



Occupational Safety & Health

February 24, 2005

Environmental Health

Laboratory Safety

US Nuclear Regulatory Commission, Region I

Attn: LAT

475 Allendale Road

Industrial Hygiene

King of Prussia, PA 19406-1415

45-09599-03
03016045

Radiation Safety

To whom it may concern:

Hazardous Waste

In response to the Commission's amended rules for financial assurance for decommissioning, Old Dominion University reevaluated its financial assurance requirements. Based on the amended rules, the amount of financial assurance required for Old Dominion University increased from \$150,000.00 to \$225,000.00. Attached, you will find a Statement of Intent for Old Dominion University's to address this increased cost.

Pollution Prevention

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Derek S. Krepp
Radiation Safety Officer

05 MAR -1 P 1:42

RECEIVED
REGION I

c: Mohammad A. Karim, Ph.D., Vice President for Research
Scott Sechrist, Ph.D., Chair, Radiation Safety Committee



OLD DOMINION UNIVERSITY

Office of the President

Koch Hall
Norfolk, Virginia 23529-0001
Telephone: (757) 683-3159
FAX: (757) 683-5679

February 22, 2005

Statement of Intent

Old Dominion University is a state corporation under control of the General Assembly of the Commonwealth of Virginia, §23-49.11, Code of Virginia (1950), as amended. Accordingly, Old Dominion University is a state government licensee as defined in 10 C.F.R. §30.35(f)(4).

I, Roseann Runte, acting in my capacity as President, am authorized by the Board of Visitors of Old Dominion University to issue this Statement of Intent on behalf of Old Dominion University. An excerpt from the Board of Visitors' Bylaws, providing my authority, is attached to this Statement of Intent as Attachment A.

Old Dominion University currently holds NRC License Number 45-09599-03. The referenced license describes the facilities for which this Statement of Intent is provided. A copy of the license is attached to this Statement of Intent as Attachment B.

Should Old Dominion University terminate its license, it is estimated that the decommissioning costs would be \$225,000.00. This figure is based on the table contained in 10 C.F.R. §30.35(d). Old Dominion University reserves the right to re-assess this funding estimate at the time of license termination, should that occur. As a state agency, Old Dominion University is subject to a bi-annual appropriation from the General Assembly. In the event that Old Dominion University decides to relinquish its NRC license, it agrees to request an appropriation from the General Assembly to cover the decommissioning costs sufficiently in advance to prevent any delays in required decommissioning activities.

Roseann Runte

Roseann Runte
President, Old Dominion University

February 22 2005

Date

NONNEGOTIABLE

Attachment A

by the Board. When directed by the Board, the Secretary shall take the minutes of closed meetings and be responsible for the security of draft minutes and audio recordings of closed meetings. The Secretary shall be responsible for ensuring that all Board of Visitors' reports required by the Commonwealth are submitted in a timely manner by the Rector.

§ 5.08. Other Representatives of the Board. From time to time, the Rector may designate a member of the Board, who is not an officer, to represent the Board on special occasions or for special ceremonies. Any member so designated shall be limited in his/her actions on behalf of the Board by the express role delegated by the Board for each occasion. The Rector only shall delegate his/her role as Board spokesperson for policy and other Board matters to other Board officers.

ARTICLE VI University Administrative Officers

§ 6.01. The President. The President of the University is appointed by the Board of Visitors and serves at the pleasure of the Board and may be removed only by an affirmative vote of at least nine voting Board members. The President is the chief executive and academic officer of the University and has direct charge of and is responsible to the Board for the operation of the University. The President shall submit to the Board, in writing, an annual report on the condition of the University.

- (a) Responsibilities of the President include, but are not limited to:
- (1) Providing leadership in the development of the University's mission and programs;
 - (2) Providing leadership for the governance of the University's faculty, all other University employees, and students;
 - (3) Balancing the University's revenues and expenditures, managing the University's funds and other resources, assuring the financial integrity of the University, and reporting the financial condition of the University to the Board, on a regular basis.
 - (4) Managing and personally participating in public and private fund-raising;
 - (5) Managing the University's facilities;
 - (6) Implementing the Policies and Procedures of the Board relating to University operations.
 - (7) Making recommendations to the Board concerning the initial appointment of faculty, the award of tenure to faculty, and the granting of emeritus status;

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. Old Dominion University Environmental Health and Safety Office</p> <p>2. Hughes Hall, Room 2061 Norfolk, Virginia 23529</p>	<p>In accordance with the letter dated December 6, 2004,</p> <p>3. License No. 45-09599-03</p> <p>is amended in its entirety to read as follows:</p> <hr/> <p>4. Expiration Date: November 30, 2005</p> <hr/> <p>5. Docket No. 030-16045</p>	
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Any byproduct material with atomic numbers 3 through 83 and with a half-life of not more than 120 days, except as follows:</p> <p>B. Cadmium 109</p> <p>C. Calcium 45</p> <p>D. Carbon 14</p> <p>E. Cesium 137</p> <p>F. Chlorine 36</p> <p>G. Cobalt 60</p> <p>H. Hydrogen 3</p> <p>I. Nickel 63</p> <p>J. Plutonium 236</p> <p>K. Plutonium 239</p> <p>L. Thorium 229</p> <p>M. Thorium 232</p>	<p>7. Chemical and/or physical form</p> <p>A. Any</p> <p>B. Any Electroplated sources</p> <p>C. Any</p> <p>D. Any</p> <p>E. Sealed source</p> <p>F. Any</p> <p>G. Sealed source</p> <p>H. Any</p> <p>I. Foils or plated sources</p> <p>J. Any</p> <p>K. Any</p> <p>L. Any</p> <p>M. Any</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. Not to exceed 150 millicuries per radionuclide and 5 curies total, except as follows:</p> <p>B. 20 millicuries</p> <p>C. 4 millicuries</p> <p>D. 500 millicuries</p> <p>E. 165 millicuries</p> <p>F. 5 millicuries</p> <p>G. 10 millicuries</p> <p>H. 500 millicuries</p> <p>I. Not to exceed 20 millicuries per source and 500 millicuries total</p> <p>J. 5 microcuries</p> <p>K. 5 microcuries</p> <p>L. 2 microcuries</p> <p>M. 100 microcuries</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
N. Tin 119m	N. Electro-deposited on foils	N. 4 millicuries
O. Uranium 232	O. Any	O. 1 microcurie
P. Uranium 236	P. Solid	P. 15 microcuries
Q. Natural Uranium	Q. Any	Q. 100 microcuries
R. Zinc 65	R. Any	R. 10 millicuries
S. Manganese 54	S. Any	S. 5 millicuries
T. Cadmium 109	T. Any	T. 5 millicuries

9. Authorized use:

A. - T. 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.

CONDITIONS

10. Licensed material may be used or stored only at the licensee's facilities located at Old Dominion University (ODU) in Norfolk, Virginia except that:
- A. Hydrogen 3, carbon 14 and iodine 125 may also be used aboard research vessels anywhere in the United States where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material; and
 - B. Nickel 63 foils or plated sources for research and development may also be used at temporary job sites of the licensee anywhere in the United States where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
11. The Radiation Safety Officer (RSO) for this license is Derek S. Krepp.

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12. Licensed material shall be used by, or under the supervision of, individuals designated by the Radiation Safety Committee, Scott R. Sechrist, Ph.D., Chairperson.
13. Licensed material shall not be used in or on human beings or in products distributed to the public.
14. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
15. 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.
16. The licensee shall conduct a physical inventory every six months to account for all sources and/or devices received and possessed under the license.
17. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
18. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months or at such intervals as specified by 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 six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- 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 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.
- 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. 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.
- H. 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.
19. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
20. 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:
- 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
 - 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
 - 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.

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21. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of unsealed licensed material to quantities less than 10^4 times the applicable limits in Appendix C of 10 CFR Part 20 pursuant to 10 CFR 30.35(d).
22. A. Detector cells containing titanium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 225 degrees Centigrade.
- B. Detector cells containing scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 325 degrees Centigrade.
23. This license does not authorize commercial distribution of licensed material.
24. Experimental animals, or the products from experimental animals, that have been administered licensed materials shall not be used for human consumption.
25. 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.
26. 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 (with attachments) and cover letter dated May 23, 1995
 - B. Letter dated May 31, 1990 [with attachments]
 - C. Letter dated November 8, 1995 [clarifying information in response to NRC fax dated 10/27/95]
 - D. Letter dated November 17, 1995 [amend L/C 18 for decay-in-storage with half-lives of <120 days]
 - E. Letter dated November 27, 1995 [addition of new work site]
 - F. Letter dated January 22, 1996 [change RSC Chairman]
 - G. Letter dated May 2, 1996 [add building for RAM use; change wording of research vessels used; and use of Ni-63 foils or plated sources for R&D at various sites in U.S.]
 - H. Letter dated May 29, 1996 [additional information regarding Ni-63 foils or plated sources use]
 - I. Letter dated March 3, 1997 [add location at ODU; revise hood flow criteria; add calibration procs]

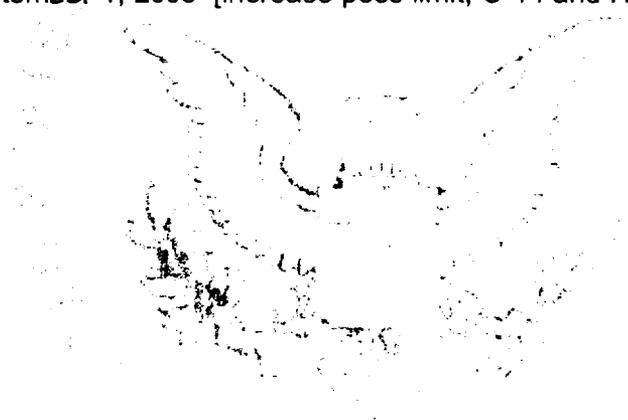
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- J. Letter dated August 21, 1997 [change RSC Chair]
- K. Letter dated November 4, 1997 [change RSC membership]
- L. Letter dated January 7, 1998 [adds location for sewer waste disposal]
- M. Letter dated June 23, 1999 [add Mn-54 and Cd-109 for R&D]
- N. Letter dated November 8, 1999 [change of mailing address for Radiation Safety Office]
- O. Letter dated February 16, 2000 [release some facilities for unrestricted use]
- P. Letter dated April 25, 2000 [additional information regarding release of facilities]
- Q. Letter dated October 17, 2000 [add location of use]
- R. Letter dated April 30, 2002 [change RSO]
- S. Letter dated September 30, 2002 [change of mailing address for ODU]
- T. Letter dated April 24, 2003 [change RSC Chairperson]
- U. Letter dated September 1, 2003 [increase poss limit, C-14 and H-3 to 500 mCi each]



For the U. S. Nuclear Regulatory Commission

Date January 13, 2005

By Original signed by Bryan A. Parker
 Bryan A. Parker
 Commercial and R&D Branch
 Division of Nuclear Materials Safety
 Region I
 King of Prussia, Pennsylvania 19406

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

2/24/2005, and to inform you that the initial processing which includes an administrative review has been performed.

Financial Assurance 45-09599-03
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

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** 136573.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

: (FOR LFMS USE)
 : INFORMATION FROM LTS
 : -----
 :
 BETWEEN: :
 :
 License Fee Management Branch, ARM : Program Code: 01100
 and : Status Code: 0
 Regional Licensing Sections : Fee Category: EX 3L 1D 2C
 : Exp. Date: 20051130
 : Fee Comments: 170.11(A)(4)
 : Decom Fin Assur Reqd: Y
 : ::

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED
 Applicant/Licensee: OLD DOMINION UNIVERSITY
 Received Date: 20050301
 Docket No: 3016045
 Control No.: 136573
 License No.: 45-09599-03
 Action Type: Fin. Assurance

2. FEE ATTACHED
 Amount: /
 Check No.: /

3. COMMENTS
 Signed *Alfreda Jurek*
 Date 3/9/2005

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /_/_/)

1. Fee Category and Amount: _____
 2. Correct Fee Paid. Application may be processed for:
 Amendment _____
 Renewal _____
 License _____
 3. OTHER _____

Signed _____
 Date _____