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	[ ] 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.
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 full in Sept. 06
☐Yes ☐No	TAR needed to complete action.

Branch Chief's and/or Sr. HP's Initials: JAC **Date:** 8/17/06

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 ML060050248).

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 <u>any</u> 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: JDC **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:

8/9/06

License Reviewer and Date

MONTANA STATE UNIVERSITY

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

MONTANA STATE UNIVERSITY BOZEMAN

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

RECEIVED
AUG 7 2006
DNMS

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 a 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,

Curtis L. Hofer

Curtis L. Hofer
Radiation Safety Officer

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

(FOR LFMS USE)
INFORMATION FROM LTS

Program Code: 01100
Status Code: 0
Fee Category: EX 3L 1D
Exp. Date: 20100731
Fee Comments: 170.11(A)(4)
Decom Fin Assur Reqd: Y

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED
   Applicant/Licensee: MONTANA STATE UNIVERSITY
   Received Date: 20060807
   Docket No: 3000871
   Control No.: 471067
   License No.: 25-00326-06
   Action Type: Amendment

2. FEE ATTACHED
   Amount: /
   Check No.: /

3. COMMENTS

Signed Colleen Murnahan
Date 8-9-06

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 _____

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	Transferred	8/14/2006 11:26:00 AM
chofer (chofer@montana.edu)		
nrc.gov		
ARL_PO.ARL_DO	Delivered	8/14/2006 11:25:12 AM
RJT BC (Roberto Torres)	Opened	8/14/2006 11:26:24 AM

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

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

47167

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

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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

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	Route
ARL_PO.ARL_DO	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

47167