

MATERIALS LICENSE

Amendment No. 22

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.

301970

Licensee

In accordance with letter dated
October 16, 19963. License Number 48-09843-32 is amended
in its entirety to read as follows:

4. Expiration Date August 31, 2001

5. Docket or
Reference No. 030-152026. Byproduct, Source, and/or
Special Nuclear Material7. Chemical and/or Physical
Form8. Maximum Amount that Licensee
May Possess at Any One Time
Under This License

A. Cesium-137

A. Sealed teletherapy
sources (PICKER Model
3800B-1 Series)A. 1,500 curies
per source

B. Cobalt-60

B. Teletherapy sealed
sources (AECL Models
C-146 or C-151)B. 10,000 curies
per source

9. Authorized Use:

A. For use in Picker Corporation Model 6152 teletherapy unit for the irradiation of animals and materials, excluding explosives and flammable materials, and for calibration of radiation detection instruments and dosimeters, and student instruction.

B. For use in AECL Model Eldorado 78 teletherapy unit for the irradiation of materials for research, excluding explosives and flammable materials, and for calibration of radiation detection instruments, and student instruction.

CONDITIONS

10. Licensed material listed in Subitem B. shall be used at the University of Wisconsin-Madison, Medical Sciences Center, Room B460, 1300 University Avenue, Madison, Wisconsin. Licensed material listed in Subitem A. shall be used at the University of Wisconsin-Madison, Medical Sciences Center, Room B480, 1300 University Avenue, Madison, Wisconsin.

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PDR ADOCK 03015202
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11. A. Licensed Material shall be used by, or under the supervision of P. M. DeLuca, D. W. Pearson, L. A. DeWerd or J. A. Micka.
- B. Licensed material may also be used by individuals who have completed the licensee's training program, as described in letters dated April 23, 1991, and July 31, 1991 and who have been designated by the licensee's Radiation Safety Officer. The licensee shall maintain records of the individuals who have been designated as authorized users.
- C. Persons who have been designated as authorized users in accordance with Condition 11.B. shall not be permitted to supervise other individuals in the use of the source. At least one individual named in Condition 11.A. shall be physically present at the authorized place of use whenever licensed material is being used by persons other than those authorized in Condition 11.B.
- D. Each person working under the supervision of an individual named in Condition 11.A. shall complete the training program described in letter dated November 22, 1989 prior to use of irradiator. Each person shall be approved by the Radiation Safety Officer. Records of training shall be retained.
12. A. Teletherapy sources shall be tested for leakage at intervals not to exceed 6 months. Records of test results shall be kept in units of microcuries and maintained for inspection by the Commission. In the absence of a certificate from a transferor indicating that a test has been made within 6 months before the transfer, a source received from another person shall not be used until tested for leakage.
- B. The tests shall be sufficiently sensitive to detect 0.05 microcurie of contamination on the test sample.
- C. The test sample shall be taken from selected accessible surfaces of the teletherapy head. The selected accessible surfaces should be those surfaces on which one might expect contamination (if there were to be leakage) to accumulate and shall include the inner surface of the most frequently used treatment cones or beam collimating device. The test sample shall be taken with the source in the "off" position.

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- D. If the test reveals the presence of 0.05 microcurie or more of removable contamination, the licensee shall immediately withdraw the source from use and take action to prevent spread of contamination. A 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.
13. The following shall be performed only by persons specifically licensed by the Commission or an Agreement State to perform such services:
- A. Installation, relocation, or removal of teletherapy units containing sources.
 - B. Source exchange.
 - C. Any maintenance or repair operations on a teletherapy unit involving work on the source drawer, the shutter, or other mechanism that could expose the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.
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 uranium contained as shielding material in the teletherapy units authorized by this license.
15. Before initiation of irradiator operations or after reloading of sources in the irradiator and before restart of the irradiator, a radiation survey shall be conducted to determine radiator levels around, above, and below the irradiator with the sources in the shielded position and in the exposed position. The results of the survey shall be sent to the U.S. Nuclear Regulatory Commission, Region III, 801 Warrenville Road, Lisle, Illinois 60532-4351, ATTN: Chief, Materials Licensing Section not more than 30 days after the survey is conducted.
16. After installation of the irradiator and cesium-137 or cobalt-60 source and prior to initiation of the irradiation program, a radiation survey shall be conducted to determine radiation levels around, above, and below the irradiator with the sources in the irradiate position and with the source in the shielded position. The results of the survey shall be sent to the U.S. Nuclear Regulatory Commission, Region III, 801 Warrenville Road, Lisle, Illinois 60532-4351, ATTN: Chief, Materials Licensing Section not more than thirty (30) days following installation of the source.

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17. Written emergency procedures for Co-60 and Cs-137 Teletherapy Units contained in materials attached to letter dated April 23, 1991 shall be followed and a copy of these instructions shall be made available to each individual using or having responsibility for use of licensed material. Any changes in these instructions shall have the prior approval of the U.S. Nuclear Regulatory Commission, Region III, 801 Warrenville Road, Lisle, Illinois 60532-4351, ATTN: Chief, Materials Licensing Branch.
18. A. Access to the teletherapy room shall be controlled by a door at each entrance. Such doors shall be normally closed.
- B. Each entrance to the teletherapy room shall be equipped with an electrical interlock system that will turn the teletherapy machine's primary beam of radiation "off" immediately upon opening of any entrance door. The interlock system shall be connected in such a manner that the teletherapy machine's primary beam of radiation cannot be turned "on" until all treatment room entrance doors are closed and the beam "on-off" control is reset at the control panel.
- C. Electrical interlocks on entrance doors to the teletherapy room shall be tested for proper operation at least once every 6 months. Records of test results shall be maintained for inspection by the Commission. Records may be disposed of following Commission inspection.
- D. In the event of malfunction of any door interlock, the teletherapy machine control shall be locked in the "off" condition and not used, except as may be necessary for repair or replacement of the interlock system, until the interlock system is shown to be functioning properly.
19. The licensee shall maintain records of information important to safe and effective decommissioning at 103 North Lake St., Madison, Wisconsin per the provisions of 10 CFR 30.35(g) until this license is terminated by the Commission.
20. Notwithstanding the requirements of 10 CFR 36.23(a); (b), (c), and (f), the licensee shall maintain access control to the irradiators (teletherapy units), as described in letters dated May 17, 1993 and July 12, 1993.
21. Notwithstanding the requirements of 10 CFR 36.27(a) and (b), the licensee shall maintain fire protection equipment as described in letters dated May 17, 1993 and July 12, 1993.
22. Notwithstanding the requirements of 10 CFR 36.31(a), the licensee shall maintain control of source movement as described in letters dated May 17, 1993 and July 12, 1993.

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23. 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 March 15, 1991 (except attachment 8 Training For Teletherapy Unit Operators Medical Physics Calibration Service); and
- B. Letters dated August 22, 1980, March 9, 1982, July 26, 1982, August 30, 1982, September 28, 1982, November 26, 1984, May 5, 1987 (with attached Survey Report), September 2, 1988, November 22, 1989, October 18, 1990 (with attachments, excluding paragraph number 1 on page 3 of Appendix III (entitled "Training For Irradiator Operators"), February 21, 1991 (with attachments), April 23, 1991 (with attachments), July 31, 1991, September 3, 1991, and September 21, 1992, May 17, 1993, July 12, 1993, March 8, 1994, August 8, 1994, and October 16, 1996.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date December 9, 1996

By

Loren J. Huster
Nuclear Materials Licensing Branch, Region III

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BETWEEN:

(FOR LFMS USE)
INFORMATION FROM LTS

License Fee Management Branch, ARM
and
Regional Licensing Sections

Program Code: 03520
Status Code: 0
Fee Category: EX 3E_3P
Exp. Date: 20010831
Fee Comments: 170.11(A)(4)
Decon Fin Assur Req'd: N

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: WISCONSIN-MADISON, UNIVERSITY OF
Received Date: 961021
Docket No: 3015202
Control No.: 301970
License No.: 48-09843-32
Action Type: Amendment

2. FEE ATTACHED

Amount: 0
Check No.: 0

3. COMMENTS

Signed
Date

D. Hersey
10-25-96

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

1. Fee Category and Amount: EX 3E_3P 170.11(A)(4)

2. Correct Fee Paid. Application may be processed for:

Amendment ☒
Renewal ☐
License ☐

3. OTHER

Signed
Date

SC
10/25/96

OCT 31 1996

RECEIVED BY LFDCB	
Date	<u>Oct. 25, 1996</u>
Log	<u>Oct 12 III</u>
By	<u>SC</u>
Date Completed	<u>10/25/96</u>

1996 OCT 25 AM 11:12

UNIVERSITY OF
WISCONSIN
MADISON

October 16, 1996

U.S. Nuclear Regulatory Commission, Region III
Nuclear Materials Licensing Section
801 Warrenville Road
Lisle, Illinois 60532-4351

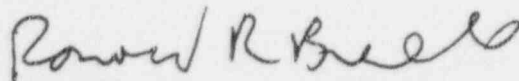
RE: Amendment Request, BML 48-09843-32

This request is to correct several inaccuracies in this license and to provide an updated listing of users of the source.

1. Item 6A pertains to a ^{137}Cs source. I believe the information may be inaccurate. The following information is from our records: a maximum of 1000 Ci ^{137}Cs (source model 3800B, SN PX-23) in a Picker Model 6152 teletherapy unit. The license specifies 10,000 Ci as source model AECL C-146 or C-151. We would recommend changing Paragraphs 6, 7, 8, and 9 A to reflect:
 - 6A. Cesium-137
 - 7A. Sealed teletherapy sources (Picker Model 3800B)
 - 8A. One source not to exceed 1,500 curies
 - 9A. For use in Picker Corporation Model 6152 teletherapy unit for the irradiation of animals and materials, excluding explosives and flammable materials, and for calibration of radiation detection instruments and dosimeters, and student instruction.
2. Item 11A lists users of these sources. Please delete F.H. Attix, B.P. Thomadsen, and N.B. Chiu. The persons are either no longer with the UW or do not attend the annual required training and should not be listed as users.

If you have any questions pertaining to this information, please call me at (608) 262-9178 or FAX me at (608) 262-6767.

Sincerely,



Ronald R. Bresell
Radiation Safety Officer

170.11(A)(4)
FEE EXEMPT
pm: 10-16-96
Safety Department

RECEIVED
OCT 21 1996
REGION III

301970

OCT 21 1996

DEC 10 1996

Ronald Bresell
Radiation Safety Officer
University of Wisconsin
Safety Department
30 North Murray Street
Madison, WI 53715

Dear Mr. Bresell:

Enclosed is Amendment No. 22 to your NRC Material License No. 48-09843-32 in accordance with your request.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office at (630) 829-9887 so that we can provide appropriate corrections and answers.

Please be advised that your license expires at the end of the day, in the month, and year stated in the license. Unless your license has been terminated, you must conduct your program involving byproduct materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate in accordance with NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers; Inspections," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Notify NRC, in writing, within 30 days:
 - a. When the Radiation Safety Officer permanently discontinues performance of duties under the license or has a name change; or
 - b. When the licensee's mailing address changes (no fee is required if the location of byproduct material remains the same).

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3. In accordance with 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request termination of the license when you decide to terminate all activities involving materials authorized under the license.
4. Request and obtain a license amendment before you:
 - a. Change Radiation Safety Officers;
 - b. Order byproduct material in excess of the amount, or radionuclide, or form different than authorized on the license;
 - c. Add or change the areas of use or address or addresses of use identified in the license application or on the license; or
 - d. Change ownership of your organization.
5. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date of your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of byproduct material after your license expires is a violation of NRC regulations. A license will not normally be renewed, except on a case-by-case basis, in instances where licensed material has never been possessed or used.

In addition, please note that NRC Form 313 requires the applicant, by his/her signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or certifying official rather than a consultant.

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions. Since serious consequences to employees and the public can result from failure to comply with NRC requirements,

R. Bresell

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prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

Sincerely,

Original Signed By
Loren J. Hueter
Nuclear Materials Licensing Branch

License No. 48-09843-32
Docket No. 030-15202

Enclosures:

1. Amendment No. 22
2. NRC Form 313

DOCUMENT NAME: M:\03015202.CL6

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" =
Copy with attachment/enclosure "N" = No copy

OFFICE	DNMS/RIII	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAME	LJHueter:brt	<i>LJH</i>						
DATE	12/09/96							

OFFICIAL RECORD COPY



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

October 22, 1996

Ronald Bressell
Radiation Safety Officer
University of Wisconsin-Madison
Safety Department
30 North Murray Street
Madison, WI 53715-1003

SUBJECT: ACKNOWLEDGEMENT OF CORRESPONDENCE
(Letter Dated 10/16/96)

Dear Licensee:

In response to your request, we have completed the initial processing, which is an administrative review of your application for a(n):

☐ New License ☒ Amendment ☐ Renewal
☐ Termination ☐ Auth User (Amendment not required)
☐ Other _____

No administrative deficiencies were identified during this initial review. However, it should be noted that a technical review may identify omissions in the submitted information.

It appears that your request is routine (see 1-3 below, as applicable).

1. New and amendment actions are normally processed within 90 days, unless we find major deficiencies, or policy issues requiring central program office assistance.
2. Renewal actions are normally processed within 180 days, however, under timely filing (before expiration), you may continue to operate under your existing license.
3. Termination actions are normally processed within 90 days, unless confirmatory surveys following decontamination/decommissioning activities are involved.

A copy of your correspondence has been forwarded to our Licensing Fee and Debt Collection Branch (301/415-6097) for approval of the fee category and amount, if required.

If you have a compelling safety or business-related reason for requesting expedited review, please contact the Materials Licensing Branch at (630) 829-9887. We will try to complete your request as soon as practicable. Any correspondence about this request should reference the control number.

Nuclear Materials Support Branch

Mail Control No. 301970
License No. 48-09843-32