453-02

Dear Ms. Weidner,

An amendment to the above referenced radioactive materials license is requested to:

1. Remove the following as a location of use:

Integral Imaging at Southampton
965 Street Road, First Floor
Southampton, PA 18966

The last day of patients was on July 27, 2007. Only Tc-99m was used at this site. Please see the attached closeout survey which was conducted on August 9, 2007 by our Health Physicist/Radiation Safety Officer Janice Nguyen. All areas were found to be free of radioactive contamination. Radiopharmacy Nuclear Diagnostic Products picked up all radioactive sealed sources for disposal. Radioactive waste was held for decay and then disposed of as biohazardous waste.

2. Remove the following as a location of use:

Bethlehem Cardiac Imaging
406 Delaware Avenue
Bethlehem, PA 18015

The last day of patients was on August 29, 2007. Tc-99m and Tl-201 were used at this site, but only Tc-99m was used in the last several years. Please see the attached closeout survey which was conducted on September 19, 2007 by our Assistant Radiation Safety Officer Dave Steigerwalt. All areas were found to be free of radioactive contamination. The active sealed sources will be picked up by radiopharmacy Nuclear Diagnostic Products and then transferred to CardioLogic, LLC (NRC license 37-31121-01 and PA license PA-0983). The inactive sources were transferred to our location in Limerick for storage and eventual disposal. Radioactive waste was held for decay and then disposed of as biohazardous waste.

141125

Paoli Executive Green II, Suite 200, 43 Leopard Road, Paoli, PA 19301
telephone: 610.993.1640 fax: 610.993.1651 www.integralpet.com

3. Add the following authorized users:

Linda A. Kloss, DO
Mark S. Silidker, MD
Daniel A. Pryma, MD

Please see the attached credentials for Drs. Kloss and Silidker. Dr. Pryma is currently listed on NRC license number 37-02523-01. They should be licensed for 35.100, 35.200, and 35.500.

4. Remove the following authorized users:

David M. Milstein, MD
Ana Y. Valdivia, MD
Morton Donald Blaufox, MD
Abass Alavi, MD
Annette Yacovone Griffith, MD
Frank Robert Domeraki, MD
Richard D. Wiess, MD
Linda Griska, MD
Simin Dadparvar, MD

A separate amendment request has been submitted to the Pennsylvania Department of Environmental Protection in order make these changes to our PA State radioactive materials license.

If you have any further questions or need any additional information, please do not hesitate to notify me at (610) 993-1640 Ext. 203, or you may contact Janice Nguyen, our Health Physicist, at (610) 993-1640 Ext. 208. Thank you in advance for your consideration.

Sincerely,

Wendy Rowan

Wendy Rowan
Vice President of Operations

Attachments

Close-out Survey of
Integral Imaging at Southampton
965 Street Road, First Floor
Southampton, PA 18966

Performed 8-9-07 by Janice Nguyen, Health Physicist/RSO

Used Ludlum 14C survey meter s/n 114770
cal 10-25-06 Background: 0.03 mR/hr

Used Capintec CRC-15W well counter s/n 170438
Co-57/Tc 99m efficiency: 0.793 cpm/dpm
Cs-137 efficiency: 0.145 cpm/dpm
Background: 121 cpm

	mR/hr	dpm
Hot Lab Counter	0.03	~~0~~
Hot Lab Floor	0.03	19
L-block	0.03	11
Dose Calibrator	0.03	~~0~~
Console	0.03	~~0~~
Well Counter	0.03	~~0~~
Lead Bricks	0.03	3
Lead Syringe Carrier	0.03	24
Survey Meters	0.03	~~0~~
Lead-lined waste container (small)	0.03	~~0~~
Lead-lined waste container (large)	0.03	~~0~~
Lead lined sharps container	0.03	4
Camera Room Floor	0.03	~~0~~
Camera	0.03	~~0~~
Computer	0.03	~~0~~
Injection Table	0.03	~~0~~
Treadmill	0.03	~~0~~
Treadmill Floor	0.03	7

	mR/hr	dpm
Prep Areas	0.03	~~0~~
Bathroom (Sink + Toilet)	0.03	11
Bathroom Floor	0.03	~~0~~
Waiting Room Chairs	0.03	~~0~~
Waiting Room Floor	0.03	14
Reception Area	0.03	~~0~~
Reception Floor	0.03	~~0~~
Kitchen Areas	0.03	~~0~~
Kitchen Floor	0.03	~~0~~
Employee Bathroom Sink/Toilet	0.03	~~0~~
Employee Bathroom Floor	0.03	~~0~~

Source Leak Test / Inventory

Paoli Executive Green II
43 Leopard Road, Suite 200
Paoli, PA 19301

(610) 993-1640
(610) 993-1651 FAX

Date: 8-9-07

Review Performed by: Janice E. Nguyen

Facility: INA - Southampton

RSO Review: Janice E. Nguyen

Source Data :

Source	Serial Number	Activity/Date	Wipe Results	Bkgd (cpm)	Ambient Dose Rate Survey	Bkgd (mR/hr)	Comments	Current Activity (As of 8-17-07)
#1 Cs-137	757-99-10	1.109 uCi/8-1-02	N/A	723	0.03 mR/hr	0.03	Syncor-Rod	0.9870 uCi
#2 Cs-137	93CSR003492	0.083 uCi/1-2-94	N/A	723	0.03 mR/hr	0.03	The Source - Rod	0.0606 uCi
#3 Cs-137	94CSR002457	0.107 uCi/9-2-94	N/A	723	0.03 mR/hr	0.03	The Source-Rod	0.0793 uCi
#4 Cs-137	32668	785.4 nCi/2-1-03	N/A	723	0.03 mR/hr	0.03	N. American Scientific-Rod	0.8872 uCi
#5 Cs-137	934-38-8	256.7 uCi/1-1-03	-0.003 nCi	723	0.03 mR/hr	0.03	Syncor-[illegible]	230.6762 uCi
#6 Cs-137	A5303	7.305 MBq/8-1-96	0.087 nCi	723	0.03 mR/hr	0.03	CIS-US-Rod (N Amer Sci)	152.93 uCi
#7 Cs-137	788-22-3	261.0 uCi/3-1-02	-0.003 nCi	723	0.03 mR/hr	0.03	Syncor-Rod	
								230.04 uCi

Location of Sources:

Well Counter: Caplintec CRC-15W
S/n 170438
Cs-137 Efficiency: 0.145 cpm/dpm
Co-57 Efficiency: 0.793 cpm/dpm

Used Ludlum 14C
S/n 114770
cal: 10-25-06
for ambient dose rate survey

Half Life of Gd-153
241.6 days

Source Leak Test / Inventory

Paoli Executive Green II
43 Leopard Road, Suite 200
Paoli, PA 19301

(610) 993-1640
(610) 993-1651 FAX

Date: 8-9-07

Review Performed by: Jamie C. Nguyen

Facility: INA-Southampton

RSO Review: Jamie C. Nguyen

Source Data :

	Source	Serial Number	Activity/Date	Wipe Results	Bkgd (cpm)	Ambient Dose Rate Survey	Bkgd (mR/hr)	Comments	Current Activity (As of 8-17-07)
#8	Co-57	970-8-12	5.447mCi/1-1-03	-0.011nCi	723	0.03mR/hr	0.03	Syncor-Void	0.0734 mCi
#9	Co-57	988-77-4	5.236mCi/9-1-03	-0.008nCi	723	0.03mR/hr	0.03	Syncor-Void	0.1312 mCi
#10	Co-57	1155-002	10mCi/3-1-06	-0.014nCi	723	<0.50mR/hr	0.03	IPL-Flood	2.5626 mCi
#11	Co-57	1121-166	10mCi/6-1-05	-0.007nCi	723	<0.50mR/hr	0.03	IPL-Flood	1.2775 mCi
#12	Co-57	1187-084	10mCi/8-1-06	-0.010nCi	723	<30mR/hr	0.03	IPL-Flood	3.7853 mCi
#13 *	Gd-153(2)	DS-813 + DS-816	250mCi/each/9-1-06	0.111nCi	723	<0.30mR/hr	0.03	IPL-Line	183.2179 mCi total (91.6089 mCi each)

Location of Sources:

* Wipe of housing done on 8-9-07
on 8/30/07, wipe was done of actual sources.
Background 575 cpm Wipe Results -0.069nCi
Done by D. Steigerwalt Ambient Dose Rate Survey 1.8 mR/hr

Sources #1 thru #7 placed in
NDP ammo box #p239

8.5 mR/hr at surface
0.4 mR/hr at 1 meter.

TOTAL ACTIVITY
615.6603 µCi
137-Cs.

Sources #8 + #9 placed in
NDP ammo box #p229

0.05 mR/hr at surface
0.02 mR/hr at 1 meter.

TOTAL ACTIVITY
0.2046 mCi 57-Co

Sources #10, #11 and #12
placed in individual Storage cases

#10: 0.12 mR/hr at surface 2.5626 mCi
0.04 mR/hr at 1 meter 57Co

#11: 0.05 mR/hr at surface 1.2775 mCi
0.03 mR/hr at 1 meter. 57 Co

#12: 0.20 mR/hr at surface 3.7853 mCi
0.05 mR/hr at 1 meter. 57 Co.

Survey meter Ludlum 3
S/n 184546
Calib: 10/12/06

D. Steigerwalt
CNMI
8-30-07

Source #13: placed in individual carrying package.

0.18 mR/hr surface
0.04 mR/hr at 1 meter

183.2 mCi
^{153}Gd.

Survey meter: Ludlum 3
S/n 184546
Calib: 10-12-06

D. Steigerwalt, CNMI
8-31-07

Box 239

Date: 8/30/2007 SHIPPERS DECLARATION FOR DANGEROUS GOODS

CARRIER: SAME AS CONSIGNEE ORIGIN: Date: 8/30/2007@ Time: 11:00

CONSIGNEE:
Nuclear Diagnostic Products of Phila.
2 Keystone Ave. Unit 200
Cherry Hill, NJ 08003
Emergency Contact: 1-856-489-5733

SHIPPER:
INA Southampton
965 Street Road First Floor
Southampton, PA
1-215-322-3485

PROPER SHIPPING NAME/CLASSIFICATION
RADIOACTIVE MATERIAL UN 2915

# PIECES	ISOTOPE	CHEMICAL FORM/PHYSICAL STATE	ACTIVITY - GBq
7	Cs-137	Resin	.0228 GBq (.616 mCi)

LABEL CATEGORY (RADIOACTIVE **Yellow II**) TRANSPORT INDEX 0.4

This document does not conform to ICAO TI/IATA regulations for transportation by aircraft

METER SURVEY INSTRUMENT:

WIPE SURVEY INSTRUMENT:

BACKGROUND _____ CPM SOURCE CONTAINER _____CPM PACKAGE _____CPM

PKG. SURFACE _____ mR/Hr Mo99 content of Tc99m Product is less than 0.15 uCi/mCi at expiration time

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to applicable regulations for the Department Of Transportation. This shipment contains radioactive material intended for use in, or incidental to, research, or medical diagnosis or treatment

Performed By:					
Date: 8/30/2007	Time: 1100				

Box 229

Date: 8/3[illegible]/2007 SHIPPERS DECLARATION FOR DANGEROUS GOODS

CARRIER: SAME AS CONSIGNEE ORIGIN: Date: 8/3[illegible]/2007@ Time: 1100

CONSIGNEE:
Nuclear Diagnostic Products of Phila.
2 Keystone Ave. Unit 200
Cherry Hill, NJ 08003
Emergency Contact: 1-856-489-5733

SHIPPER:
INA Southampton
965 Street Road 1st Floor
Southampton, PA 18966
1-215-322-3485

PROPER SHIPPING NAME/CLASSIFICATION
RADIOACTIVE MATERIAL UN 2915

# PIECES	ISOTOPE	CHEMICAL FORM/PHYSICAL STATE	ACTIVITY - GBq
2	Co-57	Resin	.0076 GBq (.2046 mCi)

LABEL CATEGORY (RADIOACTIVE **White I**) TRANSPORT INDEX [illegible]0[illegible]

This document does not conform to ICAO TI/IATA regulations for transportation by aircraft

METER SURVEY INSTRUMENT:

WIPE SURVEY INSTRUMENT:

BACKGROUND _____ CPM SOURCE CONTAINER _____ CPM PACKAGE [illegible] CPM

PKG. SURFACE [illegible] mR/Hr Mo99 content of Tc99m Product is less than 0.15 uCi/mCi at expiration time

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to applicable regulations for the Department Of Transportation. This shipment contains radioactive material intended for use in, or incidental to, research, or medical diagnosis or treatment

Performed By:					
Date: 8/3[illegible]/2007	Time: [illegible]00				

Date: 8/3[redacted]/2007 SHIPPERS DECLARATION FOR DANGEROUS GOODS

CARRIER: SAME AS CONSIGNEE ORIGIN: Date: 8/3[redacted]/2007@ Time: 1100

CONSIGNEE:
Nuclear Diagnostic Products of Phila.
2 Keystone Ave. Unit 200
Cherry Hill, NJ 08003
Emergency Contact: 1-856-489-5733

SHIPPER:
INA Southampton
965 Street Road 1st Floor
Southampton, PA 18966
1-215-322-3485

PROPER SHIPPING NAME/CLASSIFICATION
RADIOACTIVE MATERIAL UN 2915

# PIECES	ISOTOPE	CHEMICAL FORM/PHYSICAL STATE	ACTIVITY - GBq
[redacted]	Co-57	Resin	.0948 GBq (2.56 mCi)

LABEL CATEGORY (RADIOACTIVE **White I**) TRANSPORT INDEX [redacted]0[redacted]

This document does not conform to ICAO TI/IATA regulations for transportation by aircraft

METER SURVEY INSTRUMENT:

WIPE SURVEY INSTRUMENT:

BACKGROUND _____ CPM SOURCE CONTAINER _____CPM PACKAGE [redacted]CPM

PKG. SURFACE [redacted] mR/Hr Mo99 content of Tc99m Product is less than 0.15 uCi/mCi at expiration time

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to applicable regulations for the Department Of Transportation. This shipment contains radioactive material intended for use in, or incidental to, research, or medical diagnosis or treatment

Performed By:					
Date: 8/3[redacted]/2007	Time: [redacted]00				

Flood W

Date: 8/30/2007 SHIPPERS DECLARATION FOR DANGEROUS GOODS

CARRIER: SAME AS CONSIGNEE ORIGIN: Date: 8/30/2007@ Time: 1100

CONSIGNEE:
Nuclear Diagnostic Products of Phila.
2 Keystone Ave. Unit 200
Cherry Hill, NJ 08003
Emergency Contact: 1-856-489-5733

SHIPPER:
INA Southampton
965 Street Road 1st Floor
Southampton, PA 18966
1-215-322-3485

PROPER SHIPPING NAME/CLASSIFICATION
RADIOACTIVE MATERIAL UN 2915

# PIECES	ISOTOPE	CHEMICAL FORM/PHYSICAL STATE	ACTIVITY - GBq
1	Co-57	Resin	.0473 GBq (3.78 mCi)

LABEL CATEGORY (RADIOACTIVE **White I**) TRANSPORT INDEX 0

This document does not conform to ICAO TI/IATA regulations for transportation by aircraft

METER SURVEY INSTRUMENT:

WIPE SURVEY INSTRUMENT:

BACKGROUND _____ CPM SOURCE CONTAINER _____ CPM PACKAGE _____ CPM

PKG. SURFACE _____ mR/Hr Mo99 content of Tc99m Product is less than 0.15 uCi/mCi at expiration time

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to applicable regulations for the Department Of Transportation. This shipment contains radioactive material intended for use in, or incidental to, research, or medical diagnosis or treatment

Performed By:					
Date: 8/30/2007	Time: 1100				

Flood #12

Date: 8/3[redacted]/2007 SHIPPERS DECLARATION FOR DANGEROUS GOODS

CARRIER: SAME AS CONSIGNEE ORIGIN: Date: 8/3[redacted]/2007@ Time: 1100

CONSIGNEE:
Nuclear Diagnostic Products of Phila.
2 Keystone Ave. Unit 200
Cherry Hill, NJ 08003
Emergency Contact: 1-856-489-5733

SHIPPER:
INA Southampton
965 Street Road 1st Floor
Southampton, PA 18966
1-215-322-3485

PROPER SHIPPING NAME/CLASSIFICATION
RADIOACTIVE MATERIAL UN 2915

# PIECES	ISOTOPE	CHEMICAL FORM/PHYSICAL STATE	ACTIVITY - GBq
1	Co-57	Resin	0.143 GBq (3.785 mCi)

LABEL CATEGORY (RADIOACTIVE **White I**) TRANSPORT INDEX 0

This document does not conform to ICAO TI/IATA regulations for transportation by aircraft

METER SURVEY INSTRUMENT:

WIPE SURVEY INSTRUMENT:

BACKGROUND _____ CPM SOURCE CONTAINER _____ CPM PACKAGE _____ CPM

PKG. SURFACE _____ mR/Hr Mo99 content of Tc99m Product is less than 0.15 uCi/mCi at expiration time

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to applicable regulations for the Department Of Transportation. This shipment contains radioactive material intended for use in, or incidental to, research, or medical diagnosis or treatment

Performed By:					
Date: 8/3[redacted]/2007	Time: [redacted]00				

Decay in Storage Log

Radioactive waste must be decayed for at least 10 half lives,
AND,
the dose rate at disposal must be at background levels (in a low background area).
Half-lives: Tc-99m - 6.02 hrs (3 day decay) Tl-201 - 73 hrs (31 day decay)

	Date placed in Storage	Isotope	Initials	Disposal: Date	Dose Rate	Bkg	Instrument	Weights (NJ): Reg.	Nonreg.	Sharps	Initials
	1-10-07	Tc99m	HJ	1-22-07	.02	.02	114770				HJ
	1-22-07	Tc99m	HJ	2-2-07	.02	.02	114770				HJ
	1-24-07	Tc99m	HJ.	2-2-07	.02	.02	114770				HJ
	2-5-07	Tc99m	HJ	2-12-07	.02	.02	114770				HJ
	2-12-07	Tc99m	HJ	3/2/07	.02	.02	114770				[illegible]
	3/23/07	99m Tc	[illegible]	3/29/07	.02	.02	114770				HJ
Reg TRASH	4/4/07	99m Tc	[illegible]	4/9/07	.02	.02	114770				HJ.
	4/27/07	99m Tc	[illegible]	7/16/07	.02	.02	L3				[illegible]
	7/27/07	Tc-99m	gen	8-9-07	0.02	0.02	114770				gen
	7/27/07	Tc-99m	gen	8-9-07	0.02	0.02	114770				gen
	7-27-07	Tc 99m	gen	8-9-07	0.02	0.02	114770				gen

Bethlehem Cardiac Imaging
Close-Out Survey
9-14-07

Survey meter: Ludlum 14C s/n 203183 Calib: 8-8-07
Well: Ludlum 2200 s/n 130512

Surveys | Wipes

	survey (mR/hr.)	Bkgd. (mR/hr)	Wipe (cpm)	Bkgd (cpm)	NET (cpm)
Hot LAB					
Dose Calib	.02	.02	929	977	Ø
L-block	.02	.02	949	977	Ø
sealed source storage	.05	.02	939	977	Ø
Inject. chair	.02	.02	928	977	Ø
HL Floor	.02	.02	973	977	Ø
Cold Trash	.02	.02	948	977	Ø
Stress Room					
Treadmill	.02	.02	964	977	Ø
Floor	.02	.02	979	977	2
Cold Trash	.02	.02	980	977	3
Camera Room					
Camera	.02	.02	932	977	Ø
Computer	.02	.02	960	977	Ø
Floor	.02	.02	966	977	Ø
Patient Bath.	.02	.02	931	977	Ø
Waste storage	.02	.02	961	977	Ø

– David Steigerwalt, CNMT 9-19-07

Source Leak Test / Inventory

Paoli Executive Green II
[illegible] Leopard Road, Suite 200
[illegible]oli, PA 19301
(610) 993-1640
(610) 993-1651 FAX

Date: 9-19-07 **Review Performed by:** David Steigerwalt, CNMT

Facility: INA - Bethlehem. **RSO Review:** Jamie E. Nguyen

I. Source Data :

Source	Serial Number	Activity/Date	Wipe(cpm)	BKG(cpm)	NET(cpm)	Comments
Co-57	830-23	10mCi / 10-1-01	946	977	Ø	Syncor sheet
Am-241	GD9681	14mCi / 4-4-91	1013	977	36	Amersham-point
Am-241	4736 LX	14mCi / 12-12-91	960	977	Ø	Amersham-point
Am-241	—	—	1024	977	47	Amersham-point
Gd-153	PP-134	6mCi / 1-1-99	954	977	Ø	Syncor - Line
Co-57	788-59-7	5.495mCi / 3-1-02	945	977	Ø	Syncor - vial

Location of Sources: Above Sources are being transferred to Limerick PET Associates, LLC for temporary storage.
420 W Linfield-Trappe Rd #340
Limerick, PA 19464

II. Well Counter Efficiency Verification :

Check Source : _____ Calib. Date : _____ Activity : _____

Current Source Activity : _____

$$\text{Efficiency} = \frac{\textit{Check Source (cpm)} - \textit{Background (cpm)}}{(2.22 \times 10^6\ \textit{dpm/uCi}) \times (\textit{Current Activity uCi})}$$

= _____ cpm/dpm

0.005 uCi x 2.22×10^6 dpm/uCi = 11,100 dpm

For this counter :
11,100 dpm x _____ (Efficiency from above) cpm/dpm = _____ cpm

Therefore, wipes exhibiting net count rates of this or less, are less than 0.005 uCi.

Well Counter: Ludlum 2200
S/n 130512

Source Leak Test / Inventory

Paoli Executive Green II
43 Leopard Road, Suite 200
Paoli, PA 19301
(610) 993-1640
(610) 993-1651 FAX

Sources to be picked up by NDP & transferred to Cardio Logic, LLC

Date: 9-19-07 **Review Performed by:** Jonnie E. Nguyen

Facility: INA - Bethlehem **RSO Review:** Jonnie E. Nguyen

I. Source Data :

Source	Serial Number	Activity/Date	Wipe(cpm)	BKG(cpm)	NET(cpm)	Comments
Cs-137	—	0.112 uCi/12-2989				Dupont-Rad
Cs-137	58117008-03	102.3 uCi/4-9-92				Capintec-Vial
Co-57	1194-44-20	5.563 mCi/9-1-06				IPL-Vial
Co-57	1186-143	10 mCi/7-1-06				IPL-Flood
Cs-137	970	1 uCi/4-2004				Spectron Technigues Check
Cs-137	I-90	1 uCi/ —				The Source-Check
Location of Sources:						

II. Well Counter Efficiency Verification :

Check Source : _____ Calib. Date : _____ Activity : _____

Current Source Activity : _____

N/A

$$\text{Efficiency} = \frac{\text{Check Source (cpm)} - \text{Background(cpm)}}{(2.22 \times 10^6 \text{ dpm / uCi}) \times (\text{Current Activity uCi})}$$

= _____ cpm/dpm

0.005 uCi x 2.22×10^6 dpm/uCi = 11,100 dpm

For this counter :
11,100 dpm x _____ cpm/dpm = _____ cpm
(Efficiency from above)

Therefore, wipes exhibiting net count rates of this or less, are less than 0.005 uCi.

Linda A. Kloss, D.O.
CURRICULUM VITAE

Address: [redacted]

Social Security # [redacted]
Home phone
Work Phone

CURRENT EMPLOYMENT

July 1998 to Present

Diagnostic Imaging, Inc.
4 Neshaminy Interplex
Suite 209
Trevose, PA 19053
(current business address)

Hospital Affiliations

July 1998 to Present
Board Certified Radiologist
Frankford Hospital
Frankford Campus
Frankford Ave. & Wakeling Sts.
Philadelphia, PA 19124

Torresdale Campus
Red Lion & Knights Rds.
Philadelphia, PA 19114

Bucks Campus
200 Oxford Valley Rd.
Langhorne, PA 19047

November 2002 to Present
Board Certified Radiologist
Northeastern Hospital
2301 E. Allegheny Ave.
Philadelphia, PA 19134

November 2003 to closing March 30, 2007
Board Certified Radiologist
Graduate Hospital
1800 Lombard St.
Philadelphia, PA 19146

April 2005 to Present
Board Certified Radiologist
Warminster Hospital
225 Newtown Rd.
Warminster, PA 18974

July 2006 to Present
Board Certified Radiologist
Lourdes Medical Center of Burlington County, NJ
218A Sunset Road
Willingboro, NJ 08046

November 2006 to present
Central Montgomery Medical Center
100 Medical Campus Drive
Lansdale Pa 19446

July 1, 2007 to present
Holy Redeemer Hospital
1648 Huntingdon Pike
Meadowbrook Pa 19046

PAST EMPLOYMENT:

1985 to 1986	Volunteer, Pottstown Memorial Hospital E.R., Pottstown, PA
1986 to 1987	Lab Assistant, Dept. of Biology, Ursinus College, Collegeville, PA
1986 to 1992	Bartender, 23 East Cabaret, Ardmore, PA
1987 to 1988	Volunteer, Osteopathic Medical Center E.R., Phila., PA
1988 to 1992	Medical Assistant, O.D.P. Associates, Bryn Mawr, PA

EDUCATION:

09/79 to 05/83
Springfield High School
Springfield, PA

09/83 to 05/84
Hahnemann University
Philadelphia, PA
Medical Tech program

09/84 to 05/87
Ursinus College
Collegeville, PA
B.S. in Biology

09/88 to 05/92
Philadelphia College of Osteopathic Medicine
Philadelphia, PA
D.O. Degree, Diploma date: May 31, 1992

INTERNSHIP:

6-23-92 to 6-22-93
UMDNJ - J.F.K. Memorial Hospitals
Stratford, NJ
and
Our Lady of Lourdes Medical Center
Camden, NJ
Rotating Osteopathic Internship

6-21-93 to 6-20-94
Presbyterian Medical Center
Philadelphia, PA
Preliminary Internal Medicine year

RESIDENCY:

7-1-94 to 6-30-98
University of Pennsylvania Health Systems ; Presbyterian Medical Center and Hospital of the University of Pennsylvania
Philadelphia, PA.
Diagnostic Radiology

FELLOWSHIP:

7-1-98 to 6-30-99
Hospital of the University of Pennsylvania
Philadelphia, PA
Neuroradiology

CERTIFICATION:

National Board of Osteopathic Medical Examiners, July 1, 1993
American Board of Radiology Written examination, passed 09/97, Oral Boards passed 05/98
American Board of Radiology, June 3, 1998
Certificate of Added Qualification in Neuroradiology, 11-6-2000
Basic Cardiac Life Support
Advanced Cardiac Life Support

LICENSURE:

Pennsylvania - Medical License # OS-008286-L
D.E.A. License - BK5429192

HONORS AND AWARDS:

Beta Beta Beta Biological Honor Society- member; inducted 09/85 at Ursinus College, Collegeville, PA
Award for Excellence as an Intern; 06/94 at Presbyterian Medical Center, Phila., PA.

MEMBERSHIPS:

American Roentgen Ray Society
Radiologic Society of North America
Pennsylvania Radiologic Society

PUBLICATIONS AND PRESENTATIONS:

Kloss LA, Zegel H, et. al., "Sonographic Evaluation of Upper Extremity Veins: "A Review", Video Journal of Color Flow Imaging, January 1995

Kloss LA, Zegel H, et. al., "Helical CT evaluation of ankle trauma: A comparison with plain film radiography"; Poster exhibit presented at PA Radiologic Society annual meeting, Hershey, PA; May 19, 1995.

Kloss LA, Zegel HG, et. al., "Upper Extremity Venous Ultrasonography – A Review"; video presentation at American Roentgen Ray Society annual meeting, San Diego, CA ; May 5-10, 1996.

Heller LB, Zegel HG, Eravid V, Kloss LA, et al., "Helical CT Angiography of Infrapopliteal Arterial Disease: A Comparison with Angiography"; presented at Association of University Radiologists annual meeting, San Diego, CA; April 8, 1995.

CONTINUING MEDICAL EDUCATION:

American College of Radiology
SPR Postgraduate Course
Miami, Florida
April 17-18, 2007 — 11 credits

The University of Arizona College of Medicine
Medical Errors Prevention Strategies for Physicians And Healthcare Providers
November 22, 2006 — 6 credits

Frankford Hospital
Department of Medical Education
January 1, 2006 – August 31, 2006 — 4 credits

Pennsylvania Osteopathic Medical Association
98th Annual Clinical Assembly
King of Prussia, PA
May 3-6, 2006 — 41 credits

Frankford Hospital
Department of Medical Education
January 1, 2005 – December 31, 2005 — 3 credits

The University of Arizona College of Medicine
Medical-Legal Issues in Risk Management: Improving Quality
Of Care and Reducing Medical Liability
August 29, 2005 — 6 credits

New York University School of Medicine
Summer Clinical Imaging Update on the Italian Lakes
(Neuro & Musculoskeletal)
August 1-August 5, 2005 — 20 credits

97TH ANNUAL CLINICAL ASSEMBLY
Pennsylvania Osteopathic Medical Association
King of Prussia, Pennsylvania
May 11-14, 2005 — 41 credits

Frankford Hospital
AMA's Physician Recognition Award &
The Pennsylvania Medical Society's membership requirement
January 1 – November 30, 2004 — 3 credits
January 1 – December 31, 2003 — 2 credits

EDUCATIONAL SYMPOSIUM
Spiral/Helical 2002:National Symposium
Date of issuance 9-1-2004 — 28 credits

Frankford Hospitals - Department of Medical Education
AMA's Physician Recognition Award
July 1-30, 2003 — 3 credits

Classic Lectures in Musculoskeletal MRI
Video Teaching Program Educational Symposia
Tampa Florida
Date of Issuance July 14, 2003 — 22 credits

University of Cincinnati College of Medicine
CMRS 2003 Annual Society Meeting
Lake Buena Vista, Florida
June 26, 29, 2003 — 28 credits

Pennsylvania Osteopathic Medical Association
95th Annual Clinical Assembly
April 30 – May 3, 2003 Philadelphia, PA — 40 credits

SCBT/MR
2002 Society of Computed Body Tomography and MR
Twelfth Summer Practicum
August 18-22 2002
Silverado Resort Napa California — 25 credits

Frankford Hospital
Department Of Education
Year June 30, 2002 — 1 credit

POMA
94TH Annual Clinical Assembly
May 1-4 2002 Philadelphia, PA — 41 credits

Pro Assurance Risk Management Education
2001 Malpractice Update
2001 Regulatory Update
2001 Specialty-Specific: Radiology — 3 credits

Center for Medical Education and Research Incorporated
Vertebroplasty Hands-On How-To Approach
September 9, 2001 — 5 credits

CSI'S Radiology Compliance and Documentation
Session July 24, 2001 — 1.5 hours

International Diagnostic Course in Davos
Musculoskeletal Diseases
March 24-30, 2001
Davos, Switzerland — 33 credits

Frankford Hospitals
AMA Physician Recognition Award
July 1, 2000-June 30, 2001
Phila. PA — 1 hour

Abdominal Radiology Postgraduate Course 2000
Certificate
March 12-17, 2000
Kauai, Hawaii — 24.5 hours

Pronational Risk Management Education
Certificate of Completion
September 14, 1999
Phila. Pa. — 3 hours

American Osteopathic Association
104th Annual Convention/AOA
January 1, 1998 to December 31, 2000
Chicago, Ill. — 26 credits

REFERENCES:
Available Upon Request.

The American Board of Radiology

Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Therapeutic Radiology and Oncology, the Association of
University Radiologists, and American Association of Physicists in Medicine
Hereby certifies that

Linda Anne Kloss, DO

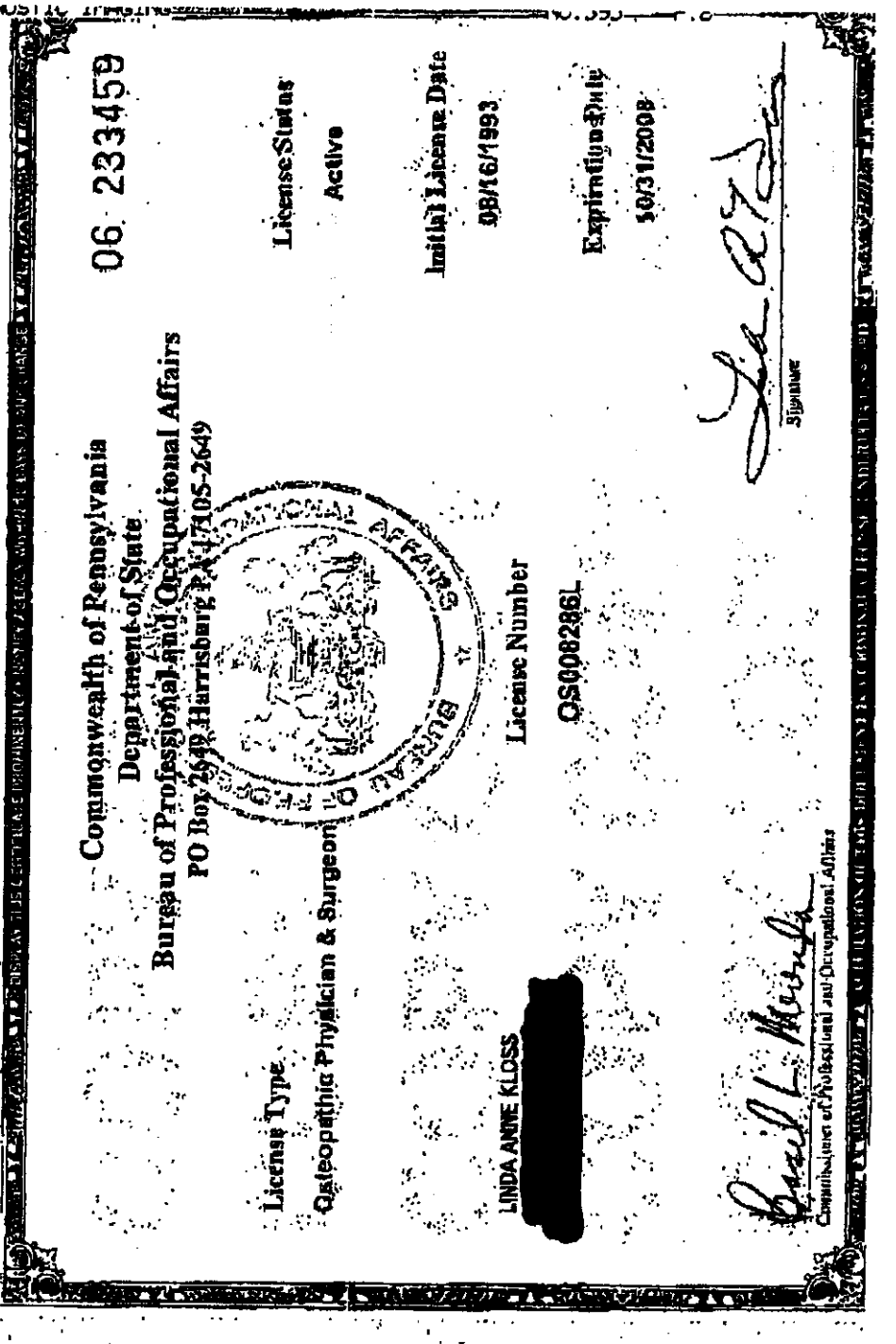
Has pursued an accepted course of graduate study
and clinical work, has met certain standards and qualifications and
has passed the examinations conducted under the authority of
The American Board of Radiology
On this third day of June, 1998
Thereby demonstrating to the satisfaction of the Board
that she is qualified to practice the specialty of

Diagnostic Radiology

American Board of Radiology — Incorporated in the District of [illegible] — 1934

President — Secretary-Treasurer — Executive Director

[illegible] No. 12466



Mark S. Silidker, M.D.

[redacted]

EDUCATION:	1975-1979	B.A. Rutgers College New Brunswick, New Jersey
	1979-1983	M.D. UMDNJ - N.J. Medical School Newark, New Jersey
	1983-1984	Internship - Brown University Rhode Island Hospital Internal Medicine
	1984-1987	Residency - Brown University Rhode Island Hospital Diagnostic Radiology
	1987-1988	Residency - U.M.D.N.J. Saint Barnabas Medical Center Nuclear Radiology
	1988-1989	Fellowship - U.M.D.N.J. Saint Barnabas Medical Center CT/US/MRI
BOARD CERTIFICATION:	..	American Board of Radiology, 1991
OTHER CERTIFICATION:		MQSA
PRACTICE:	1989-1991	Private Practice Ira Berger, M.D., P.A. Morristown, New Jersey
	1991-2001	Diagnostic Radiologist Chief, Div. Of Ultrasound & Nuc. Med. Edison Radiology Group Edison Imaging Associates John F. Kennedy Medical Center James St., Edison, New Jersey
	2002 - Present	Diagnostic Radiologist Parlee & Tatum Radiologic Associates Doylestown Hospital & CMMC 595 W. State Street Doylestown, Pennsylania

APPOINTMENTS	1983-1987	Clinical Instructor of Medicine Brown University Rhode Island Hospital
	1990-1992	Secretary / Treasurer New Jersey Institute of Ultrasound in Medicine
	1992-1994	President New Jersey Institute of Ultrasound in Medicine
	1994-1996	Chairman, Administrative Committee New Jersey Institute of Ultrasound in Medicine
	1996-1998	President New Jersey Institute of Ultrasound in Medicine
	2002 - 2006	Radiation Safety Officer Central Montgomery Medical Center Lansdale, Pennsylvania
	2006 - Present	Medical Director of PET/CT Center Doylestown Hospital Doylestown, Pennsylvania
	2006	Vice-Chairman Department of Radiology Central Montgomery Medical Center Lansdale, Pennsylvania
	2007 - Present	Radiation Safety Officer Doylestown Hospital Doylestown, Pennsylvania
AWARDS:	1979	U.M.D.N.J. - New Jersey Medical School Summer Research Fellowship - Highest Honor *The Incidence of Sleep Disorders in the Community Mental Health Center Population.*
SOCIETIES:		American College of Radiology Radiology Society of North America Pennsylvania Medical Society American Institute of Ultrasound in Medicine Society of Nuclear Medicine Society of Breast Imaging

PERSONAL:

Wife - Mary
Children - Alyson, Shannon, Casey & Kerry

Raised in Murray Hill, New Jersey

STATES LICENSED:

Pennsylvania, New Jersey, New York

PUBLICATIONS:

Gielchinsky I, Parsonnet V, Krishnan B, Silidker M, Abel RM: *Delayed Sternal Closure Following Open Heart Surgery*
Annals of Thoracic Surgery 1981: 32 : 273-277.

Silidker MS, Cronan JJ, Scola FH, Schepps B, Moore M, Thompson W, Dorfman GS: *Ultrasound Evaluation of Cholelithiasis in the Morbidly Obese.*
Gastrointestinal Radiology, 1988, 13 : 4.

PRESENTATIONS:

Assoc. of University Radiologists - Annual Meeting
Ultrasound Evaluation of Cholelithiasis in the Morbidly Obese
Charleston, South Carolina March 22-27, 1987.

New Jersey Chiropractic Society
Imaging Update in Nuclear Medicine & Ultrasound
October 28, 1993

John F. Kennedy Medical Center
Grand Rounds
Applications of Doppler Ultrasound in Obstetrics and Gynecology
April 12, 1994

John F. Kennedy Medical Center
Breast Management Conference
MRI of the Breast
May 16, 2000

Clinical PET/CT
Medical Conference
Doylestown Hospital
Doylestown, Pennsylvania
June 27, 2006

Indications for PET/CT in Breast Cancer
Doylestown Hospital
Doylestown, Pennsylvania
September 26, 2006

The American Board of Radiology

Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Therapeutic Radiology and Oncology,
and the Association of University Radiologists
Hereby certifies that

Mark Stuart Silidker, M.D.

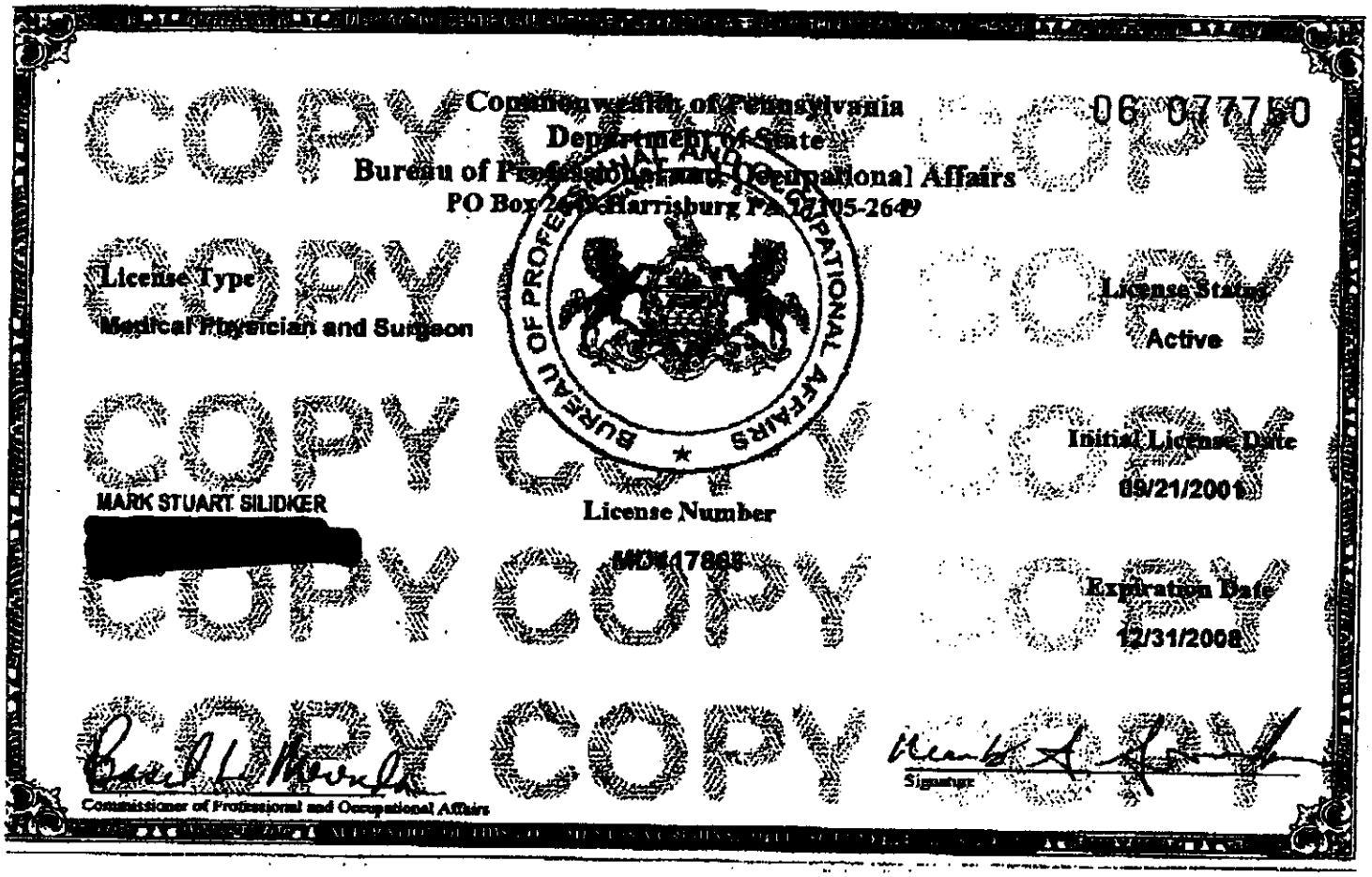
Has pursued an accepted course of graduate study
and clinical work, has met certain standards and qualifications and
has passed the examinations conducted under the authority of
The American Board of Radiology
On this twenty-fifth day of November, 1991
Thereby demonstrating to the satisfaction of the Board
that he is qualified to practice the specialty of

Diagnostic Radiology

AMERICAN BOARD OF RADIOLOGY — INCORPORATED IN THE DISTRICT OF COLUMBIA — 1934

President | Secretary-Treasurer | Executive Director

AMERICAN BOARD OF MEDICAL SPECIALTIES



Commonwealth of Pennsylvania
Department of State
Bureau of Professional and Occupational Affairs
PO Box 2649, Harrisburg PA 17105-2649

06 077750

License Type
Medical Physician and Surgeon

License Status
Active

MARK STUART SILIDKER
[redacted]

License Number
MD047865

Initial License Date
09/21/2001

Expiration Date
12/31/2008

Commissioner of Professional and Occupational Affairs

Signature

PERSONAL INFORMATION WAS REMOVED BY NRC. NO COPY OF THIS INFORMATION WAS RETAINED BY THE NRC.

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NRC FORM 374 U.S. NUCLEAR REGULATORY COMMISSION PAGE 1 OF 11 PAGES
Amendment No. 98

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, 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. UPMC Presbyterian Shadyside

2. 5230 Centre Avenue
Pittsburgh, Pennsylvania 15232

In accordance with the letter dated October 18, 2006,

3. License number 37-02523-01 is amended in its entirety to read as follows:

4. Expiration date November 30, 2011

5. Docket No. 030-03921
Reference No.

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 permitted by 10 CFR 35.100	A. Any	A. As needed
B. Any byproduct material permitted by 10 CFR 35.200	B. Any	B. As needed
C. Any byproduct material permitted by 10 CFR 35.300	C. Any	C. 600 millicuries
D. Any byproduct material permitted by 10 CFR 35.400	D. Sealed Sources	D. 3,500 millicuries
E. Any byproduct material permitted by 10 CFR 35.500	E. Sealed Sources (North American Scientific Model MED 3601; DuPont Pharma Model NES 8412; IPL Model HEG-137)	E. 2,120 millicuries total

2/14/07
Dist to:
Karen Anderson
Kevin McHugh

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NRC FORM 374A U.S. NUCLEAR REGULATORY COMMISSION

License Number: 37-02523-01

Docket or Reference Number: 030-03021

Amendment No. 98

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
F. Iridium 192 permitted by 10 CFR 35.600	F. Sealed Sources (Nucletron Model 105.002 [manufactured by Mallinckrodt Medical and AEA Technology, Inc.]; Nucletron Model 096.001 [manufactured by Mallinckrodt Medical and AEA Technology, Inc.])	F. 12 curies per source and 24 curies total
G. Any byproduct material permitted by 10 CFR 31.11	G. Prepackaged Kits	G. 2 millicuries
H. Strontium 90	H. Sealed Source (Nuclear Enterprises Model 2503/3A)	H. 12 millicuries
I. Depleted Uranium	I. Metal	I. 1029 kilograms
J. Hydrogen 3	J. Any	J. 50 millicuries
K. Carbon 14	K. Any	K. 50 millicuries
L. Phosphorus 32	L. Any	L. 50 millicuries
M. Phosphorus 33	M. Any	M. 50 millicuries
N. Sulfur 35	N. Any	N. 50 millicuries
O. Iodine 125	O. Any	O. 50 millicuries
P. Strontium 90	P. Sealed Sources (BEBIG Model Sr0.S03 or AEAT SICW Series (SICW.1 and SICW.2))	P. 5 millicuries per source; 1,040 millicuries total
Q. Iridium 192	Q. Sealed Sources (Best Industries Model 81-01)	Q. No single source to exceed 33 millicuries, in a three-ribbon set containing 6, 10, or 14 iridium-192 seeds per ribbon; 2 ribbon sets of 2 curies total

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MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number: 37-02523-01
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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
R. Phosphorus 32	R. Sealed Sources (Guidant Corporation VI Model GDT P-32 Series)	R. 600 millicuries per source assembly; 2 source assemblies total

9. Authorized use:

A. Any uptake, dilution and excretion study permitted by 10 CFR 35.100.
B. Any imaging and localization study permitted by 10 CFR 35.200.
C. Any diagnostic study or therapy procedure permitted by 10 CFR 35.300.
D. Any manual brachytherapy procedure permitted by 10 CFR 35.400.
E. Diagnostic medical use of sealed sources permitted by 10 CFR 35.500 in compatible devices registered pursuant to 10 CFR 30.32(g).
F. One source for medical use permitted by 10 CFR 35.600, in a Nucletron MicroSelectron remote afterloader unit. The source activity may not exceed 10 curies at the time of use. One source in its shipping container as necessary for replacement of the source in the remote afterloader unit.
G. In vitro studies.
H. Calibration and checking of the licensee's instruments.
I. For shielding in a linear accelerator and an afterloading irradiation devices.
J. through O. Research and development as defined in 10 CFR 30.4.
P. For use in Novoste A1000 series models for intravascular brachytherapy.
Q. For medical use in a Cordis Checkmate Catheter System for intravascular brachytherapy.
R. For medical use in a Guidant Corporation VI Model GALILEO intravascular brachytherapy remote afterloader unit for intravascular brachytherapy.

CONDITIONS

10. A. Licensed material may be used or stored only at the licensee's facilities located at: 5230 Centre Avenue, Pittsburgh, Pennsylvania; and 5200 Centre Avenue, Pittsburgh, Pennsylvania.

B. Licensed material under 6.A, 6.B and 6.C may be used or stored only at the licensee's facilities located at 600 Oxford Drive, Monroeville, Pennsylvania.

11. The Radiation Safety Officer for this license is Ronald J. Scala, M.S.

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12. Licensed material is only authorized for use by, or under the supervision of:

A. Individuals permitted to work as an authorized user and/or authorized medical physicist in accordance with 10 CFR 35.13 and 35.14.

B. The following individuals are authorized users for the materials and uses indicated:

Authorized Users	Material and Use
Steven Burton, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90, Iridium 192 and Phosphorus 32 for intravascular brachytherapy procedures
Alexander Chen, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90, Iridium 192 and Phosphorus 32 for intravascular brachytherapy procedures
John Flickinger, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90, Iridium 192 and Phosphorus 32 for intravascular brachytherapy procedures
Dwight E. Heron, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90 and Phosphorus 32 for intravascular brachytherapy procedures
Barry M. McCook, M.D.	35.100; 35.200; 35.300
Melvin Deusch, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90 and Phosphorus 32 for intravascular brachytherapy procedures
Joel Greenberger, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90 and Phosphorus 32 for intravascular brachytherapy procedures

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030-03021

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Joseph Wapenski, M.D.	35.100; 35.200; 35.300
Christopher C. Allen, M.D.	35.200
Judith M. Joyce, M.D.	35.100; 35.200; 35.300
James M. Mountz, M.D.	35.100; 35.200; 35.300
Badreddine Bencherif, M.D.	35.100; 35.200; 35.300
Susan Rakdal, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90 and Phosphorus 32 for intravascular brachytherapy procedures
Kristina Gerszten, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90 and Phosphorus 32 for intravascular brachytherapy procedures
Robert S. Werner, M.D.	35.400
Sushil Beriwal, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90 for intravascular brachytherapy procedures
Ryan Smith, M.D.	35.400; Iridium 192 for uses in a High Dose Rate Remote Afterloader Unit; Strontium 90 for intravascular brachytherapy procedures
Daniel A. Pryma, M.D.	35.100; 35.200; 35.300
Ashok Muthukrishnan, M.D.	35.100; 35.200; Oral administration of sodium iodide I-131; Parenteral administration of any beta emitter, or a photon-emitting radionuclide with a photon energy less than 150 keV
Amar B. Shah, M.D.	35.100; 35.200; Oral administration of sodium iodide I-131; 35.500

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SUPPLEMENTARY SHEET

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Docket or Reference Number: 030-03021
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C. The following individuals are authorized medical physicists as indicated:

Authorized Medical Physicists	Material and Use
Bruce Libby, Ph.D.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90, Iridium 192 and Phosphorus 32 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Mubina Quadar, Ph.D.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90, Iridium 192 and Phosphorus 32 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Raj Severaj, M.S.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90, Iridium 192 and Phosphorus 32 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Bob Surgent, M.S.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90, Iridium 192 and Phosphorus 32 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Lee Tao, Ph.D.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90, Iridium 192 and Phosphorus 32 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Ronald Scala, M.S.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90, Iridium 192 and Phosphorus 32 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training; Strontium 90 for calibration of the licensee's instruments

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MATERIALS LICENSE
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Amendment No. 98

Krishna Komanduri, Ph.D.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90, Iridium 192 and Phosphorus 32 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Cheng Saw, Ph.D.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90, Iridium 192 and Phosphorus 32 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Ning Yue, Ph.D.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Mohammed Saiful Huq, Ph.D.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Hung-Cheng Chen, M.S.	Iridium 192 in a High Dose Rate Remote Afterloader Unit and Strontium 90 in an Intravascular Brachytherapy Afterloader Device for calibrations, spot checks, and training
Fang Li, M.S.	Iridium 192 in a High Dose Rate Remote Afterloader Unit for calibrations, spot checks, and training

D. The following individuals are authorized users for non-medical uses as indicated:

Users	Material and Use
Joel Nelson, M.D.	Hydrogen 3; Carbon 14; Phosphorus 32; Phosphorus 33; Sulfur 35 and Iodine 125
Beth Pflug, Ph.D.	Hydrogen 3; Carbon 14; Phosphorus 32; Phosphorus 33; Sulfur 35 and Iodine 125

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Users	Material and Use
Zhou Wang, Ph.D.	Hydrogen 3; Carbon 14; Phosphorus 32; Phosphorus 33; Sulfur 35 and Iodine 125

E. Intravascular brachytherapy procedures shall be conducted under the supervision of the authorized user, who will consult with the interventional cardiologist/physician and authorized medical physicist prior to initiating treatment. The procedures shall be conducted in the physical presence of the authorized user or the authorized medical physicist.

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 decommissioning financial assurance.

14. In lieu of 10 CFR 35.404, immediately after retracting the source from the patient into its shielded position in the intravascular brachytherapy device, a radiation survey shall be made of the patient and the intravascular brachytherapy 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 35.2404.

15. The intravascular brachytherapy afterloading device shall be inspected and serviced at intervals recommended by the manufacturer, and maintenance and repair shall be performed by the manufacturer or persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

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

17. The licensee shall not use licensed material in field applications where it is released except as provided otherwise by specific condition of this license.

18. For sealed sources not associated with 10 CFR Part 35 use, the following conditions apply:

A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.

B. Notwithstanding Paragraph A of this Condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.

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SUPPLEMENTARY SHEET

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37-02523-01

Docket or Reference Number
030-03021

Amendment No. 98

C. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.

D. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.

E. Sealed sources need not be tested if they are in storage and are not being used; however, when they are removed from storage for use or transferred 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 shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

F. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.

G. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

H. Records of leak test results shall be kept in units of microcuries and shall be maintained for 5 years.

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

20. The licensee shall conduct a physical inventory every six months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.

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MATERIALS LICENSE
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License Number: 37-02523-01
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21. Replacement-exchange of the source/source-holder combination, for diagnostic sources identified in 10 CFR 35.500, may be performed by the licensee in accordance with the instructions contained in the manufacturer's manual.

22. The licensee is authorized to hold byproduct material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity if the licensee:

A. Monitors byproduct material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and

B. Removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee; and

C. Maintains records of the disposal of licensed materials for 3 years. The record must include the date of disposal, the survey instrument used, the background radiation level, the radiation level measured at the surface of each waste container, and the name of the individual who performed the disposal.

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

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MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number: 37-02523-01
Docket or Reference Number: 030-03021
Amendment No. 98

24. 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. This license condition applies only to those procedures that are required to be submitted in accordance with the regulations. Additionally, this license condition does not limit the licensee's ability to make changes to the radiation protection program as provided for in 10 CFR 35.26. 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 September 7, 2001 except Quality Management Program (ML012570086)
B. Letter dated October 22, 2001 (ML012960161)
C. Letter dated October 24, 2001 except Irradiator Program (ML013030569)
D. Letter dated May 6, 2002 (ML022420092)
E. Letter dated June 4, 2002 (ML021650299)
F. Letter dated June 18, 2002 (ML021760157)
G. Facsimile received July 29, 2002 (ML022130039)
H. Letter dated June 27, 2002 (ML021920302)
I. Letter dated December 20, 2002 (ML030060478)
J. Letter dated June 4, 2003 (ML031700351)
K. Letter dated April 12, 2006 (ML061180088)

For the U.S. Nuclear Regulatory Commission

Date January 26, 2007

By *Original signed by Tara L. Weidner*

Tara L. Weidner
Medical Branch
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406
Friday, January 26, 2007 8:24:03 AM

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This is to acknowledge the receipt of your letter/application dated

9/21/2007, and to inform you that the initial processing which includes an administrative review has been performed.

☑ AMEND, 37-28453-02
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

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A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 141125.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader