

January 16, 2006

K-8

US NRC Region One Office
Medical Licensing Section
475 Allendale Road
King of Prussia, PA 19406-1415

03003094

RE: License Amendment For 37-07722-04 – Addition of an Authorized Medical Physicist

To Whom It May Concern:

We are writing to request an amendment to our NRC license to allow us to add one physicist to our license as an Authorized Medical Physicist (AMP). His name is Craig Aaron Goldberg. He has just completed the requirements of 10 CFR 35.51(b). Attached are Form 313A filled out with the details of his training and the preceptor forms for the physicist responsible for this training. Also, we request the removal of Della Hutchinson from the list of AMP's.

As this is a staffing issue, we would like to request that this amendment application be expedited.

If there are any questions in the processing of this amendment, please contact:

Mike Bieda, MS DABR
Bryn Mawr Hospital
Department of Radiation Oncology
130 S. Bryn Mawr Ave.
Bryn Mawr, PA 19010

Email: biedam@mlhs.org
Phone: (610) 526-3372

Sincerely,



Brenda DeFeo, Senior Vice President

138246

RECEIVED IN MATERIALS-002

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 infocollect@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.

APPLICATION FOR MATERIAL LICENSE

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
811 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

03003094

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.

THIS IS AN APPLICATION FOR (Check appropriate item)

- A. NEW LICENSE
- B. AMENDMENT TO LICENSE NUMBER 37-07722-04
- C. RENEWAL OF LICENSE NUMBER _____

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

The Bryn Mawr Hospital
130 S. Bryn Mawr Ave.
Bryn Mawr, PA 19010

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Same as #2

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Michael Bieda, M.S.

TELEPHONE NUMBER

(610) 526-3372

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 ENCLOSED \$ 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 82 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

enda DeFeo, Senior Vice President

SIGNATURE

Brinda DeFeo

DATE

FOR NRC USE ONLY

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

**MEDICAL USE TRAINING AND EXPERIENCE
AND PRECEPTOR ATTESTATION**

PART I -- TRAINING AND EXPERIENCE

Note: Descriptions of training and experience must contain sufficient detail to match the training and experience criteria in the applicable regulation (10 CFR Part 35)

1. Name of Individual, Proposed Authorization (e.g., Radiation Safety Officer), and Applicable Training Requirements (e.g., 10 CFR 35.50)

Craig Goldberg, Authorized Medical Physicist 10 CFR 35.51(b) for 10 CFR 35. 400 Prostate Seed, 600 Remote Afterloader

2. For Physicians, Podiatrists, Dentists, Pharmacists -- State or Territory Where Licensed

3. CERTIFICATION

- a. Provide a copy of the board certification. (Stop here if applying under 10 CFR Part 35, Subpart J or 35.590(a); continue if applying under other subparts.)
- b. Provide documentation in appropriate items 4 through 10 of training or clinical case work required by 35.50(e); 35.51(c); 35.290(c)(1)(ii)(G) for AU seeking 35.200 authorization: 35.390(b)(1)(ii)(G); 35.396(d)(1) and 35.396(d)(2); 35.590(c); or 35.690(c).
- c. Provide completed Part II Preceptor Attestation, Items 11a through 11d.
Stop here after completing items 3a, 3b, and 3c when using board certification to meet 10 CFR Part 35 training and experience requirements.

4. INDIVIDUALS IDENTIFIED ON A LICENSE OR PERMIT AS RADIATION SAFETY OFFICERS (RSO), AUTHORIZED USERS (AU), AUTHORIZED MEDICAL PHYSICISTS (AMP), OR AUTHORIZED NUCLEAR PHARMACISTS (ANP) SEEKING ADDITIONAL AUTHORIZATIONS

- a. Provide a copy of the license or broadscope permit listing the current authorization **and** (b) or (c)
- b. Complete items 6c (and 10 when training is provided by an RSO, AMP, ANP, or AU) and preceptor items 11b through 11d to meet requirements for: RSO in 35.50(c)(2) or 35.50(e); or AU in 35.290(c)(1)(ii)(G) or 35.390(b)(1)(ii)(G) or 35.590(c) or 35.690(c); or AMP under 35.51(c).
- c. Complete items 5, 6a, 6b, 10, and Preceptor items 11a through 11d to meet AU requirements in 35.396(a).

5. DIDACTIC OR CLASSROOM AND LABORATORY TRAINING (optional for Medical Physicists)

Description of Training	Location	Clock Hours	Dates of Training
Radiation Physics and Instrumentation			
Radiation Protection			
Mathematics Pertaining to the Use and Measurement of Radioactivity			
Radiation Biology			
Chemistry of Byproduct Material for Medical Use			
OTHER			

MEDICAL USE TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

6a. WORK OR PRACTICAL EXPERIENCE WITH RADIATION

Description of Experience	Name of Supervising Individual(s)	Location and Corresponding Materials License Number	Dates and/or Clock Hours of Experience
Clinical Medical Physicist - The Hospital of The University of Pennsylvania - High Dose Rate; Manual Brachytherapy	Indra Das	Hospital of the University of Pennsylvania	8/2004 - 1/2006

6b. SUPERVISED CLINICAL CASE EXPERIENCE (describe experience elements in 6a)

Radionuclide	Type of Use	No. of Cases Involving Personal Participation	Name of Supervising Individual	Location and Corresponding Materials License Number	Dates and/or Clock Hours of Experience

MEDICAL USE TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

6c. TRAINING FOR SECTIONS 35.50(e), 35.51(c), 35.590(c), or 35.690(c)

Training Element	Type of Training *	Location and Dates
High Dose Rate - Full calibration; Daily Checks; Dose rate checks in adjacent areas	Supervised	Hospital of the University of Pennsylvania - 8/2004 - 1/2006
Manual Brachytherapy - Handling of Sealed Sources; Leak Testing	Supervised	Hospital of the University of Pennsylvania - 2/2004 - 1/2006

* Types of training may include supervised (complete item 10 for 35.50(e), 35.51(c), and 35.690(c)), didactic, or vendor training.

7. FORMAL TRAINING Physicians (for uses under 35.400 and 35.600) and Medical Physicists

Degree, Area of Study or Residency Program	Name of Program and Location with Corresponding Materials License Number	Dates	Name of Organization that Approved the Program (e.g., Accreditation Council for Graduate Medical Education) and the Applicable Regulation (e.g., 10 CFR 35.490)
MA Physics	Temple University	08/2002 - 12/2003	

8. RADIATION SAFETY OFFICER (RSO) -- ONE-YEAR FULL-TIME EXPERIENCE

YES Completed 1 year of full-time radiation safety experience (in areas identified in item 6a) under supervision.
 N/A of _____ the RSO for License No. _____

9. MEDICAL PHYSICIST -- ONE-YEAR FULL-TIME TRAINING/WORK EXPERIENCE

YES Completed 1 year of full-time training (for areas identified in item 6a) in therapeutic radiological physics (35.961) or medical physics (35.51) under the supervision of Indra Das
 N/A who is a medical physicist (35.961) or meets requirements for Authorized Medical Physicists (35.51);

and

YES Completed 1 year of full-time work experience (at location providing radiation therapy services described and for topics identified in item 6a) for (specify use or device) HDR, Prostate Seeds
 N/A under the supervision of Indra Das who is a medical physicist (35.961) or meets requirements for Authorized Medical Physicists (35.51) (specify use or device) 10CFR35.400, 600HDR

MEDICAL USE TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

10. SUPERVISING INDIVIDUAL -- IDENTIFICATION AND QUALIFICATIONS

The training and experience indicated above was obtained under the supervision of (if more than one supervising individual is needed to meet requirements in 10 CFR Part 35, provide the following information for each) :

A. Name of Supervisor
Indra Das

B. Supervisor is:
 Authorized User
 Authorized Medical Physicist
 Radiation Safety Officer
 Authorized Nuclear Pharmacist

C. Supervisor meets requirements of Part 35, Section(s) 51
 for medical uses in Part 35, Section(s) 400 Prostate Seed, 600 HDR

D. Address
 Hospital of the University of Penna. Dept. of Rad Onc
 3400 Spruce Street
 2 Donner
 Philadelphia PA 19104

E. Materials License Number
37-00118-07

PART II -- PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each. This part is not required to meet training requirements in 35.590 or Part 35, Subpart J (except 35.980).

I attest the individual named in Item 1:

11a. has satisfactorily completed the requirements in Part 35, Section(s) and Paragraph(s) 51(b), 35.400,633,643, as documented in section(s) 6a; 6c of this form.

11b. Select one
 meets the requirements in 35.50(e) 35.51(c) 35.390(b)(1)(ii)(G) 35.690(c) for 2 types of use, as documented in section(s) 6c of this form.
 N/A

11c.
 has achieved a level of competency sufficient to independently operate a nuclear pharmacy (for 35.980); **OR**
 has achieved a level of competency sufficient to function independently as an authorized Medical Physicist for 35.400, 600 uses (or units); **OR**
 has achieved a level of radiation safety knowledge sufficient to function independently as a Radiation Safety Officer for a medical use licensee ; **OR**
 N/A

11d.
 I am an Authorized Nuclear Pharmacist; **OR** I am a Radiation Safety Officer; **OR**
 I meet the requirements of 35.51 section(s) of 10 CFR Part 35 or equivalent Agreement State requirements to be a preceptor AU or AMP for the following byproduct material uses (or units): Remote Afterloaders, Manual Brachytherapy

A. Address
 Hospital of the University of Penna, Dept. of Rad Onc
 3400 Spruce Street
 2 Donner
 Philadelphia PA 19104

B. Materials License Number
37-00118-07

C. NAME OF PRECEPTOR (print clearly) Indra Das - See Attached Letter for signature	D. SIGNATURE -- PRECEPTOR	E. DATE
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December 28, 2005

To Whom It May Concern:

This is in regards to Craig Goldberg who is working as a physicist at the hospital of the University of Pennsylvania (HUP). He holds a master degree in physics from Temple University and has completed one year of full-time training in medical physics and an additional year of full-time work experience under my supervision. The training and work experience were conducted in clinical radiation facilities that provide megavoltage, external beam therapy (photons and electrons) and also training in brachytherapy services performing;

- (i) sealed source leak tests and inventories;
- (ii) decay corrections;
- (iii) full calibration and periodic spot checks of the high dose rate remote afterloading unit (HDR) and
- (iv) conducting radiation surveys around the HDR unit.

In addition, he has training for HDR that includes hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system.

Mr. Goldberg has achieved a level of competency sufficient to function independently as an authorized medical physicist for HDR units.

Sincerely

Indra J. Das, Ph.D., FIPEM, FAAPM, CSci
Professor, Radiation Oncology

TEMPLE UNIVERSITY

OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION

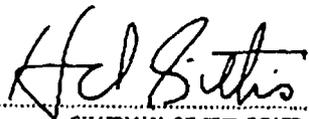
BY AUTHORITY OF THE BOARD OF TRUSTEES AND UPON RECOMMENDATION
OF THE FACULTY HEREBY CONFERS UPON

Craig Goldberg

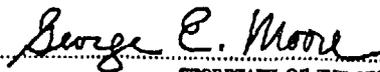
THE DEGREE OF

Master of Arts Physics

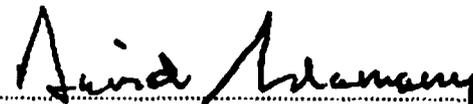
TOGETHER WITH ALL THE RIGHTS PRIVILEGES AND HONORS APPERTAINING
THERETO IN RECOGNITION OF THE SATISFACTORY COMPLETION
OF THE COURSE PRESCRIBED BY THE FACULTY OF THE UNIVERSITY
IN TESTIMONY WHEREOF THE UNDERSIGNED HAVE SUBSCRIBED
THEIR NAMES AND AFFIXED THE SEAL OF THE UNIVERSITY
GIVEN AT PHILADELPHIA PENNSYLVANIA ON THIS THIRTIETH DAY OF
JANUARY TWO THOUSAND AND FOUR



CHAIRMAN OF THE BOARD OF TRUSTEES



SECRETARY OF THE UNIVERSITY



PRESIDENT OF THE UNIVERSITY



DEAN OF THE GRADUATE SCHOOL

Craig Aaron Goldberg, M.A.
Hospital of the University of Pennsylvania
Department of Radiation Oncology
3400 Spruce Street, 2 Donner Building
Philadelphia, PA 19104
(215) 662-3088
goldberg@xrt.upenn.edu

EMPLOYMENT

Medical Physicist Hospital of the University of Pennsylvania	September 2004 – present PHILADELPHIA, PA
Junior Medical Physicist Hospital of the University of Pennsylvania	February 2004 – September 2004 PHILADELPHIA, PA
Junior Medical Physicist (Volunteer) Hospital of the University of Pennsylvania	May 2003 – February 2004 PHILADELPHIA, PA

EDUCATION

Master of Science: Medical Physics University of Pennsylvania	September 2004 – present PHILADELPHIA, PA
Master of Arts: Physics Temple University	September 2002 – December 2003 PHILADELPHIA, PA
Bachelor of Science: Physics Pennsylvania State University	September 1997 – May 2001 UNIVERSITY PARK, PA

Experience

- Validation of treatment planning system and newly integrated IMRT algorithm (Oncentra)
- Maintenance and management of treatment planning system (Oncentra)
- Intensity modulated radiation therapy (IMRT) planning and quality assurance (QA)
- Prostate I-125 seed implants (Variseed)
- High dose rate (HDR) brachytherapy (Plato)
- Daily patient chart checks
- Treatment planning and in vivo dosimetry
- Stereotactic Radiotherapy/Radiosurgery (X-Knife)
- Linear accelerator commissioning, calibration, and quality assurance (QA) (Siemens Oncor)
- Low dose rate (LDR) brachytherapy (TheraPlan)
- Computed Tomography (CT) simulator quality assurance (QA) (Phillips)
- Zmed Ultrasound system

Relevant Coursework

- Human Physiology, 2005
- Medical Physics Lab, 2005
- Radiobiology, 2005
- Human Anatomy, 2004
- Medical Radiation Engineering, 2004

Honors

- Outstanding Teaching Assistant Award, Temple University, 2003
- National Science Foundation Research Experience for Undergraduates Grant Recipient, Pennsylvania State University, 2001

Memberships

- American Association of Physicists in Medicine, 2005 – present
- American Association of Physics Teachers, 2003

Research

- Avery S, Das I, Chopra K, **Goldberg C**, Mesina C. "Dosimetric Analysis of Abutting Multileaf Collimator Matchline in Three-Field Breast Treatment." (2004 American Association of Physicists in Medicine Annual Meeting Poster, Pittsburg, PA, July 25 – 29)
- **Goldberg C**, Wood C, Quon H. "Contoured Parotid Volume: Implications for Threshold Dose." (2005 Radiological Society of North America Annual Meeting Poster Presentation, Chicago, IL, November 27 – December 2)
- Kassaei A, Zhu T, **Goldberg C**. "Characteristics of Bremsstrahlung Photons in Megavoltage Clinical Electron Beams." (2004 American Association of Physicists in Medicine Annual Meeting Poster, Pittsburg, PA, July 25 – 29)
- Magnes J, Ahmed E, Kirova T, **Goldberg C**, Lyyra A. "Observation of the K₂ 43.g State by cw Perturbation-Facilitated Optical-Optical Double-Resonance Spectroscopy." *Journal of Molecular Spectroscopy*. 2003 Sep;221(1):72-79.
- Sarkar A, **Goldberg C**, Kassaei A. "Near Surface Dose for Dynamic and Physical Wedges." (2004 American Association of Physicists in Medicine Annual Meeting Poster, Pittsburg, PA, July 25 – 29)