



EDINBORO UNIVERSITY  
OF PENNSYLVANIA

September 20, 2007

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REGION 1  
2007 SEP 25 AM 5:57

U.S. Nuclear Regulatory Commission  
Region 1, 475 Allendale Road  
King of Prussia, PA 19406-1415

37-13277-06  
03028932

To whom it may concern:

We request an increase in the maximum amount of Sulfur-35 that may be possessed, from 1 milliCurie to 5 milliCuries. This will allow us to conduct several planned experiments and store the waste until decayed. We currently have approximately 1/8 milliCurie, so we cannot proceed to order even 1 milliCurie. Attached are copies of our current license and the report from our most recent inspection.

Thanks for attending to this request.

Sincerely,

Craig T. Van Bell, Ph.D  
Dept. of Biology  
Edinboro University of PA  
230 Scotland Road  
Edinboro, PA 16444

Naod Kebede, Ph.D  
Dept. of Chemistry  
Edinboro University of PA  
230 Scotland Road  
Edinboro, PA 16444

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NMSS/RGN1 MATERIALS-002

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■ MATERIALS LICENSE ■

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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.

<p>Licensee</p> <p>1. Edinboro University of Pennsylvania Departments of Biology, Chemistry &amp; Physics</p> <p>2. Cooper Science Hall 152 Edinboro, Pennsylvania 16444</p>	<p>In accordance with letter dated February 26, 2002,</p> <p>3. License number 37-13277-06 is amended in its entirety to read as follows:</p> <p>4. Expiration date: October 31, 2011</p> <p>5. Docket No. 030-28932 Reference No. 37-13277-05</p>
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Hydrogen 3</p> <p>B. Phosphorus 32</p> <p>C. Sulfur 35</p> <p>D. Iodine 125</p> <p>E. Krypton 85</p> <p>F. Californium 252</p> <p>G. Cesium 137</p>	<p>7. Chemical and/or physical form</p> <p>A. Any</p> <p>B. Any</p> <p>C. Any</p> <p>D. Non-volatile compounds</p> <p>E. Sealed source (Amersham Searle Model X-167)</p> <p>F. Sealed source (Savannah River Model USL)</p> <p>G. Sealed Sources (Model RAMCO-50-ORNLL)</p> <p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 250 microcuries</p> <p>B. 1 millicurie</p> <p>C. 1 millicuries</p> <p>D. 50 microcuries</p> <p>E. 3.86 millicuries</p> <p>F. 0.115 micrograms (64 microcuries)</p> <p>G. No single source to exceed the maximum activity per source specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State</p>

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**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

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License Number

87-13277-06

Docket or Reference Number

030-28932/37-13277-05

Amendment No. 06

9. Authorized use:

- A. through F. Research and development as defined in 10 CFR 30.4; teaching and training of students.
- G. For irradiation of materials in self-shielded irradiator devices that have been registered either with the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or with an Agreement State and which have been distributed in accordance with a Commission or Agreement State specific license authorizing distribution to persons specifically authorized by a Commission or Agreement State license to receive, possess, and use the devices.

CONDITIONS

- 10. Licensed material may be used or stored only at the licensee's facilities located at Cooper Hall and Hendricks Hall, Edinboro, Pennsylvania.
- 11. A. Licensed material shall be used by, or under the supervision of, Martin J. Mitchell, Ph.D., Craig T. Van Bell, Ph.D., or Thomas Walkiewicz, Ph.D.
- B. Licensed material in item 6 G. shall be used by, or under the supervision of, individuals who have received the training described in letter dated April 3, 2002, and have been designated, in writing, by the Radiation Safety Officer.
- C. The Radiation Safety Officer for this license is Martin J. Mitchell, Ph.D.
- 12. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d), 40.36(b), and 70.25(d) for establishing financial assurance for decommissioning.
- 13. The licensee shall not use licensed material in or on human beings.
- 14. The licensee shall not use licensed material in field applications where it is released except as provided otherwise by specific condition of this license.
- 15. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.

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Amendment No. 06

- C. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.
- D. Sealed sources need not be tested if they are in storage and are not being used; however, when they are removed from storage for use or transferred to another person and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- E. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.
- F. Tests for leakage and/or contamination, including leak test, sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
16. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
17. The licensee shall conduct a physical inventory every six months, or at other interval approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license.
18. The licensee shall not repair, remove, replace, or alter any of the following: electrical and mechanical systems that control source or shielding movement, the irradiator's shielding or sealed source, safety interlocks, or any component that may affect safe operation of the irradiator. These activities shall be performed by a person specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
19. The licensee is authorized to hold radioactive material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal in ordinary trash, provided:
- A. Waste to be disposed of in this manner shall be held for decay a minimum of 10 half-lives.

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Amendment No. 06

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- B. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
- C. A record of each such disposal permitted under this license condition shall be retained for 3 years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.
20. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
21. 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. Letter dated October 11, 2001
  - B. Letter dated October 22, 2001
  - C. Letter dated April 3, 2002

For the U.S. Nuclear Regulatory Commission

Date April 15, 2002

By

*Original signed by Sattar Lodhi, Ph.D.*

Sattar Lodhi, Ph.D.

Nuclear Materials Safety Branch 2

Division of Nuclear Materials Safety

Region 1  
King of Prussia, Pennsylvania 19406

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## NRC FORM 591M PART 1

(10-2005)  
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

## SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

NK

## 1. LICENSEE/LOCATION INSPECTED

Edinboro University of Pennsylvania  
Departments of Biology, Chemistry & Physics  
Edinboro, Pennsylvania 16444

## 2. NRC/REGIONAL OFFICE

U.S. Nuclear Regulatory Commission  
Region I, 475 Allendale Road  
King of Prussia, Pennsylvania 19406-1415

REPORT Nos 2007-001

## 3. DOCKET NUMBER(S)

030-28932

## 4. LICENSE NUMBER(S)

37-13277-06

## 5. DATE(S) OF INSPECTION

Apr 12, 2007

## LICENSEE:

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- ☒ 1. Based on the inspection findings, no violations were identified.
- ☒ 2. Previous violation(s) closed.
- ☐ 3. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, NUREG-1300, to exercise discretion, were satisfied.

☐ Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

- ☐ 4. During this inspection certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.

## Licensee's Statement of Corrective Actions for Item 4, above.

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

Title

Printed Name

Signature

Date

LICENSEE'S  
REPRESENTATIVE

NRC INSPECTOR

Dennis Lawyer

Dennis Lawyer

4/12/07

NRC FORM 591M PART 1 (Rev. by RI 07/06)

G:\Reference\Blank Forms\Blank 591M-Part I.wpd

SUNSI Review Completed By:

/RA/

Dennis Lawyer

☒

Public

☒

Non-Sensitive

TOTAL P.02

This is to acknowledge the receipt of your letter/application dated

9/20/2007, and to inform you that the initial processing which includes an administrative review has been performed.

☒ Approved. 37-13277-06  
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

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

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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** 141105.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.