

## ACCEPTANCE REVIEW MEMO (ARM)

**Licensee:** University of Fairbanks, Alaska      **License No.:** 50-02430-07  
**Docket No.:** 030-01179      **Mail Control No.:** 471123  
**Type of Action:** Amend      **Date of Requested Action:** 09-18-06  
**Reviewer Assigned:** Rachel      **ARM reviewer(s):** torres

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.
✓	<b>Ask RSO if she wants to remove the authorization to possess gauges.</b> <i>Yes, She does. See Telecom - 10/18/06.</i>

**Reviewer's Initials:** RSB      **Date:** 12/7/06

<input type="checkbox"/> Yes <input type="checkbox"/> No	Unrestricted release Group 2 or >: Transfer memo to FCDB within 10 days.
<input type="checkbox"/> Yes <input type="checkbox"/> No	Decommissioning notification should be completed within 30 days.
<input type="checkbox"/> Yes <input type="checkbox"/> No	Termination request < 90 days from date of expiration
<input type="checkbox"/> Yes <input type="checkbox"/> No	Expedite (medical emergency, no RSO, location of use/storage not on license, RAM in possession not on license, other)
<input type="checkbox"/> Yes <input type="checkbox"/> 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:** ARIC      **Date:** 10/5/06

471123  
 ML063420261

## Pre-Licensing Screening

### Applicant Information:

Control No. 471023

Name: University of Fairbanks, Alaska	Type of Request: Amend Program Code(s):
Location: AK	License No.: 50-02430-07      Docket No.: 030-01179

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

<p><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.</p>	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 <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.

<p>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></p>	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:

ATC 10/5/06

License Reviewer and Date

<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		Date: October 17, 2006
<b>TELEPHONE CONVERSATION RECORD</b>		
Mail Control 471123 or Report No(s):	License No.: 50-02430-07	Docket No. 030-01179
Name of Licensee:	Univ of Alaska, Fairbanks	
Contact: Telephone Number:	Secretary for Dr. Henrichs 907-474-7464	
Subject:	Telecom for clarification to letter dated 9/12/06	
Summary:	I called Dr. Henrichs, and the secretary took my message. I requested Dr. Henrichs to return my call regarding her letter dated 9/12/06. It was not clear whether the letter served as notification only and the record would serve as part of the decommissioning records - or whether it was a request to remove density gauge authorization from the license.	
Rachel S. Browder	/RA/	10/17/06

10/18/06

Dr. Susan Henrichs returned my telephone call on 10/18/06. She clarified that she wanted to remove the authorization for the Troxler gauges [Authorized Use 9.C. and 9.D.] from the license. She wanted to retain the authorized use for CPN gauges which are listed in Item I. and J.

RECEIVED

SEP 18 2006

DNMS



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September 12, 2006

Nuclear Materials Licensing Section  
U.S. Nuclear Regulatory Commission, Region IV  
611 Ryan Plaza Drive, Suite 300  
Arlington TX 76011

Licensing Section Staff:

This letter is to inform you of changes in the sealed source inventory of the University of Alaska Fairbanks, under our Type B Broad Scope license, # 50-02430-07, docket # 030-01179. The following soil moisture gauges have been disposed:

Source Identification	Device Identification	Quantity (millicuries)	as of Date
Troxler Electronic (Source S/N AM-019)	Model 105A-1257 SN H-1638	100	9/1964
Troxler Electronic (Source S/N AM-001)	Model 217-104A	100	prior to 1979
Troxler Electronic (Source S/N AM-093) S/N CPN-131	Model 1257 S/N 394	110	4/1971
Troxler Electronic Model 3220 S/N 397	none	10	7/1983

The above-listed gauges were shipped to:

Qal-Tek Associates  
3998 Commerce Circle  
Idaho Falls, ID 83401  
Phone (208) 523-5557  
Fax (208) 524-8470  
<http://www.qaltek.com/index.html>

License Number: 11-27610-01  
Expires: December 31, 2008

Sincerely,

A handwritten signature in cursive script that reads "Susan M. Henrichs".

Susan M. Henrichs  
Radiation Safety Officer

471123

BETWEEN:

License Fee Management Branch, ARM  
and  
Regional Licensing Sections

(FOR LFMS USE)  
-----  
INFORMATION FROM LTS  
-----  
: Program Code: 01110  
: Status Code: 0  
: Fee Category: EX 3L  
: Exp. Date: 20100331  
: Fee Comments: 170.11(A) (4)  
: Decom Fin Assur Req'd: Y  
: .....

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: ALASKA, UNIVERSITY OF FAIRBANKS  
Received Date: 20060918  
Docket No.: 3001179  
Control No.: 471123  
License No.: 50-02430-07  
Action Type: Amendment

2. FEE ATTACHED

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

3. COMMENTS

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

*Colleen P. ...*

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 \_\_\_\_\_