



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

21 17

October 1, 2004

Docket No. 030-03296
Control No. 135395

License No. 45-00034-26

Ralph O. Allen
Radiation Safety Officer
University of Virginia
ATTN: Environmental Health & Safety
515 Edgemont Road
P. O. Box 400322
Charlottesville, VA 22904-4322

SUBJECT: UNIVERSITY OF VIRGINIA, ISSUANCE OF LICENSE AMENDMENT,
CONTROL NO. 135395

Dear Mr. Allen:

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. Please note that in addition to changes based on your requests, Condition No. 34 of your license has been significantly revised to reflect new requirements for decay-in-storage waste. Specifically, you are no longer required to hold the waste for a minimum of 10 half-lives. 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).

In accordance with 10 CFR 2.390, a copy of this letter will be placed in the NRC Public Document Room and will be accessible from the NRC Web site at <http://www.nrc.gov/reading-rm.html>.

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R. Allen
University of Virginia

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Thank you for your cooperation.

Sincerely,

Original signed by Bryan A. Parker

Bryan A. Parker
Health Physicist
Nuclear Materials Safety Branch 3
Division of Nuclear Materials Safety

Enclosure:
Amendment No. 114

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OFFICE	DNMS/RI	N	DNMS/RI	DNMS/RI		
NAME	B Parker/BAP					
DATE	10/01/04					

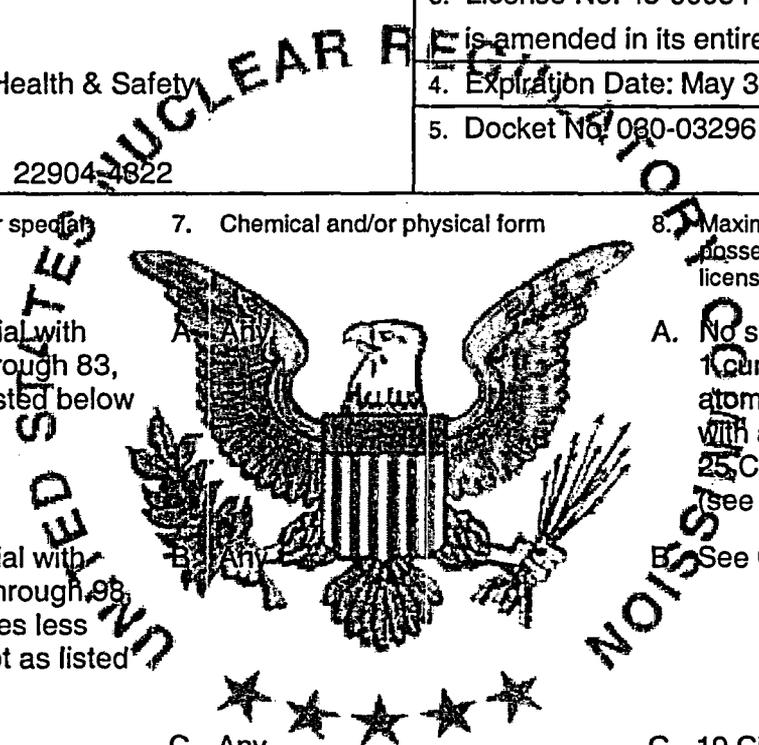
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MATERIALS LICENSE

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. University of Virginia</p> <p>2. ATTN: Environmental Health & Safety P. O. Box 400322 Charlottesville, Virginia 22904-4822</p>	<p>In accordance with the letter dated July 20, 2004,</p> <p>3. License No. 45-00034-26</p> <p>is amended in its entirety to read as follows:</p> <p>4. Expiration Date: May 31, 2005</p> <p>5. Docket No. 060-03296</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, inclusive except as listed below</p> <p>B. Any byproduct material with atomic numbers 84 through 98, inclusive, with half lives less than 120 days, except as listed below</p> <p>C. Hydrogen 3</p> <p>D. Carbon 14</p> <p>E. Phosphorus 32</p> <p>F. Sulfur 35</p> <p>G. Cobalt 60</p> <p>H. Molybdenum 99</p> <p>I. Iodine 125</p> <p>J. Iodine 129</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. Sealed source</p> <p>H. Mo-99/Tc-99m generator</p> <p>I. Any</p> <p>J. Sealed source</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. No single nuclide to exceed 1 curie (Ci) of each nuclide with atomic numbers 3-83 inclusive with a total possession limit of 25 Ci except as listed below (see also Condition No. 33)</p> <p>B. See Condition No. 33</p> <p>C. 10 Ci</p> <p>D. 4 Ci</p> <p>E. 5 Ci</p> <p>F. 5 Ci</p> <p>G. 2 Ci</p> <p>H. 6 Ci</p> <p>I. 2 Ci</p> <p>J. 10 millicuries (mCi)</p>
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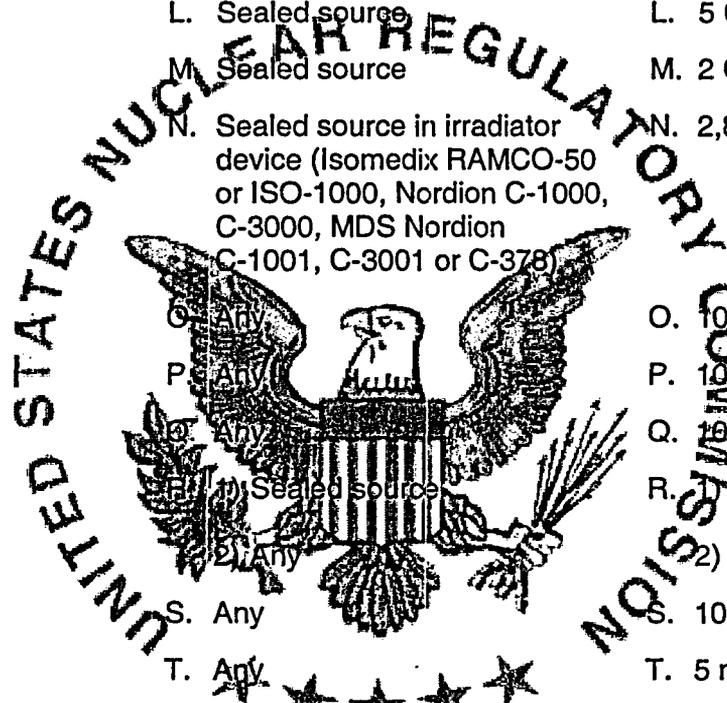
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6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
K. Cesium 137	K. Sealed brachytherapy source	K. 3 Ci
L. Gadolinium 153	L. Sealed source	L. 5 Ci
M. Iridium 192	M. Sealed source	M. 2 Ci
N. Cesium 137	N. Sealed source in irradiator device (Isomedix RAMCO-50 or ISO-1000, Nordion C-1000, C-3000, MDS Nordion C-1001, C-3001 or C-378)	N. 2,800 Ci
O. Sodium 22	O. Any	O. 10 mCi
P. Chlorine 35	P. Any	P. 10 mCi
Q. Manganese 54	Q. Any	Q. 10 mCi
R. 1) Iron 55	R. 1) Sealed source	R. 1) 300 mCi
2) Iron 55	2) Any	2) 100 mCi
S. Cobalt 58	S. Any	S. 10 mCi
T. Cobalt 60	T. Any	T. 5 mCi
U. 1) Nickel 63	U. 1) Sealed, foil and/or plated source	U. 1) 250 mCi
2) Nickel 63	2) Any	2) 30 mCi
V. Zinc 65	V. Any	V. 10 mCi
W. Krypton 85	W. Any	W. 100 mCi
X. 1) Strontium 90	X. 1) Any	X. 1) 100 microcuries (uCi)
2) Strontium 90	2) Sealed source	2) 500 mCi
Y. Cadmium 109	Y. Any	Y. 10 mCi
Z. Silver 110m	Z. Any	Z. 1 mCi



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A1. Antimony 124	A1. Sealed neutron source	A1. 60 Ci
A2. Iodine 129	A2. Any	A2. 100 uCi
A3. Barium 133	A3. Any	A3. 10 mCi
A4. Cesium 137	A4. Any	A4. 300 mCi
A5. Cesium 137	A5. Sealed source	A5. 500 mCi
A6. Gadolinium 153	A6. Any	A6. 10 mCi
A7. Thallium 204	A7. Any	A7. 10 mCi
A8. Polonium 210	A8. Any	A8. 100 uCi
A9. Uranium 235	A9. Foil and/or disk source	A9. 149 grams
A10. Plutonium 239	A10. Sealed neutron source	A10. 160 grams
A11. Plutonium 239	A11. Sealed in neutron dosimeter and air monitor	A11. 10 micrograms
A12. Plutonium 239	A12. Any	A12. 10 uCi
A13. Americium 241	A13. Sealed source	A13. 500 mCi
A14. Californium 249	A14. Sealed source	A14. 200 nanocuries
A15. Californium 252	A15. Sealed source	A15. 100 uCi
A16. Mixed Fission Products	A16. Corrosion in shipping cask	A16. 2 Ci
A17. Uranium	A17. Natural uranium in any form	A17. 50 kilograms
A18. Cesium 137	A18. Sealed source in gamma irradiator	A18. 400 Ci
A19. Cesium 137	A19. Sealed source in gamma irradiator	A19. 4,000 Ci
A20. Uranium	A20. Contained depleted uranium metal	A20. 999 kilograms



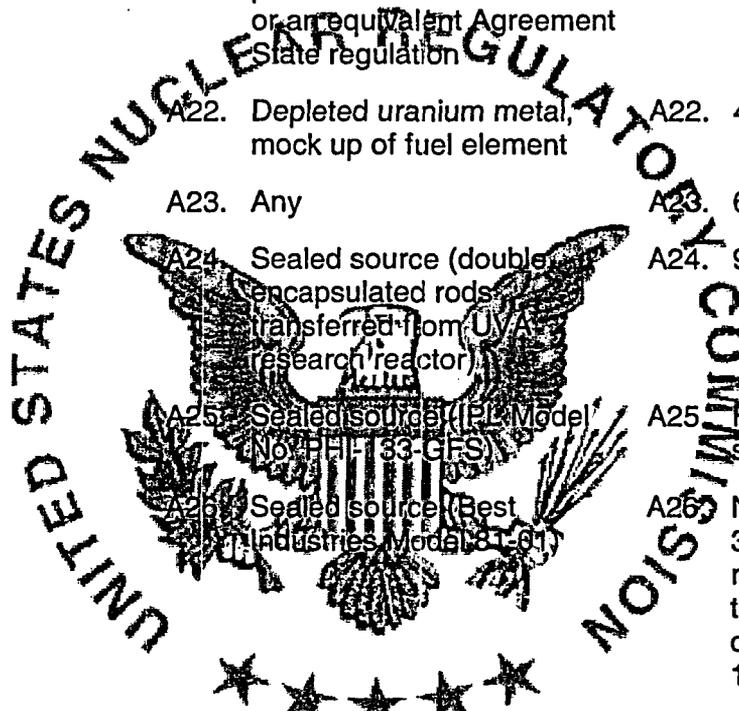
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A21. Iridium 192	A21. Sealed source registered pursuant to 10 CFR 32.210 or an equivalent Agreement State regulation	A21. Two sources, no single source to exceed 12 Ci
A22. Uranium	A22. Depleted uranium metal, mock up of fuel element	A22. 45 kilograms
A23. Technetium 99m	A23. Any	A23. 6 Ci
A24. Cobalt 60	A24. Sealed source (double encapsulated rods transferred from UVA research reactor)	A24. 900 Ci
A25. Barium 133	A25. Sealed source (JPL Model No. PH-33-GFS)	A25. Four sources, no single source to exceed 12 mCi
A26. Iridium 192	A26. Sealed source (Best Industries Model 81-01)	A26. No single seed to exceed 35 mCi; 2.5 Ci total; two ribbon sets consisting of three ribbons each containing 6, 10, or 14 seeds per ribbon
A27. Yttrium 90	A27. Sealed source (MDS Nordion Model TheraSphere)	A27. 2.5 Ci
A28. Cesium 137	A28. Sealed source [J.L. Shepherd & Assoc. Model 6810; AEA Technology/QSA (Revis Services, Ltd.) Models CDC.PE1; CDC.PE2; CDC.PE3 (R6000); CDC.PE4 (R6010); CDC.PE5 (R6020); CDC.PE6 (R6030); CDC.PE7 (R6040); and CDC.PE8 (R6050)]	A28. Two sources, not to exceed 6100 Ci total



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9. Authorized use:

- A. - M., X.(2), and A23. Medical research, diagnosis and therapy. Research and development as defined in 10 CFR 30.4.
- N. For use in MDS Nordion Gammacell 1000, Model B and Gammacell 3000 Elan Model I self contained irradiators for irradiating biological samples, human blood and blood products for introduction in human subjects and other materials except for explosives and food for human consumption. [NOTE: Gammacell 1000 (1200 Ci) is to be replaced by the Gammacell 3000 (1525 Ci)]
- O: - A17. Research and development as defined in 10 CFR 30.4.
- A18. For use in Radiation Machinery Corporation Gammator Model B self contained irradiator for irradiation of biological samples and other materials except for explosives and food for human consumption.
- A19. For use in MDS Nordion (formerly AECL) Gammacell Model 40 self contained irradiator for irradiation of small animals, biological samples and other materials except for explosives and food for human consumption.
- A20. For use as shielding material in storage containers and exposure devices.
- A21. One sealed source for use in a compatible Isotopen-Technik Model GammaMed 12i remote afterloading brachytherapy irradiator (Registry No. NR-726-D-101-S) for treatment of cancer patients, non-human research, training of personnel, performance of radiation safety and quality control procedures; and, one source for storage in its shipping container, incident to source replacement.
- A22. Storage only.
- A. - A20. Any standard source authorized by this license may be used for calibration of radiation detection equipment (see also Condition No. 16).
- A24. Storage only, for a period not to exceed five years from October 31, 2004. The sources must be transferred to an authorized recipient before the end of the five year period.

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- A25. For use in the Picker International, Inc., Beacon non-uniform attenuation correction device.
- A26. One ribbon set for use in the Cordis Checkmate Catheter System for intravascular brachytherapy, and one ribbon set in a shipping container for ribbon set replacement.
- A27. For use as manual brachytherapy sources for permanent implants under 10 CFR 35.400.
- A28. For use in a J.L. Shepherd & Associates Model Mark I, Model 68A self contained irradiator for irradiation of biological samples and other materials except for explosives and food for human consumption.

CONDITIONS:

10. A. Licensed material shall be used only at facilities owned, operated or leased by the University of Virginia (UVA) and located at Charlottesville, Virginia, Albemarle County, Virginia and may be used at these temporary locations: 1) portable moisture density gauges anywhere in the United States where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material; 2) for any licensed material identified in Subitem 6.A, not exceeding 1 millicurie (mCi) per nuclide and 20 mCi total at UVA's Mountain Lake Biological Station, Giles County, Virginia; and 3) for hydrogen 3, carbon 14, and sulfur 35 for uptake studies throughout the Commonwealth of Virginia.
- B. Prior to use of licensed material at a temporary job site, the licensee shall obtain written permission from the property owner.
- C. The licensee shall not vacate or release to unrestricted use a field office or storage location whose address is identified in Condition 10, without prior NRC written approval. Reports of residual levels of contamination or other information concerning facility status may be required.
- D. The high dose remote afterloader unit identified in Subitem No. 9.A21 shall be used only at UVA Hospital West, Division of Radiation Oncology, Main Floor, Room 1962A, Jefferson Park Avenue, Charlottesville, Virginia.

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11. A. The Radiation Safety Officer (RSO) for this license is Ralph O. Allen, or in his absence, Deborah P. Steva, Alternate RSO.
- B. The Authorized Medical Physicist for this license shall meet the training and experience criteria specified in 10 CFR Part 35 and be designated in writing by the licensee's Radiation Safety Committee (RSC).
12. A. The use of licensed material in or on humans shall be by a physician, dentist, or podiatrist as defined in 10 CFR 35.2.
- B. Physicians, dentists or podiatrists designated to use licensed material in or on humans shall meet the training criteria established in 10 CFR Part 35, and shall be designated by the licensee's RSC, Ralph O. Allen, Chairman.
- C. Licensed material for other than human use shall be used by or under the supervision of individuals designated by the RSC, Ralph O. Allen, Chairman.
13. A. The licensee shall not acquire licensed material in a sealed source or device that contains a sealed source unless the source or device has been registered with the U. S. Nuclear Regulatory Commission under 10 CFR 32.210 or with an Agreement State.
- B. Notwithstanding Condition 13.A., the licensee may acquire licensed material in a sealed source or device that contains a sealed source that has not been registered with the U. S. Nuclear Regulatory Commission under 10 CFR 32.210 or with an Agreement State if:
- 1) the sealed sources or devices containing sealed sources are intended for use solely under this license and are transferred only to recipients specifically authorized to receive them;
 - 2) this license authorizes the possession of the requested quantity of radioactive material in unsealed form or the sealed sources or devices containing sealed sources are specifically described in Items 6., 7. and 8. of this license; and
 - 3) you perform a safety evaluation in accordance with the administrative procedures required by 10 CFR 33.13(c)(3)(ii).

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- C. Sealed sources or detector cells containing licensed material shall not be opened by the licensee.
- D. The licensee shall conduct a physical inventory every three months to account for all sources and/or devices received and possessed pursuant to 10 CFR 35.67, 10 CFR 35.400, and 10 CFR 35.500 and every six months for all other sources and/or devices.
14. Sealed sources and detector cells possessed under this license shall be tested in accordance with the provisions of this Condition. In addition, the licensee may collect and analyze leak test samples from sealed sources and detector cells for customers. The licensee shall provide its customers with documentation and reports of results as may be necessary to meet appropriate regulatory and licensing requirements.
- A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed six 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 three months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- D. 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.
- E. Sealed sources need not be leak tested if:
- 1) they contain only hydrogen-3;
 - 2) they contain only a radioactive gas;
 - 3) the half-life of the isotope is 30 days or less;
 - 4) they contain not more than 100 microcuries (uCi) of beta and/or gamma emitting material or not more than 10 uCi of alpha emitting material; or
 - 5) 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.

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- F. The leak test shall be capable of detecting the presence of 0.005 uCi 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 U. S. Nuclear Regulatory Commission. If the test reveals the presence of 0.005 uCi 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. The report shall be filed within five days of the date the leak test result is known with the appropriate U. S. Nuclear Regulatory Commission, Regional Office referenced in Appendix D of 10 CFR Part 20. The report shall specify the source involved, the test results, and corrective action taken.
- G. Tests for leakage and/or contamination 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.
15. 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."
16. The licensee may calibrate radiation detection equipment for customers, as a non-profit community service, provided that it also furnishes the customer with documentation and reports as may be necessary to meet the customer's regulatory and licensing requirements.
17. 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 U. S. Nuclear Regulatory Commission or an Agreement State to perform such services.
18. Each portable nuclear gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container must be locked when in transport, storage or when not under the direct surveillance of an authorized user.
19. Any cleaning, maintenance, or repair of the gauge(s) that requires removal of the source rod 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.

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20. 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 NRC; and
- B. When in use, detector cells containing a titanium tritide foil or a scandium tritide foil shall be vented to the outside.
21. The licensee shall not perform repairs or alterations of the irradiator involving removal of shielding or access to the licensed material. Removal, replacement, and disposal of sealed sources in the irradiator shall be performed by a person specifically licensed by the U. S. Nuclear Regulatory Commission or an Agreement State to perform such services.
22. The licensee shall make available and require the use of the irradiator manufacturer's written instruction manual by each person using or having responsibility for the safe use of irradiator devices authorized by this license.
23. For each J. L. Shepherd Mark I Ion Model 81122 cesium-137 irradiator installed and used, the licensee shall:
- A. Permit the use of the irradiator only when a calibrated and operable radiation survey meter or room monitor is available; and
- B. Permit the irradiator door to be opened only after the operator has checked visual indicators to verify that the source has returned to its safe storage position; and
- C. Have room monitors installed that will:
- 1) Operate at all times when the irradiator is in use; and
 - 2) Activate a visible and audible alarm when radiation exceeds 2 millirem per hour; and
 - 3) Detect any radiation leaking from the irradiator door; and
 - 4) Be visible to the irradiator user when the user is next to the irradiator; or
- D. If a room monitor is not installed, have available a calibrated and operable survey meter which will be used to:
- 1) Determine the radiation level at the irradiator door when the door is closed; and
 - 2) Check for any increase in radiation levels each time the irradiator door is opened.

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- E. If abnormal radiation levels or any malfunctions of the irradiator are detected at any time, stop using the irradiator, restrict access to the area housing the irradiator, immediately notify the Radiation Safety Officer, and submit all reports required under 10 CFR Parts 20, 21 or 30.
- F. Not repair or authorize repairs of the irradiator except by the manufacturer or other persons specifically authorized by the U. S. Nuclear Regulatory Commission or an Agreement State to perform such services.
24. This license does not authorize the intentional release of licensed material to the environment, except as permitted under 10 CFR Part 20, Appendix B.
25. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
26. This license does not authorize commercial distribution of licensed material. However, as a community service, the licensee may transfer licensed material to other specific licensees in accordance with the terms and conditions of this license and the receiving license.
27. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.
28. The licensee shall possess and use byproduct material for human research in accordance with the prescriptive and performance criteria in all sections of 10 CFR Part 35 except Sections 35.49(a), (b) and (c), 35.100, 35.200, and 35.300.
29. Notwithstanding the requirements of 10 CFR 35.49(a), (b) and (c), 10 CFR 35.100, 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 U.S. Food and Drug Administration (FDA) and other Federal and State requirements.

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30. The licensee shall elute generators and process radioactive material with reagent kits in accordance with instructions furnished by the manufacturer on the label attached to or in the leaflet or brochure that accompanies the generator or reagent kit.
31. A. Radiopharmaceuticals transferred to other licensees for human use shall be either:
- 1) repackaged from prepared radiopharmaceuticals that are the subject of an FDA-approved "New Drug Application" (NDA) or for which FDA has accepted a "Notice of Claimed Investigational Exemption for a New Drug" (IND); or
 - 2) prepared from generators and reagent kits that are the subject of an FDA-approved NDA or for which FDA has accepted an IND.
- B. Prepared radiopharmaceuticals for which FDA has accepted an IND and radiopharmaceuticals prepared from generators or reagent kits for which FDA has accepted an IND shall be dispensed and/cr distributed:
- 1) in accordance with the directions provided by the sponsor of the IND; and
 - 2) only to physicians who have been accepted by the sponsor of the IND to participate in clinical evaluation of the drug.
32. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the limits specified in 10 CFR 30.72 which require consideration of the need for an emergency plan for responding to a release of licensed material.
33. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of unsealed licensed material to quantities less than 10^5 times the applicable limits in Appendix B of 10 CFR Part 30, or 100 mCi of readily dispersible source material as specified in 10 CFR 30.35(d), or 70.25(d), or 40.36(b), respectively. The sum of the ratios for all unsealed radionuclides possessed under the license shall not exceed 100.
34. 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 without regard to its radioactivity if it:
- 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

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- B. Removes and 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 material for three 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.
35. Pursuant to 10 CFR 20.1301, 20.1302, and 20.2002, 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. All ash residue generated from incineration of licensed material shall be treated as radioactive waste and shall be disposed of only in accordance with the provisions of 10 CFR 20.2002 or as otherwise specifically authorized by this license. CWX
m.2/11
36. 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 March 26, 1993, as revised by letter dated May 6, 1994, and enclosures thereto.
- B. Letter dated May 6, 1994 [revised application]
- C. Letter dated August 30, 1994 [revised application for HDR device originally submitted December 9, 1992]
- D. Letter dated November 18, 1994 [with enclosed revisions to application for renewal of license]
- E. Letter dated December 13, 1994 [fax with copy of RDRC No. 11 for UVA]
- F. Letter dated December 19, 1994 [fax with RSO certification dated 12/13/94]
- G. Letter dated January 25, 1995 [additional information about radiation safety procedures]
- H. Letter dated January 27, 1995 [additional information about radiation safety procedures]
- I. Letter dated March 8, 1995 [procedures for frequency of laboratory audits]
- J. Letter dated March 24, 1998 [change alt RSO (D. Steva); add Tc-99m and Sr-90 use; and increase poss. limits for Cs-137, Fe-55 and Ni-63]
- K. Letter dated May 13, 1999 [increase poss. limits for Am-241 and Ba-133; add Co-60 sources from reactor facility for storage only; change environmental monitoring freq.]
- L. Letter dated August 2, 1999 [additional information regarding May 13, 1999 amendment]
- M. Letter dated March 10, 2000 [change mailing address]
- N. Letter dated March 15, 2001 [add intravascular brachytherapy (Cordis Checkmate System)]
- O. Letter dated November 7, 2001 [add intravascular brachytherapy (Novoste Beta-Cath System)]
- P. Letter dated June 3, 2003 [change RSO (R. Allen)]

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- Q. Letter dated June 9, 2003 [add'l info for change of RSO]
- R. Letter dated June 16, 2003 [add Y-90 for 35.400 use; increase poss limit of Sr-90 for Novoste IVB]
- S. Letter dated August 13, 2003 [add'l info for adding Y-90 TheraSpheres]
- T. Letter dated February 16, 2004 [add JLS irradiator]
- U. Letter dated July 20, 2004 [extend storage of Co-60 incident to disposal]
- V. Letter dated August 9, 2004 [add Cs-137 blood irradiator]



For the U. S. Nuclear Regulatory Commission

Date October 1, 2004

By

*Original signed by Bryan Parker*Bryan Parker
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