

## MATERIALS LICENSE

Amendment No. 13

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>Licensee</p> <p>1. Howard University Radiation Safety Committee Hospital Tower Building Suite 6000 Washington, D.C. 20060</p>	<p>In accordance with the letter dated April 9, 1997,</p> <p>3. License Number 08-00386-19 is amended in its entirety to read as follows:</p> <p>4. Expiration Date February 28, 2004</p> <p>5. Docket or Reference No. 030-11063</p>	
<p>6. Byproduct, Source, and/or Special Nuclear Material</p> <p>A. Any byproduct material with Atomic Nos. 3 through 83, with half-lives of less than 120 days, inclusive</p> <p>B. Hydrogen-3</p> <p>C. Carbon-14</p> <p>D. Phosphorus-32</p> <p>E. Sulfur-35</p> <p>F. Calcium-45</p> <p>G. Chromium-51</p> <p>H. Iron-55</p> <p>I. Iron-59</p> <p>J. Cobalt-60</p> <p>K. Zinc-65</p> <p>L. Iodine-125</p> <p>M. Iodine-131</p> <p>N. Polonium-210</p> <p>O. Americium-241</p> <p>P. Californium-252</p> <p>Q. Nickel-63</p> <p>R. Cesium-137</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 sources</p> <p>H. Any</p> <p>I. Any</p> <p>J. Sealed sources</p> <p>K. Any</p> <p>L. Any</p> <p>M. Any</p> <p>N. Sealed source</p> <p>O. Sealed source</p> <p>P. Sealed source</p> <p>Q. Plated sources or foils</p> <p>R. Any</p>	<p>8. Maximum Amount that Licensee May Possess at Any One Time Under This License</p> <p>A. 10 millicuries of each byproduct material, no more than 200 millicuries total</p> <p>B. 1.0 curie</p> <p>C. 1.0 curie</p> <p>D. 500 millicuries</p> <p>E. 250 millicuries</p> <p>F. 100 millicuries</p> <p>G. 100 millicuries</p> <p>H. 100 millicuries</p> <p>I. 100 millicuries</p> <p>J. 30 millicuries</p> <p>K. 100 millicuries</p> <p>L. 500 millicuries</p> <p>M. 250 millicuries</p> <p>N. 5 millicuries</p> <p>O. 25 millicuries</p> <p>P. 5 millicuries</p> <p>Q. Not to exceed 15 millicuries per source and 30 millicuries total</p> <p>R. 100 millicuries</p>
<p>9. Authorized use</p> <p>A. through P. Research and development as defined in 10 CFR 30.4; animal studies; training of students.</p> <p>Q. For use in electron capture detectors in gas chromatographs which are distributed under a license issued by the U.S. Nuclear Regulatory Commission or an Agreement State.</p> <p>R. Instrument calibration.</p> <p>OFFICIAL RECORD COPY</p> <p>9707090289 970701 PDR ADOCK 03011063 C PDR</p> <p>ML 10 011</p>		

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10. Licensed material may be used only at the licensee's facilities in Washington, D.C.
11. A. Licensed material shall be used by, or under the supervision of, individuals designated in writing by the Radiation Safety Committee, Dr. Marlene McKetty, Chairperson.
- B. The Radiation Safety Officer for this license is Gregory B. Tally.
12. Licensed material shall not be used in or on human beings.
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 and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
- 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 and detector cells 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 transfer 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.
- F. The test shall be capable of detecting the presence of 0.005 microcurie of

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radioactive material on the test sample. 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 or detector cell 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 U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source or detector cell 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.

- G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
16. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
17. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
18. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.
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. 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.
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. Radioactive waste generated shall be stored in accordance with the statements, representations, and procedures included with the waste storage plan described in the licensee's letter/application dated November 3, 1993.
23. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days for decay-in-storage before disposal in ordinary trash, provided:
- A. Waste to be disposed of in this manner shall be held for decay a minimum of ten

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half-lives.

- B. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
- C. A record of each such disposal shall be retained for three 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.
24. 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 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 September 9, 1991  
B. Letter dated November 3, 1993  
C. Letter dated April 9, 1997

For the U.S. Nuclear Regulatory Commission

ORIGINAL SIGNED BY:

By

SHERIA ARREDONDO

Nuclear Materials Safety Branch  
Region I

King of Prussia, Pennsylvania 19406

Date JUL 1 - 1997



JUL 1 - 1997

Marlene H. McKetty, Ph.D., Chairperson  
Radiation Safety Committee  
Howard University  
Hospital Tower Building  
Suite 6000  
Washington, D.C. 20060

Dear Dr. McKetty:

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

Prior to release of your old laboratory for unrestricted use you should be sure that the facilities meet the criteria in the enclosed "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material." You should submit a report of the results of the surveys you performed to this office and refer to this letter.

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) 337-5093 or 5239, so that we can provide appropriate corrections and answers.

Thank you for your cooperation.

Sincerely,

Original Signed By:  
Michelle R. Beardsley  
Michelle R. Beardsley  
Division of Nuclear Materials Safety


License Nos. 08-03075-07/08-00386-19  
Docket Nos. 030-01321/030-11063  
Control Nos. 124509/124510

Enclosures:

1. Amendment No. 31
2. Amendment No. 13
3. Guidelines for Decontamination of Facilities and  
Equipment Prior to Release for Unrestricted  
Use or Termination of Licenses for Byproduct, Source,  
or Special Nuclear Material

DOCUMENT NAME: R:\WPS\MLTR\L0803075.01

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	<input checked="checked" type="checkbox"/> N	DNMS/RI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAME	Beardsley						
DATE	05/07/97		05/ /97	05/ /97		05/ /97	

OFFICIAL RECORD COPY

OFFICE OF THE VICE PRESIDENT  
FOR HEALTH AFFAIRS  
RADIATION SAFETY COMMITTEE

April 9, 1997

Ms. Michelle R. Beardsley  
Nuclear Materials Safety Branch  
Division of Radiation Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, Pennsylvania 19404-1415

RE: License No. 08-03075-07  
License No. 08-00386-19

Dear Ms. Beardsley:

The Howard University Radiation Safety Committee has reviewed and forwards to you, for your action, this request to amend materials license numbers 08-03075-07 (human use) and 08-00386-19 (broad license). The requested amendment is as follows:

ORelocation of the Radiation Safety Counting Laboratory  
from Room B-114 of the Howard University Cancer Center  
to Room B-101/Howard University Cancer Center

The supporting documentation is attached and the fee is being processed by our Accounts Payable Section and will be mailed under separate cover. We would appreciate your prompt attention to this amendment request. If you require further information, please call the Radiation Safety Office on 202/806-7216.

Sincerely yours,

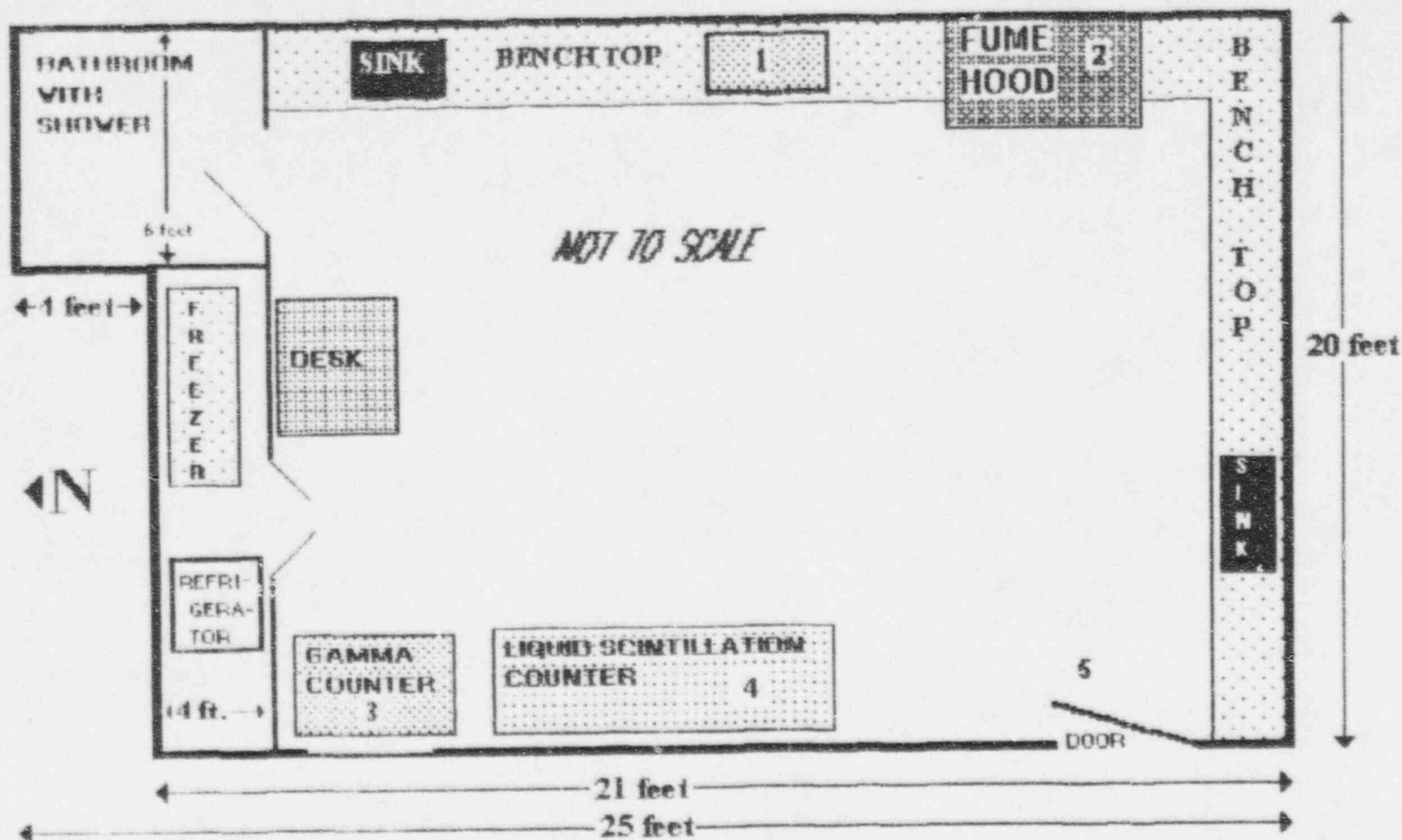
*Marlene McKetty*

Marlene H. McKetty, Ph.D., Chairperson  
Howard University Radiation Safety Committee

dmr  
Enclosures



124510



## Room B-101 Howard University Cancer Center (Proposed Lay-out)

- |  |   |
|--|---|
| <p>1. Harshaw, Model TASC-12M Low Background Alpha-Beta Counting System</p> <p>2. Fume Hood, equipped with an inner filtered glove box and air sampling apparatus. THIS HOOD WILL NOT BE USED UNTIL IT IS CONNECTED TO A HEPA FILTER WITH ACTIVATED CARBON AND VENTED DIRECTLY TO THE OUTSIDE. This filter and ventilation system has not been installed. It is anticipated that the installation of this system will be completed within 90 days.</p> | <p>3. Tracor, Gamma Trac II, Gamma Scintillation Counter</p> <p>4. Tracor, Mark III Liquid Scintillation Counter</p> <p>5. Entry Door equipped with dead-bolt lock.</p> |
|--|---|