

## ACCEPTANCE REVIEW MEMO (ARM)

**Licensee:** The Queen's Medical Center      **License No.:** 53-16533-02  
**Docket No.:** 030-14522      **Mail Control No.:** 471174  
**Type of Action:** Amend      **Date of Requested Action:** 10-30-06  
**Reviewer Assigned:**      **ARM reviewer(s):** Torres

*RTZ*

Response	Deficiencies Noted During Acceptance Review
	[ ] Open ended possession limits. Limit possession. Submit inventory. [ ] Submit copies of most recent leak test results. [ ] Add - delete IC license condition. Add IC paragraph in cover letter. [ ] Split license from cover letter. Add SUNSI marking to license. [ ] Ask the licensee if they have any type-amount of EPAct Material.

**Reviewer's Initials:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Yes  No      Unrestricted release Group 2 or >: Transfer memo to FCDB within 10 days.  
 Yes  No      Decommissioning notification should be completed within 30 days.  
 Yes  No      Termination request < 90 days from date of expiration  
 Yes  No      Expedite (medical emergency, no RSO, location of use/storage not on license, RAM in possession not on license, other)  
 Yes  No      TAR needed to complete action.

**Branch Chief's and/or Sr. HP's Initials:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**SUNSI Screening according to RIS 2005-31**

Yes  No      **Non-Publicly Available, Sensitive** if any item below is checked

General guidance:

- \_\_\_\_\_ RAM = or > than Category 3 (Table 1, RIS 2005-31), use Unity Rule
- \_\_\_\_\_ Exact location of RAM (whether = or > than Category 3 or not)
- \_\_\_\_\_ Design of structure and/or equipment (site specific)
- \_\_\_\_\_ Information on nearby facilities
- \_\_\_\_\_ Detailed design drawings and/or performance information
- \_\_\_\_\_ Emergency planning and/or fire protection systems

Specific guidance for medical, industrial and academic (above Category 3):

- \_\_\_\_\_ RAM quantities and inventory
- \_\_\_\_\_ Manufacturer's name and model number of sealed sources & devices
- \_\_\_\_\_ Site drawings with exact location of RAM, description of facility
- \_\_\_\_\_ RAM security program information (locks, alarms, etc.)
- \_\_\_\_\_ Emergency Plan specifics (routes to/from RAM, response to security events)
- \_\_\_\_\_ Vulnerability/security assessment/accident-safety analysis/risk assess
- \_\_\_\_\_ Mailing lists related to security response

**Branch Chief's and/or Sr. HP's Initials:** *RTZ* \_\_\_\_\_ **Date:** 11-22-06

## Pre-Licensing Screening

### Applicant Information:

Control No. 471174

Name: The Queen's Medical Center	Type of Request: Amend Program Code(s):
Location: HI	License No.: 53-16533-02      Docket No.: 030-14522

### STEP 1—Radioactive Materials and Quantities Requested:

<b>Instructions for Step 1: Complete Step 1 for all applications.</b> If all your responses in Step 1 are "No" then do not complete Step 2 (Screening Criteria). Sign and date the completed step-sheet and add it as the sensitive and non-publicly available OAR in ADAMS. If a "yes" response is indicated for any item in Step 1, also complete Step 2. If the type of use is subject to a Security Order or the requirements for increased controls, complete Step 3 (Item A or Item B) without delay.	Yes or No
A. The request is from a new applicant.	No
B. NUREG-1556, Volume 20, Section 4.9 indicates a licensing site visit is needed for the requested type of use, e.g., (1) Type A broad scope license, (2) panoramic irradiator containing > 10000 curies, (3) manufacturers or distributors using unsealed radioactive material or significant quantities of sealed material, (4) radioactive waste brokers, (5) radioactive waste incinerators, (6) commercial nuclear laundries, and (7) any other application that in the judgement of the reviewer and cognizant supervisor involves complex technical issues, complex safety questions, or unprecedented issues that warrant a site visit.	No
C. The applicant requested certain radionuclides and quantities that equal or exceed the Risk Significant Quantity (TBq) values in the table, below, that have been "highlighted" by the reviewer	No

### Table of Risk Significant Quantities

(Category 2 Quantities, IAEA Safety Guide No. RS-G-1.9, Categorization of Radioactive Sources, August 2005)

Radionuclide	Risk Significant Quantity (TBq <sup>1</sup> )	Risk Significant Quantity (Ci <sup>1</sup> )	Radionuclide	Risk Significant Quantity (TBq <sup>1</sup> )	Risk Significant Quantity (Ci <sup>1</sup> )
Am-241	0.6	16	Pm-147	400	11,000
Am-241/Be	0.6	16	Pu-238	0.6	16
Cf-252	0.2	5.4	Pu-239/Be	0.6	16
Cm-244	0.5	14	Ra-226 <sup>2</sup>	0.4	11
Co-60	0.3	8.1	Se-75	2	54
Cs-137	1	27	Sr-90 (Y-90)	10	270
Gd-153	10	270	Tm-170	200	5,400
Ir-192	0.8	22	Yb-169	3	81

<sup>1</sup> The primary values are TBq. The curie (Ci) values are for informational purposes only.  
<sup>2</sup> The Atomic Energy Act, as amended by the Energy Policy Act of 2005, authorizes NRC to regulate Ra-226 and NRC is in the process of amending its regulations for discrete sources of Ra-226.

Calculations of the Total Activity or the Unity Rule are attached to document whether or not the screening criteria in Step 2 were also completed to evaluate the application. <b>NOTE—If an amendment of an existing license is being requested, the calculations will include the previously authorized quantities for the radionuclide(s).</b>	Yes, No, or Not Applicable (NA)
Total Activity—multiple activities are requested for a single radionuclide and the sum of the activities equals or exceeds the quantity of concern for the radionuclide	—
Unity Rule—multiple radionuclides are requested and the sum of the ratios equals or exceeds unity, e.g., [(total activity for radionuclide A) ÷ (risk significant quantity for radionuclide A)] + [(total activity for radionuclide B) ÷ (risk significant quantity for radionuclide B)] ≥ 1.0.	—

#### Signature and Date for Step 1:

RTZ 11-22-06

License Reviewer and Date



# THE QUEEN'S MEDICAL CENTER

1301 Punchbowl Street • Honolulu, Hawaii 96813 • Phone (808) 538-9011 • FAX: (808) 547-4646 • www.queens.org

October 30, 2006

USNRC Region IV  
Attention: Rachel S. Browder  
Nuclear Materials Licensing Branch  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

RECEIVED

NOV 06 2006

DNMS

Docket: 030-14522  
License: 53-16533-02  
Control: 471135

Dear Rachel,

Thank you for your email dated 10/22/06 addressing the issues of having the Sr-90 eye applicator listed separately on our license and the physicians specifically authorized for use of the Sr-90 eye applicator for ophthalmic radiotherapy. As such, please amend our license accordingly for the following physicians as authorized users for materials and use of the Sr-90 eye applicator:

1. Vincent Brown, M.D., who is presently authorized for materials and uses identified in 10 CFR 35.400, 35.600, 35.1000 and meets the training for ophthalmic use of strontium-90 as identified in 10 CFR 35.491(a). (see attached)
2. Paul DeMare, M.D., who is presently authorized for materials and uses identified in 10 CFR 35.400, 35.600, 35.1000 and meets the training for ophthalmic use of strontium-90 as identified in 10 CFR 35.491(a). (see attached)
3. Thanh Huyhn, M.D., who is presently authorized for materials and uses identified in 10 CFR 35.400, 35.600, 35.1000 and meets the training for ophthalmic use of strontium-90 as identified in 10 CFR 35.491(a). (see attached)
4. John Lederer, M.D., who is presently authorized for materials and uses identified in 10 CFR 35.400, 35.600, 35.1000 and meets the training for ophthalmic use of strontium-90 as identified in 10 CFR 35.491(a). (see attached)
5. Christina Liu, M.D., who is presently authorized for materials and uses identified in 10 CFR 35.400, 35.600, 35.1000 and meets the training for ophthalmic use of strontium-90 as identified in 10 CFR 35.491(a). (see attached)

6. Laeton Pang, M.D., who is presently authorized for materials and uses identified in 10 CFR 35.400, 35.600, 35.1000 and meets the training for ophthalmic use of strontium-90 as identified in 10 CFR 35.491(a). (see attached)
7. Charles Yamashiro, M.D., who is presently authorized for materials and uses identified in 10 CFR 35.400, 35.600, 35.1000 and meets the training for ophthalmic use of strontium-90 as identified in 10 CFR 35.491(a). (see attached)

Our Radiation Safety Officer, Brian Oyadomari, can be reached at (808) 547-4597 or email at [boyado@queens.org](mailto:boyado@queens.org) for further information.

Sincerely,

A handwritten signature in black ink, appearing to read "Darlena Chadwick". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Darlena Chadwick  
Vice President, Professional Services

Attached: ABR certificates for items 1-7

#1

#1

# 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  
 and the American Society of Therapeutic Radiologists  
 Hereby certifies that

**Vincent Cook Brown, U. M.D.**

Has pursued an accepted course of graduate study  
 and clinical work, has met certain standards and qualifications and  
 has passed the examinations conducted under the authority of  
 The American Board of Radiology

On this eleventh day of June, 1977  
 Thereby demonstrating to the satisfaction of the Board  
 that he is qualified to practice the specialty of

**Therapeutic Radiology**

Sidney W. Nelson  
 President

C. Allen Good  
 Secretary



#2

#2

# 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  
and the Section on Radiology of the American Medical Association  
Hereby certifies that*

**Paul Arthur DeMare, M.D.**

*Has pursued an accepted course of graduate study  
and clinical work, has met certain standards and qualifications and  
has passed the examinations conducted under the authority of  
The American Board of Radiology*

**On this ninth day of June, 1972**

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

**Therapeutic Radiology**

*John F. Rouse*  
President

*C. Allen Good*  
Secretary



#3

#3

# 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  
and the American Society of Therapeutic Radiologists  
Hereby certifies that*

**Thank Van Hyngh, M.D.**

*Has pursued an accepted course of graduate study  
and clinical work, has met certain standards and qualifications and  
has passed the examinations conducted under the authority of  
The American Board of Radiology*

**On this seventh day of June, 1980**

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

**Therapeutic Radiology**

*C. Richard Long*

*C. Allen Good*



#4

# The American Board of Radiology

#4

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

*Hereby certifies that*

**John Leslie Lederer, M.D.**

*Has pursued an accepted course of graduate study  
and clinical work, has met certain standards and qualifications and  
has passed the examinations conducted under the authority of*

*The American Board of Radiology*

*On this seventh day of June, 1990*

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

**Radiation Oncology**

*Robert G. Parker*  
President

*James H. L. Zentgraf*  
Secretary



# 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*

**Pi-Ju Christina Liu, 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 third day of November, 1997*

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

**Radiation Oncology**



*Irish S. Cousser, MD.*  
President

*R.P. Hatten, MD*  
Secretary-Treasurer

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



Certificate No. 42618

Valid through 2007

# 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 Physicians in Medicine  
Hereby certifies that

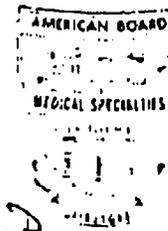
**Laeton James Pang**

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 ninth day of June, 1991

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



*Lea F. Rogers* MD  
President

*Justin J. Patten*  
Secretary

*M. Paul Cury* M.D.  
Executive Director

*M.D.*



DEC - 8 2006

DATE

This is to acknowledge the receipt of your letter/application dated 10-30-06, and to inform you that the initial processing, which includes an administrative review, has been performed.

- There were no administrative omissions. Your application will be assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.
- Please provide to this office within 30 days of your receipt of this card:

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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** 471174.  
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

(FOR LFMS USE)  
INFORMATION FROM LTS

Program Code: 02230  
Status Code: 0  
Fee Category: 7C 3E 3M  
Exp. Date: 20141231  
Fee Comments: CODE 23  
Decom Fin Assur Req'd: N

BETWEEN:  
License Fee Management Branch, ARM  
and  
Regional Licensing Sections

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED  
Applicant/Licensee: QUEEN'S MEDICAL CENTER, THE  
Received Date: 20061106  
Docket No: 3014522  
Control No.: 471174  
License No.: 53-16533-02  
Action Type: Amendment

2. FEE ATTACHED

Amount: \_\_\_\_\_  
Check No.: \_\_\_\_\_

3. COMMENTS

Signed *Colleen M. ...*  
Date 11-16-06

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / )

1. Fee Category and Amount: \_\_\_\_\_

2. Correct Fee Paid. Application may be processed for:

Amendment \_\_\_\_\_  
Renewal \_\_\_\_\_  
License \_\_\_\_\_

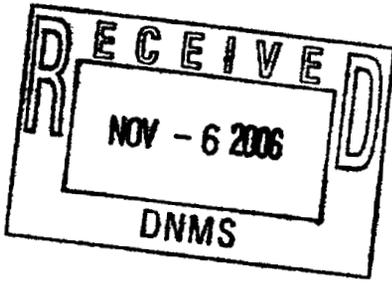
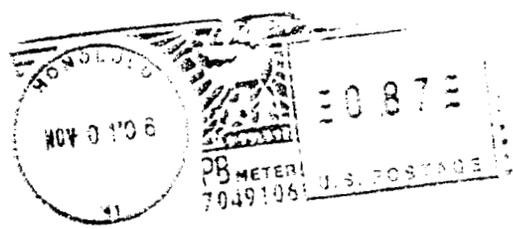
3. OTHER

\_\_\_\_\_  
\_\_\_\_\_

Signed \_\_\_\_\_  
Date \_\_\_\_\_

**The Queen's Medical Center  
ATTN: Brian Oyadomari  
Radiation Safety Officer  
1301 Punchbowl Street  
Honolulu, HI 96813**

**United States Nuclear Regulatory Commission  
Region IV  
ATTN: Rachel S. Browder  
Nuclear Materials Licensing Branch  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011**



**United States Nuclear Regulatory Commission  
Region IV  
ATTN: Rachel S. Browder  
Nuclear Materials Licensing Branch  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011**