



William Beaumont Hospital
Royal Oak, Michigan 48073-6769
April 30, 2007

U.S. Nuclear Regulatory Commission
Region III
Materials Licensing Section
2443 Warrenville Rd, Suite 210
Lisle, Illinois 60532

Dear Sir or Madam:

This is an application for a license amendment to Materials Use License 21-01333-02. We would like to make the following changes to our license:

- 1) Add Leonard Kim to the license as an Authorized Medical Physicist
- 2) Add Ann Maitz to the license as the Radiation Safety Officer and delete Patrick McDermott as RSO
- 3) Add Paul Chuba, M.D., Ph.D. to the license as an Authorized User.

Ann Maitz is currently listed on our license as an Authorized Medical Physicist for Gamma Knife use. She has had 20 years of experience as an Authorized Medical Physicist for Gamma Knife use at the University of Pittsburgh (license # 37-00245-09). For many years she has taught as an instructor in the University of Pittsburgh course "Principles and Practice of Gamma Knife Radiosurgery." She has numerous publications on Gamma Knife. I believe her to be eminently qualified to act as RSO for Gamma Knife. Form 313A (RSO) is enclosed.

Leonard Kim is listed on the William Beaumont Hospital Broad Scope license (21-01333-01) as an Authorized Medical Physicist for 10 CFR 35.100. A listing from the Radiation Safety Committee is enclosed which documents this. A memo to the Director of the Radiation Oncology Department from the Radiation Safety Committee documenting Leonard Kim's approval as an AMP on broad scope license #21-01333-01 for 35.400, 35.500 and 35.600 is enclosed. Also enclosed is a certificate of attendance at the University of Pittsburgh Gamma Knife course and a copy of his diploma for a MS degree in Radiological Physics from Wayne State University. Form 313A (AMP) is enclosed documenting supervised experience with the Gamma Knife at William Beaumont Hospital.

Paul Chuba, M.D., Ph.D. is listed as an Authorized User on NRC license 21-01190-05 (~~copy-enclosed~~) for 10 CFR 35.400 (HDR). He has attended the University of Pittsburgh Gamma Knife course (certificate enclosed) in 1998. I realize that this training is more than seven years old but I have enclosed it nonetheless to indicate his background. He has had recent supervised experience as documented on Form 313A (AUS) (enclosed).

If there are any questions regarding this amendment application please do not hesitate to contact me at 248-551-6256 or patrick.mcdermott@beaumont.edu.

Sincerely,

Patrick N. McDermott, Ph.D.
Radiation Safety Officer (Gamma Knife)

RECEIVED MAY 15 2007

NRC FORM 313

(10-2005)

10 CFR 30, 32, 33,
34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIAL LICENSE

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 10/31/2008

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- ☐ A. NEW LICENSE
☒ B. AMENDMENT TO LICENSE NUMBER 21-01333-02
☐ C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

William Beaumont Hospital
Department of Radiation Oncology
3601 W. Thirteen Mile Rd
Royal Oak, MI 48073

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

William Beaumont Hospital
Department of Radiation Oncology
3601 W. Thirteen Mile Rd
Royal Oak, MI 48073

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Patrick N. McDermott, Ph.D.

TELEPHONE NUMBER

(248) 551-6256

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY AMOUNT ENCLOSURE \$ 0.00

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

Patrick N. McDermott, Ph.D.

SIGNATURE

Patrick N. McDermott

DATE

04/30/2007

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
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\$

APPROVED BY

DATE

**AUTHORIZED USER TRAINING AND EXPERIENCE
AND PRECEPTOR ATTESTATION**
(for uses defined under 35.400 and 35.600)
[10 CFR 35.490, 35.491, and 35.690]APPROVED BY OMB: NO. 3150-0120
EXPIRES: 10/31/2008

Name of Proposed Authorized User

Paul Chuba, M.D., Ph.D.

State or Territory Where Licensed

Michigan

Requested

Authorization(s)

(check all that apply)

☐ 35.400 Manual brachytherapy sources☐ 35.600 Teletherapy unit(s)☐ 35.400 Ophthalmic use of strontium-90☒ 35.600 Gamma stereotactic radiosurgery unit(s)☐ 35.600 Remote afterloader unit(s)**PART I -- TRAINING AND EXPERIENCE**
(Select one of the three methods below)

*Training and Experience, including Board Certification, must have been obtained within the 7 years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

☒ **1. Board Certification**a. Provide a copy of the board certification. ☒☒ b. For 35.600, go to the table in 3.e. and describe training provider and dates of training for each type of use for which authorization is sought.

c. Skip to and complete Part II Preceptor Attestation.

☐ **2. Current 35.600 Authorized User Requesting Additional Authorization for 35.600 Use(s) Checked Above**

a. Go to the table in section 3.e. to document training for new device.

b. Skip to and complete Part II Preceptor Attestation.

☐ **3. Training and Experience for Proposed Authorized User**a. Classroom and Laboratory Training ☐ 35.490 ☐ 35.491 ☐ 35.690

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation			
Radiation protection			
Mathematics pertaining to the use and measurement of radioactivity			
Radiation biology			

Total Hours of Training:

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Training and Experience for Proposed Authorized User (continued)

b. Supervised Work and Clinical Experience for 10 CFR 35.490 (If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this page.)

Description of Experience	Location of Experience/License or Permit Number of Facility	Clock Hours	Dates of Experience*
Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys			
Checking survey meters for proper operation			
Preparing, implanting, and safely removing brachytherapy sources			
Maintaining running inventories of material on hand			
Using administrative controls to prevent a medical event involving the use of byproduct material			
Using emergency procedures to control byproduct material			

Total Hours of Work Experience

Clinical experience in radiation oncology as part of an approved formal training program	Location of Experience/License or Permit Number of Facility	Dates of Experience*
Approved by: <input type="checkbox"/> Residency Review Committee for Radiation Oncology of the ACGME <input type="checkbox"/> Royal College of Physicians and Surgeons of Canada <input type="checkbox"/> Committee on Postdoctoral Training of the American Osteopathic Association		
Supervising Individual	License/Permit Number listing supervising individual as an Authorized User	

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Training and Experience for Proposed Authorized User (continued)

c. Supervised Clinical Experience for 10 CFR 35.491

Description of Experience	Location of Experience/License or Permit Number of Facility	Clock Hours	Dates of Experience*
Use of strontium-90 for ophthalmic treatment, including: examination of each individual to be treated; calculation of the dose to be administered; administration of the dose; and follow up and review of each individual's case history			
Supervising Individual	License/Permit Number listing supervising individual as an Authorized User		

d. Supervised Work and Clinical Experience for 10 CFR 35.690

☐ Remote afterloader unit(s)

☐ Teletherapy unit(s)

☐ Gamma stereotactic radiosurgery unit(s)

Description of Experience	Location of Experience/License or Permit Number of Facility	Clock Hours	Dates of Experience*
Reviewing full calibration measurements and periodic spot-checks			
Preparing treatment plans and calculating treatment doses and times			
Using administrative controls to prevent a medical event involving the use of byproduct material			
Implementing emergency procedures to be followed in the event of the abnormal operation of the medical unit or console			
Checking and using survey meters			
Selecting the proper dose and how it is to be administered			

Total Hours of Work Experience

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Training and Experience for Proposed Authorized User (continued)

d. Supervised Work and Clinical Experience for 10 CFR 35.690 (continued)

Clinical experience in radiation oncology as part of an approved formal training program	Location of Experience/License or Permit Number of Facility	Dates of Experience*
Approved by:		
Residency Review Committee for Radiation Oncology of the ACGME		
Royal College of Physicians and Surgeons of Canada		
Committee on Postdoctoral Training of the American Osteopathic Association		
Supervising Individual	License/Permit Number listing supervising individual as an Authorized User	

e. For 35.600, describe training provider and dates of training for each type of use for which authorization is sought.

Description of Training	Training Provider and Dates		
	Remote Afterloader	Teletherapy	Gamma Stereotactic Radiosurgery
Device operation			provided by P. McDermott, Gamma Knife RSO on 12/16/06
Safety procedures for the device use			provided by P. McDermott, Gamma Knife RSO on 12/12/06
Clinical use of the device			three proctored cases documentation attached. Dr. Peter Chen, M.D.
Supervising Individual. If training provided by Supervising Individual (If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this page.)		License/Permit Number listing supervising individual as an Authorized User	

Authorized for the following types of use:

☐ Remote afterloader unit(s)☐ Teletherapy unit(s)☒ Gamma stereotactic radiosurgery unit(s)

f. Provide completed Part II Preceptor Attestation.

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following for each requested authorization:

For 35.490:

Board Certification

I attest that _____ has satisfactorily completed the requirements in

Name of Proposed Authorized User

35.490(a)(1) and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized under 10 CFR 35.400.

OR

Training and Experience

I attest that _____ has satisfactorily completed the 200 hours of

Name of Proposed Authorized User

classroom and laboratory training, 500 hours of supervised work experience, and 3 years of supervised clinical experience in radiation oncology, as required by 10 CFR 35.490(b)(1) and (b)(2), and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized under 10 CFR 35.400.

For 35.491:

I attest that _____ has satisfactorily completed the 24 hours of

Name of Proposed Authorized User

classroom and laboratory training applicable to the medical use of strontium-90 for ophthalmic radiotherapy, has used strontium-90 for ophthalmic treatment of 5 individuals, as required by 10 CFR 35.491(b), and has achieved a level of competency sufficient to function independently as an authorized user of strontium-90 for ophthalmic use.

Second Section

For 35.690:

Board Certification

✓ I attest that Paul Chuba, M.D. has satisfactorily completed the requirements in

Name of Proposed Authorized User

35.690(a)(1).

OR

Training and Experience

I attest that _____ has satisfactorily completed 200 hours of classroom

Name of Proposed Authorized User

and laboratory training, 500 hours of supervised work experience, and 3 years of supervised clinical experience in radiation therapy, as required by 10 CFR 35.690(b)(1) and (b)(2).

AND

AUTHORIZED USER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

Preceptor Attestation (continued)

Third Section

For 35.690: (continued)

☒ I attest that Paul Chuba, M.D. has received training required in 35.690(c) for device
Name of Proposed Authorized User
 operation, safety procedures, and clinical use for the type(s) of use for which authorization is sought, as
 checked below.

☐ Remote afterloader unit(s) ☐ Teletherapy unit(s) ☒ Gamma stereotactic radiosurgery unit(s)

AND

Fourth Section

☒ I attest that Paul Chuba, M.D. has achieved a level of competency sufficient to
Name of Proposed Authorized User
~~achieve a level of competency sufficient to~~ function independently as an authorized user for:

☐ Remote afterloader unit(s) ☐ Teletherapy unit(s) ☒ Gamma stereotactic radiosurgery unit(s)

Fifth Section

Complete the following for preceptor attestation and signature:

☒ I meet the requirements in 10 CFR 35.490, 35.491, 35.690, or equivalent Agreement State requirements, as
 an authorized user for:

☐ 35.400 Manual brachytherapy sources ☐ 35.600 Teletherapy unit(s)
☐ 35.400 Ophthalmic use of strontium-90 ☒ 35.600 Gamma stereotactic radiosurgery unit(s)
☐ 35.600 Remote afterloader unit(s)

Name of Preceptor

Signature

Telephone Number

Date

Peter Chen

Peter J. Chen

248-551-7075

4/30/07

License/Permit Number/Facility Name

248-551-7038

21-01333-02 William Beaumont Hospital

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*

Paul Chuba, PhD, MD

Has successfully fulfilled the requirements of this Board

and is recertified as a

Diplomate of the American Board of Radiology

in

Radiation Oncology

September 15, 2000



R.P. Hattery, D
President

Norm A. Lechl, M.D.
Secretary-Treasurer

M. [Signature], M.D.
Executive Director



Certificate No. 41586

Valid through 2010

Gamma Knife® Center at Beaumont

Proctoree Verification Form

Proctoree: PAUL J. CHUBA M.D.
(Print name)Proctor #1: PETER Y. CHEN
(Print name)Proctor #2: _____
(Print name)Proctor #3: _____
(Print name)Date of treatment: 2/19/06 Case #1 P.W. 6/12/32
Mo Day YearDiagnosis: Solitary melanoma @ parietal lobeProctor's signature: Peter Y. ChenProctoree's signature: Paul J. ChubaDate of treatment: 12/24/06 Case #2
Mo Day YearDiagnosis: Solitary melanomaProctor's signature: Peter Y. ChenProctoree's signature: Paul J. ChubaDate of treatment: 12/19/06 Case #3
Mo Day YearDiagnosis: Acoustic NeuromaProctor's signature: Peter Y. ChenProctoree's signature: Paul J. Chuba

I verify the above listed proctoree has observed a minimum of three (3) Gamma Knife patients.

Proctor's signature: Peter Y. Chen Date: Dec 22, 2006

Gamma Knife® Center at Beaumont

Medical Director's signature: Peter Y. Chen Date: April 24, 2007
(Gamma Knife Oversight Committee Member)

University of Pittsburgh

Center for Image-Guided Neurosurgery

This is to Certify That

Paul J. Chuba, M.D.



Attended

Principles and Practice of Gamma Knife® Radiosurgery

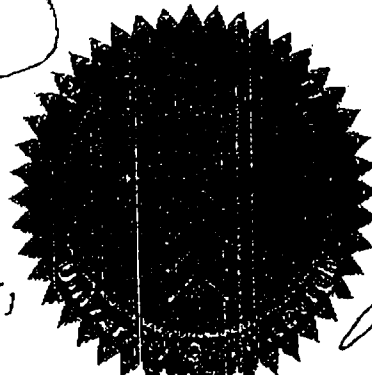
from July 20-24, 1998

A large, stylized handwritten signature in black ink.

L. Dade Lunsford, M.D., FACS

A handwritten signature in black ink.

Ann H. Maitz, M.Sc.



A handwritten signature in black ink.

Douglas Kondziolka M.D., M.Sc., FRCS(C)

A handwritten signature in black ink.

John C. Flickinger, M.D.

Beaumont[®]
William Beaumont Hospital

Instructor: P. M. Kernott

[illegible]

**AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE
AND PRECEPTOR ATTESTATION**
[10 CFR 35.51]

APPROVED BY OMB: NO. 3150-0120
EXPIRES: 10/31/2008

Name of Proposed Authorized Medical Physicist

Leonard Kim

Requested Authorization(s) (check all that apply)

<input type="checkbox"/> 35.400 Ophthalmic use of strontium-90	<input type="checkbox"/> 35.600 Teletherapy unit(s)
<input type="checkbox"/> 35.600 Remote afterloader unit(s)	<input checked="" type="checkbox"/> 35.600 Gamma stereotactic radiosurgery unit(s)

PART I -- TRAINING AND EXPERIENCE
(Select one of the three methods below)

*Training and Experience, including Board Certification, must have been obtained within the 7 years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

☐ **1. Board Certification**

- Provide a copy of the board certification.
- Go to the table in 3.c. and describe training provider and dates of training for each type of use for which authorization is sought.
- Skip to and complete Part II Preceptor Attestation.

☒ **2. Current Authorized Medical Physicist Seeking Additional Authorization for use(s) checked above**

- Go to the table in section 3.c. to document training for new device.
- Skip to and complete Part II Preceptor Attestation

☐ **3. Education, Training, and Experience for Proposed Authorized Medical Physicist**

- Education: Document master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university.

Degree

Major Field

College or University

- Supervised Full-Time Medical Physics Training and Work Experience in clinical radiation facilities that provide high-energy external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services.

☐ Yes. Completed 1 year of full-time training in medical physics (for areas identified below) under the supervision of _____ who meets the requirements for an Authorized Medical Physicist.

AND

☐ Yes. Completed 1 year of full-time work experience in medical physics (for areas identified below) under the supervision of _____ who meets the requirements for an Authorized Medical Physicist.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Education, Training, and Experience for Proposed Authorized Medical Physicist (continued)

b. Supervised Full-Time Medical Physics Training and Work Experience (continued)

If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.

Description of Training/ Experience	Location of Training/License or Permit Number of Training Facility/Medical Devices Used+	Dates of Training*	Dates of Work Experience*
Medical Physics			
Performing sealed source leak tests and inventories			
Performing decay corrections			
Performing full calibration and periodic spot checks of external beam treatment unit(s)			
Performing full calibration and periodic spot checks of stereotactic radiosurgery unit(s)			
Performing full calibration and periodic spot checks of remote afterloading unit(s)			
Conducting radiation surveys around external beam treatment unit(s), stereotactic radiosurgery unit(s), remote after loading unit(s)			
Supervising Individual**	License/Permit Number listing supervising individual as an authorized Medical Physicist		

for the following types of use:

☐ Remote afterloader unit(s)

☐ Teletherapy unit(s)

☐ Gamma stereotactic radiosurgery unit(s)

+ Training and work experience must be conducted in clinical radiation facilities that provide high-energy external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services.

* 1 year of Full-time medical physics training and 1 year of full time work experience cannot be concurrent.

** If the supervising medical physicist is not an authorized medical physicist, the licensee must submit evidence that the supervising medical physicist meets the training and experience requirements in 10 CFR 35.51 and 35.59 for the types of use for which the individual is seeking authorization.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Education, Training, and Experience for Proposed Authorized Medical Physicist (continued)

c. Describe training provider and dates of training for each type of use for which authorization is sought.

Description of Training	Training Provider and Dates		
	Remote Afterloader	Teletherapy	Gamma Stereotactic Radiosurgery
Hands-on device operation			"Principles and Practice of Gamma Knife Radiosurgery," U. of Pittsburgh Sept. 25-29, 2006
Safety procedures for the device use			Same as above
Clinical use of the device			Patrick McDermott William Beaumont Hospital December 18, 2006 → April 5, 2007
Treatment planning system operation			"Principles and Practice of Gamma Knife Radiosurgery," U. of Pittsburgh Sept. 25-29, 2006

Supervising Individual

If training is provided by Supervising Medical Physicist, (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)

License/Permit Number listing supervising individual as an authorized Medical Physicist

Patrick McDermott

21-01333-02

for the following types of use:

☐ Remote afterloader unit(s)☐ Teletherapy unit(s)☒ Gamma stereotactic radiosurgery unit(s)

If Applicable:

Authorization Sought	Device	Training Provided By	Dates of Training
35.400 Ophthalmic Use of strontium-90			

d. Skip to and complete Part II Preceptor Attestation.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

☐ I attest that _____ has satisfactorily completed the requirements in
Name of Proposed Authorized Medical Physicist
10 CFR 35.51(a)(1) and (a)(2).

OR

2. Education, Training, and Experience

☒ I attest that Leonard Kim has satisfactorily completed the 1-year of full-time
Name of Proposed Authorized Medical Physicist
training in medical physics and an additional year of full-time work experience as required by 10 CFR 35.51(b)(1).

AND

Second Section

Complete the following:

☒ I attest that Leonard Kim has training for the types of use for which authorization
Name of Proposed Authorized Medical Physicist
is sought that include hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system.

AND

Third Section

Complete the following:

☒ I attest that Leonard Kim has achieved a level of competency sufficient to
Name of Proposed Authorized Medical Physicist
function independently as an Authorized Medical Physicist for the following:

- | | |
|--|--|
| <input type="checkbox"/> 35.400 Ophthalmic use of strontium-90 | <input type="checkbox"/> 35.600 Teletherapy unit(s) |
| <input type="checkbox"/> 35.600 Remote afterloader unit(s) | <input checked="" type="checkbox"/> 35.600 Gamma stereotactic radiosurgery unit(s) |

AND

Fourth Section

Complete the following for preceptor attestation and signature:

☒ I meet the requirements in 10 CFR 35.51, or equivalent Agreement State requirements for Authorized Medical Physicist for the following:

- | | |
|--|--|
| <input type="checkbox"/> 35.400 Ophthalmic use of strontium-90 | <input type="checkbox"/> 35.600 Teletherapy unit(s) |
| <input type="checkbox"/> 35.600 Remote afterloader unit(s) | <input checked="" type="checkbox"/> 35.600 Gamma stereotactic radiosurgery unit(s) |

Name of Preceptor <u>Patrick McDermott</u>	Signature <u>Patrick McDermott</u>	Telephone Number <u>248-551-6256</u>	Date <u>9/17/07</u>
License/Permit Number/Facility Name <u>21-01333-02 William Beaumont Hospital</u>			

Authorized User List

I. PHYSICIANS

CATEGORY OF APPROVAL

A. Nuclear Medicine

Conrad Nagle, M.D., Corporate Director	35.100, 35.200, 35.300, 35.500, 35.1000**
Darlene Fink-Bennett, M.D., RO Director	35.100, 35.200, 35.300, 35.500, 35.1000**
Howard Dworkin, M.D.	35.100, 35.200, 35.300, 35.500
Donald Meier, M.D.	35.100, 35.200, 35.300, 35.500
Helena Balon, M.D.	35.100, 35.200, 35.300, 35.500
Christine Dickinson, M.D.	35.100, 35.200, 35.300, 35.500
Michael Kaplan, M.D.	35.100, 35.200, 35.300, 35.500
Jack Juni, M.D.	35.100, 35.200, 35.300, 35.500
C. Oliver Wong, M.D., Ph.D.	35.100, 35.200, 35.300, 35.500
John Seitz, M.D.	35.100, 35.200, 35.300, 35.500
William Mallin, M.D.	35.100, 35.200, 35.300, 35.500
Pareesh Mahajan, M.D.	35.100, 35.200, 35.300, 35.500
Dafang Wu, M.D., Ph.D.	35.100, 35.200, 35.300, 35.500
Michael Savin, M.D.	35.1000* (Y-90 microsphere only)
William Romano, M.D.	35.1000* (Y-90 microsphere only)
Gary W. Edelson, M.D.	35.100, 35.200, 35.300 (thyroid only)
Michael Garcia, M.D.	35.100, 35.200, 35.300 (thyroid only)
Charles Taylor, M.D.	35.100, 35.200, 35.300 (thyroid only)
David Brill, M.D.	35.100, 35.200 (except generators), cardio at LOrion
Nancy Gregory, M.D.	F-18 FDG PET mammography imaging
Feng Qing, M.D., Ph.D.	35.100, 35.200, 35.300, 35.500
John Ryberg, M.D.	35.100, 35.200, 35.300, 35.500

B. Radiation Oncology

Alvaro A. Martinez, M.D., Director	35.400, 35.500, 35.600, 35.1000
Donald Brabbins, M.D.	35.400, 35.500, 35.600, 35.1000
Greg Gustafson, M.D.	35.400, 35.500, 35.600, 35.1000
Richard Matter, M.D.	35.400, 35.500, 35.600, 35.1000
Frank Vicini, M.D.	35.400, 35.500, 35.600, 35.1000
Peter Chen, M.D.	35.400, 35.500, 35.600, 35.1000
Gary Gustafson, M.D.	35.400, 35.500, 35.600, 35.1000
Jannifer Stromberg, M.D.	35.400, 35.500, 35.600, 35.1000
John Robertson, M.D.	35.400, 35.500, 35.600, 35.1000
Larry Kestin, M.D.	35.400, 35.500, 35.600, 35.1000
Mihai Ghilezan, M.D.	35.400, 35.500, 35.600, 35.1000
Daniel Krauss, M.D.	35.400, 35.500, 35.600, 35.1000
Inga Grills, M.D.	35.400, 35.500, 35.600, 35.1000

II. AUTHORIZED NUCLEAR PHARMACISTS

Michelle Beauvais, RPh, BCNP	Nuclear Medicine
Wayne Melchior, PharmD, BCPS	Nuclear Medicine
William Michael Balogh	PETNet
Edward M. Plut, BPS, Pharm D	PETNet

III. AUTHORIZED MEDICAL PHYSICISTS

HDR, Brachytherapy, 35.1000

Evelyn Sebastian, M.S.
Lisa Burgess, M.S.
Di Yan, Ph.D.

Radiation Safety Officer and Designates

Cheryl Culver Schultz, M.S., Corporate Radiation Safety
Lisa Burgess, M.S., Radiation Oncology
Rick Layman, M.S., Divisional RSO for Troy

William Beaumont Hospital

2

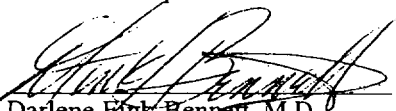
HDR, Brachytherapy, 35.1000

Qiuwen Wu, Ph.D.
Patrick McDermott, Ph.D.
Douglas Drake, M.S.
Leonard Kim, M.S.

35.1000 only

Donovan Bakalyar, Ph.D.
Lauren Hefner, M.S.
Janice Campbell, M.S.
Wenzheng Feng, M.S.

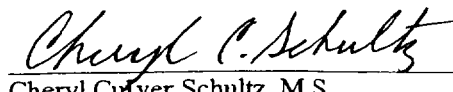
*Y-90 microsphere under 35.1000


Darlene Fink-Bennett, M.D.
Chair, Radiation Safety Committee

Radiation Safety Officer and Designates

Janice Campbell, M.S., Corporate Nuclear Medicine
Evelyn Sebastian, Brachytherapy
J. Douglas Ferry, Ph.D., Clinical Pathology
Brian Marples, Ph.D., Research Institute
Wenzheng Feng, M.S., Heart and Vascular
Lauren Hefner, M.S., Diagnostic Radiology
Donovan Bakalyar, Ph.D., Diagnostic Radiology

**I-125 Gliosite under 35.1000


Cheryl Culver Schultz, M.S.
Corporate Radiation Safety Officer

September 18, 2006


U.S. NUCLEAR REGULATORY COMMISSION License No. 21-01333-01

To: Alvaro Martinez, M.D.Department: Director, Radiation OncologyFrom: Darlene Fink-Bennett, M.D. DFB/dfbDepartment: Chair, Radiation Safety CommitteeDate: March 21, 2006Subject: Approval of Leonard Kim as an Authorized Medical Physicist

Leonard Kim completed the training as specified in 10 CFR 35.51 including one year of full-time training in therapeutic radiological physics, one year full-time work experience under the supervision of an authorized medical physicist and written certification by an authorized medical physicist. His training and experience meet the requirements of 35.400 (manual brachytherapy), 35.500 (sealed sources for diagnosis) and 35.600 (photon emitting remote afterloader units). Therefore, the Radiation Safety Committee approved Leonard Kim as an authorized medical physicist for categories 35.400, 35.500 and 35.600 on March 13, 2006 pending the successful completion of his Masters Degree from Wayne State University in May 2006.

cc. Evelyn Sebastian

Leonard Kim

 Di Yan, Ph.D.

Lisa Burgess, M.S.

Cheryl Culver Schultz, M.S.

University of Pittsburgh

Center for Image-Guided Neurosurgery

This is to Certify That

Leonard Kim, M.S.



Attended

Principles and Practice of Gamma Knife® Radiosurgery

from September 25-29, 2006

L. Dade Lunsford, M.D., FACS

Ann H. Maitz, M.Sc.



Douglas Kondziolka M.D., M.Sc., FRCS(C)

John C. Flickinger, M.D.

The Board of Governors hereby confers upon

Leonard H. Kim

The degree

Master of Science

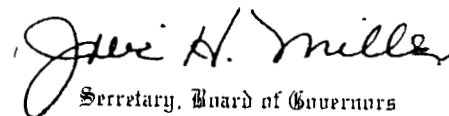
With a Major in Radiological Physics

In recognition of the achievements specified for this degree

May 2, 2006

Detroit, Michigan


President


Secretary, Board of Governors

**RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE
AND PRECEPTOR ATTESTATION**
[10 CFR 35.50]APPROVED BY OMB: NO. 3150-0120
EXPIRES: 10/31/2008

Name of Proposed Radiation Safety Officer

Ann Maitz

Requested Authorization(s) The license authorizes the following medical uses (check all that apply):

- ☐ 35.100 ☐ 35.200 ☐ 35.300 ☐ 35.400 ☐ 35.500 ☐ 35.600 (remote afterloader)
☐ 35.600 (teletherapy) ☒ 35.600 (gamma stereotactic radiosurgery) ☐ 35.1000 ()

PART I -- TRAINING AND EXPERIENCE
(Select one of the four methods below)

*Training and Experience, including board certification, must have been obtained within the 7 years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

1. Board Certification

- Provide a copy of the board certification.
- Use Table 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
- Skip to and complete Part II Preceptor Attestation.

OR**2. Current Radiation Safety Officer Seeking Authorization to Be Recognized as a Radiation Safety Officer for the Additional Medical Uses Checked Above**

- Use the table in section 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for the additional types of medical use for which recognition as RSO is sought.
- Skip to and complete Part II Preceptor Attestation.

OR**3. Structured Educational Program for Proposed Radiation Safety Officer****a. Classroom and Laboratory Training**

Description of Training	Location of Training	Clock Hours	Dates of Training*
Radiation physics and instrumentation			
Radiation protection			
Mathematics pertaining to the use and measurement of radioactivity			
Chemistry of byproduct material for medical use			
Radiation biology			

Total Hours of Training:

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience

(If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this section.)

Description of Experience	Location of Training/ License or Permit Number of Facility	Dates of Training*
Shipping, receiving, and performing related radiation surveys		
Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides		
Securing and controlling byproduct material		
Using administrative controls to avoid mistakes in administration of byproduct material		
Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures		
Using emergency procedures to control byproduct material		
Disposing of byproduct material		
Licensed Material Used (e.g., 35.100, 35.200, etc.)+		

+ Choose all applicable sections of 10 CFR Part 35 to describe radioisotopes and quantities used: 35.100, 35.200, 35.300, 35.400, 35.500, 35.600 remote afterloader units, 35.600 teletherapy units, 35.600 gamma stereotactic radiosurgery units, emerging technologies (provide list of devices).

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

b. Supervised Radiation Safety Experience (continued)

(If more than one supervising individual is necessary to document supervised work experience, provide multiple copies of this section.)

Supervising Individual	License/Permit Number listing supervising individual as a Radiation Safety Officer
------------------------	--

This license authorizes the following medical uses:

<input type="checkbox"/> 35.100	<input type="checkbox"/> 35.200	<input type="checkbox"/> 35.300	<input type="checkbox"/> 35.400
<input type="checkbox"/> 35.500	<input type="checkbox"/> 35.600 (remote afterloader)	<input type="checkbox"/> 35.600 (teletherapy)	
<input type="checkbox"/> 35.600 (gamma stereotactic radiosurgery)	<input type="checkbox"/> 35.1000 ()		

c. Describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.

Description of Training	Training Provided By	Dates of Training*
Radiation safety, regulatory issues, and emergency procedures for 35.100, 35.200, and 35.500 uses		
Radiation safety, regulatory issues, and emergency procedures for 35.300 uses		
Radiation safety, regulatory issues, and emergency procedures for 35.400 uses		
Radiation safety, regulatory issues, and emergency procedures for 35.600 - teletherapy uses		
Radiation safety, regulatory issues, and emergency procedures for 35.600 - remote afterloader uses		
Radiation safety, regulatory issues, and emergency procedures for 35.600 - gamma stereotactic radiosurgery uses		
Radiation safety, regulatory issues, and emergency procedures for 35.1000, specify use(s):		

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Structured Educational Program for Proposed Radiation Safety Officer (continued)

- c. Training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license (continued)

Supervising Individual *If training was provided by supervising RSO, AU, AMP, or ANP. (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)*

License/Permit Number listing supervising individual

Patrick McDermott

21-01333-02

License/Permit lists supervising individual as:

- ☒ Radiation Safety Officer ☐ Authorized User ☐ Authorized Nuclear Pharmacist
☐ Authorized Medical Physicist

Authorized as RSO, AU, ANP, or AMP for the following medical uses:

- | | | | |
|--|--|---|---------------------------------|
| <input type="checkbox"/> 35.100 | <input type="checkbox"/> 35.200 | <input type="checkbox"/> 35.300 | <input type="checkbox"/> 35.400 |
| <input type="checkbox"/> 35.500 | <input type="checkbox"/> 35.600 (remote afterloader) | <input type="checkbox"/> 35.600 (teletherapy) | |
| <input checked="" type="checkbox"/> 35.600 (gamma stereotactic radiosurgery) | <input type="checkbox"/> 35.1000 (| |) |

- d. Skip to and complete Part II Preceptor Attestation.

OR

☒ **4. Authorized User, Authorized Medical Physicist, or Authorized Nuclear Pharmacist identified on the licensee's license**

- a. Provide license number. *21-01333-02*
- b. Use the table in section 3.c. to describe training in radiation safety, regulatory issues, and emergency procedures for all types of medical use on the license.
- c. Skip to and complete Part II Preceptor Attestation.

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

I attest that _____ has satisfactorily completed the requirements in

Name of Proposed Radiation Safety Officer

10 CFR 35.50(a)(1)(i) and (a)(1)(ii); or 35.50 (a)(2)(i) and (a)(2)(ii); or 35.50(c)(1).

OR

2. Structured Educational Program for Proposed Radiation Safety Officers

I attest that _____ has satisfactorily completed a structural educational

Name of Proposed Radiation Safety Officer

program consisting of both 200 hours of classroom and laboratory training and one year of full-time radiation safety experience as required by 10 CFR 35.50(b)(1).

OR

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

Preceptor Attestation (continued)

First Section (continued)

Check one of the following:

☒ **3. Additional Authorization as Radiation Safety Officer**

☒ I attest that Ann Maitz is an
Name of Proposed Radiation Safety Officer

☐ Authorized User

☐ Authorized Nuclear Pharmacist

☒ Authorized Medical Physicist

identified on the Licensees license and has experience with the radiation safety aspects of similar type of use of byproduct material for which the individual has Radiation Safety Officer responsibilities

AND

Second Section

Complete for all (check all that apply):

☒ I attest that Ann Maitz has training in the radiation safety, regulatory issues, and
Name of Proposed Radiation Safety Officer

emergency procedures for the following types of use:

☐ 35.100

☐ 35.200

☐ 35.300 oral administration of less than or equal to 33 millicuries of sodium iodide I-131, for which a written directive is required

☐ 35.300 oral administration of greater than 33 millicuries of sodium iodide I-131

☐ 35.300 parenteral administration of any beta-emitter, or a photon-emitting radionuclide with a photon energy less than 150 keV for which a written directive is required

☐ 35.300 parenteral administration of any other radionuclide for which a written directive is required

☐ 35.400

☐ 35.500

☐ 35.600 remote afterloader units

☐ 35.600 teletherapy units

☒ 35.600 gamma stereotactic radiosurgery units

☐ 35.1000 emerging technologies, including:

RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

AND

Third Section
Complete for ALL

✓ I attest that Ann Maitz has achieved a level of radiation safety knowledge
Name of Proposed Radiation Safety Officer
sufficient to function independently as a Radiation Safety Officer for a medical use licensee.

Fourth Section
Complete the following for Preceptor Attestation and signature

I am the Radiation Safety Officer for William Beaumont Hospital
Name of Facility

License/Permit Number: 21-01333-02

Name of Preceptor

Patrick M^c Dermott

Signature

Patrick M^c Dermott

Telephone Number

248-551-6256

Date

4/17/07



Beaumont[®]

William Beaumont Hospital

McDermott

3441 W. Thirteen Mile Rd.
Royal Oak, MI 48073-6769

Deliver to:

U.S. Nuclear Regulatory Commission
Region III
Materials Licensing Section
2443 Warrenville Rd, Suite 210
Lisle, IL 60532