



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-4005

August 22, 2007

Boise State University  
ATTN: Calvin W. Gillis  
Radiation Safety Officer  
1910 University Drive  
Boise, Idaho 83725-1825

SUBJECT: LICENSE AMENDMENT

Please find enclosed copy to Amendment No. 12 to License No. 11-27388-01 **acknowledging receipt of your updated Statement of Intent letter**. An environmental assessment for this action is not required, since this action is categorically excluded under 10 CFR 51.22(c)(14)(v). You should review this license carefully and be sure that you understand all conditions. If you have any questions, you may contact me at 817-860-8189.

NRC expects licensees to conduct their programs with meticulous attention to detail and a high standard of compliance. Because of the serious consequences to employees and the public that can result from failure to comply with NRC requirements, you must conduct your radiation safety program according to the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate by NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Notify NRC in writing of any change in mailing address.
3. By 10 CFR 30.36(d) and/or license condition, notify NRC, promptly, in writing, and request termination of the license:
  - a. When you decide to terminate all activities involving materials authorized under the license whether at the entire site or any separate building or outdoor area; or
  - b. If you decide not to acquire or possess and use authorized material; or
  - c. When no principal activities under the license have been conducted for a period of 24 months.
4. Request and obtain a license amendment before you:
  - a. Change Radiation Safety Officers;

- b. Order byproduct material in excess of the amount, radionuclide or form authorized on the license;
  - c. Add or change the areas or address(es) of use identified in the license application or on the license; or
  - d. Change the name or ownership of your organization.
5. Submit a complete renewal application or termination request at least 30 days before the expiration date on your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of radioactive material after your license expires is a violation of NRC regulations.

In addition, please note that NRC Form 313 requires the applicant, by signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or certifying official rather than a consultant. Since the NRC also accepts a letter requesting amendment or renewal of an NRC license, the signatory for such a request should also be the licensee or certifying official rather than a consultant.

NRC will periodically inspect your radiation safety program. Failure to conduct your program according to NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC may result in enforcement action against you. This could include issuance of a notice of violation; imposition of a civil penalty; or an order suspending, modifying, or revoking your license as specified in the NRC Enforcement Policy. The NRC Enforcement Policy is available on the following internet address:

<http://www.nrc.gov/what-we-do/regulatory/enforcement/enforc-pol.pdf>.

The NRC no longer publishes the NRC Rules and Regulations loose leaf supplements. However, an electronic version of the NRC's regulations is available on the NRC Web site at [www.nrc.gov](http://www.nrc.gov). To view these regulations, highlight "Electronic Reading Room" and choose "Regulations" on the drop down menu. An electronic version of the NUREG-1556 Series publications is also available on the NRC Web site. To view these guidance documents, highlight "Electronic Reading Room"; choose "All Collections" on the drop down menu; choose "NUREGS (NRC Reports)"; and select "Publications Prepared by the NRC Staff". Then, choose "NUREG-1556" from the table and select the appropriate volume(s) for your license type.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Thank you for your cooperation.

Sincerely,

**/RA/**

Roberto J. Torres, Senior Health Physicist  
Nuclear Materials Licensing Branch

Docket: 030-32218  
License: 11-27388-01  
Control: 471436

Enclosure: As stated

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		In accordance with letter dated July 13, 2007
1. Boise State University		3. License number 11-27388-01 is amended in its entirety to read as follows:
2. 1910 University Drive Boise, Idaho 83725-1825		4. Expiration date August 31, 2011
		5. Docket No. 030-32218 Reference No.
6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Americium-241	A. Sealed sources	A. 10 microcuries
B. Carbon-14	B. Any, except sealed sources	B. 10 millicuries
C. Hydrogen-3	C. Any, except sealed sources	C. 10 millicuries
D. Iodine-125	D. Any, except sealed sources	D. 1 millicurie
E. Phosphorus-32	E. Any, except sealed sources	E. 10 millicuries
F. Sulfur-35	F. Any, except sealed sources	F. 3 millicuries
G. Phosphorus-33	G. Any, except sealed sources	G. 3 millicuries
H. Uranium-233	H. Any, except sealed sources	H. 300 microcuries
I. Uranium-235	I. Any, except sealed sources	I. 5 microcuries
J. Nickel-63	J. Sealed sources (Isotope Products Laboratories [formerly New England Nuclear] Model NER-004)	J. 60 millicuries total. No single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State.
K. Cesium-137	K. Any, except sealed sources	K. 10 microcuries
L. Lead-202	L. Any, except sealed sources	L. 1 microcurie
M. Lead-205	M. Any, except sealed sources	M. 1 microcurie
N. Thorium-229	N. Any, except sealed sources	N. 5 microcuries

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|---|----------------------------------|--|
| 6. Byproduct, source, and/or special nuclear material | 7. Chemical and/or physical form | 8. Maximum amount that licensee may possess at any one time under this license |
| O. Thorium-230  | O. Any, except sealed sources    | O. 100 microcuries   |
| P. Thorium-232  | P. Any, except sealed sources    | P. 1 microcurie  |
| Q. Uranium-236  | Q. Any, except sealed sources    | Q. 2 microcuries   |
| R. Uranium-238  | R. Any, except sealed sources    | R. 10 microcuries  |

## 9. Authorized use:

- A. through I. Research and development as defined in 10 CFR 30.4; animal and plant studies; teaching and training of students.
- J. To be used in laboratory and field applications under research and development as an ionization source contained in an ion mobility spectrometer sensor to be housed in a probe.
- K. through Q. To be used in research and development as standards for thermal ionization mass spectrometry.
- R. To be used in research and development to evaluate materials for use in uranium electrorefining and salt/metal separations.

**CONDITIONS**

10. A. Licensed material shall be used or stored only at the licensee's facilities located at:
- Science/Nursing Building, 2133 Campus Lane, Boise, Idaho,
  - Multipurpose Classroom Building, 2110 University Drive, Boise, Idaho,
  - Math/Geosciences Building, 2000 University Drive, Boise, Idaho,
  - Micron Engineering Center, 1020 Manitou Avenue, Boise, Idaho, and
  - Harry Morrison Civil Engineering Building, 1019 Euclid Avenue, Boise, Idaho.
- B. Licensed material identified in Item 6.J. may be used in field applications under the purview of the licensee's radiation safety program at temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material, including areas of exclusive Federal jurisdiction within Agreement States.
- If the jurisdiction status of a Federal facility within an Agreement State is unknown, the licensee should contact the federal agency controlling the job site in question to determine whether the proposed job site is an area of exclusive Federal jurisdiction. Authorization for use of radioactive materials at job sites in Agreement States not under exclusive Federal jurisdiction shall be obtained from the appropriate state regulatory agency.
- C. Licensed material shall be received at 1453 University Drive (Central Receiving Area), Boise, Idaho.

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11. A. Licensed material identified in Item 6.A. shall be used by, or under the supervision of, Richard J. Reimann, Ph.D.
- B. Licensed material identified in Items 6.A. through 6.G. shall be used by, or under the supervision of, Al Dufty, Ph.D., James Long, Ph.D., James Munger, Ph.D., Cheryl Jorcyk, Ph.D., Susan Shadle, Ph.D., Denise Wingett, Ph.D., Kenneth Cornell, Ph.D., Darryl Butt, Ph.D., and Kevin Feris, Ph.D.
- C. Special nuclear material identified in Items 6.H. and 6.I. shall be used by, or under the supervision of, Mark Schmitz, Ph.D.
- D. Licensed material identified in Item 6.J. and 6.R. shall be used by, or under the supervision of, Darryl Butt, Ph.D.
- E. Licensed material identified in Items 6.K. through 6.R. shall be used by, or under the supervision of, Mark Schmitz, Ph.D.
12. The Radiation Safety Officer for this license is Calvin W. Gillis.
13. The licensee is authorized to hold byproduct material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity if the licensee:
- A. Monitors byproduct material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and
- B. Removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee; and
- C. Maintains records of the disposal of licensed materials for 3 years. The record must include the date of the disposal, the survey instrument used, the background radiation level, the radiation level measured at the surface of each waste container, and the name of the individual who performed the disposal.
14. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
15. Licensed material shall not be used in or on human beings except as provided otherwise by specific condition of this license.
16. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
17. Notwithstanding license condition 16, the licensee shall only install or remove the sealed source contained in an ion mobility spectrometer sensor for the purpose of cleaning, repairing, or providing maintenance to the sensor in accordance with procedures outlined in application dated February 22, 2006.



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18. The licensee shall use the nickel-63 sealed source, contained in the ion mobility spectrometer sensor, within the manufacturer's specified temperature and environmental limits as specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State, such that the source is not compromised by environmental factors exceeding tolerance levels.
19. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
20. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.
21. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
22. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated April 24, 2001 (ML011980201)
  - B. Application dated July 19, 2004 (ML042120569)
  - C. Letter dated March 2, 2005 (ML050800402)
  - D. Application dated February 22, 2006 (ML060610141)
  - E. Letter dated April 5, 2007 (ML071090227)
  - F. E-mail and letter dated July 13, 2007 (ML072070568)

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: August 22, 2007

By: /RA/  
Roberto J. Torres, Senior Health Physicist  
Nuclear Materials Licensing Branch  
Region IV  
Arlington, Texas 76011