

# ACCEPTANCE REVIEW MEMO (ARM)

Licensee: Billings Clinic

License No.: 25-01051-01

Docket No.: 030-02389

Mail Control No.: 471448

Type of Action: Amend

Date of Requested Action: 07-17-07

Reviewer  
Assigned:

ARM reviewer(s): Torres

Response	Deficiencies Noted During Acceptance Review
	<ul style="list-style-type: none"><li>[ ] Open ended possession limits. Limit possession. Submit inventory.</li><li>[ ] Submit copies of most recent leak test results.</li><li>[ ] Add - delete IC license condition. Add IC paragraph in cover letter.</li><li>[ ] Split license from cover letter. Add SUNSI marking to license.</li><li>[ ] Ask the licensee if they have any type-amount of EPAct Material.</li></ul>

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: AUG - 7 2007

# Pre-Licensing Screening

## Applicant Information:

Control No. 471448

Name: Billings Clinic	Type of Request: Amend Program Code(s):
Location: MT	License No.: 25-01051-01      Docket No.: 030-02389

## 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:

  
License Reviewer and Date

AUG - 7 2007



2800 Tenth Avenue North  
P.O. Box 37000  
Billings, Montana 59107-7000

July 17, 2007

Roberto J. Torres, Senior Health Physicist  
U.S. Nuclear Regulatory Commission, Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011  
817-860-8188

RECEIVED  
JUL 23 2007  
DNMS

Christopher K. Fitz, Radiation Safety Officer  
Billings Clinic Health System  
Department Of Nuclear Medicine  
2800 10<sup>th</sup> Ave. North  
P.O. Box 37000  
Billings, MT 59107

Re: Amendment Request for Billings Clinic License Number 25-01051-01

Mr. Torres, we request to add a new authorized user to our license. Please accept this letter and the supporting material to add Laura L. Ford-Mukkamala, DO, as an authorized user for 10 CFR 35.200 use of radioactive material. Dr. Ford-Mukkamala has completed certification from the Certification Board of Nuclear Cardiology.

If you require addition information please call me at 406-672-6756.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Fitz", followed by a horizontal line.

Christopher K. Fitz, J.D., M.S.  
Radiation Safety Officer

Cc: Peggy Wharton, VP Clinical Operations

THE CERTIFICATION BOARD OF NUCLEAR CARDIOLOGY  
Incorporated 1996  
CERTIFIES THAT

*Laura L. Ford-Mukkamala, DO*

HAVING MET THE REQUIREMENTS PRESCRIBED BY THIS BOARD FOR PHYSICIANS RESIDING  
IN THE UNITED STATES AND HAVING SATISFACTORILY PASSED THE REQUIRED EXAMINATION,

IS HEREBY DESIGNATED

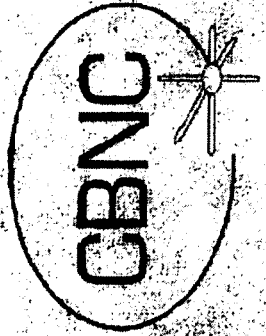
A DIPLOMATE CERTIFIED IN THE SUBSPECIALTY OF

**NUCLEAR CARDIOLOGY**

FOR THE PERIOD 2004 THROUGH 2014

*Paul D. Langreene*  
President

*[Signature]*  
Secretary



CERTIFICATE # 3304

OCTOBER 24, 2004

(FOR LFMS USE)  
INFORMATION FROM LTS

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Program Code: 00000
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Fields: 00000
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Fee Category: 00
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Exp. Date: 20150430
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Fee Comments: CODE 23
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Decom Fin Assur Req'd: N
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: See Comments: Code 20
: Decom Fin Assur Req'd: N
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