



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

April 8, 2008

Docket No. 03000638
Control No. 142058

License No. 08-02075-03

Carl Petchik
Executive Director- Facilities Maintenance and Operations
The Catholic University of America
Marist Annex Building
Cardinal Station
Washington, DC 20064

SUBJECT: THE CATHOLIC UNIVERSITY OF AMERICA, LICENSE AMENDMENT,
CONTROL NO. 142058

Dear Mr. Petchik:

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).

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Medical, Academic, and Industrial Uses of Nuclear Material**; then **Regulations, Guidance, and Communications**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 7:00 a.m. to 8:00 p.m. EST, Monday through Friday (except Federal holidays).

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. 61

C. Petchik
The Catholic University of America

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cc:
Mahmoud S. Haleem, Radiation Safety Officer

DOCUMENT NAME: C:\FileNet\ML081060668.wpd

SUNSI Review Complete: TThompson

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NAME	TThompson /TKT/							
DATE	4/8/08							

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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. The Catholic University of America</p> <p>2. Marist Annex Building Cardinal Station Washington, D.C. 20064</p>	<p>In accordance with the letter dated February 20, 2008,</p> <p>3. License No. 08-02075-03</p> <p>is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration Date: July 31, 2015</p> <hr/> <p>5. Docket No. 030-00638</p>
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<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material with atomic numbers 3 through 83</p> <p>B. Any byproduct material with atomic numbers greater than 83</p> <p>C. Hydrogen 3</p> <p>D. Carbon 14</p> <p>E. Phosphorus 32</p> <p>F. Phosphorus 33</p> <p>G. Sulfur 35</p> <p>H. Potassium 42</p> <p>I. Strontium 90</p> <p>J. Molybdenum 99</p> <p>K. Technetium 99m</p> <p>L. Iodine 125</p> <p>M. Iodine 131</p> <p>N. Cesium 137</p> <p>O. Cesium 139/Barium 139</p>	<p>7. Chemical and/or physical form</p> <p>A. Any</p> <p>B. Any</p> <p>C. Any</p> <p>D. Any</p> <p>E. Any</p> <p>F. Any</p> <p>G. Any</p> <p>H. Any</p> <p>I. Any</p> <p>J. Any</p> <p>K. Any</p> <p>L. Any</p> <p>M. Any</p> <p>N. Any</p> <p>O. Any</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. Not to exceed 10 millicuries per radionuclide and 500 millicuries total</p> <p>B. Not to exceed 10 microcuries per radionuclide and one millicurie total</p> <p>C. 2 curies</p> <p>D. 50 millicuries</p> <p>E. 30 millicuries</p> <p>F. 30 millicuries</p> <p>G. 2 curies</p> <p>H. 100 millicuries</p> <p>I. 30 millicuries</p> <p>J. 200 millicuries</p> <p>K. 200 millicuries</p> <p>L. 25 millicuries</p> <p>M. 100 millicuries</p> <p>N. 50 millicuries</p> <p>O. 1 curie</p>
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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License No.
08-02075-03

Docket No.
030-00638

Amendment No.61

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
P. Lead 210	P. Any	P. 250 microcuries
Q. Lead 214	Q. Any	Q. 250 microcuries
R. Bismuth 210	R. Any	R. 250 microcuries
S. Bismuth 214	S. Any	S. 250 millicuries
T. Polonium 210	T. Any	T. 250 microcuries
U. Polonium 214	U. Any	U. 250 microcuries
V. Radon 222	V. Any	V. 250 microcuries
W. Radium 226	W. Any	W. 250 microcuries
X. Thorium 230	X. Any	X. 100 microcuries
Y. Americium 241	Y. Any	Y. 35 microcuries
Z. Cobalt 60	Z. Sealed source (Nuclear Chicago Model RR60 [CUA ID S-033])	Z. 20 millicuries
AA. Nickel 63	AA. Foils or plated sources (Amersham Model NBC 7020, NRD Model -1001, or DuPont Merck Model NER-002)	AA. Not to exceed 15 millicuries per source and 45 millicuries total
BB. Nickel 63	BB. Foils (New England Nuclear)	BB. 225 millicuries
CC. Samarium 151	CC. Sealed source (Model 0103 DA Product Code SSD167)	CC. 500 millicuries
DD. Polonium 210	DD. Sealed source (Monsanto Research Design Dwg. NS-2)	DD. 1 curie
EE. Polonium 210	EE. Sealed source (Research Model MRC-N-SS-W-PO-BE)	EE. 10 curies

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FF. Neptunium 237	FF. Encapsulated Foils	FF. 3.5 millicuries
GG. Americium 241	GG. Sealed source (NUMEC Cat. No. 9AMG14 [CUA ID S-107])	GG. 30 millicuries
HH. Americium 241	HH. Sealed source ([CUA ID S-104, Inventory No. 95-012])	HH. 200 millicuries
II. Californium 252	II. Plated source ([CUA ID S-108])	II. 0.22 microcurie
JJ. Californium 252	JJ. Plated source ([CUA ID S-110])	JJ. 12 microcuries
KK. Cesium 137	KK. Sealed source (Amersham Models CDC.93, CDC.192, CDC.PE2, CDC.PE3, CDC.PE4, CDC.PE5, CDC.PE6, CDC.PE7, or CDC.PE8; IPL Model 193; IRL Models 2-4 or 2-10; JL Shepherd Model 6810; 3M Models 4P6E, 4F6H, 4D6L, or 4F6S; or US Nuclear Model 375)	KK. 200 millicuries
LL. Cobalt 57	LL. Sealed source (IPL Model MOS-57)	LL. 50 millicuries
MM. Cobalt 57	MM. Sealed source (WEB Research C., Inc. Model MCo7 series)	MM. 50 millicuries

9. Authorized use:

A. - JJ. and LL.-MM. Research and development as defined in 10 CFR 30.4; animal studies; teaching and training of students; storage and disposal of licensed material from Trinity College.

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KK. In a J.L. Shepherd & Associates Model No. 28-5 calibrator, for instrument calibration.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at 620 Michigan Avenue, N.E., Washington, D.C.
11. A. 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 three years following the last use of licensed material by the individual.
B. The Radiation Safety Officer (RSO) for this license is Mahmoud S. Haleem.
12. The licensee shall not use licensed material in or on human beings except as provided otherwise by specific condition of this license.
13. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
14. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.
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 three months.
C. 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.
D. 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.
E. 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.

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- F. 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.
- G. 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.
- H. 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.
- I. Records of leak test results shall be kept in units of microcuries and shall be maintained for five years.
16. 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 five 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.
17. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
18. A. Detector cells containing a titanium tritide foil or a scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents the foil temperatures from exceeding that specified in the certificate of registration referred to in 10 CFR 32.210.
- B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
19. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the Commission or an Agreement State to perform such services.
20. 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:

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- 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 three years. The record must include the date of 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.
21. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."
22. Notwithstanding the requirements of Condition 23, the licensee is authorized to make program changes and changes to procedures specifically identified in the condition, which were previously approved by the U. S. Nuclear Regulatory Commission and incorporated into the license without prior Commission approval as long as:
- A. The proposed revision is documented, reviewed, and approved by the licensee's Radiation Safety Committee in accordance with established procedures prior to implementation.
- B. The revised program is in accordance with regulatory requirements, will not change the license conditions, and will not decrease the effectiveness of the Radiation Safety Program.
- C. The licensee's staff is trained in the revised procedures prior to implementation.
- D. The licensee's audit program evaluates the effectiveness of the change and its implementation.

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23. 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 November 4, 2003 [ML033290081]
- B. Application dated October 27, 2004 [ML043140380]
- C. Letter dated June 7, 2005 [ML051660115]



For the U.S. Nuclear Regulatory Commission

Original signed by Thomas K. ThompsonDate April 8, 2008

By

Thomas K. Thompson
Commercial and R&D Branch
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406