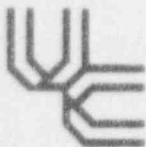


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University of Cincinnati



DOCKETED  
USNRC

Office of General Counsel  
University of Cincinnati  
PO Box 210623  
Cincinnati OH 45221-0623

'97 MAR 26 A10:08

300 Administration Building  
Phone (513) 556-3483  
Fax (513) 556-3232

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

March 20, 1997

RE: In The Matter of University of Cincinnati  
Denial of License Amendment  
Docket No. 30-02764-MLA  
ASLBP No. 97-722-01-MLA

To The Parties On The Attached Service List:

It has come to my attention that Amendment 80 of the University of Cincinnati's United States Nuclear Regulatory Commission license number 34-07903-05 was not attached to the University Request to Dismiss Proceeding dated March 13, 1997. Accordingly, I am sending you the missing attachment, together with my apologies for any inconvenience this may have caused.

Very truly yours,

James E. Wesner  
General Counsel

JW:cmw

Attachment

9704010080 970320  
PDR ADOCK 03002764  
C PDR

DS03

Administrative Judge  
G. Paul Bollwerk, III, Presiding Officer  
Atomic Safety and Licensing Board  
Mail Stop - T-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Administrative Judge  
Jerry R. Kline  
Special Assistant  
Atomic Safety and Licensing Board  
Mail Stop - T-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Donald Harrison, M.D.  
Senior Vice President and  
Provost for Health Affairs  
University of Cincinnati  
141 Health Professions Building  
Mail Location 0663  
Cincinnati, OH 45267-0663

Office of Commission Appellate  
Adjudication  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Richard G. Bachmann, Esq.  
Bernard M. Bordenick, Esq.  
Office of the General Counsel  
Mail Stop - 0-15 B18  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION III  
801 WARRENVILLE ROAD  
LISLE, ILLINOIS 60532-4351

FEB 18 1997

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FEB 19 1997

SR. MR. HEALTH EDUCATION

Donald Harrison, M.D.  
Senior Vice President and Provost  
for Health Affairs  
University of Cincinnati  
141 Health Professions Building  
Mail Location 663  
Cincinnati, OH 45267-0663

RECEIVED

MAR 3 1997

C.R.C.

Dear Dr. Harrison:

In our letter to you dated December 12, 1996, we had indicated that your request for a license amendment to permit certain members of the public to receive doses up to 500 mrem/yr was denied. Specifically, you had requested that certain specified visitors of patients undergoing treatments using licensed materials, such as brachytherapy, be permitted to receive doses up to 500 mrem/yr incidental to their presence with patients during these treatments. We had also indicated that the most appropriate route to follow would be for your organization to submit a request for rulemaking concerning this matter.

Because of changes in some Nuclear Regulatory Commission policies that have a direct bearing on this matter, particularly the recent publication in the Federal Register of the revised patient release rule (10 CFR 35.75), we have reconsidered your request under 10 CFR 20.1301(c). As discussed with Vicky Morris and other members of the university's staff during a telephone call on February 12, 1997, enclosed is the amended license that addresses your January 1996 request. License Condition 27 permits use of the 500 mrem/yr dose limit for specified members of the public provided certain controls are in place. These controls are similar to those proposed in your letter dated January 5, 1996 (Revised). We regret any inconvenience caused by the delay in granting this request.

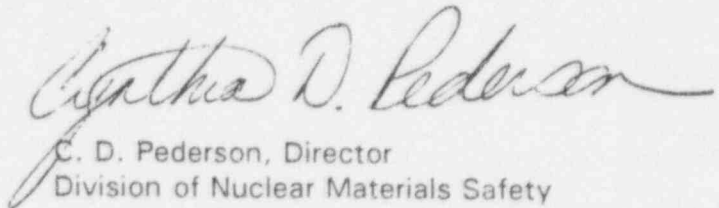
Please also note that we have extended your NRC license expiration date by five years as described in letter dated May 7, 1996 (enclosed).

D. Harrison

-2-

If you have any questions or require clarification on any of the information stated above, you may contact B.J. Holt or James Mullauer of my staff at (630) 829-9807.

Sincerely,



C. D. Pederson, Director  
Division of Nuclear Materials Safety

License No. 34-06903-05

Docket No. 030-02764

Enclosures: 1. Amendment No. 80  
2. Ltr dtd 05/07/96

cc w/encls: Victoria Morris, RSO

## MATERIALS LICENSE

Amendment No. 80

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  
January 5, 19963. License Number 34-06903-05 is amended  
in its entirety to read as follows:

4. Expiration Date June 30, 2002

5. Docket or  
Reference No. 030-027646. Byproduct, Source, and/or  
Special Nuclear Material7. Chemical and/or Physical  
Form8. Maximum Amount that Licensee  
May Possess at Any One Time  
Under This LicenseA. Any byproduct material  
with Atomic Numbers  
between 1-83, inclusive,  
except as specified  
belowA. Any, other than  
Sealed SourcesA. 500 millicuries of each  
radionuclide with a  
total possession limit  
of 10 curies

B. Hydrogen-3

B. Any

B. 5 curies

C. Carbon-14

C. Any

C. 5 curies

D. Phosphorus-32

D. Any

D. 2 curies

E. Sulfur-35

E. Any

E. 2 curies

F. Technetium-99

F. Any

F. 2 curies

G. Rhenium-186

G. Any

G. 3 curies

H. Rhenium-188

H. Any

H. 3 curies

I. Lead-210

I. Any

I. 10 millicuries

J. Molybdenum-99

J. Any

J. 20 curies

K. Technetium-99m

K. Any

K. 30 curies

L. Iodine-125

L. Any

L. 3 curies

M. Iodine-131

M. Any

M. 3 curies

N. Iodine-129

N. Any

N. 1 millicurie

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- |   |   |   |
|---|---|---|
| <p>6. Byproduct, source, and/or special nuclear material</p> <p>O. Any byproduct material with Atomic Numbers between 1-83, inclusive, except as specified below</p> <p>P. Gadolinium-153</p> <p>Q. Iodine-125</p> <p>R. Cesium-137</p> <p>S. Cesium-137</p> <p>T. Cesium-137</p> <p>U. Cesium-137</p> <p>V. Cesium-137</p> | <p>7. Chemical and/or physical form</p> <p>O. Sealed Sources (registered pursuant to Section 32.210 of 10 CFR Part 32 or an Agreement State)</p> <p>P. Sealed Sources (registered pursuant to Section 32.210 of 10 CFR Part 32 or an Agreement State)</p> <p>Q. Sealed Sources (registered pursuant to Section 32.210 of 10 CFR Part 32 or an Agreement State)</p> <p>R. Sealed Source (J. L. Shepard Model 28-8)</p> <p>S. Sealed Source (Amersham Model #77302)</p> <p>T. Sealed Source (Victoreen Model 64-764)</p> <p>U. Sealed Source (Amersham Model 773)</p> <p>V. Sealed Source (Kay-Ray Inc. Model 7060BP)</p> | <p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>O. No single source to exceed 100 millicuries. Total possession not to exceed 15 curies</p> <p>P. Not to exceed 2 curies per source with a total possession limit of 6 curies</p> <p>Q. Not to exceed 500 millicuries per source with a total possession limit of 2 curies</p> <p>R. One source not to exceed 3.5 Ci</p> <p>S. One source not to exceed 145 mCi</p> <p>T. One source not to exceed 100 mCi</p> <p>U. One source not to exceed 145 mCi</p> <p>V. One source not to exceed 100 mCi</p> |
|---|---|---|

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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
W. Americium-241	W. Sealed Sources (registered pursuant to Section 32.210 of 10 CFR Part 32 or an Agreement State)	W. Not to exceed 10 mCi per source with a total possession limit of 100 millicuries
X. Cesium-137	X. Sealed Sources (registered pursuant to Section 32.210 of 10 CFR Part 32 or an Agreement State)	X. Not to exceed 50 mCi per source with a total possession limit of 500 millicuries
Y. Californium-252	Y. Sealed Sources (registered pursuant to Section 32.210 of 10 CFR Part 32 or an Agreement State)	Y. 1 mCi
Z. Neptunium-237	Z. Any, other than sealed sources	Z. 1 mCi
AA. Plutonium-238	AA. Any, other than sealed sources	AA. 1 mCi
BB. Plutonium-239	BB. Any, other than sealed sources	BB. 1 mCi
CC. Plutonium-240	CC. Any, other than sealed sources	CC. 1 mCi
DD. Thorium-228	DD. Any, other than sealed sources	DD. 10 mCi
EE. Thorium-230	EE. Any, other than sealed sources	EE. 300 mCi
FF. Thorium-232	FF. Any, other than sealed sources	FF. 10 mCi
GG. Uranium-234	GG. Any, other than sealed sources	GG. 10 mCi
HH. Uranium-235	HH. Any, other than sealed sources	HH. 10 mCi

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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 |
| II. Uranium-238   | II. Any, other than sealed sources   | II. 10 mCi   |
| JJ. Neptunium-237   | JJ. See Item 9.JJ. and 9.KK.   | JJ. 5 mCi  |
| KK. Plutonium-242   | KK. See Item 9.JJ. and 9.KK.   | KK. 5 mCi  |
| LL. Actinium-227  | LL. See Item 9.LL. through 9.NN.   | LL. 1 mCi  |
| MM. Polonium-210  | MM. See Item 9.LL. through 9.NN.   | MM. 10 mCi   |
| NN. Uranium-236   | NN. See Item 9.LL. through 9.NN.   | NN. 1 mCi  |
| OO. Plutonium-238   | OO. Sealed Source(s) (registered pursuant to Section 32.210 of 10 CFR Part 32 or an Agreement State) | OO. 1 mCi  |
| PP. Plutonium-239   | PP. Sealed Source(s) (registered pursuant to Section 32.210 of 10 CFR Part 32 or an Agreement State) | PP. 1 mCi  |
| QQ. Americium-241   | QQ. Sealed Source (NEN Model 476A)   | QQ. 88 mCi   |
| RR. Americium-241   | RR. Sealed Source(s) (Amersham Model AMC.D3)   | RR. 2 sources not to exceed 30 millicuries each                                |
| SS. Any radioactive material with Atomic Numbers between 1-95, inclusive. | SS. Any, other than seal sources   | SS. 2 millicuries each radionuclide. Total possession 100 millicuries          |

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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 |
| TT. Any byproduct material (Atomic Numbers between 1-83, inclusive. | TT. Sealed sources (registered pursuant to Section 32.74 of 10 CFR Part 32 or an Agreement State) | TT. No single source to exceed 300 millicuries                                 |
9. Authorized Use:
- A. through N. Medical diagnosis, therapy, and research in humans. Research and development as defined in Section 30.4 of 10 CFR Part 30, student instruction, instrument calibration and dosimeter calibration.
- O. through Q. Medical use described in 35.400 and 35.500, research in humans and animal studies, licensee instrument and dosimeter calibration and student instruction.
- R. through V. Student instruction, licensee instrument and dosimeter calibration, and densitometry studies.
- W. and X. For use in Troxler portable surface moisture/density gauges, student instruction and licensee instrument and dosimeter calibration.
- To be used for student instruction and neutron fluency rate studies.
- Z. through II. Research and development pertaining to the Department of Energy as described in letters dated June 2, 1993 and July 12, 1993.
- JJ. and KK. To study the spectrophotometric properties of heavy metals and their complexes as described in letters dated December 31, 1990, and August 2, 1991.
- LL. through NN. To study the aging process on radioactive waste as described in letters dated December 31, 1992, August 2, 1991, and February 5, 1993.
- OO. and PP. Student instruction and licensee instrument and dosimeter calibration.
- QQ. Student instruction and licensee instrument calibration.
- RR. To be used in a Provalid-AB Model Renalyzer PRX90 x-ray fluorescence instrument for plasma sample analysis.

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- SS. Research and development pertaining to the Department of Energy as described in letters dated June 2, 1993 and July 12, 1993.
- TT. For use in Transmission Line Source devices for medical radiography in humans which have been registered pursuant to Section 32.74 of 10 CFR Part 32 and distributed in accordance with a NRC or Agreement State specific license to persons specifically licensed by the NRC to receive, possess and use the device.

CONDITIONS

10. Locations of Use:
- A. Licensed material in Subitem A. shall be used at Daniel Drake Memorial Hospital or in any building on the East Campus of the University of Cincinnati, the West Campus of the University of Cincinnati, Raymond Walters College, University of Cincinnati Medical Center and Hospitals, Children's Hospital Medical Center, Shriners Burns Institute (all in Cincinnati, Ohio), or at Eklund Biology Laboratory, McMurdo Station, Antarctica.
  - B. Licensed materials in Subitems B. through V. shall be used at Daniel Drake Memorial Hospital or in any building on the East Campus of the University of Cincinnati, the West Campus of the University of Cincinnati, Raymond Walters College, University of Cincinnati Medical Center and Hospitals, Children's Hospital Medical Center, or Shriners Burns Institute (all in Cincinnati, Ohio).
  - C. Licensed material in Subitems W. and X. may be stored at the East Campus or the West Campus of the University of Cincinnati and may be used at temporary job sites of the licensee throughout the State of Ohio.
  - D. Licensed material in Subitems Y. through SS. shall be used in any building on the East Campus or the West Campus of the University of Cincinnati.
11. The Radiation Safety Officer for this license is Victoria R. Morris, M.S.
12. A. The use of licensed material in or on humans shall be by a physician as defined in 10 CFR 35.2.
- B. Physicians designated to use licensed material in or on humans shall meet the training criteria established in 10 CFR 35, Subpart J and shall be designated by the licensee's Radiation Safety Committee, Ronald Millard, Ph.D., Chairperson. The licensee shall maintain records of physicians designated as users.
  - C. Licensed material for other than human use shall be used by, or under the supervision of, individuals designated by the Radiation Safety Committee, Ronald Millard, Ph.D., Chairperson. The licensee shall maintain records of individuals designated as users.

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13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. Sealed sources need not be leak tested if:
- (i) they contain only hydrogen-3; or
  - (ii) they contain only a radioactive gas; or
  - (iii) the half-life of the isotope is 30 days or less; or
  - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
  - (v) they are not designed to emit alpha particles, 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 or detector cell 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 of radioactive material on the test sample. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region III, 801 Warrenville Road, Lisle, Illinois 60532-4351, ATTN: Chief, Nuclear Materials Safety Branch. The report shall specify the source involved, the test results, and corrective action taken. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.
- F. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to Perform such services.

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14. Pursuant to 10 CFR Part 40, "Domestic Licensing of Source Material," the licensee is authorized to possess, use, transfer, and import up to 999 kilograms of depleted uranium contained as shielding material.
15. The licensee shall conduct a physical inventory every 3-months to account for all sources and/or devices received and possessed pursuant to 10 CFR 35.59, 10 CFR 35.400 and 10 CFR 35.500 and every 6 months for all other sources and/or devices. Records of inventories shall be maintained for 5 years from the date of each inventory, and shall include the information required in 10 CFR 35.59(g).
16. 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 temperature from exceeding that specified by the manufacturer and approved by U.S. Nuclear Regulatory Commission.  
B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
17. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in 10 CFR 20.203(a)(1), the licensee is hereby authorized to label detector cells, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols.
18. Notwithstanding the requirements of 10 CFR 35.49(a) and (b), 10 CFR 25.100, 10 CFR 35.200, 10 CFR 35.300, 10 CFR 35.400, and 10 CFR 35.500, the licensee may use for any medical use any byproduct material or reagent kit. The licensee shall possess and use byproduct material for medical use in accordance with the prescriptive and performance criteria in the other sections of 10 CFR 35. This does not relieve the licensee from complying with applicable United States Food and Drug Administration (FDA) and other Federal and State requirements.
19. The licensee shall possess and use byproduct material for human research use in accordance with the prescriptive and performance criteria in all sections of 10 CFR Part 35 except Sections 35.49(a) and (b), 35.100, 35.200, and 35.300.
20. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
21. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days, and radionuclides identified in item 12.A. of letter dated February 26, 1992, for decay-in-storage before disposal in ordinary trash provided:
  - A. Radioactive waste to be disposed of in this manner shall be held for decay a minimum of 10 half-lives.



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- B. Before disposal as normal waste, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
- C. Generator columns shall be segregated so that they may be monitored separately to ensure decay to background levels prior to disposal.
- D. A record of each 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.
22. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.
23. The licensee is authorized to transport licensed material only in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
24. The licensee shall maintain records of information related to decommissioning at the University of Cincinnati, Cincinnati, Ohio, as specified in 10 CFR 30.35(g) until this license is terminated by the Commission.
25. Pursuant to 10 CFR 20.106(b) and 10 CFR 20.302, the licensee is authorized to dispose of licensed material by incineration provided the gaseous effluent from incineration does not exceed the limits specified for air in Appendix B, Table II, 10 CFR Part 20. Ash residues may be disposed of as described in letter dated February 26, 1992. Authorization to dispose of ash residues as described in letter dated February 26, 1992, shall expire on December 31, 1992.
26. Notwithstanding the provisions of 10 CFR 35.75, the licensee may release from confinement patients containing up to 70 millicuries of technetium-99m, without first measuring the dose rate from the patient.
27. Notwithstanding the provisions of 10 CFR 20.1301, individuals visiting patients confined pursuant to 10 CFR 35.75 are permitted to receive 500 mrem during the confinement period provided:
- A. The limit applies to visitors determined by the physician to be necessary for the emotional and/or physical support of the patient.
- B. The specified visitors shall be limited to persons 18 years and older and non-pregnant females.

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- C. The specified visitors shall be instructed to maintain their exposure as low as is reasonably achievable. The instructions shall emphasize the basic radiation safety precautions of time, distance and shielding. The risks of radiation exposure shall be explained to the specified visitors and the visitors shall be advised that the exposure received may be above the regulatory limit for the general public.
- D. Exposures received by the specified visitors under this license condition shall be estimated by means appropriate to ensure that this dose limit is not exceeded. Records documenting compliance shall be maintained for three years.
28. 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, except for minor changes in the medical use radiation safety procedures as provided in 10 CFR 35.31. 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 received September 20, 1990; and
- B. Letters dated December 31, 1990, August 2, 1991, February 26, 1992, April 30, 1992, May 27, 1992, October 9, 1992, January 8, 1993, January 28, 1993, February 5, 1993, April 5, 1993, June 2, 1993, July 12, 1993, August 16, 1993, February 24, 1994, April 25, 1994, February 1, 1995 (excluding Items 2 and 3, and reference to the University reserving the right to change voting (core) membership of the Radiation Safety Committee), April 24, 1995, May 24, 1995, July 5, 1995, November 22, 1995, and January 5, 1996 (Revised).

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date 2/14/97

By *S. J. Hec*  
Nuclear Materials Licensing Branch, Region III