

ACCEPTANCE REVIEW MEMO (ARM)

Licensee: Montana State University

License No.: 25-00326-06

Docket No.: 030-00871

Mail Control No.: 471067

Type of Action: Amend

Date of Requested Action: 08-07-06

Reviewer Assigned: Roberto

ARM reviewer(s): Cook

Response	Deficiencies Noted During Acceptance Review
OK → Will be done	<ul style="list-style-type: none"><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 checked="" 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.
RJC	REVIEWER: 1) Verify no increase in FA is needed. 2) Add under license condition 10 use at TJS. for neutron generator. 3) Please verify if IC orders are needed.

Reviewer's Initials: RJC

Date: 8/14/06

- ☐ 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 researcher wants to do work in Sept. 06)
- ☐ Yes ☐ No TAR needed to complete action.

Branch Chief's and/or Sr. HP's Initials: JAC

Date: 8/14/06

- 1) Need to update cost estimates in DFP. 30.35(e) requires cost estimate adjustment every 3 years. Last update was in 2000. RAI dtd 8/14/06. Talked to RSO and he will submit DFP within 60 days. Also followed up by email.
- 2) Adding the H-3 neutron generator will not affect increased control status.
- 3) Increased Controls (IC) - Licensee not required to implement IC based on response (See MLO60050248).

License needs to be separated from cover letter. License will need Sunsi markings.

RJC 8/14/06

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:

JOC

Date:

8/9/06

Applicant Information:**Control No. 471067**

Name: Montana State University	Type of Request: Amend Program Code(s):
Location: MT	License No.: 25-00326-06 Docket No.: 030-00871

STEP 1—Radioactive Materials and Quantities Requested:

Instructions for Step 1: Complete Step 1 for all applications. 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.	N
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.	N
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	N

Table of Risk Significant Quantities

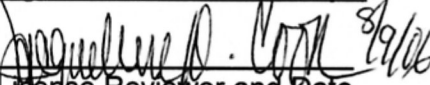
(Category 2 Quantities, IAEA Safety Guide No. RS-G-1.9, Categorization of Radioactive Sources, August 2005)

Radionuclide	Risk Significant Quantity (TBq ¹)	Risk Significant Quantity (Ci ¹)	Radionuclide	Risk Significant Quantity (TBq ¹)	Risk Significant Quantity (Ci ¹)
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 ²	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

¹ The primary values are TBq. The curie (Ci) values are for informational purposes only.
² 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. NOTE—If an amendment of an existing license is being requested, the calculations will include the previously authorized quantities for the radionuclide(s).	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 8/9/06



Safety & Risk Management
1160 Research Drive
P.O. Box 170510
Bozeman, MT 59717-0510
Telephone: 406-994-2711
Fax: 406-994-7040
www.montana.edu/wwwsrm

Risk Management
HazMat
Fire-Life Safety
Occupational Health
Radiation Safety
BioHaz Mgmt.
Regulatory Compliance

Fax

SAFETY AND RISK MANAGEMENT FAX # 406-994-7040

To: Mr. Whitten

From: Curtis L Hofer, RSO

Date: 08-07-06

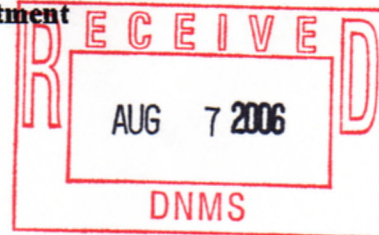
Re: Expedited Amendment Request

Pages Including Cover Sheet: 2

If all pages were not received, notify us at (406) 994 -6888

**Safety and Risk Management Department**

Radiation Safety Office
Montana State University
1160 Research Drive
Bozeman, MT 59718-6856
Phone: (406) 994-7317
Fax: (406) 994-7040
E-mail: chofer@montana.edu



August 7, 2006

Nuclear Materials Licensing Branch
U. S. Nuclear Regulatory Commission, Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-4005

RE: Byproduct Materials License #25-00326-06

Dear Mr. Whitten:

We have a collaborating researcher from Brookhaven National Laboratory that desires to do some field work here in Montana with a neutron generator containing a 2.5 Ci H-3 sealed source. The researcher would like to do the work the first week of September if possible. The cold weather and snow comes in September quite often here. We are requesting an amendment to our license for Item 8F. allowing us to have no single source of tritium exceeding 3.0 Ci. Also, under Item 10E, the conditions would be to use a neutron generator containing ~2.5 Ci of titanium embedded H-3 for soil analysis at temporary job sites around the State of Montana.

Please do not hesitate to contact me with any questions or comments regarding this application for license amendment.

For Montana State University,

A handwritten signature in black ink that reads "Curtis L. Hofer".

Curtis L. Hofer
Radiation Safety Officer

No 471067

From: Roberto Torres
To: chofer@montana.edu
Date: 8/14/2006 11:25:12 AM
Subject: Request for additional information

Mr. Hofer:

I will be processing your expedited request to add a H-3 neutron generator to the license. I will increase the amount to 3.0 Ci in Item 8.F. as requested. However I noticed that you need to update the cost estimates for your decommissioning funding plan (DFP). The last update to the DFP, according to our records, was in 2000. The financial assurance and decommissioning regulations were updated in December 2005. 30.35(e) requires that DFP cost estimates must be adjusted at intervals not to exceed 3 years. Please provide within the next 60 days: 1) an updated Statement of Intent containing the new decommissioning cost estimates and 2) an updated DFP with updated cost estimates.

I will go ahead and issue an amendment this week to allow the use of the H-3 neutron generator and will create a separate licensing action to track the update to the DFP.

Please confirm the 60-day DFP commitment by reply email. Thank you.

Roberto J. Torres
Senior Health Physicist
U.S. Nuclear Regulatory Commission, Region IV
Division of Nuclear Materials Safety
Nuclear Materials Licensing Branch
611 Ryan Plaza Drive, Suite 400
Arlington, Texas 76011
Telephone 817-860-8189
Facsimile 817-860-8188
rjt@nrc.gov

*RSO confirmed during
8/14/06 telecon that he will
submit revised DFP with
revised cost estimate, and
revised SOI within 60 days.*

*Roberto
8/14/06*

471067

Mail Envelope Properties

(44E0A3E8.D94 : 18 : 64234)

Subject: Request for additional information
Creation Date 8/14/2006 11:25:12 AM
From: Roberto Torres
Created By: RJT@nrc.gov

Recipients	Action	Date & Time
montana.edu AM chofer (chofer@montana.edu)	Transferred	8/14/2006 11:26:00

nrc.gov ARL_PO.ARL_DO AM	Delivered	8/14/2006 11:25:12
RJT BC (Roberto Torres) AM	Opened	8/14/2006 11:26:24

Post Office	Delivered	Route
ARL_PO.ARL_DO	8/14/2006 11:25:12 AM nrc.gov	montana.edu

Files	Size	Date & Time
MESSAGE	1886	8/14/2006 11:25:12 AM

Options

Auto Delete:	No
Expiration Date:	None
Notify Recipients:	Yes
Priority:	Standard
ReplyRequested:	No
Return Notification:	None

Concealed Subject:	No
Security:	Standard

To Be Delivered:	Immediate
Status Tracking:	Delivered & Opened

471067

From: "Hofer, Curtis" <chofer@montana.edu>
To: "Roberto Torres" <RJT@nrc.gov>
Date: 8/15/2006 11:36:29 AM
Subject: RE: Request for additional information

Hello Mr. Torres:

The 60 day DFP commitment should be fine for us here at MSU.

Curtis

-----Original Message-----

From: Roberto Torres [mailto:RJT@nrc.gov]
Sent: Monday, August 14, 2006 10:25 AM
To: Hofer, Curtis
Subject: Request for additional information

Mr. Hofer:

I will be processing your expedited request to add a H-3 neutron generator to the license. I will increase the amount to 3.0 Ci in Item 8.F. as requested. However I noticed that you need to update the cost estimates for your decommissioning funding plan (DFP). The last update to the DFP, according to our records, was in 2000. The financial assurance and decommissioning regulations were updated in December 2005. 30.35(e) requires that DFP cost estimates must be adjusted at intervals not to exceed 3 years. Please provide within the next 60 days: 1) an updated Statement of Intent containing the new decommissioning cost estimates and 2) an updated DFP with updated cost estimates.

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Arlington, Texas 76011
Telephone 817-860-8189
Facsimile 817-860-8188
rjt@nrc.gov

47106

Mail Envelope Properties

(44E1F7F2.111 : 14 : 4369)

Subject: RE: Request for additional information
Creation Date 8/15/2006 11:35:36 AM
From: "Hofer, Curtis" <chofer@montana.edu>
Created By: chofer@montana.edu

Recipients

nrc.gov
ARL_PO.ARL_DO
RJT (Roberto Torres)

Post Office

ARL_PO.ARL_DO

Route

nrc.gov

Files	Size	Date & Time
MESSAGE	1477	8/15/2006 11:35:36 AM
Mime.822	2650	

Options

Expiration Date: None
Priority: Standard
ReplyRequested: No
Return Notification: None

Concealed Subject: No
Security: Standard

Junk Mail Handling Evaluation Results

Message is eligible for Junk Mail handling
This message was not classified as Junk Mail

Junk Mail settings when this message was delivered

Junk Mail handling disabled by User
Junk List is not enabled
Junk Mail using personal address books is not enabled
Block List is not enabled

4-7-16-7