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DEPARTMENT OF THE ARMY
MADIGAN ARMY MEDICAL CENTER
TACOMA, WASHINGTON 98431-1100

RECEIVED

OCT 21 2010

DNMS

October 19, 2010

U.S. Nuclear Regulatory Commission, Region IV
 Nuclear Materials Licensing Branch
 612 Lamar Boulevard, Suite 400
 Arlington, Texas 76011-4125

Dear Sir or Madam:

This is to inform you that Dr. Jess Graham and Dr. Brent Tinnel meet the requirements of 10 CFR 35.13 (b) and have been approved by the Madigan Army Medical Center (MAMC) Radiation Control Committee (RCC) to begin using radioactive material. We are also requesting to add I-125 sealed sources for manual brachytherapy.

Dr. Jess Graham meets the requirements of 10 CFR 35.13 (b)(4)(i) as follows

Licensee	State	License Number	Type of Use
Sky Ridge Medical Center	Colorado	Colo. 1053-01	100, 200, 300
Centura Health – Littleton Adventist Hospital	Colorado	Colo. 765-01	100, 200, 300
Centura Health – Porter Adventist Hospital	Colorado	Colo. 210-01	100, 200, 300
Rocky Mountain Cancer Centers of Colorado	Colorado	Colo. 1012-01	100, 200

He also meets the requirements of 10 CFR 35.13 (b)(4)(ii) as follows

Licensee	State	License Number	Permit Number	Type of Use
Brooke Army Medical Center	NRC	42-01368-01	NM-JG-1	100, 200, 300, 500

Dr. Brent Tinnel meets the requirements of 35.13 (b)(1) as follows

- He is certified by the American Board of Radiology in Radiation Oncology
- His certification is dated 05 June 2007 and is designated as "AU Eligible"

He also meets the requirements of 10 CFR 35.13 (b)(4)(ii) as follows

Licensee	State	License Number	Permit Number	Type of Use
Walter Reed Army Medical Center	NRC	08-01738-02	N/A	400

Enclosed you will find the documents required by 10 CFR 35.14 (a).

Request that NRC License 46-02645-03 be amended with the following changes:

- Add Dr. Jess Graham as an Authorized User under 10 CFR 35.100, 35.200, and 35.300, Items 6.E thru 6.KK as outlined on our current license.
- Add Dr. Brent Tinnel as an Authorized User under 10 CFR 35.400 as outlined on our current license.
- Remove Dr. Antonio G. Balingit as an Authorized User as he is no longer assigned to MAMC.

We also request that the renewal application (Docket: 030-03368; License: 46-02645-03; Control: 573618) for NRC License 46-02645-03 be amended with the following changes:

- Add Dr. Jess Graham as an Authorized User under 10 CFR 35.100, 35.200, 35.300, and Items 6.H thru 6.OO as outlined on the license renewal.
- Add Dr. Brent Tinnel as an Authorized User of Items 6.D through 6.F and Item PP. as outlined on the license renewal and this ammendment.
- Remove Dr. Antonio G. Balingit as an Authorized User as he is no longer assigned to MAMC.
- Please add the following line to Item 5

Item 5. Radioactive Material

	Byproduct, Source, and/or Special Nuclear Material	Chemical and/or Physical Form	Maximum Amount that May Be Possessed at Any One Time
PP.	I-125 (specific manual brachytherapy source, 35.400 use)	Sealed source or device (Amersham, Model 6700 series; Bard Brachytherapy, Inc., Model STM 1251; Best Medical International, Inc., Model 2301; Theragenics Corporation, Model I25.S06; Nucletron, Model 130.002)	Not to exceed 0.5 millicuries per source and 200 millicuries total

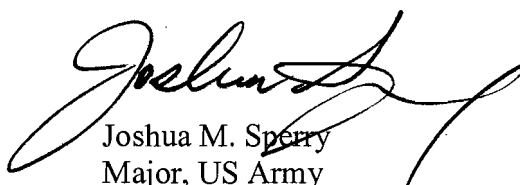
- Please change the following in Item 6

Item 6. Purposes for Which Licensed Material will be used

D. through F. and PP. Any manual brachytherapy use permitted by 10 CFR 35.400.

Point of contact for this action is Major Joshua Sperry, Radiation Safety Officer, commercial phone (253) 968-4300.

Sincerely,



Joshua M. Sperry
Major, US Army
Chief, Health Physics and Radiation Safety Office

Enclosure

1. American Board of Nuclear Medicine Certification, Preceptor Statement, and workload for Dr. Jess Graham
2. Licenses listing Dr. Jess Graham as an Authorized User (5)
3. American Board of Radiology Certification and Preceptor Statement for Dr. Brent Tinnel
4. Letter from WRAMC approving Dr. Brent Tinnel as an Authorized User for NRC License 08-01738-02

Enclosure 1

American Board of Nuclear Medicine Certification, Preceptor Statement, and workload for Dr. Jess Graham

The American Board of Nuclear Medicine

Incorporated 1971

Certifies that

Jess A. Graham

*has met the requirements of this Board and is qualified
during the period of 2001 through 2011 to practice as a Specialist
in all aspects of Clinical and Laboratory*

Nuclear Medicine

*including but not limited to Radiobioassay, Nuclear Imaging,
In Vivo Measurements & Therapy with Unsealed Radionuclides*

Ronald L. Van Nanten
Chairman



Frank J. Hargrave
Secretary-Treasurer

07226
Number 35

NRC FORM 313B
(8-1999)

U.S. NUCLEAR REGULATORY COMMISSION

PRECEPTOR STATEMENT

Note: Descriptions of training and experience must contain sufficient detail to match the training and experience criteria in the applicable regulations.

This form 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.

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

Graham, Jess A.

2. ADDRESS

Nuclear Medicine Service, Dept. Radiology
Darnall Army Community Hospital
3600 Darnall Loop
Ft. Hood, TX 76544-5003

3. SUPERVISED EXPERIENCE OF ABOVE NAMED INDIVIDUAL

Radionuclide	Type of Use	Number of Cases Involving Personal Participation	Location and Corresponding Materials License Number	Dates and Clock Hours of Experience
I-131	thyrotoxicosis	12	Baylor Army Medical Center, Ft. Sam Houston, TX NRC# 42-01368-01	1 Jun 99-30 Nov 99 1 Jan 00-31 Oct 00
I-131	thyroid cancer	6	"	"
Sr-90	bone metastasis pain	3	"	"
P-32	bone metastasis pain	2	"	"
I-131	thyrotoxicosis	58	UTMS, San Antonio, TX TDH 20 State of Texas # L01279	1 Mar 00-30 Jun 00 1 Mar 01-31 May 01
I-131	thyroid cancer	19	"	"
I-131	thyrotoxicosis thyroid cancer	20	Wilford Hall Medical Center, San Antonio, TX NRC# TX-02682-01-02	1 Dec 99-27 Feb 00 1 Nov 00-28 Feb 01
I-131	thyroid cancer	8	"	"
Sr-89	painful bone metastasis	1	"	"

[illegible]

☐ NO **Note: Response to this item is only applicable to proposed authorized nuclear pharmacists.**

☐ NO NUCLEAR REACTIVE FUNCTION

C. DATE 7 Aug 01

Enclosure 2

Licenses listing Dr. Jess Graham as an Authorized User (5)

- Sky Ridge Medical Center
- Centura Health – Littleton Adventist Hospital
- Centura Health – Porter Adventist Hospital
- Rocky Mountain Cancer Centers of Colorado
- Brooke Army Medical Center

STATE OF COLORADO

Bill Ritter, Jr., Governor
James B. Martin, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Laboratory Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

Sky Ridge Medical Center
10101 RidgeGate Parkway
Lone Tree, Colorado 80124

SEP - 9 2009

Attention: Daniel W. Marvel, M.S., Radiation Safety Officer

Re: License Amendment

Colorado Radioactive Materials License Number Colo. 1053-01

Enclosed is Radioactive Materials License Number Colo. 1053-01, Amendment No. 14. The license has been amended as requested in a correspondence from Karen Yowell dated August 10, 2009. Please review this document thoroughly.

Please note that the mailing address, use location(s), maximum quantities of radioactive materials, and the radiation safety officer are specific conditions of your license. If you have questions about making changes to your licensed activities, please contact the Radiation Management Unit to discuss the requirements for an amendment of your license.

If you have any questions regarding this letter or your license please contact Chas Etherton at 303-692-3382 or chastiti.etherton@state.co.us. Additional questions or comments can be directed to me at 303-692-3423 or steve.tarlton@state.co.us.

Steve Tarlton, Unit Leader
Radiation Management Unit
Hazardous Materials and Waste Management Division

Enclosure: Colo. 1053-01, Amendment No. 14

STATE OF COLORADO

RADIOACTIVE MATERIALS LICENSE



Colorado Department
of Public Health
and Environment

Pursuant to the Colorado Radiation Control Act, Title 25, Article 11, Colorado Revised Statutes, and the State of Colorado Rules and Regulations Pertaining to Radiation Control (the Regulations), and in reliance on statements and representations heretofore made by the licensee designated below; a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive material(s) for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of the Colorado Department of Public Health and Environment and to any conditions specified below.

1. Licensee: Sky Ridge Medical Center
2. Mailing Address: 10101 RidgeGate Parkway, Lone Tree, Colorado 80124
3. License Number: Colo. 1053-01, Amendment Number 14
4. Expiration date: July 31, 2013
5. Authorized Storage/Use Location: 10101 RidgeGate Parkway, Lone Tree, Colorado 80124
6. The Designated Radiation Safety Officer is: Daniel W. Marvel, M.S.;
The Designated Alternate Radiation Safety Officers are: Andrew Fisher, M.D.; Gregory L. Gibbs, M.S.; Bruce I. Goshorn, M.S.; Richard McKeown, M.S.; Jennifer Stickel, Ph.D.;
and Gerald A. White, M.S.
7. Radiation Safety Officer Contact Number: (303) 506-2461
8. Fee Category: 7.C
9. Reference Number:

CONDITIONS

10. Authorized Radioactive Material and Uses:

- A. The licensee is authorized to possess and use any unsealed radioactive material for uptake, dilution, or excretion studies which has been prepared for medical use in accordance with the requirements of Section 7.30 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.

STATE OF COLORADO RADIOACTIVE MATERIALS LICENSE

11. Authorized Users:

A. Radioactive material authorized in Item 10 shall be used by or under the supervision of the following authorized users as specified:

Name of Authorized User	Description of Materials authorized
Simeon Abramson, M.D.	10.A, 10.B, 10.D
Scott Robert Andersen, M.D.	10.A, 10.B
Kim Baker, M.D.	10.A, 10.B, 10.D
Lora D. Barke, M.D.	10.A, 10.B, 10.D
Richard J. Bellon, M.D.	10.A, 10.B, 10.D
Ellen R. Blatt, M.D.	10.A, 10.B, 10.D
Janice Brenneman, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii, 10.D
Glen Burmeister, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii, 10.D
Dennis Carter, M.D.	10.E, 10.F, 10.G
Vernon M. Chapman, M.D.	10.A, 10.B, 10.D
Keith Dangleis, M.D.	10.A, 10.B, 10.C.i, 10.D
Mark Dennis, M.D.	10.A, 10.B, 10.D
Malcolm Dobrow, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii, 10.D
James Dreisbach, M.D.	10.A, 10.B, 10.D
William Dunfee, M.D.	10.A, 10.B, 10.D
David Dungan, M.D.	10.A, 10.B, 10.D
Andrew Fisher, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii, 10.D
Matthew Fleishman, M.D.	10.A, 10.B, 10.C.i, 10.D
Kristin Freestone, M.D.	10.A, 10.B, 10.D
Donald Frei, M.D.	10.A, 10.B, 10.D
Jeffrey Friedland, M.D.	10.A, 10.B, 10.D
Laurence Gaynor, M.D.	10.A, 10.B, 10.D
Jess Allen Graham, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
Dennis Griffin, M.D.	10.A, 10.B, 10.D
Phillip Gunther, M.D.	10.A, 10.B
Steven Heiss, M.D.	10.A, 10.B, 10.D
David Hollander, M.D.	10.A, 10.B, 10.D
Kent Hootman, M.D.	10.A, 10.B
Orlin Woodie Hopper, M.D.	10.A, 10.B, 10.C.i, 10.D
Paul Hsieh, M.D.	10.A, 10.B, 10.D
Daniel Huddle, D.O.	10.A, 10.B, 10.D
Kevin Johnson, M.D.	10.A, 10.B, 10.D
Bobby Konwoo Kang, M.D.	10.A, 10.B, 10.C.i
Jason Kelly, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
Kevin Lampert, M.D.	10.A, 10.B, 10.D

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

- F. The following individuals are designated as authorized medical physicists for: A) manual Brachytherapy (⁹⁰Y Microspheres only): Timothy Johnson, Ph.D.

12. General Requirements:

- A. The licensee shall comply with the all applicable provisions of the Regulations including: Part 1, "General Provisions"; Part 3, "Licensing of Radioactive Material"; Part 4, "Standards for Protection Against Radiation"; Part 7, "Use of Radionuclides in the Healing Arts"; Part 10, "Notices, Instructions and Reports to Workers; Inspections"; and Part 17, "Transportation of Radioactive Material".
- B. The Radiation Safety Officer shall maintain documentation of the training and experience for each person who uses radioactive materials under the supervision of an authorized user.
- C. Each person who uses radioactive material under the supervision of an authorized user shall be supervised and receive instruction in accordance with the requirements of Section 7.10 and Section 10.3 of the Regulations.
- D. The licensee shall not transfer possession and/or control of radioactive materials or items contaminated with radioactive material except: by transfer of waste to an authorized recipient; by transfer to a specifically licensed recipient; or, as provided otherwise by specific condition of this license pursuant to the requirements of Part 3, Section 3.22 of the Regulations.
- E. Radioactive material authorized by Item 10 of this license shall be stored and used in a manner that will preclude possession or use by unauthorized personnel.
- F. The licensee shall ensure that information listed in this license is correct and accurate. The licensee shall notify the Department in writing within ten (10) days whenever the information contained in Items 1 through 7 above is no longer current or determined to be incorrect.
- G. The licensee may transport radioactive material or deliver radioactive material to a carrier for transport in accordance with the provisions of Part 17 of the Regulations and the requirements of U.S. Department of Transportation (49 CFR).
- H. The licensee shall not make any false statement, representation, or certification in any application, record, report, plan, or other document regarding radiation levels, tests performed or radiation safety conditions or practices.

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

14. Licensee Commitments and Reference Documents:

The State of Colorado Rules and Regulations Pertaining to Radiation Control shall govern unless the licensee's statements, representations, and procedures contained in the application and correspondence are more restrictive than the Regulations. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Item 10 of this license in accordance with the statements, representations, and procedures contained in:

- A. the application and attachments dated June 24, 2008; and
- B. the license correspondence and attachments dated October 24, 2008; January 30, 2009; March 1, 2009; and August 10, 2009.

FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Date: September 9, 2009 By: Jennifer T. Opila

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

- B. The licensee is authorized to possess and use any unsealed radioactive material for imaging and localization studies which has been prepared for medical use in accordance with the requirements of Section 7.32 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
- i. This authorization includes radioactive aerosols and gases in accordance with Section 7.34 of the Regulations.
- C. The licensee is authorized to possess and use any unsealed radioactive material for which a written directive is required which has been prepared for medical use in accordance with the requirements of Section 7.36 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
- i. Use of any unsealed radioactive material for diagnostic or therapeutic medical use for which a written directive is required in accordance with Section 7.36.2 of the Regulations
- ii. Use limited to oral administration of ≤ 1.22 GBq (33 mCi) of I-131 Sodium Iodide in accordance with Section 7.36.3 of the Regulations
- iii. Use limited to oral administration of > 1.22 GBq (33 mCi) of I-131 Sodium Iodide in accordance with Section 7.36.4 of the Regulations
- D. The licensee is authorized to possess and use sealed sources in accordance with Section 7.40 of the Regulations for diagnosis. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
- E. The licensee is authorized to possess and use sealed sources in accordance with Section 7.42 of the Regulations for manual brachytherapy. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
- F. The licensee is authorized to possess and use no more than 370 GBq (10 Ci) of Yttrium-90 microspheres for use in a Sirtex SIR-Spheres brachytherapy afterloader system in accordance with Section 7.62 of the Regulations. The total activity of Yttrium-90 contained in each vial shall not exceed 4.0 GBq (108 mCi).
- G. The licensee is authorized to possess and use no more than 80 GBq (2.16 Ci) of Yttrium-90 microspheres for use in a MDS Nordion TheraSphere therapy device in accordance with Section 7.62 of the Regulations. The total activity of Yttrium-90 contained in each vial shall not exceed 20 GBq (540 mCi).
- H. The licensee is authorized to possess and use any radioactive materials specified in Section 7.19 of the Regulations for check, calibration, and reference use.

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

Name of Authorized User	Description of Materials authorized
Sharmila Lingam-Nattamai, M.D.	10.A, 10.B, 10.D
Kay Lozano, M.D.	10.A, 10.B, 10.D
James Luethe, M.D.	10.A, 10.B, 10.D
Eric Malden, M.D.	10.A, 10.B, 10.D
Charles, Mateskon, M.D.	10.F
Christopher McLaughlin, M.D.	10.A, 10.B, 10.D
Charles Nutting, D.O.	10.A, 10.B, 10.D, 10.F, 10.G
Richard Obregon, M.D.	10.A, 10.B, 10.D
Michael Otte, M.D.	10.A, 10.B, 10.D
Meera Patel, M.D.	10.F
Michael Payne, M.D.	10.A, 10.B, 10.D
David Porter, M.D.	10.A, 10.B, 10.D
Peter Ricci, M.D.	10.A, 10.B, 10.D
John Roberts, M.D.	10.A, 10.B, 10.C.i, 10.D
Allison Sandberg, M.D.	10.A, 10.B
Donald Schomer, M.D.	10.A, 10.B, 10.D
Stanley Smazal, M.D.	10.A, 10.B, 10.D
Andrew Sonin, M.D.	10.A, 10.B, 10.D
William Steines, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii, 10.D
Jerome Sutherland, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii, 10.D
Samuel Wang, M.D.	10.A, 10.B, 10.C.i, 10.D
Shane Wheeler, M.D.	10.A, 10.B
Donald Yee, M.D.	10.A, 10.B, 10.D

- B. Radioactive material authorized in Item 10.H may be used by or under the supervision of any of the authorized users listed above and by the designated Radiation Safety Officer, alternate RSOs and authorized medical physicists listed on this license.
- C. The Radiation Safety Officer shall maintain documentation of the training and experience for each authorized user of radioactive materials. This documentation shall include for each user: a copy of the applicable board certifications, preceptor statements, and any other relevant training documents.
- D. The following individuals are designated as authorized medical physicists for: A) therapeutic use of unsealed radioactive materials; and B) manual Brachytherapy: Stephen R. Armour, M.S.; Bruce I. Goshorn, M.S.; and Shawn Meyer, M.S.
- E. The following individuals are designated as authorized medical physicists for: A) therapeutic use of unsealed radioactive materials; and B) manual Brachytherapy (⁹⁰Y Microspheres only): Daniel W. Marvel, M.S.

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

13. Specific Radiation Safety Requirements:

- A. The licensee shall acquire and maintain a current copy of the applicable Sealed Source and Device Registry Evaluation for each brachytherapy device/source in use by the licensee. Unless alternative operating procedures are specifically authorized by this license, the licensee shall comply with the safety precautions and limitations established in the applicable device registry evaluation.
- B. Authorized users of radioactive materials in Item 10.F, authorized users subsequently approved for use, and any designated authorized medical physicists, shall complete the Sirtex SIR-Spheres training prior to initial use.
- C. The Sirtex SIR-Spheres therapy device shall be used with the Delivery Set and Delivery Box in accordance with the manufacturer's instructions.
- D. Authorized users of radioactive materials in Item 10.G, authorized users subsequently approved for use, and any designated authorized medical physicists, shall complete the MDS Nordion TheraSphere Radiotherapy System training program prior to initial use.
- E. The MDS Nordion TheraSphere system shall be used with the Administration Set and Accessory Kit in accordance with the manufacturer's instructions. Only the MONARCH 25 syringe should be used with the Administration Set in accordance with the manufacturer's instructions.
- F. The MDS Nordion TheraSphere Radiotherapy System is approved by the U.S. Food and Drug Administration under the provisions of a Humanitarian Device Exemption (HDE No. H9800006). Therefore, an Institutional Review Board is required to approve and monitor the use of the TheraSphere device.
- G. Each sealed source authorized in Item 10 of this license or in Section 7.19 of the Regulations shall be tested for leakage and/or contamination in accordance with the requirements of Section 7.20.2 of the Regulations, and Part 4, Section 4.16 of the Regulations, at intervals not to exceed six (6) months.

STATE OF COLORADO

Bill Ritter, Jr., Governor
Martha E. Rudolph, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Denver, Colorado 80230-6928
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<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

JUL 13 2010

Centura Health – Littleton Adventist Hospital
7700 South Broadway
Littleton, Colorado 80122

Attention: Daniel W. Marvel, M.S., Radiation Safety Officer

Re: License Amendment

Colorado Radioactive Materials License Number Colo. 765-01

Enclosed is Radioactive Materials License Number Colo. 765-01, Amendment No. 19. The license has been amended as requested in a correspondence from Brian Lentz dated June 4, 2010, with the exception discussed with Jennifer Stickel, Ph.D. in a phone conversation on July 7, 2010. Please review this document thoroughly.

Please note that the mailing address, use location(s), maximum quantities of radioactive materials, and the radiation safety officer are specific conditions of your license. If you have questions about making changes to your licensed activities, please contact the Radiation Management Unit to discuss the requirements for an amendment of your license.

If you have any questions regarding this letter or your license please contact Chas Etherton at 303-692-3382 or chastiti.etherton@state.co.us. Additional questions or comments can be directed to me at 303-692-3403 or jennifer.opila@state.co.us.

Jennifer T. Opila, Unit Leader
Radiation Management Unit
Hazardous Materials and Waste Management Division

Enclosure: Colo. 765-01, Amendment No. 19

STATE OF COLORADO

RADIOACTIVE MATERIALS LICENSE



Colorado Department
of Public Health
and Environment

Pursuant to the Colorado Radiation Control Act, Title 25, Article 11, Colorado Revised Statutes, and the State of Colorado Rules and Regulations Pertaining to Radiation Control (the Regulations), and in reliance on statements and representations heretofore made by the licensee designated below; a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive material(s) for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of the Colorado Department of Public Health and Environment and to any conditions specified below.

1. Licensee: Centura Health – Littleton Adventist Hospital
2. Mailing Address: 7700 South Broadway, Littleton, Colorado 80122
3. License Number: Colo. 765-01, Amendment Number 19
4. Expiration date: April 30, 2014
5. Authorized Storage/Use Location: 7700 South Broadway, Littleton, Colorado 80122
6. The Designated Radiation Safety Officer is: Daniel W. Marvel, M.S.;
The Designated Alternate Radiation Safety Officers are: Stephanie Franz, M.S.; Jason Senn, M.S.; and Jennifer Stickel, Ph.D.
7. Radiation Safety Officer Contact Number: (303) 506-2461
8. Fee Category: 7.C
9. Reference Number:

CONDITIONS

10. Authorized Radioactive Material and Uses:

- A. The licensee is authorized to possess and use any unsealed radioactive material for uptake, dilution, or excretion studies which has been prepared for medical use in accordance with the requirements of Section 7.30 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.

STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE

- B. The licensee is authorized to possess and use any unsealed radioactive material for imaging and localization studies which has been prepared for medical use in accordance with the requirements of Section 7.32 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
 - i. This authorization includes radioactive aerosols and gases in accordance with Section 7.34 of the Regulations.
 - ii. This authorization includes positron-emitting isotopes
- C. The licensee is authorized to possess and use any unsealed radioactive material for which a written directive is required which has been prepared for medical use in accordance with the requirements of Section 7.36 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
 - i. Use of any unsealed radioactive material for diagnostic or therapeutic medical use for which a written directive is required in accordance with Section 7.36.2 of the Regulations
 - ii. Use limited to oral administration of ≤ 1.22 GBq (33 mCi) of I-131 Sodium Iodide in accordance with Section 7.36.3 of the Regulations
 - iii. Use limited to oral administration of > 1.22 GBq (33 mCi) of I-131 Sodium Iodide in accordance with Section 7.36.4 of the Regulations
- D. The licensee is authorized to possess and use sealed sources in accordance with Section 7.42 of the Regulations for manual brachytherapy. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
- E. The licensee is authorized to possess and use no more than 160 GBq (4.32 Ci) of Y-90 microspheres for use in a Sirtex SIR-Spheres brachytherapy afterloader system in accordance with Section 7.62 of the Regulations. The total activity of Y-90 contained in each vial shall not exceed 5.75 GBq (175 mCi).
- F. The licensee is authorized to possess and use any radioactive materials specified in Section 7.19 of the Regulations for check, calibration, and reference use.
- G. The licensee is authorized to possess and use sealed sources containing not more than 11.1 GBq (300 mCi) each of Gadolinium 153 (^{153}Gd) for attenuation correction purposes for computerized emission tomography images.

STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE

Authorized Users:

- A. Radioactive material authorized in Item 10 shall be used by or under the supervision of the following authorized users as specified:

Name of Authorized User	Description of Materials Authorized
Simeon D. Abramson, M.D.	10.A, 10.B
Scott Robert Anderson, M.D.	10.A, 10.B
Kim B. Baker, M.D.	10.A, 10.B
Lora Barke, D.O.	10.A, 10.B
Richard J. Bellon, M.D.	10.A, 10.B
Ellen R. Blatt, M.D.	10.A, 10.B
Janice K. Brenneman, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
Glen E. Burmeiester, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
Dennis Carter, M.D.	10.E
Vernon M. Chapman, M.D.	10.A, 10.B
Keith C. Dangleis, M.D.	10.A, 10.B, 10.C.i
Malcolm S. Dobrow, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
James N. Dreisbach, M.D.	10.A, 10.B
William R. Dunfee, M.D.	10.A, 10.B
David H. Dungan, M.D.	10.A, 10.B
Andrew J. Fisher, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
Matthew J. Fleishman, M.D.	10.A, 10.B, 10.C.i
Kristin A. Freestone, M.D.	10.A, 10.B
Donald F. Frei, M.D.	10.A, 10.B
Jeffrey A. Friedland, M.D.	10.A, 10.B
Jess Allen Graham, M.D.	10.A, 10.B, 10.C.i
Lawrence F. Gaynor, M.D.	10.A, 10.B
Dennis J. Griffin, M.D.	10.A, 10.B
Phillip Gunther, M.D.	10.A, 10.B
Steven G. Heiss, M.D.	10.A, 10.B
David S. Hollander, M.D.	10.A, 10.B
Kent Hootman, M.D.	10.A, 10.B
Orlin W. Hopper II, M.D.	10.A, 10.B, 10.C.i
Paul Sek-Bin Hsieh, M.D.	10.A, 10.B
Daniel C. Huddle, D.O.	10.A, 10.B
Kevin K. Johnson, M.D.	10.A, 10.B
Bobby Konwoo Kang, M.D.	10.A, 10.B, 10.C.i
Jason L. Kelly, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
Kevin I. Lampert, MB, BCh	10.A, 10.B
Sharmila C. Lingam-Nattamai, MB, BS	10.A, 10.B
Kay D. Lozano, M.D.	10.A, 10.B

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

Name of Authorized User	Description of Materials Authorized
James M. Luethke, M.D.	10.A, 10.B
Erik S. Malden, M.D.	10.A, 10.B
Christopher G. McLaughlin, M.D.	10.A, 10.B
Charles Nutting, D.O.	10.A, 10.B, 10.E
Richard G. Obregon, M.D.	10.A, 10.B
Michael T. Otte, M.D.	10.A, 10.B
Michael J. Payne, M.D.	10.A, 10.B
Meera Patel, M.D.	10.E
David J. Porter, M.D.	10.A, 10.B
Peter E. Ricci, Jr., M.D.	10.A, 10.B
John C. Riley, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii, 10.D
John F. Roberts, M.D.	10.A, 10.B, 10.C.i, 10.D
Allison Sandberg, M.D.	10.A, 10.B
David F. Schomer, M.D.	10.A, 10.B
Stanley F. Smazal, Jr., M.D.	10.A, 10.B
Andrew H. Sonin, M.D.	10.A, 10.B
Brooke Spencer, M.D.	10.E
William J. Steines, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
Jerome D. Sutherland, M.D.	10.A, 10.B, 10.C.ii, 10.C.iii
Samuel C. Wang, M.D.	10.A, 10.B, 10.C.i
Shane Wheeler, M.D.	10.A, 10.B
Dominic C. Yee, M.D.	10.A, 10.B

- B. Radioactive material authorized in Item 10.F and 10.G may be used by or under the supervision of any of the authorized users listed above and by the designated Radiation Safety Officer, alternate RSOs, and authorized medical physicists listed on this license.
- C. The Radiation Safety Officer shall maintain documentation of the training and experience for each authorized user of radioactive materials. This documentation shall include for each user: a copy of the applicable board certifications, preceptor statements, and any other relevant training documents.
- D. The following individuals are designated as authorized medical physicists for: A) therapeutic use of unsealed radioactive materials and B) manual Brachytherapy: Stephen R. Armour, M.S.; Bruce I. Goshorn, M.S.; and Tim Johnson, M.S.
- E. The following individuals are designated as authorized medical physicists for: A) therapeutic use of unsealed radioactive materials and B) Sirtex SIR-Spheres therapy: Daniel W. Marvel, M.S.; David Pascoe, M.S.; Jason Senn, M.S.; and Jennifer Stickel, Ph.D.

STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE

2. General Requirements:

- A. The licensee shall comply with the all applicable provisions of the Regulations including: Part 1, "General Provisions"; Part 3, "Licensing of Radioactive Material"; Part 4, "Standards for Protection Against Radiation"; Part 7, "Use of Radionuclides in the Healing Arts"; Part 10, "Notices, Instructions and Reports to Workers; Inspections"; and Part 17, "Transportation of Radioactive Material".
- B. The Radiation Safety Officer shall maintain documentation of the training and experience for each person who uses radioactive materials under the supervision of an authorized user.
- C. Each person who uses radioactive material under the supervision of an authorized user shall be supervised and receive instruction in accordance with the requirements of Section 7.10 and Section 10.3 of the Regulations.
- D. The licensee shall not transfer possession and/or control of radioactive materials or items contaminated with radioactive material except: by transfer of waste to an authorized recipient; by transfer to a specifically licensed recipient; or, as provided otherwise by specific condition of this license pursuant to the requirements of Part 3, Section 3.22 of the Regulations.
- E. Radioactive material authorized by Item 10 of this license shall be stored and used in a manner that will preclude possession or use by unauthorized personnel.
- F. The licensee shall ensure that information listed in this license is correct and accurate. The licensee shall notify the Department in writing within ten (10) days whenever the information contained in Items 1 through 7 above is no longer current or determined to be incorrect.
- G. The licensee may transport radioactive material or deliver radioactive material to a carrier for transport in accordance with the provisions of Part 17 of the Regulations and the requirements of U.S. Department of Transportation (49 CFR).
- H. The licensee shall not make any false statement, representation, or certification in any application, record, report, plan, or other document regarding radiation levels, tests performed or radiation safety conditions or practices.

Specific Radiation Safety Requirements:

- A. Each sealed source authorized in Item 10 of this license or in Section 7.19 of the Regulations shall be tested for leakage and/or contamination in accordance with the requirements of Section 7.20.2 of the Regulations, and Part 4, Section 4.16 of the Regulations, at intervals not to exceed six (6) months.

STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE

- B. The licensee shall acquire and maintain a current copy of the applicable Sealed Source and Device Registry Evaluation for each brachytherapy device/source in use by the licensee. Unless alternative operating procedures are specifically authorized by this license, the licensee shall comply with the safety precautions and limitations established in the applicable device registry evaluation.
- C. Authorized users of radioactive materials in Item 10.E and any authorized users subsequently approved for use, shall complete the Sirtex SIR-Spheres training prior to initial use.
- D. The Sirtex SIR-Spheres therapy device shall be used with the Delivery Set and Delivery Box in accordance with the manufacturers instructions.

2. Special License Requirements:

- A. Installation, relocation, maintenance, repair, leak testing and initial survey of devices that contain radioactive material and replacement, and disposal of sealed sources that contain radioactive material that is used in devices shall be performed only by the manufacturer, or by other persons who are specifically authorized by the U.S. Nuclear Regulatory Commission or an Agreement State having jurisdiction over the possession and use of accelerator produced radioactive material.

3. Licensee Commitments and Reference Documents:

The State of Colorado Rules and Regulations Pertaining to Radiation Control shall govern unless the licensee's statements, representations, and procedures contained in the application and correspondence are more restrictive than the Regulations. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Item 10 of this license in accordance with the statements, representations, and procedures contained in:

- A. the application and attachments dated March 30, 2009; and
- B. the license correspondence and attachments dated March 10, 2009; August 10, 2009; November 30, 2010; March 25, 2010 (email); March 29, 2010 (email); April 20, 2010 (email); and June 4, 2010.

FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Date: July 13, 2010 By: Jennifer T. Opila

STATE OF COLORADO

RADIOACTIVE MATERIALS LICENSE



Colorado Department
of Public Health
and Environment

Pursuant to the Colorado Radiation Control Act, Title 25, Article 11, Colorado Revised Statutes, and the State of Colorado Rules and Regulations Pertaining to Radiation Control (the Regulations), and in reliance on statements and representations heretofore made by the licensee designated below; a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive material(s) for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of the Colorado Department of Public Health and Environment and to any conditions specified below.

1. Licensee: Centura Health – Porter Adventist Hospital
2. Mailing Address: 2525 South Downing Street, Denver, Colorado 80210
3. License Number: Colo. 210-01, Amendment No: 101
4. Expiration date: September 30, 2013
5. Authorized Storage/Use Location: 2525 South Downing Street, Denver, Colorado 80210
6. The Designated Radiation Safety Officer is: Daniel Marvel, M.S.
The Designated Alternate Radiation Safety Officers are: Michael J. Bailey, M.S.; Stephanie Franz, M.S.; Gregory Lee Gibbs, M.S.; Richard McKeown, M.S.; Shawn Meyer, M.S.; Jennifer Stickel, Ph.D.; and Gerald A. White, M.S.
7. Radiation Safety Officer Contact Number: (303) 506-2461
8. Fee Category: 7.C
9. Reference Number:

CONDITIONS

10. Authorized Radioactive Material and Uses:

- A. The licensee is authorized to possess and use any unsealed radioactive material for uptake, dilution, or excretion studies which has been prepared for medical use in accordance with the requirements of Section 7.30 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.

STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE

- B. The licensee is authorized to possess and use any unsealed radioactive material for imaging and localization studies which has been prepared for medical use in accordance with the requirements of Section 7.32 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
 - i. This authorization includes radioactive aerosols and gases in accordance with Section 7.34 of the Regulations.
 - ii. This authorization includes positron-emitting isotopes
- C. The licensee is authorized to possess and use any unsealed radioactive material for which a written directive is required which has been prepared for medical use in accordance with the requirements of Section 7.36 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
 - i. Use limited to oral administration of ≤ 1.22 GBq (33 mCi) of I-131 Sodium Iodide in accordance with Section 7.36.3 of the Regulations
 - ii. Use limited to oral administration of > 1.22 GBq (33 mCi) of I-131 Sodium Iodide in accordance with Section 7.36.4 of the Regulations.
- D. The licensee is authorized to possess and use sealed sources in accordance with Section 7.40 of the Regulations for diagnosis. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
- E. The licensee is authorized to possess and use sealed sources in accordance with Section 7.42 of the Regulations for manual brachytherapy. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
- F. The licensee is authorized to possess and use no more than 30 GBq (810 mCi) of Y-90 microspheres for use in a Sirtex SIR-Spheres brachytherapy afterloader system in accordance with Section 7.62 of the Regulations. The total activity of Y-90 contained in each vial shall not exceed 4.89 GBq (132 mCi).
- G. The licensee is authorized to possess and use no more than 60 GBq (1620 mCi) of Y-90 microspheres for use in a MDS Nordion TheraSphere therapy device in accordance with Section 7.62 of the Regulations. The total activity of Y-90 contained in each vial shall not exceed 20 GBq (540 mCi).
- H. The licensee is authorized to possess and use 2 sealed sources in accordance with Section 7.48 of the Regulations for use in a Varian Medical Systems transportable VariSource HDR Remote Afterloading Brachytherapy Unit. The total activity shall not exceed 777 GBq (21 Ci) of Ir-192. The source activity may not exceed 370 GBq (10 Ci) at the time of installation.

STATE OF COLORADO

RADIOACTIVE MATERIALS LICENSE

- I. The licensee is authorized to possess and use not more than 37 GBq (1 Ci) of Gadolinium 153 (¹⁵³Gd) in North American Scientific model MED-3601 and Isotope Products Laboratory model NES-8412 sealed sources, for use in an ADAC Vantage Non-uniform Attenuation Correction System for attenuation correction determinations.
- J. The licensee is authorized to possess and use sealed sources containing not more than 2.4 GBq (65 mCi) of Germanium 68 (⁶⁸Ge) in sealed sources (GE Part No. 46-311375G1) in a GE PET Advance Attenuation Correction System for attenuation correction determinations.
- K. The licensee is authorized to possess and use any radioactive materials specified in Section 7.19 of the Regulations for check, calibration, and reference use.

11. Authorized Users:

- A. Radioactive material authorized in Item 10 shall be used by or under the supervision of the following authorized users as specified:

Name of Authorized User	Description of Materials Authorized
Simeon Abramson, M.D	10.A,10.B and 10.D
Scott R. Anderson, M.D	10.A,10.B and 10.D
Kim Baker, M.D.	10.A,10.B and 10.D
Richard J. Bellon, M.D.	10.A,10.B and 10.D
Ellen R. Blatt, M.D	10.A,10.B and 10.D
Janice Brenneman, M.D	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Lora Burke, D.O.	10.A, 10.B
Glen Burmeister, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Vernon M. Chapman, M.D.	10.A,10.B and 10.D
Keith Dangleis, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Mark Dennis, M.D.	10.A,10.B and 10.D
Malcolm Dobrow, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
James Dreisbach, M.D.	10.A,10.B and 10.D
William Dunfee, M.D.	10.A,10.B and 10.D
David Dungan, M.D.	10.A,10.B and 10.D
Andrew Fisher, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Matthew Fleishman, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Kristin Freestone, M.D.	10.A,10.B and 10.D
Donald Frei, M.D.	10.A,10.B and 10.D
Jeffrey Friedland, M.D.	10.A,10.B and 10.D
Laurence Gaynor, M.D.	10.A,10.B and 10.D
Jess Allen Graham, M.D.	10.A,10.B and 10.C.i, 10.C.ii
Dennis Griffin, M.D.	10.A,10.B and 10.D

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

Name of Authorized User	Description of Materials Authorized
Phillip Gunther, M.D.	10.A,10.B and 10.D
Steven Heiss, M.D.	10.A,10.B and 10.D
David Hollander, M.D.	10.A,10.B and 10.D
Kent Hootman, M.D.	10.A, 10.B
Orlin Woodie Hopper, M.D.	10.A,10.B, C i, ii and 10.D
Paul Hsieh, M.D.	10.A,10.B and 10.D
Daniel Huddle, D.O.	10.A,10.B and 10.D
Kevin Johnson, M.D.	10.A,10.B and 10.D
Bobby Konwoo Kang, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Jason Kelly, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Kevin Lampert, M.D.	10.A,10.B and 10.D
Sharmila Lingam-Nattamai, M.D.	10.A,10.B and 10.D
Kay Lozano, M.D.	10.A,10.B and 10.D
James Luethke, M.D.	10.A,10.B and 10.D
Eric Malden, M.D.	10.A,10.B and 10.D
Christopher McLaughlin, M.D.	10.A,10.B and 10.D
Charles Nutting, D.O.	10.A,10.B and 10.D
Richard Obregon, M.D.	10.A,10.B and 10.D
Michael Otte, M.D.	10.A,10.B and 10.D
Michael Payne, M.D.	10.A,10.B and 10.D
David Porter, M.D.	10.A,10.B and 10.D
Seth D. Reiner, M.D.	10.E, 10.F, 10.G and 10.H
Peter Ricci, M.D.	10.A,10.B and 10.D
John Roberts, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Allison Sandberg, M.D.	10.A, 10.B
Donald Schomer, M.D.	10.A,10.B and 10.D
Stanley Smazal, M.D.	10.A,10.B and 10.D
Andrew Sonin, M.D.	10.A,10.B and 10.D
William Steines, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Jerome Sutherland, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Samuel Wang, M.D.	10.A,10.B, 10.C.i, 10.C.ii and 10.D
Shane Wheeler, M.D.	10.A, 10.B
Donald Yee, M.D.	10.A,10.B and 10.D

- B. Radioactive material authorized in Item 10.I, 10.J, and 10.K may be used by or under the supervision of any of the authorized users listed above and by the designated Radiation Safety Officer, alternate RSOs, and authorized medical physicists listed on this license.

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RADIOACTIVE MATERIALS LICENSE

- C. The following individual is designated as authorized medical physicist for: A) therapeutic use of unsealed radioactive materials; B) manual Brachytherapy; C) Low Dose Rate (LDR) Brachytherapy; D) Medium Dose Rate (MDR) Brachytherapy; E) High Dose Rate (HDR) Brachytherapy: Greg Chaney, M.S.
- D. The following individual is designated as authorized medical physicist for: A) High Dose Rate (HDR) Brachytherapy: Arnold Z. Cohen, M.S.
- E. The following individuals are designated as authorized medical physicists for: A) SIRTEX SIRSPHERES; and B) MDS NORDION THERASPHERES: Daniel Marvel, M.S., Shawn Meyer, M.S., Gayle Harnish, M.S.
- F. The Radiation Safety Officer shall maintain documentation of the training and experience for each authorized user of radioactive materials. This documentation shall include for each user: a copy of the applicable board certifications, preceptor statements, and any other relevant training documents.

12. General Requirements:

- A. The licensee shall comply with the all applicable provisions of the Regulations including: Part 1, "General Provisions"; Part 3, "Licensing of Radioactive Material"; Part 4, "Standards for Protection Against Radiation"; Part 7, "Use of Radionuclides in the Healing Arts"; Part 10, "Notices, Instructions and Reports to Workers; Inspections"; and Part 17, "Transportation of Radioactive Material".
- B. The Radiation Safety Officer shall maintain documentation of the training and experience for each person who uses radioactive materials under the supervision of an authorized user.
- C. Each person who uses radioactive material under the supervision of an authorized user shall be supervised and receive instruction in accordance with the requirements of Section 7.10 and Section 10.3 of the Regulations.
- D. The licensee shall not transfer possession and/or control of radioactive materials or items contaminated with radioactive material except: by transfer of waste to an authorized recipient; by transfer to a specifically licensed recipient; or, as provided otherwise by specific condition of this license pursuant to the requirements of Part 3, Section 3.22 of the Regulations.
- E. Radioactive material authorized by Item 10 of this license shall be stored and used in a manner that will preclude possession or use by unauthorized personnel.

STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE

- F. The licensee shall ensure that information listed in this license is correct and accurate. The licensee shall notify the Department in writing within ten (10) days whenever the information contained in Items 1 through 7 above is no longer current or determined to be incorrect.
- G. The licensee may transport radioactive material or deliver radioactive material to a carrier for transport in accordance with the provisions of Part 17 of the Regulations and the requirements of U.S. Department of Transportation (49 CFR).
- H. The licensee shall not make any false statement, representation, or certification in any application, record, report, plan, or other document regarding radiation levels, tests performed or radiation safety conditions or practices.

13. Specific Radiation Safety Requirements:

- A. Each sealed source authorized in Item 10 of this license or in Section 7.19 of the Regulations shall be tested for leakage and/or contamination in accordance with the requirements of Section 7.20.2 of the Regulations, and Part 4, Section 4.16 of the Regulations, at intervals not to exceed six (6) months.
- B. Source installation and maintenance of the HDR device authorized in Item 10.H shall be performed in accordance with Section 7.49 of the Regulations.
- C. Authorized users of radioactive materials in Item 10.F, authorized users subsequently approved for use, and any designated authorized medical physicists, shall complete the Sirtex SIR-Spheres training prior to initial use.
- D. The Sirtex SIR-Spheres therapy device shall be used with the Delivery Set and Delivery Box in accordance with the manufacturer's instructions.
- E. Authorized users of radioactive materials in Item 10.G, authorized users subsequently approved for use, and any designated authorized medical physicists, shall complete the MDS Nordion TheraSphere Radiotherapy System training program prior to initial use.
- F. The MDS Nordion TheraSphere system shall be used with the Administration Set and Accessory Kit in accordance with the manufacturer's instructions. Only the MONARCH 25 syringe should be used with the Administration Set in accordance with the manufacturer's instructions.
- G. The MDS Nordion TheraSphere Radiotherapy System is approved by the U.S. Food and Drug Administration under the provisions of a Humanitarian Device Exemption (HDE No. H9800006). Therefore, an Institutional Review Board is required to approve and monitor the use of the TheraSphere device.

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

- H. The licensee is authorized to transport radioactive material that is authorized in Item 10.H to and from other licensed facilities in Colorado that are authorized for use of this material in the VariSource HDR Remote Afterloading Brachytherapy Unit. The licensee shall maintain records appropriate for the transfer of radioactive material between licensees and shall provide a transfer schedule to this Department upon request.
- I. Leak tests of the sealed sources in the VariSource HDR remote afterloading brachytherapy device are not required prior to transfer between hospitals, provided that: transfer is made in anticipation of, or after a scheduled use for therapy; all leak tests that are otherwise required have been performed on schedule and the results are satisfactory; and, sealed sources have not been removed from the device since their most recent leak test.
- J. The licensee is authorized to use radioactive material in Items 10.A, 10.B and 10.H in research protocols as described in the licensee's correspondence to the Department dated April 2, 2007.
- K. The licensee shall acquire and maintain a current copy of the applicable Sealed Source and Device Registry Evaluation for each brachytherapy device/source in use by the licensee. Unless alternative operating procedures are specifically authorized by this license, the licensee shall comply with the safety precautions and limitations established in the applicable device registry evaluation.

14. Licensee Commitments and Reference Documents:

The State of Colorado Rules and Regulations Pertaining to Radiation Control shall govern unless the licensee's statements, representations, and procedures contained in the application and correspondence are more restrictive than the Regulations. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Item 10 of this license in accordance with the statements, representations, and procedures contained in:

- A. the application and attachments dated August 28, 2008; and
- B. the license correspondence and attachments dated August 29, 2008; November 17, 2008 (email); November 18, 2008 (email); December 3, 2008 (email); December 12, 2008 (email); March 10, 2009; August 10, 2009 (two documents received August 25, 2009 and September 10, 2009); and April 26, 2010.

FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Date: _____ By: _____

STATE OF COLORADO

Bill Ritter, Jr., Governor
Martha E. Rudolph, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S. Laboratory Services Division
Denver, Colorado 80246-1530 8100 Lowry Blvd.
Phone (303) 692-2000 Denver, Colorado 80230-6928
TDD Line (303) 691-7700 (303) 692-3090
Located in Glendale, Colorado
<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

JUL 13 2010

Rocky Mountain Cancer Centers of Colorado
7951 East Maplewood Avenue, Suite 300
Greenwood Village, Colorado 80111

Attention: Bruce I. Goshorn, M.S., Radiation Safety Officer

Re: License Amendment
Colorado Radioactive Materials License Number Colo. 1012-01

Enclosed is Radioactive Materials License Number Colo. 1012-01, Amendment No. 23. The license has been amended as requested in correspondence from Bruce I. Goshorn, M.S. and Elaine McDonald dated June 23, 2010. Please review this document thoroughly.

Additionally, your license has been amended based on Departmental changes to the appearance and content of licenses. While most changes are of a formatting nature, there are also requirements that have been added, strengthened, or clarified in the license. Also, in some instances, license conditions may have been removed from the license where equivalent requirements have been incorporated into the Regulations. Again, we encourage you to review the license thoroughly and contact us should you have questions.

Please note that the mailing address, use location(s), maximum quantities of radioactive materials, and the radiation safety officer are specific conditions of your license. If you have questions about making changes to your licensed activities, please contact the Radiation Management Unit to discuss the requirements for an amendment of your license.

If you have any questions regarding this letter or your license please contact James DeWolfe at 303-692-3444 or james.dewolfe@state.co.us. Additional questions or comments can be directed to me at 303-692-3403 or jennifer.opila@state.co.us.

Jennifer T. Opila, Unit Leader
Radiation Management Unit
Hazardous Materials and Waste Management Division

Enclosure: Colo. 1012-01, Amendment No. 23

STATE OF COLORADO

RADIOACTIVE MATERIALS LICENSE



Colorado Department
of Public Health
and Environment

Pursuant to the Colorado Radiation Control Act, Title 25, Article 11, Colorado Revised Statutes, and the State of Colorado Rules and Regulations Pertaining to Radiation Control (the Regulations), and in reliance on statements and representations heretofore made by the licensee designated below; a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive material(s) for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders now or hereafter in effect of the Colorado Department of Public Health and Environment and to any conditions specified below.

1. Licensee: Rocky Mountain Cancer Centers of Colorado
2. Mailing Address: 7951 East Maplewood Avenue, Suite 300
Greenwood Village, Colorado 80111
3. License Number: Colo. 1012-01, Amendment Number 23
4. Expiration date: May 31, 2011
5. Authorized Storage/Use Location(s): See Condition 14
6. The Designated Radiation Safety Officer is: Bruce I. Goshorn, M.S.
The Designated Alternate Radiation Safety Officer(s) are: Stephen R. Armour, M.S.;
Timothy Johnson, Ph.D. and Michael Tallhamer, M.S.
7. Radiation Safety Officer Contact Number: (303) 730-4700
8. Fee Category: 7.C
9. Reference Number: PET

CONDITIONS

10. Authorized Radioactive Material and Uses:

- A. The licensee is authorized to possess and use any unsealed Positron Emitting radioactive material for uptake, dilution, or excretion studies which has been prepared for medical use in accordance with the requirements of Section 7.30 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.

STATE OF COLORADO

RADIOACTIVE MATERIALS LICENSE

- B. The licensee is authorized to possess and use any unsealed Positron Emitting radioactive material for imaging and localization studies which has been prepared for medical use in accordance with the requirements of Section 7.32 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
- C. The licensee is authorized to possess and use any unsealed radioactive material for which a written directive is required which has been prepared for medical use in accordance with the requirements of Section 7.36 of the Regulations. The licensee shall not possess more than 370 GBq (10 Ci) of these materials at any one time.
 - i. Use limited to oral administration of ≤ 1.22 GBq (33 mCi) of I-131 Sodium Iodide in accordance with Section 7.36.3 of the Regulations
 - ii. Use limited to oral administration of > 1.22 GBq (33 mCi) of I-131 Sodium Iodide in accordance with Section 7.36.4 of the Regulations
 - iii. Use limited to parenteral administration in accordance with Section 7.36.5 of the Regulations.
- D. The licensee is authorized to possess and use not more than 4 sealed source(s) for patient attenuation corrections and for Positron Emission Tomography (PET) camera quality control as part of the GE Discovery ST PET scanner. Each sealed source contains not more than 55.5 MBq (1.5 mCi) of Germanium-68 (^{68}Ge).
- E. The licensee is authorized to possess and use any radioactive materials specified in Section 7.19 of the Regulations for check, calibration, and reference use.

11. Authorized Users:

- A. Radioactive material authorized in Item 10 shall be used by or under the supervision of the following authorized users as specified:

Name of Authorized User	Description of Materials authorized
Norman O. Aarestad, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Andrew G. Antell, M.D.	10.C.i, 10.C.ii, 10.C.iii
Christopher R. Bartlett, M.D.	10.A, 10.B
Matthew H. Blomquist, M.D.	10.A, 10.B
Eric Bode, M.D.	10.A, 10.B
Charles R. Bowles, M.D.	10.A, 10.B
Carlos A. Cardenas, M.D.	10.A, 10.B
Bert R. Carrollo, M.D.	10.A, 10.B
Dennis L. Carter, M.D.	10.C.i, 10.C.ii
Daniel T. Chin, M.D.	10.C.iii
Paul V. Connaughton, M.D.	10.A, 10.B

**STATE OF COLORADO
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Name of Authorized User	Description of Materials authorized
Keith C. Dangleis, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
William E. Daniel, M.D.	10.C.i, 10.C.ii
Lawrence L. Emmons, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Richard M. Finer, M.D.	10.A, 10.B
Matthew J. Fleishman, M.D.	10.A, 10.B and 10.C.i, 10.C.ii
Alexandra A. Fortner, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Garret M. Gannuch, M.D.	10.A, 10.B
John P. Gerhold, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Monte E. Golditch, M.D.	10.A, 10.B
Warren D. Goldstein, M.D.	10.A, 10.B
David Gordon Goodbee, M.D.	10.A, 10.B
Brenda C. Grabb, M.D.	10.A, 10.B
Jess Allen Graham, M.D.	10.A, 10.B
Stacy L. Greenspan, D.O.	10.A, 10.B
Philip B. Gunther, M.D.	10.A, 10.B
Hilarie Joyce Gutierrez, M.D.	10.A, 10.B
Horacio Gutierrez, M.D.	10.A, 10.B
Robert E. Helgans, M.D.	10.A, 10.B
Orlin W. Hopper II, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Kathryn T. Howell, M.D.	10.C.iii
Steven R. Hughes, M.D.	10.A, 10.B
Gustavo L. Isuani, M.D.	10.A, 10.B
Robert J. Johnston, M.D.	10.A, 10.B
Jennifer L. Kemp, M.D.	10.A, 10.B
Paul D. King, M.D.	10.A, 10.B
William C. Klingensmith III, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Craig M. Kornbluth, M.D.	10.A, 10.B
Christine Anne Lamoureux, M.D.	10.A, 10.B
Robert M. LaPorte, M.D.	10.C.i, 10.C.ii
Charles E. Leonard, II, M.D.	10.C.i, 10.C.ii
Matthew A. Lowery, M.D.	10.A, 10.B
Karl E. Magsamen, M.D.	10.A, 10.B
Jie Mao, M.D.	10.A, 10.B
Lee K. McNeely, M.D.	10.C.i, 10.C.ii
Brian K. Metz, M.D.	10.A, 10.B
Stephen M. Miller, M.D.	10.A, 10.B
Roger D. Nichols, M.D.	10.A, 10.B
Christopher A. Nusser, M.D.	10.A, 10.B
David A. Oppenheimer, M.D.	10.A, 10.B
Meera Patel, M.D.	10.C.iii

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Name of Authorized User	Description of Materials authorized
Nicole L. Restauri, M.D.	10.A, 10.B
Bradford J. Robinson, M.D.	10.A, 10.B
Barry A. Schoelch, D.O.	10.A, 10.B
Chad C. Schooley, M.D.	10.A, 10.B
Robert H. Sherrier, M.D.	10.A, 10.B
Scott Smith, M.D.	10.A, 10.B
Thomas D. Suby-Long, M.D.	10.A, 10.B
Jerome D. Sutherland, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Sachin Kumar Talusani, M.D.	10.A, 10.B
Andrew S. Tanner, M.D.	10.C.iii
William Brent Wahl, M.D.	10.A, 10.B
Samuel C. Wang, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Wayne W. Wenzel, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Nicholas Wickersham, M.D.	10.A, 10.B
James P. Wilson, M.D.	10.A, 10.B, 10.C.i, 10.C.ii
Karl A. Wolff, M.D.	10.A, 10.B
J. Werner Ziegler, M.D.	10.A, 10.B

- B. Radioactive material authorized in Items 10.D and 10.E may be used by or under the supervision of any of the authorized users listed above and by the designated Radiation Safety Officer and alternate RSOs listed on this license.
- C. The following individuals are designated as authorized medical physicists for: A) therapeutic use of unsealed radioactive materials: Stephen R. Armour, M.S.; Bruce I. Goshorn, M.S; Timothy Johnson Ph.D; Michael Tallhamer, M.S.
- D. The Radiation Safety Officer shall maintain documentation of the training and experience for each authorized user of radioactive materials. This documentation shall include for each user: a copy of the applicable board certifications, preceptor statements, and any other relevant training documents.

12. General Requirements:

- A. The licensee shall comply with the all applicable provisions of the Regulations including: Part 1, "General Provisions"; Part 3, "Licensing of Radioactive Material"; Part 4, "Standards for Protection Against Radiation"; Part 7, "Use of Radionuclides in the Healing Arts"; Part 10, "Notices, Instructions and Reports to Workers; Inspections"; and Part 17, "Transportation of Radioactive Material".
- B. The Radiation Safety Officer shall maintain documentation of the training and experience for each person who uses radioactive materials under the supervision of an authorized user.

STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE

- C. Each person who uses radioactive material under the supervision of an authorized user shall be supervised and receive instruction in accordance with the requirements of Section 7.10 and Section 10.3 of the Regulations.
- D. The licensee shall not transfer possession and/or control of radioactive materials or items contaminated with radioactive material except: by transfer of waste to an authorized recipient; by transfer to a specifically licensed recipient; or, as provided otherwise by specific condition of this license pursuant to the requirements of Part 3, Section 3.22 of the Regulations.
- E. Radioactive material authorized by Item 10 of this license shall be stored and used in a manner that will preclude possession or use by unauthorized personnel.
- F. The licensee shall ensure that information listed in this license is correct and accurate. The licensee shall notify the Department in writing within ten (10) days whenever the information contained in Items 1 through 7 above is no longer current or determined to be incorrect.
- G. The licensee may transport radioactive material or deliver radioactive material to a carrier for transport in accordance with the provisions of Part 17 of the Regulations and the requirements of U.S. Department of Transportation (49 CFR).
- H. The licensee shall not make any false statement, representation, or certification in any application, record, report, plan, or other document regarding radiation levels, tests performed or radiation safety conditions or practices.

13. Specific Radiation Safety Requirements:

- A. Each sealed source authorized in Item 10 of this license or in Section 7.19 of the Regulations shall be tested for leakage and/or contamination in accordance with the requirements of Section 7.20.2 of the Regulations, and Part 4, Section 4.16 of the Regulations, at intervals not to exceed six (6) months.
- B. In addition to the other requirements of Part 7 of the Regulations, mobile medical service licensees shall conduct operations in accordance with Section 7.3.5 and 7.27 of the Regulations unless otherwise authorized in writing by the Department.
- C. The licensee shall post the telephone number(s) of the Radiation Safety Officers and authorized users in the mobile coach for emergency notification.
- D. An authorized user listed in condition 11 of this license shall be responsible for approving in writing the patient schedule prior to initiating scans and shall be responsible for the supervision of technologists operating under this license at that location.

STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE

14. Special License Requirements:

- A. Installation, relocation, maintenance, repair, leak testing and initial survey of devices that contain radioactive material and replacement, and disposal of sealed sources that contain radioactive material that is used in devices shall be performed only by the manufacturer, or by other persons who are specifically authorized by the U.S. Nuclear Regulatory Commission or an Agreement State having jurisdiction over the possession and use of accelerator produced radioactive material.
- B. The licensee is authorized to operate not more than 2 mobile unit(s) within the state of Colorado at any one time.
- C. Radioactive materials authorized by Conditions 10.A; 10.B; 10.C.iii, 10.D, and 10.E may be used and stored at the following location:
 - i. Rocky Mountain Cancer Center - Boulder
4715 Arapahoe Avenue, Boulder, Colorado 80303
- D. Radioactive materials authorized by Conditions 10.A through 10.E. may be used and stored at the following locations:
 - i. Rocky Mountain Cancer Center - Colorado Springs
3027 North Circle Drive, Colorado Springs, Colorado 80909
 - ii. Rocky Mountain Cancer Center - Denver
1800 Williams Street, Denver, Colorado 80218
- E. Radioactive materials authorized by Conditions 10.A; 10.B, 10.D, and 10.E may be used and stored in either of (2) PET mobile coaches at the following locations:
 - i. Rocky Mountain Cancer Center - Aurora
1700 South Potomac Street, Aurora, Colorado 80011
 - ii. Rocky Mountain Cancer Center - Lakewood
34 Van Gordon Street, Lakewood, Colorado 80228
 - iii. Rocky Mountain Cancer Center - Littleton
22 West Dry Creek Circle, Littleton, Colorado 80120
 - iv. Rocky Mountain Cancer Center - Thornton
8820 Huron Street, Thornton, Colorado 80260
 - v. Rocky Mountain Cancer Center - Denver
1800 Williams Street, Denver, Colorado 80218
 - vi. Rocky Mountain Cancer Center - Colorado Springs
3027 North Circle Drive, Colorado Springs, Colorado 80909
 - vii. Rocky Mountain Cancer Center- Longmont
1382 Tulip Street, Longmont, Colorado 80501
 - viii. Rocky Mountain Cancer Center- Lone Tree
10103 Ridge Gate Parkway, Lone Tree, Colorado 80124

**STATE OF COLORADO
RADIOACTIVE MATERIALS LICENSE**

- F. Unused patient doses and PET materials may also be stored for decay in the designated areas within any of the facilities that are listed in License Conditions 14.C through 14.E.
- G. The licensee shall maintain a use log in the mobile coach indicating the authorized user, nuclear medicine technologist, the date, and location of use.

15. Licensee Commitments and Reference Documents:

The State of Colorado Rules and Regulations Pertaining to Radiation Control shall govern unless the licensee's statements, representations, and procedures contained in the application and correspondence are more restrictive than the Regulations. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Item 10 of this license in accordance with the statements, representations, and procedures contained in:

- A. the application and attachments dated May 4, 2006; and
- B. the license correspondence and attachments dated July 1, 2006; October 30, 2006; November 30, 2006; December 14, 2006; April 6, 2007; April 25, 2007; July 16, 2008; August 20, 2008; January 13, 2009; February 2, 2009 (fax); February 9, 2009; March 6, 2009; September 21, 2009 (email); October 1, 2009; October 19, 2009; April 26, 2010; June 23, 2010; and July 6, 2010 (2 emails).

FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Date: July 13, 2010 By: Jennifer T. Opila

1. In accordance with BAMC Memo 40-72, USNRC License 42-01368-01, and Army Radioisotope Authorization 42-01-16 the BAMC Radiation Control Committee (RCC) issues the following Radioactive Material Permit:

- a. Permit Number: **NM-JG-1**
- b. Permit Expiration Date: **Jun 2008**
- c. Permitted Individual: **LTC Jess A. Graham**
- d. Permitted Activities: **Authorized User (AU)** IAW Title 10 CFR Part 35.

2. Permitted individual is responsible for complying with the requirements of Title 10, Code of Federal Regulations, USNRC License 42-01368-01, Army Radioisotope Authorization 42-01-16, BAMC Memo No. 40-72, established operating procedures, and the conditions of this permit.

3. The permitted individual is authorized to prescribe, prepare and administer radiopharmaceuticals for medical research, medical diagnosis, and therapy as specified below:

a.	10 CFR 35.100	Medical Use of Unsealed Byproduct Material for Uptake, Dilution, and Excretion Studies for Which a Written Directive is Not Required
b.	10 CFR 35.200	Medical Use of Unsealed Byproduct Material for Imaging and Localization Studies for Which a Written Directive is Not Required
c.	10 CFR 35.300	Medical Use of Unsealed Byproduct Material for Which a Written Directive is Required
d.	10 CFR 35.500	Medical Use of Sealed Sources for Diagnosis

4. All administration of radiopharmaceuticals will be performed by the permitted individual, an individual supervised by the Chief, Nuclear Medicine Service IAW 35.27, or a student under the direct control of the permitted individual or a supervised individual.

5. Students administering radiopharmaceuticals shall be under the direct control of an individual authorized to administer radiopharmaceuticals. Direct control requires that the authorized individual observe and control every aspect of the student's actions. The authorized individual is responsible for the action and omission of the individual under their direct control.

6. The permitted individual shall immediately report unsafe conditions, loss of accountability of radioactive materials, or violations of operating procedures, regulatory requirements, or the conditions of this permit to the Radiation Safety Officer.

7. The BAMC RCC determined the permitted individual met the training and experience requirement of the USNRC as evidenced by Amendment 29 to USNRC License No. 42-19113-01, issued Apr 29, 2003, which listed the permitted individual as an Authorized User for the uses listed in 3.a thru 3.c above and for diagnostic uses of sealed sources.

APPROVED BY THE RCC electronically in: JUN 07 (RCC-0607-005):



MICHAEL T. WALKINGSTICK

CPT, MS

Recorder, Radiation Control Committee

DATE: 1 JUN 2007

Enclosure 3

American Board of Radiology Certification and Preceptor Statement for Dr. Brent Tinnel

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

Brent Allan Tinnel, MD

*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 fifth day of June, 2007

*Thereby demonstrating to the satisfaction of the Board
that he is qualified to practice the specialty of*

Radiation Oncology

AM Eligible



Certificate No. 55905

Ray O. Anderson, MD
President

Lith Eichen
Secretary-Treasurer

R.P. Hatten, MD
Executive Director



Valid through 2017

H02

NRC FORM 313A
(10-2002)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB. NO. 3150-0120
EXPIRES: 10/31/2005

TRAINING AND EXPERIENCE AND PRECEPTOR STATEMENT

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 regulations.

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

Brent A Tinnel, MD

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

Virginia

3. CERTIFICATION

Specialty Board	Category	Month and Year Certified

Stop here when using Board Certification to meet 10 CFR Part 35 training and experience requirements.

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

Description of Training	Location	Clock Hours	Dates of Training
Radiation Physics and Instrumentation	Indiana University School of Medicine, Radiation Oncology Department, Indianapolis, IN	30	7/1/02 - 6/30/06
Radiation Protection	Indiana University School of Medicine, Radiation Oncology Department, Indianapolis, IN	5	7/1/02 - 6/30/06
Mathematics Pertaining to the Use and Measurement of Radioactivity	Indiana University School of Medicine, Radiation Oncology Department, Indianapolis, IN	22	7/1/02 - 6/30/06
Radiation Biology	Indiana University School of Medicine, Radiation Oncology Department, Indianapolis, IN	40	7/1/02 - 6/30/06
Chemistry of Byproduct Material for Medical Use	Indiana University School of Medicine, Radiation Oncology Department, Indianapolis, IN	6	7/1/02 - 6/30/06
OTHER 1) Radiation Treatment planning and applications. 2) Radiation (Patient) Dosimetry	1) Radiation Oncology Department, Indiana University School of Medicine, Indianapolis, IN 2) Radiation Oncology Department, Indiana University School of Medicine, Indianapolis, IN	1) 200 2) 100	7/1/02 - 6/30/06

TRAINING AND EXPERIENCE AND PRECEPTOR STATEMENT (continued)

5a. WORK EXPERIENCE WITH RADIATION

Description of Experience	Name of Supervising Individual(s)	Location and Corresponding Materials License Number	Dates and Clock Hours of Experience
Ordering, Receiving, & Unpacking Materials, Safety & Performing Survey	Radiation Safety Office	13-02752-03	July 1, 02 - June 30, 06
Checking Survey Meters for Proper Operation & Performing Measurements	Radiation Safety Office & Medical Physics	13-02752-03	7/1/02 - 6/30/06
Preparing, implanting, and removing sealed sources	Radiation Safety Office, Rad Onc Medical physics, Rad Onc Authorized Users	13-02752-03	7/1/02 - 6/30/06
Maintaining running inventories of material on hand	Rad Onc Medical Physics Staff	13-02752-03	7/1/02 - 6/30/06
Using administrative controls to prevent a medical event involving byproduct material	Radiation Safety Office, Rad Onc Medical Physics Staff, Rad Onc Authorized Users	13-02752-03 13-02752-08	7/1/02 - 6/30/06
Using/Implementing emergency procedures to control byproduct material and/or respond to abnormal operation of a rad device	Radiation Safety Office, Rad Onc med physics Staff, Rad Onc Auth Users, Device Vendors	13-02752-03 13-02752-08	7/1/02 - 6/30/06
Review of the full calibration measurements and periodic spot-checks	Rad Onc Medical Physics Staff	13-02752-03 13-02752-08	7/1/02 - 6/30/06
Preparing treatment plans and calculating treatment times	Rad Onc Medical Physics Staff; Rad Onc Authorized Users	13-02752-03 13-02752-08	7/1/02 - 6/30/06

5b. SUPERVISED CLINICAL CASE EXPERIENCE

Radionuclide	Type of Use	No. of Cases Involving Personal Participation*	Name of Supervising Individual	Location and Corresponding Materials License Number	Dates and Clock Hours of Experience
Ir-192, Cs-137, I-125	Manual; LDR Intraoperative	9 (200 hrs)	Drs Timmerman, Langer, Randall, Morphis, Cardenas, Deslauriers, Milbrary	13-02752-03	7/1/02 - 6/30/06
P 32	Intraperitoneal	2 (10 hrs)	Drs Randall & Cardenas	13-02752-03	7/1/02 - 6/30/06
Co-60	Teletherapy/TBI/Gamma-knife	11 (44 hrs)	Drs Timmerman, Langer, Randall, Morphis, Cardenas, Deslauriers, Milbrary, Lab	13-02752-03	7/1/02 - 6/30/06
Ir-192, Cs-137	LDR Intracavitary	12 (576 hrs)	Drs Timmerman, Langer, Randall, Morphis, Cardenas, Deslauriers, Milbrary	13-02752-03	7/1/02 - 6/30/06
Ir-192	HDR Intracavitary	23 (138 hrs)	Drs Timmerman, Langer, Randall, Morphis, Cardenas, Deslauriers, Milbrary	13-02752-03	7/1/02 - 6/30/06

* () = implies # of hours spent on brachytherapy cases

TRAINING AND EXPERIENCE AND PRECEPTOR STATEMENT (continued)

6. FORMAL TRAINING (applies to Medical Physicists and Therapy Physicians)

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)
Radiation Oncology	Indiana University School of Medicine, Radiation Oncology Department, Indianapolis, IN 13-02752-03 13-02752-08	1 July 2002 - 30 June 2006	Accreditation Council for Graduate Medical Education

7. RADIATION SAFETY OFFICER - ONE-YEAR FULL-TIME WORK EXPERIENCE

- ☐ YES Completed 1-year of full-time radiation safety experience (in areas identified in item 5a) under supervision of _____ the RSO for License No. _____
- ☐ N/A

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

- ☐ YES Completed 1-year of full-time training in therapeutic radiological physics under the supervision of _____ who meets requirements for Authorized Medical Physicists; and
- ☐ N/A
- ☐ YES Completed 1-year of full-time work experience (for areas identified in item 5a) for _____ who meets
- ☐ N/A modality(ies) under the supervision of _____ requirements of Authorized Medical Physicists for _____ modality(ies).

9. 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 35, provide the following information for each):

A. Name of Supervisor
Dr Mark Langer as Residency
Program Director on behalf of
facility

B. Supervisor is:

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

C. Supervisor meets requirements of Part 35, Section(s) 35.390, 35.440, 35.640, 35.930, 35.940, 35.960
for medical uses in Part 35, Section(s) 35.390 (intravascular, intraperitoneal P32), 35.440, 35.640.

D. Address

Indiana University Medical Center
541 Clinical Drive
Indianapolis, IN 46202-5111

E. Materials License Number

13-02752-03

13-02752-08

TRAINING AND EXPERIENCE AND PRECEPTOR STATEMENT (continued)

PART II -- PRECEPTOR STATEMENT

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 the training requirements in 10 CFR 35.590.

Item 10 must be completed for Nuclear Pharmacists meeting the requirements of 10 CFR Part 35, Subpart J. Preceptors do not have to complete items 11a, 11b, or the certifying statements for other individuals meeting the requirements of 10 CFR Part 35, Subpart J.

- ☒ YES 10. The individual named in item 1 has satisfactorily completed the training requirements in
☐ N/A 10 CFR 35.980 and is competent to independently operate a nuclear pharmacy.

- ☒ YES 11a. The individual named in item 1 has satisfactorily completed the requirements in Part 35, Section(s)
☐ N/A and Paragraph(s) 10 CFR 35.490.

- ☒ YES 11b. The individual named in item 1 is competent to independently function as an authorized
☐ N/A user for all human uses (or units).

12. PRECEPTOR APPROVAL AND CERTIFICATION

☐ I certify the approval of item 10 and certify I am an Authorized Nuclear Pharmacist;

or

☐ I certify the approval of items 11a and 11b, and certify I am an Authorized Nuclear Pharmacist;

or

☒ I certify the approval of items 11a and 11b, and I certify that I meet the requirements of 10 CFR 35.490
or equivalent Agreement State requirements to be a preceptor authorized user

for the following uses (or units) of byproduct material: treating cancer patients with
Brachytherapy

A. Address

WALTER REED ARMY MEDICAL CENTER
RADIATION ONCOLOGY SERVICE
6900 GEORGIA AVE., N.W.
WASHINGTON, D.C. 20307

B. Materials License Number

08-01738-02

C. NAME OF PRECEPTOR (print clearly)

DEAN A. GANT

D. SIGNATURE - PRECEPTOR



E. DATE

9/5/06

Enclosure 4

Letter from WRAMC approving Dr. Brent Tinnel as an Authorized User for NRC License 08-01738-02



DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WALTER REED HEALTH CARE SYSTEM
WASHINGTON, DC 20307-5001

Reply To
Attention of

MCHL-HP

1 December 2009

MEMORANDUM FOR Chief, Radiation Oncology, Attn: Brent A. Tinnel, MAJ, MC,
Department of Radiology, Walter Reed Army Medical Center, Washington, DC 20307-5001

SUBJECT: Authorization for Medical Use of Radioactive Material

1. I am pleased to inform you that the Radiation Safety Committee reviewed your credentials on 12 November 2009 and approved your status as an authorized user, 10 CFR 35.400, at Walter Reed Army Medical Center on Nuclear Regulatory Commission (NRC) License 08-01738-02.
2. NRC Form 313A documentation of training and experience meet the qualifications under 10 CFR 35.490.

MARK A. MELANSON
COL, MS
Radiation Safety Officer

Accounts Receivable/Payable and Regional Licensing Branches

Program Code: 02120
Status Code: Pending Amendment
Fee Category: 2B 3M 7C
Exp. Date:
Fee Comments:
Decom Fin Assur Req'd: N

A. REGION

Applicant/Licensee:	DEPARTMENT OF THE ARMY, MADIGAN ARMY MEDICAL CENTER
Received Date:	10/21/2010
Docket Number:	3003368
Mail Control Number:	573781
License Number:	46-02645-03
Action Type:	Amendment

Amount: _____

Check No.: _____

Signed: Colleen Murahan
Date: 10-29-2010

1. Fee Category and Amount:

Amendment: _____

Renewal: _____

License: _____

3. OTHER _____

Signed: _____

Date: _____

From: Origin ID: OLMA (253) 968-4302
Mr PHILIP CAMPBELL
MADIGAN ARMY MEDICAL CENTER
9040A FITZSIMMONS DR
HEALTH PHYSICS
TACOMA, WA 98431



Ship Date: 21OCT10
ActWgt: 1.0 LB
CAD: 8921629/INET3090

Delivery Address Bar Code



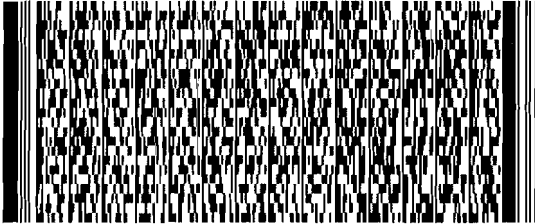
SHIP TO: (253) 968-4302 BILL SENDER
NUCLEAR MATERIALS LICENSING BRANCH
US NRC REGION 4
612 E LAMAR BLVD STE 400

Ref # MR CAMPBELL HEALTH PHYSICS
Invoice #
PO #
Dept #

ARLINGTON, TX 76011

TRK# 7963 6716 8242
0201

FRI - 22 OCT A1
STANDARD OVERNIGHT

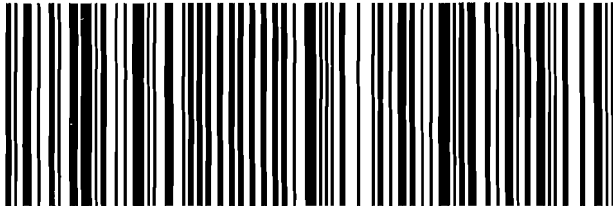


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This is to acknowledge the receipt of your letter/application dated
10-19-2010, and to inform you that the initial processing,
which includes an administrative review, has been performed.

11-09-2010
DATE

☒ There were no administrative omissions. Your application will be assigned to a technical reviewer. Please note that the technical review may identify other omissions or require additional information.

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

The action you requested is normally processed within 90 days.

☐ 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** 573781.
When calling to inquire about this action, please refer to this mail control number.
You may call me at (817) 860-8103.

Sincerely,

Colleen Murnahan
Licensing Assistant