

## ACCEPTANCE REVIEW MEMO (ARM)

**Licensee:** Rapid City Regional Hospital, Inc.      **License No.:** 40-00238-04

**Docket No.:** 030-003231      **Mail Control No.:** 471231

**Type of Action:** Amend      **Date of Requested Action:** 12-31-06

**Reviewer Assigned:**      **ARM reviewer(s):** *Torres & Cook*

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

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

*RTK*

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) *by 1/31/07*  
 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:** *RTK*      **Date:** *1/11/07*

## Pre-Licensing Screening

### Applicant Information:

Control No. 471231

Name: Rapid City Regional Hospital, Inc.	Type of Request: Amend Program Code(s):
Location: SD	License No.: 40-00238-04      Docket No.: 030-003231

### 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.	
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.	
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	

### 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



**RAPID CITY  
REGIONAL HOSPITAL**

P.O. Box 6000 Rapid City, SD 57709 (605) 719-1000

RECEIVED

JAN 08 2007

DNMS

December 31, 2006

*RATC*  
U.S. Nuclear Regulatory Commission  
Regional IV  
611 Ryan Plaza Dr., Suite 400  
Arlington, TX 76011-4005

Attn: Nuclear Material Licensing Branch

RE: Rapid City Regional Hospital  
USNRC lic. No. 40-00238-04

Rapid City Regional Hospital is providing notification that effective January 1, 2007 Richard J. Crilly has been appointed temporary Radiation Safety Officer for the hospital. Richard Crilly is an authorized medical physicist listed on the license and has worked under the direction of the previous RSO, Edmund P. Cytacki for the last five years.

Rapid City Regional Hospital is also applying for an amendment to make Richard J. Crilly the permanent Radiation Safety Officer for the hospital. We would like an expedited review of this amendment request completed by January 31, 2007 if possible since the regulations allow only 60 days per year having a temporary RSO. Enclosed are the following documents supporting the amendment:

1. Form 313a documenting Richard J. Crilly's training and experience.
2. Delegation of authority document from the hospital administration appointing Richard J. Crilly RSO that is signed by him and a hospital administrator.
3. A copy of Richard J. Crilly's certification by the American Board of Medical Physics in Radiation Oncology Physicians. This is enclosed as a supplement documenting his qualification and not as the primary document for his training experience.

If you have any questions concerning this notification, please contact Paul Clemments, Director of the Cancer Care Institute at Rapid City Regional Hospital at 605-719-2314.

Sincerely yours,



Michael Gibbs  
Vice President – Professional Services

Radiation Safety Committee Meeting

12/14/06

New Business

I, Ed Cytacki, the current Radiation Safety Officer will be leaving Rapid City Regional Hospital effective January 2, 2007. I propose making Richard Crilly the temporary RSO and submitting an amendment to the NRC requesting expedited review making him the permanent RSO. RCRH has 30 days to notify the NRC of the change in RSO's and can have a temporary RSO for 60 days. I spoke with Rachel Browder, Health Physicist with the NRC, on 12-7-06 and she recommended making Rick the temporary RSO and applying for an expedited review by January 31 of an amendment making him the permanent RSO

Attached are the following:

1. Form 313a that I completed documenting his training and experience working with me as RSO.
2. A copy of our current NRC license listing Rick as an Authorized Medical Physicist.
3. A copy of Rick's American Board of Medical Physics certification as supplemental qualification to become the RSO.
4. A draft of a letter to the NRC notifying them of the change in RSO and applying for an amendment to make Rick the permanent RSO.
5. A draft of a letter giving Rick the authority to perform the RSO duties from the RCRH administration.

Submitted by: Edmund P. Cytacki, RSO

APPENDIX 1

- Audits of the radiation protection program are performed at least annually and documented;
- If violations of regulations, license conditions, or program weaknesses are identified, effective corrective actions are developed, implemented, and documented;
- Licensed material is disposed of properly;
- Appropriate records are maintained; and
- An up-to-date license is maintained and amendment and renewal requests are submitted in a timely manner.

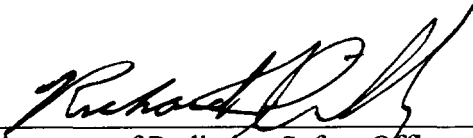
**Model Delegation of Authority**

Memo to: Richard J. Crilly, Radiation Safety Officer  
From: Michael Gibbs, Vice President – Professional Services  
Subject: Delegation of Authority

You, Richard J. Crilly, have been appointed Radiation Safety Officer and are responsible for ensuring the safe use of radiation. You are responsible for managing the radiation protection program; identifying radiation protection problems; initiating, recommending, or providing corrective actions; verifying implementation of corrective actions; stopping unsafe activities; and ensuring compliance with regulations. You are hereby delegated the authority necessary to meet those responsibilities, including prohibiting the use of byproduct material by employees who do not meet the necessary requirements and shutting down operations where justified by radiation safety. You are required to notify management if staff do not cooperate and do not address radiation safety issues. In addition, you are free to raise issues with the Nuclear Regulatory Commission at any time. It is estimated that you will spend 2-4 hours per week conducting radiation protection activities.

I accept the above responsibilities,

  
\_\_\_\_\_  
Signature of Management Representative

  
\_\_\_\_\_  
Signature of Radiation Safety Officer

1/3/07  
\_\_\_\_\_  
Date

1/3/07  
\_\_\_\_\_  
Date

cc: Affected department heads

**RADIATION SAFETY OFFICER TRAINING AND EXPERIENCE  
AND PRECEPTOR ATTESTATION  
[10 CFR 35.50]**

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

Name of Proposed Radiation Safety Officer

*Richard J. Crilly, Ph.D.*

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

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

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

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

**1. Board Certification**

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

OR

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

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

OR

**3. Structured Educational Program for Proposed Radiation Safety Officer**

a. Classroom and Laboratory Training

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

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

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

**b. Supervised Radiation Safety Experience (continued)**

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

Supervising Individual	License/Permit Number listing supervising individual as a Radiation Safety Officer
This license authorizes the following medical uses: <input type="checkbox"/> 35.100 <input type="checkbox"/> 35.200 <input type="checkbox"/> 35.300 <input type="checkbox"/> 35.400 <input type="checkbox"/> 35.500 <input type="checkbox"/> 35.600 (remote afterloader) <input type="checkbox"/> 35.600 (teletherapy) <input type="checkbox"/> 35.600 (gamma stereotactic radiosurgery) <input type="checkbox"/> 35.1000 ( _____ )	

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

Description of Training	Training Provided By	Dates of Training*
Radiation safety, regulatory issues, and emergency procedures for 35.100, 35.200, and <del>35.500</del> uses	Supervised - see 3c below	Jan. 2003 to Dec. 2005
Radiation safety, regulatory issues, and emergency procedures for 35.300 uses	Supervised - see 3c below	Jan. 2003 to Dec. 2005
Radiation safety, regulatory issues, and emergency procedures for 35.400 uses	Supervised - see 3c below	Jan. 2003 to Dec. 2005
Radiation safety, regulatory issues, and emergency procedures for 35.600 - teletherapy uses	NA	
Radiation safety, regulatory issues, and emergency procedures for 35.600 - remote afterloader uses	Supervised - see 3c below and Vendor - Nucletron	Jan 2003 to Dec. 2005  Feb 2, 2006 Oct. 13, 2004
Radiation safety, regulatory issues, and emergency procedures for 35.600 - gamma stereotactic radiosurgery uses	NA	
Radiation safety, regulatory issues, and emergency procedures for 35.1000, specify use(s):	NA	

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

**Preceptor Attestation (continued)**

**First Section (continued)**

Check one of the following:

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

I attest that Richard J. Crilly, Ph.D. is an  
Name of Proposed Radiation Safety Officer

Authorized User

Authorized Nuclear Pharmacist

Authorized Medical Physicist

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

**AND**

**Second Section**

Complete for all (check all that apply):

I attest that Richard J. Crilly, Ph.D. has training in the radiation safety, regulatory issues, and  
Name of Proposed Radiation Safety Officer

emergency procedures for the following types of use:

35.100

35.200

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

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

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

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

35.400

35.500

35.600 remote afterloader units

35.600 teletherapy units

35.600 gamma stereotactic radiosurgery units

35.1000 emerging technologies, including:

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



The American Board of Medical Physics

**ABMP**

*Hereby certifies that*

**Richard J. Crilly, Ph.D.**

*Has satisfactorily met the professional standards  
and clinical experience requirements  
in medical physics to qualify for*

**Certification in Medical Physics**

*with special competence in*

**Radiation Oncology Physics**



May 3, 2002

DATE

CHAIRPERSON

SECRETARY

No. 471231

*This document is only supplemental to show Dr. Crilly's qualifications*

JAN 16 2007

DATE

This is to acknowledge the receipt of your letter/application dated 12-31-06, 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** 471231.  
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  
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Program Code: 02230  
Status Code: 0  
Fee Category: 7C  
Exp. Date: 20101031  
Fee Comments: CODE 23  
Decom Fin Assur Reqd: N  
.....

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

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED  
Applicant/Licensee: RAPID CITY REGIONAL HOSPITAL, INC.  
Received Date: 20070108  
Docket No: 3003231  
Control No.: 471231  
License No.: 40-00238-04  
Action Type: Amendment

2. FEE ATTACHED  
Amount: \_\_\_\_\_  
Check No.: \_\_\_\_\_

Signed *Colleen Mendenhall*  
Date 01-10-09

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 \_\_\_\_\_



**RAPID CITY REGIONAL HOSPITAL**

ADMINISTRATION

353 FAIRMONT BLVD., RAPID CITY, SD 57701

40-00238-64  
030-03231

U.S. Nuclear Regulatory Commission  
Regional IV  
611 Ryan Plaza Dr., Suite 400  
Arlington, TX 76011-4005

XXX AUT



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