



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

December 2, 2004

Docket No. 03014313  
Control No. 135977

License No. 52-10510-04

Carlos E. Rosas Muniz  
Associate Dean for Administration  
University of Puerto Rico  
Mayaguez Campus  
Health and Safety Office  
P.O. Box 9050  
Mayaguez, PR 00681-9050

SUBJECT: UNIVERSITY OF PUERTO RICO, ISSUANCE OF LICENSE AMENDMENT,  
CONTROL NO. 135977

Dear Mr. Rosas Muniz:

This refers to your license amendment request. Enclosed with this letter is the amended license.

Please review the enclosed document carefully and be sure that you understand and fully implement all the conditions incorporated into the amended license. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region I Office, Licensing Assistance Team, (610) 337-5239, so that we can provide appropriate corrections and answers.

*An environmental assessment for this action is not required, since this action is categorically excluded under 10 CFR 51.22(c)(14).*

Please note that on October 25, 2004, the NRC suspended public access to ADAMS, and initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the ADAMS database accessible through the NRC's web site. Interested members of the public may obtain copies of the referenced documents for review and/or copying by contacting the NRC Public Document Room pending resumption of public access to ADAMS. The NRC Public Document Room is located at NRC Headquarters in Rockville, MD, and can be contacted at 800-397-4209 or 301-415-4737 or [pdr@nrc.gov](mailto:pdr@nrc.gov).

C. Rosas Muniz  
University of Puerto Rico

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Thank you for your cooperation.

Sincerely,

***Original signed by Thomas K. Thompson***

Thomas K. Thompson  
Senior Health Physicist  
Commercial and R&D Branch  
Division of Nuclear Materials Safety

Enclosure:  
Amendment No. 20

cc:  
Roberto Torres Martinez, Radiation Safety Officer

DOCUMENT NAME: E:\Filenet\ML043410188.wpd

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OFFICE	DNMS/RI	N	DNMS/RI		DNMS/RI			
NAME	TThompson/TKT							
DATE	12/2/04							

OFFICIAL RECORD COPY

**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.

<p style="text-align: center;">Licensee</p> <p>1. University of Puerto Rico Mayagüez Campus Health and Safety Office</p> <p>2. P.O. Box 9050 Mayagüez, Puerto Rico 00681-9050</p>	<p>In accordance with the letter dated November 9, 2004,</p> <p>3. License No. 52-10510-04 is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration date: February 28, 2005</p> <hr/> <p>5. Docket No. 030-14313 Reference No.</p>	
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Americium 241</p> <p>B. Cobalt 60</p> <p>C. Cesium 137</p> <p>D. Strontium 90</p> <p>E. Hydrogen 3</p> <p>F. Hydrogen 3</p> <p>G. Carbon 14</p> <p>H. Iodine 125</p> <p>I. Phosphorus 32</p> <p>J. Sulfur 35</p>	<p>7. Chemical and/or physical form</p> <p>A. Sealed Source</p> <p>B. Sealed Source</p> <p>C. Sealed Source</p> <p>D. Sealed Source</p> <p>E. Polymer form</p> <p>F. Plated Foils</p> <p>G. Aqueous solution</p> <p>H. Aqueous solution</p> <p>I. Aqueous solution</p> <p>J. Aqueous solution</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. 3.7 megabecquerels (MBq) (0.1 millicuries (mCi))</p> <p>B. No single source to exceed 370 MBq (10 mCi)</p> <p>C. No single source to exceed 3.7 MBq (0.1 mCi)</p> <p>D. No single source to exceed 18.5 kilobecquerels (kBq) (0.5 microcuries (FCi))</p> <p>E. 222 megabecquerels (MBq) (6 mCi)</p> <p>F. 222 gigabecquerels (GBq) (6 Ci)</p> <p>G. 2.41 GBq (65 mCi)</p> <p>H. 5.55 MBq (150 FCi)</p> <p>I. 370 MBq (10 mCi)</p> <p>J. 370 MBq (10 mCi)</p>

# **MATERIALS LICENSE SUPPLEMENTARY SHEET**

License Number

52-10510-04

Docket or Reference Number

030-14313

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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   |
| K. Nickel 63  | K. Aqueous solution   | K. 185 becquerels (Bq) (0.005 F Ci)  |
| L. Nickel 63  | L. Foil or plated source                                    | L. Not to exceed 555 MBq (15 mCi) per source   |
| M. Hydrogen 3   | M. Aqueous solution   | M. 25.9 GBq (700 mCi)  |
| N. Technetium 99m                                     | N. Aqueous solution   | N. 74 MBq (2 mCi)  |
| O. Americium 241                                      | O. Sealed Neutron Source (CPN Int'l Model CPN-131)          | O. 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                           |
| P. Cesium 137   | P. Sealed Source (CPN Int'l Model CPN-131)                  | P. 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                           |
| Q. Tin 119m   | Q. Sealed Source (WEB Research Co., Inc. Model MSn9 series) | Q. 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 and 20 millicuries total. |

## 9. Authorized use:

- A. through F.  
G. through K., and M.

Possession and storage only, incident to disposal.  
Research and development as defined in 10 CFR 30.4; animal studies; teaching and training of students; and calibration and checking of the licensee's instruments.

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- L. To be used for sample analysis in compatible gas chromatography devices that have been registered either with the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or with an Agreement State.
- N. Calibration of instruments.
- O. and P. In Campbell Pacific Nuclear International Model No. 501B portable gauging devices for measuring physical properties of materials.
- Q. For use in a Mossbauer Spectrometer for research purposes.

**CONDITIONS**

10. Licensed material may be used or stored only at locations approved by the licensee's Radiation Safety Committee at the University of Puerto Rico, Mayagüez Campus; College Station, Mayagüez; and the Marine Sciences Laboratory, Magueyes Island, La Parguera, Puerto Rico.
11. The Radiation Safety Officer for this license is Roberto Torres Martinez
12. Licensed material shall only be used by, or under the supervision of, individuals designated, in writing, by the Radiation Safety Committee. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.
13. 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. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- 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 contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.
- E. 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.

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- F. The leak test shall be capable of detecting the presence of 185 becquerels (Bq) (0.005 microcurie) of radioactive material on the test sample. If the test reveals the presence of 185 Bq (0.005 microcurie) 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.
- G. 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.
- H. Records of leak test results shall be kept in units of microcuries and shall be maintained for 5 years.
14. The licensee shall not use licensed material in or on human beings except as provided otherwise by specific condition of this license.
15. Any cleaning, maintenance, or repair of the gauges that requires detaching the source or source rod from the gauge shall be performed only by the manufacturer or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
16. The licensee shall not use licensed material in or on human beings.
17. The licensee shall conduct a physical inventory every six 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.
18. 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)] for establishing decommissioning financial assurance.
19. Except for maintaining labeling as required by 10 CFR Part 20 or 71, the licensee shall obtain authorization from RC before making any changes in the sealed source, device, or source-device combination that would alter the description or specifications as indicated in the respective Certificates of Registration issued either by the Commission pursuant to 10 CFR 32.210 or by an Agreement State.



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20. Any cleaning, maintenance, or repair of the gauges that requires detaching the source or source rod from the gauge shall be performed only by the manufacturer or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
21. A. If the licensee uses unshielded sealed sources extended more than 3 feet below the surface, the licensee shall use surface casing that extends from the lowest depth to 12 inches above the surface and other appropriate procedures to reduce the probability of the source or probe becoming lodged below the surface. If it is not feasible to extend the casing 12 inches above the surface, the licensee shall implement procedures to ensure that the cased hole is free of obstruction before making measurements.
- B. If a sealed source or a probe containing sealed sources becomes lodged below the surface and it becomes apparent that efforts to recover the sealed source or probe may not be successful, the licensee shall notify the U.S. Nuclear Regulatory Commission and submit the report required by 10 CFR 30.50(b)(2) and (c). The licensee shall not abandon the sealed source or probe without obtaining the Commission's prior written consent.
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 February 21, 1994
  - B. Letter dated January 20, 1995
  - C. Letter dated February 2, 1995
  - D. Letter dated February 3, 1995
  - E. Letter dated April 2, 1997
  - F. Letter dated September 18, 1997
  - G. Letter dated September 19, 1997
  - H. Letter dated May 8, 1998
  - I. Letter dated January 12, 2001
  - J. Letter dated March 12, 2001
  - K. Letter dated May 23, 2001
  - L. Letter dated November 26, 2001
  - M. Letter dated April 2, 2003
  - N. Letter dated September 7, 2004
  - O. Letter dated November 9, 2004



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For the U.S. Nuclear Regulatory Commission

Date December 2, 2004

By

***Original signed by Thomas K. Thompson***Thomas K. Thompson  
Commercial and R&D Branch  
Division of Nuclear Materials Safety  
Region I  
King of Prussia, Pennsylvania 19406-1415