

Murnahan, Colleen

From: Cal Gillis [cgillis@boisestate.edu]
Sent: Tuesday, August 18, 2009 2:40 PM
To: Murnahan, Colleen
Subject: Boise State University Request for Amendment
Attachments: Boise State Cover Letter, Amendment Aug09.pdf; Boise_State_Aug09_Amendment_nrc313.pdf; Boise State Request for Amendment to Materials License.pdf; D. Russell, Statement of Training and Experience.pdf

Hello Ms. Murnahan,
Boise State University is forwarding a request for amendment to our Materials License # 11-27388-01. Attached is a cover letter, Form 313, additional pages and a Statement of Training and Experience for a proposed new Authorized User. Please contact me if you need additional information. Do you require that I forward the original paperwork, or is the electronic version sufficient?

Calvin W. Gillis, REHS
Radiation Safety Officer
Boise State University
1910 University Drive, MS 1826
Boise, ID 83725-1826

Phone: (208) 426-3999
Fax: (208) 426-3343
email: cgillis@boisestate.edu

APPLICATION FOR MATERIALS LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
 OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
 U.S. NUCLEAR REGULATORY COMMISSION
 WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
 DIVISION OF NUCLEAR MATERIALS SAFETY
 U.S. NUCLEAR REGULATORY COMMISSION, REGION I
 475 ALLENDALE ROAD
 KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IDWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH
 U.S. NUCLEAR REGULATORY COMMISSION, REGION III
 2443 WARRENVILLE ROAD, SUITE 210
 LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
 U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
 612 E LAMAR BOULEVARD, SUITE 400
 ARLINGTON, TX 76011-4125

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

A. NEW LICENSE

B. AMENDMENT TO LICENSE NUMBER 11-27388-01

C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

Boise State University
1910 University Dr., MS 1826
Boise, ID 83725-1826

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Boise state University
1910 University Dr.
Boise, ID 83725-1826

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Calvin W. Gillis

TELEPHONE NUMBER

(208) 426-3999

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY	AMOUNT ENCLOSED	\$
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13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

Calvin W. Gillis, Radiation Safety Officer

SIGNATURE



DATE

08/17/2009

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	
					6 478 401



August 18, 2009

Colleen Murnahan, Licensing Assistant
U.S. Nuclear Regulatory Commission, Region IV
Division of Nuclear Materials Safety
Nuclear Materials Licensing Branch
612 E. Lamar Blvd., Suite 400
Arlington, Texas 76011-4125

Re: Boise State University Request for Amendment to Materials License No. 11-27388-01

Dear Ms. Murnahan:

This cover letter is to request amendment to Boise State University's Materials License No. 11-27388-01. Attached is a Form 313 with additional pages detailing the specific amendments requested. In summary Boise State is requesting the following changes to our NRC license:

- Increase the maximum amount of Uranium-238 in possession
- Remove a Troxler Depth Moisture Gauge from the source list and replace it with a CPN MC Series PORTAPROBE
- Add a new Authorized User. Statement of Training and Experience are attached.
- Remove Authorized Users
- Add a new facility to the list of the licensee's facilities

If additional information is needed, please contact me.

Sincerely,

Calvin W. Gillis
Radiation Safety Officer
Boise State University
1910 University Drive, MS 1826
Boise, ID 83725-1826

Phone: (208) 426-3999
Fax: (208) 426-3343
email: cgillis@boisestate.edu

Attachments: 3

Request for Amendment to Materials License No 11-27388-01

Please amend 8. Maximum amount that licensee may possess at any one time under this license to change the amount for R. Uranium-238 to 2.0 millicuries. The use of depleted uranium in research is increasing, necessitating the increase in the amount on the license. The use of depleted uranium is by, or under the supervision of Darryl Butt, Ph.D. (11. D.).

The Troxler portable gauge that Boise State University was to receive (Amendment13) malfunctioned prior to the transfer and Boise State will not be taking possession of this gauge. Please amend 6.T, 7.T, and 8.T to replace the Troxler portable gauge with the CPN gauge as per the information in the table. The moisture gauge will be used to measure soil moisture by or under the supervision of Warren Barrash, Ph.D. (11. G.). The moisture gauge will be rented/leased from Hevly Technical Services (<http://hevly.net>).

Yes	No	Radioisotope	Manufacturer or Distributor Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
X		Americium-241/Beryllium	CPN International Inc. 4057 Port Chicago Highway, Suite 100 Concord, CA 94520 Model: MC Series PORTAPROBE CPN Model CPN-131	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input checked="" type="checkbox"/> Specific description of the gauge use: <u>To measure soil moisture</u>	<input checked="" type="checkbox"/> Not applicable
X		Cesium-137	CPN International Inc. 4057 Port Chicago Highway, Suite 100 Concord, CA 94520 Model: MC Series PORTAPROBE CPN Model CPN-131	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input checked="" type="checkbox"/> Specific description of the gauge use: <u>To measure soil moisture</u>	<input checked="" type="checkbox"/> Not applicable

Please amend 9. Authorized Use, to change 9. K. through Q., to K. through R. as the standards for thermal ionization spectrometry will contain small quantities of U-238. The licensed material identified in Items 6.K through 6.R, shall be used by or under the supervision of, Mark Schmitz, Ph.D. and James Crowley, Ph.D. (11. F.).

Please amend 10. A. to add Parking Structure II, 1607 University Drive, Boise, Idaho, to the list of licensee's facilities. Richard Reimann, Physics Department, is retiring and the Physics Department no longer has use for the Americium-241 source (6.A.) The Americium-241 source has been registered as an excess source with the Off Site Source Recovery (OSSR) Project at Los

Alamos National Laboratory. The Americium-241 source will be stored in the RSO's office at 1607 University Drive, Boise, Idaho, until such time as OSSR recovers the source.

Please amend 11. A. to indicate the licensed material identified in 6. A. shall be stored by the RSO until recovery by the Off Site Source Recovery (OSSR) Project at Los Alamos National Laboratory. Dr. Reimann is retiring from the University; please remove his name as an Authorized User.

Please amend 11. B. to delete Ray Carter, Ph.D. as Dr. Carter has left the university.

Please amend 11. E. to delete Ray Carter, Ph.D. and add Dale Russell, Ph.D. as the Authorized User of the Nickel-63 (6. J.). Attached is a Statement of Training and Experience for Dr. Russell.

Statement of Training & Experience in Radiation Work

1. Name Dale D. Russell Mail Stop 1520
Title/Position Professor Telephone 6-3975
Research: Detection of actinides, separation technologies for actinides
Authorized person who will supervise your work self

2. Education (List degrees, major subject, emphasis, date, and school)
Ph.D. Chemistry, Analytical, 1985, University of Arizona
MS. Chemistry, Analytical, 1979, University of Arizona
BA. English, Technical Writing, 1967, University of California, Davis

3. Formal training in Radiation Safety

Provide a statement in the following areas. Include name of person or institution providing the training. Provide duration and date.

(a) Principles and Practices of Radiation Protection.

Use of Personal Protection Equipment (PPE), emergency procedures, shielding, storage, containment, warning communication placards, etc.

Where Idaho Falls, ID, USA

Duration 24-hours of Coursework with Practical Exam

GERT Qualification

INL Actinide Glovebox Worker

INL Rad Worker 2

When January 2009

b) Characteristics of Ionizing Radiation

Characteristics of Ionizing Radiation; alpha, beta, gamma, x-ray; types of damage, distance of penetration, energies and required stopping barriers.

Where Idaho Falls, ID, USA

Duration 24-hours of Coursework with Practical Exam

GERT Qualification

INL Actinide Glovebox Worker

INL Rad Worker 2

When January 2009

- (c) Radioactivity Detection Instrumentation and Monitoring Techniques.
Beta counters, Cherenkov counting, gamma counters, Geiger counters,
whole body scanners, paddle scanners, body badges, TLD's etc.

Where Idaho Falls, ID, USA
Duration 24-hours of Coursework with Practical Exam
GERT Qualification
INL Actinide Glovebox Worker
INL Rad Worker 2
When January 2009

- (d) Units of Radiation Dose and Quantities
Conversion of cpm to dpm, rads, roentgens, curies, exposure limits, etc.

Where Idaho Falls, ID, USA
Duration 24-hours of Coursework with Practical Exam
GERT Qualification
INL Actinide Glovebox Worker
INL Rad Worker 2
When January 2009

3. Formal training in Radiation Safety (continued)

Provide a statement in the following areas. Include name of person or institution providing the training. Provide duration and date.

- (e) Biological Hazards of Exposure to Radiation (appropriate to the types and forms of radioactive material to be used)

Damage to skin, bone marrow, unborn fetus, reproductive organs, routes of exposure, Exposure limits, etc

Where Idaho Falls, ID, USA
Duration 24-hours of Coursework with Practical Exam
GERT Qualification
INL Actinide Glovebox Worker
INL Rad Worker 2
When January 2009

4. Radiation work (Describe briefly your anticipated work and list the types and quantities of licensed material to be used at Boise State University)

Use of Ni-63 as a beta source for ionizing gas phase molecules, in an experimental separation/ analysis instrument. There are 3 Ni-63 foils, each with an activity of 15 mCi for a total of 45 mCi. I will also examine the electrochemistry of micro-trace amounts of Am-241 and Eu-154. Activity will not exceed 1000 dps.

5. Describe your Hands-on Use of Radioactive Materials

Radionuclide used	Maximum experimental activity used	Location where radionuclide was used	Length of time radionuclide was used (# of years)	Experimental procedures performed with radionuclide
Am-241	60,000 dps	Hot hood at INL, CFA 625	0.5 yr	Solvent extraction, electrochemistry, gamma counting
Eu-154	10,000 dps	Hot hood at INL, CFA 625	0.5 yr	Solvent extraction, electrochemistry, gamma counting
Th-232	Natural abundance	SN 338, BSU	8 years	Chemical sensor development, electrochemistry
U-235	Natural abundance	SN 338, BSU	8 years	Chemical sensor development, electrochemistry
Ni-63	unk	Chem lab at University of Colorado	1 year	Used as a fully enclosed, electron capture detector in a commercial gas chromatograph
Pu-238	unk	DOE Nevada Test site, Las Vegas, NV	1 week	Demonstrated actinide sensor in field tests.

6. Statement

This information is correct to the best of my knowledge. I agree to comply with the Radioactive Materials Management Manual and Radiation Safety Policies of Boise State University.

Signature Dale D Russell Date 6/22/09

Print Name Dale D Russell

ACCEPTANCE REVIEW MEMO (ARM)

Licensee: Boise State University

License: 11-27388-01

Docket: 030-32218

Mail Control: 472401

Type of Action: Amend

Date of Requested Action: 8-18-09

Reviewer Assigned:

ARM reviewer(s): Torres

Response	Deficiencies Noted During Acceptance Review
	<ul style="list-style-type: none"> [] Open ended possession limits. Submit inventory. Limit possession. [] Submit copies of latest leak test results. [] Add IC L.C./Fingerprint LC, add SUNSI markings to license. [] Confirm with licensee if they have NARM material. [] Change of contact information (RSO), send request to update IC database.

Reviewer's Initials: _____

Date: _____

<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Request for unrestricted release Group 2 or >. Consult with Bravo Branch.
<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 HP's Initials: _____ Date: _____

SUNSI Screening according to RIS 2005-31				
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No	Sensitive and Non-Publicly Available 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 [suite #, bldg. #, location different from mailing address] (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 HP's Initials: <u>RTZ</u>				Date: SEP 15

This is to acknowledge the receipt of your letter/application dated 8-17-09, and to inform you that the initial processing, which includes an administrative review, has been performed.

9-15-09
DATE

There were no administrative omissions. Your application will be assigned to a technical reviewer. Please note that the technical review may identify other omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card:

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** 472401.
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

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

: (FOR LFMS USE)
: INFORMATION FROM LTS
: -----
: Program Code: 03620
: Status Code: 0
: Fee Category: EX 3M
: Exp. Date: 20110831
: Fee Comments: 170.11(A)(4)
: Decom Fin Assur Reqd: Y
:

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: BOISE STATE UNIVERSITY
Received Date: 20090818
Docket No: 3032218
Control No.: 472401
License No.: 11-27388-01
Action Type: Amendment

2. FEE ATTACHED

Amount: _____
Check No.: /

3. COMMENTS

Signed Colleen Murnahan
Date 9-10-09

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 _____