



UNIVERSITY
of
HARTFORD

COLLEGE OF ARTS AND SCIENCES
Department of Biology

April 20, 2005

Mr. James Dwyer
Licensing Assistant Section
Nuclear Regulatory Commission

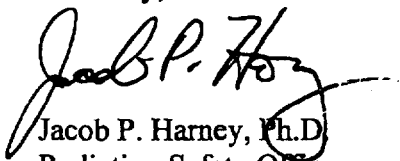
Dear Mr. Dwyer,

03035011

Enclosed please find a proposed amendment to our NRC license 06-19637-02 at the University of Hartford, a copy of our original license and our latest external audit dated September 30, 2004. As stated in the amendment, we are requesting adding Room 156 in our new Biology/Chemistry building to the current license on May 18, 2005 for the purposes of moving our Radioisotope Laboratory out of Dana Hall Rooms 349A and 349C. After the move, the RSO will survey-swipe the present laboratory and forward all survey results to you for your approval as part of our decommissioning procedure.

We appreciate your timely consideration of this amendment and look forward to your response as we make every effort to meet all necessary requirements of the NRC during our move.

Sincerely,


Jacob P. Harney, Ph.D.
Radiation Safety Officer



Donna M. Randall, Ph.D.
Provost

136861
NMSS/RGNI MATERIALS-002

Proposed amendment to License 06-19637-02, University of Hartford, Expiration date June 30, 2009.

The Department of Biology at the University of Hartford will be moving to a new Biology/Chemistry Building that is connected to Dana Hall, the department's present location. Room 156 (approx. 240 square feet) on the ground floor of the new Biology/Chemistry building will be the site of the new Radioisotope Laboratory. The Radiation Safety Officer and University Provost are requesting that Room 156 be added to the current license effective May 18, 2005, so that all equipment and materials presently in Dana Hall Rooms 349A and 349C can be moved to Room 156 under the supervision of the RSO. After removal of all equipment, Dana Hall Rooms 349A and 349C will be swipe-surveyed for any remaining contamination. If there is any contamination, the RSO will clean the rooms until swipe surveys are equivalent to background levels for the purposes of decommissioning the laboratory as the building is to be turned over to Shawmut Construction on June 1, 2005. The RSO will fax the results of all surveys to the NRC for their evaluation and for approval of official decommissioning of the laboratory.

The Radioisotope Laboratory at the University of Hartford was last audited on September 30, 2004 by Radiation Safety Associates, Inc., Hebron, CT. A copy of that audit and the license are included with this amendment. As is evident from the audit, our program appears to be in "full compliance with the Federal Regulations and the requirements of our NRC license."

At present the Radioisotope Laboratory has no scintillation or liquid waste on hand and has less than 3 mCi of ^{35}S - solid waste for decay-in-storage. The laboratory has never had on hand Phosphorus 32 or 33 or Iodine 125 despite the fact that the present license covers those isotopes.

NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

PAGE 1 OF 2 PAGES**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.

Licensee

1. University of Hartford

3. License number 06-19637-02

2. 200 Bloomfield Avenue

4. Expiration date June 30, 2009

West Hartford, Connecticut 06117-1599

5. Docket No. 03035011

Reference No. 06-19637-01

6. Byproduct, source, and/or special nuclear material

Chemical and/or physical form

8. Maximum amount that licensee may possess at any one time under this license

A. Phosphorus 32

A. 10 millicuries

B. Phosphorus 33

B. 10 millicuries

C. Sulfur 35

C. 20 millicuries

D. Iodine 125

D. 1 millicurie

9. Authorized use:

A. Through D.

Research and development as defined in 10 CFR 30.4; teaching and training of students.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at the University of Hartford, Rooms 349A and 349C Dana Hall, West Hartford, Connecticut.

11. A. Licensed material shall be used by, or under the supervision of, William H. Coleman, Ph.D., Tracy L. Simpson, Ph.D., or Jacob P. Harney, Ph.D.

B. The Radiation Safety Officer for this license is Jacob P. Harney, Ph.D.

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.

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

PAGE 2 of 2 PAGES

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number

06-19637-02

Docket or Reference Number

030-35011


06-19637-01

14. 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 in ordinary trash, provided:
- A. Waste to be disposed of in this manner shall be held for decay a minimum of ten 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 permitted under this License Condition 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.
15. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
16. 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 April 8, 1999
 - B. Letter dated May 24, 1999

For the U.S. Nuclear Regulatory Commission

Date June 1, 1999

By


James M. Bondick
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406

90538326



Radiation Safety Associates, Inc.

19 Pendleton Drive, P.O. Box 107 • Hebron, CT 06248

November 13, 2004

Donna Randall, Provost
University of Hartford
200 Bloomfield Avenue
West Hartford, CT 06117

Dear Dr. Randall,

On September 30, 2004 I performed an audit of your NRC-licensed radioactive material program at Dana Hall. Listed below are the license and regulatory requirements I reviewed as part of this audit, along with my findings.

1. Notices To Workers And Required Postings

All required notices are posted so that radiation workers can readily see them.

2. Worker Instruction And Training

Records of radiation worker training are complete.

3. Your last program audit was conducted on August 6, 2003. Audits are required annually so you are in compliance with this requirement.

4. Contamination surveys are conducted appropriately to comply with your license requirements.

5. Survey instruments were in calibration on the day of the audit.

6. Personal radiation dosimetry is provided for all radiation workers by Landaure, a NVLAP-certified supplier.

7. Areas where licensed radioactive material is used and stored are locked, and the keys are controlled by the RSO.

8. Licensed material is used only in designated controlled areas. These areas are either locked or a trained radiation worker is present to enforce the necessary controls.

9. The areas where licensed radioactive material is used and stored is properly posted "Caution Radioactive Material." Also posted are the waste storage area, the refrigerator and the freezer.

10. Each container of licensed radioactive material is labeled "Caution Radioactive Material" unless exempted by 10 CFR 20.1905.

11. Labeled packages containing licensed radioactive material are surveyed in accordance with 10 CFR 20.1906.

12. Solid radioactive waste with half-lives less than 120 days is decayed-in-storage in accordance with the requirements of License Condition 14
13. Liquid radioactive waste is either held for decay-in-storage, or it may be disposed to the sanitary sewer system in accordance with details provided in the license application. The scintillation cocktail used (Ultima Gold) has no constituents listed in RCRA and so sewer disposal is permitted.
14. The provisions of the program (i.e., procedures and requirements), results of surveys, personnel radiation dose records, effluent records, calibration records and audit records exist for the past three years. One exception is that no program audit was conducted in calendar year 2002, but this was identified during the calendar year 2003 audit.
15. NRC has a requirement for a "Decommissioning File" to be maintained. Refer to 10 CFR 30.35 Financial assurance and recordkeeping for decommissioning, Attachment A to this report. This would contain facility drawings, survey results and other information about any spills or releases that have occurred at a licensed facility. While all of the isotopes you are licensed to possess have relatively short half-lives, and recognizing that you have had no spills or releases, the regulation doesn't make any exceptions. It is therefore recommended that you start such a file within your program records.
16. All records for all aspects of your program appear to be complete.
17. I have calculated the minimum detectable activities (MDA) for your liquid scintillation counter for H-3 and for C-14, which are the calibration standards that you have. The MDA for H-3 is 41 dpm/100cm². For C-14 it is 10 dpm/100cm². In both cases the background and sample are assumed to be counted for 4 minutes each. If background and sample were counted for 1 minute each, MDAs would be 89 and 22 dpm/100cm² respectively. Since the efficiencies for the isotopes you use will be higher than H-3 and C-14, you could reduce your counting times if necessary and still maintain an acceptably low MDA.

Summary and Conclusions

This is a small and well-run program. Your program appears to be in full compliance with the Federal Regulations and the requirements of your NRC license. There were no significant findings made during this audit.

Sincerely,



K. Paul Steinmeyer, RRP
Senior Health Physicist

cc: Jacob Harney Ph.D.
Department of Biology
Room 369

Attachment A

(g) ***Each person licensed under this part or parts 32 through 36 and 39 of this chapter shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use.*** Before licensed activities are transferred or assigned in accordance with § 30.34(b), licensees shall transfer all records described in this paragraph to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of--

(1) ***Records of spills or other unusual occurrences*** involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) ***As-built drawings*** and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) Except for areas containing only sealed sources (provided the sources have not leaked or no contamination remains after any leak) or byproduct materials having only half-lives of less than 65 days, ***a list contained in a single document and updated every 2 years, of the following:***

(i) ***All areas designated and formerly designated restricted areas*** as defined in 10 CFR 20.1003 (For requirements prior to January 1, 1994, see 10 CFR 20.3 as contained in the CFR edition revised as of January 1, 1993.);

(ii) All areas outside of restricted areas that require documentation under § 30.35(g)(1).

(iii) All areas outside of restricted areas where current and previous wastes have been buried as documented under 10 CFR 20.2108; and

(iv) All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in 10 CFR part 20, subpart E, or apply for approval for disposal under 10 CFR 20.2002.

Attachment B
H-3 Minimum Detectable Activity

University of Hartford
Audit September 30, 2004

DETECTION LIMITS--WIPE SAMPLES

INPUT DATA:

Background Count = 12 cpm
Background Counting Time = 4 minutes
Sample Counting Time = 4 minutes
Detector Efficiency = 0.215 counts per disintegration
Detector Area = 100 cm²

RESULTS:

Critical Level (Lc) = 4.029 cpm above bkgd.
Detection Limit (Ld) = 8.809 cpm above bkgd.
Minimum Detectable Activity (MDA) = 40.97 dpm/wipe
Minimum Detectable Activity (MDA) = 40.97 dpm/100 cm²

All values calculated to 95% CL via MARSSIM methods

Calculated by RadCalc version 1.1 on 11/13/04 at 9:10:09 AM

Attachment C
C-14 Minimum Detectable Activity

University of Hartford
Audit September 30, 2004

DETECTION LIMITS--WIPE SAMPLES

INPUT DATA:

Background Count = 12 cpm
Background Counting Time = 4 minutes
Sample Counting Time = 4 minutes
Detector Efficiency = .863 counts per disintegration
Detector Area = 100 cm²

RESULTS:

Critical Level (Lc) = 4.029 cpm above bkgd.
Detection Limit (Ld) = 8.809 cpm above bkgd.
Minimum Detectable Activity (MDA) = 10.21 dpm/wipe
Minimum Detectable Activity (MDA) = 10.21 dpm/100 cm²

All values calculated to 95% CL via MARSSIM methods

Calculated by RadCalc version 1.1 on 11/13/04 at 9:12:59 AM

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

4/20/2005, and to inform you that the initial processing which includes an administrative review has been performed.

☒ Amendment 06-19637-02 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 136861.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

: (FOR LFMS USE)
: INFORMATION FROM LTS
: -----
:
: Program Code: 03620
: Status Code: 0
: Fee Category: EX 3M
: Exp. Date: 20090630
: Fee Comments: 170.11(A)(4) EX 3M
: Decom Fin Assur Req'd: N
:

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: HARTFORD, UNIVERSITY OF
Received Date: 20050420
Docket No: 3035011
Control No.: 136861
License No.: 06-19637-02
Action Type: Amendment

2. FEE ATTACHED

Amount: /
Check No.: /

3. COMMENTS

Signed *Deanna J. J. J.*
Date 4/20/2005

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 _____