



# University of Massachusetts Medical Center

55 Lake Avenue, North  
Worcester, Massachusetts 01655

030-14517

Department of Environmental Health and Safety  
(508) 856-3985  
Radiation Safety  
(508) 856-3208

X

RECEIVED  
DEC 21 1988  
10:51 AM '88

November 21, 1988

U.S. Nuclear Regulatory Commission  
Nuclear Materials Safety Section B  
475 Allendale Road  
King of Prussia, PA 19406

Gentlemen:

By this letter and the enclosed documents the University of Massachusetts Medical Center requests renewal of license 20-13758-02 authorizing possession of two irradiators. As stated in that license, the AECL Gamma Cell 40 irradiator, housing two AECL Model C-161 Type 8 137-Cesium sources of approximately 2000 Ci each, is the only unit in use. The U.S. Nuclear Corporation SDF-32 unit, housing a 60-Cobalt source (U.S. Nuclear Corp. Dwg. No. B-0093) of approximately 650 Ci, continues to be stored under the direct control of Radiation Safety.

At the time of last renewal the future of the Cobalt 60 unit was undetermined. Cost considerations and the reduced strength of the source now make it highly unlikely that any local licensee will want the intact unit for research purposes. We are currently exploring disposal through U.S. Ecology. In addition, even though the source has not been raised in five years, the unit is in excellent condition and the possibility that J. L. Shepherd may accept the unit for resale following a source change is being investigated. We will notify you of disposal or transfer of this unit.

On reviewing the documents pertaining to this license we noted two changes which are necessary to make the information on file current. Following receipt of the July 3, 1984 notice modifying the licenses covering use of Shepherd Mark I or Model 81-22 irradiators we reviewed our use of the AECL Gamma Cell 40 irradiator and decided that the prudent course was to install a room monitor. This monitor is set to trip at 10 mrem per hour and is installed so as to be visible from the entry to the Irradiation Facility. A revised version of the Operating Procedures reflecting this change is attached.

9001250456 890119  
REG1 LIC30  
20-13758-02 PDR

RECEIVED BY LENS  
12/6/88  
Dec 5 1988  
S. Kimberly  
12/6/88

FEE EXEMPT

170.11(9)(9)

109906

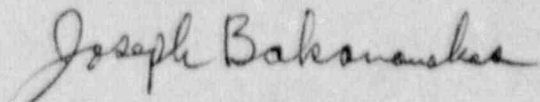
OFFICIAL RECORD COPY ML10

NOV 23 1988

The second change has to do with the personnel immediately supervising the leak testing and maintenance of the facility. They are J. Bakanauskas whose credentials are on file with license 20-13758-01 and M.I. Willard whose credentials are attached.

The University of Massachusetts Medical Center is exempt from license renewal fees pursuant to 10 CFR 170.11 (a)(9). If you require further information regarding this request please contact me at 508-8560-4901.

Sincerely,



Joseph Bakanauskas  
Radiation Safety Officer

Attachments



*Pioneering in the Public Interest* • University of Massachusetts

Office of the Chancellor  
University of Massachusetts Medical Center  
55 Lake Avenue North  
Worcester, MA 01655  
(508) 856-6670  
FAX (508) 856-5648

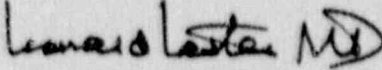
November 22, 1988

U.S. Nuclear Regulatory Commission  
Nuclear Materials Safety Section B  
475 Allendale Road  
King of Prussia, PA 19406

Gentlemen:

I am enclosing the attached letter from Mr. Joseph Bakanauskas with the Radiation Safety Office of this institution. It is submitted with my full endorsement and support.

Sincerely yours,

  
Leonard Laster, M.D.  
Chancellor

LL:ja  
enclosure

## OPERATING PROCEDURES

Only persons authorized by UMMC Radiation Safety Office are authorized to use this facility. Personnel monitoring badges must be worn at all times around this facility. The area monitor must be checked whenever this facility is approached. The area monitor must give a green signal for entry to the facility to be allowed. If a red signal or no signal is noted, follow the emergency instructions.

### Operations:

1. Follow operating instructions listed in Part 2 of the accompanying AECL Gammacell 40 manual.
2. Whenever practical, operator should remain in attendance throughout irradiation. For long irradiations, however, facility may be left unattended, but room must be locked, and a sign placed on door stating "Irradiation in Progress."
3. After completion of irradiation, remove sign from room door observe the area monitor. If other than a green signal is observed follow the emergency procedures, remove all materials that have been irradiated from room, lock door, and return keys to Radiation Safety Office.
4. Report any unusual circumstances, malfunctions etc. to Radiation Safety Office immediately.

EMERGENCY PROCEDURES

1. In the event of malfunction of equipment:
  - A. Remove key from operating console.
  - B. Leave area and lock Irradiator Room door.
  - C. Post with "Do Not Enter, Equipment Malfunction" sign.
  - D. Notify Radiation Safety as follows:

Regular working hours Ext. 3208  
After hours: Dial operator and ask her to notify  
on-call individual. If unsuccessful in either of  
above contact:  
J. Bakanauskas: 285-3494
2. Any suspected malfunction of source operation and/or controller must be reported immediately.

TRAINING AND EXPERIENCE  
AUTHORIZED USER OR RADIATION SAFETY OFFICER

1. NAME OF AUTHORIZED USER OR RADIATION SAFETY OFFICER

Marie I. Willard

2. STATE OR TERRITORY IN WHICH LICENSED TO PRACTICE MEDICINE

3. CERTIFICATION

SPECIALTY BOARD

A

CATEGORY

B

MONTH AND YEAR CERTIFIED

C

4. TRAINING RECEIVED IN BASIC RADIOISOTOPE HANDLING TECHNIQUES

FIELD OF TRAINING A	LOCATION AND DATE(S) OF TRAINING B	TYPE AND LENGTH OF TRAINING	
		LECTURE/ LABORATORY COURSES (HOURS) C	SUPERVISED LABORATORY EXPERIENCE (HOURS) D
a. Radiation Physics and instrumentation	-*SFC Fall semester '77 Physics	60 hrs.	
	-*SFC Spring semester '78 Physics	60 hrs.	
	-*WSC Fall semester Nuclear Instrumentation	60 hrs.	
b. Radiation Protection	-*NECHPS Workshop 5-81 Radiation Issues	2 hrs.	
	-Brookhaven symposium 12-82 Environmental Monitoring	8 hrs.	
	-Univ. of Texas Health Science Center at San Antonio 6-83 Radiation Safety Officer's Course	33 hrs.	
c. Mathematics pertaining to the use and measurement of Radioactivity	-NECAAPM symposium '84 Accounting	8 hrs.	
	-*SFC Fall semester '76 Calculus I	45 hrs.	
	-*SFC Spring semester '77 Statistics	45 hrs.	
d. Radiation Biology	-Clark Univ., Worc., MA Fall semester '84 Accounting	60 hrs.	
	-Univ. of Texas Health Science Center at San Antonio Radiation Officer's Course	7 hrs.	
	-Gaithersburg, MD 9-86 Compliance with the new 10CFR20 regs	24 hrs.	
e. Radiopharmaceutical Chemistry			

5. EXPERIENCE WITH RADIATION.  
 Actual use of Radioisotopes or Equivalent Experience)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION EXPERIENCE	TYPE OF USE
<sup>137</sup> Ce	5,000 Ci	Worcester Foundation for Experimental Biology/ UMASS Medical Center	12-83 thru present 7-79-present	Medical Health Physics
<sup>125</sup> I	10 mCi	" "	" "	" "
<sup>3</sup> H	30 "	" "	" "	" "
<sup>32</sup> P	100 "	" "	" "	" "
<sup>35</sup> S	50 "	" "	" "	" "
<sup>14</sup> C	10 "	" "	" "	" "
<sup>51</sup> Cr	25 "	" "	" "	" "
<sup>131</sup> I	100 "	" "	" "	" "
<sup>86</sup> Rb	1 "	" "	" "	" "
<sup>141</sup> Ce	0.5 "	" "	" "	" "
<sup>57</sup> Co	1 "	" "	" "	" "
<sup>58</sup> Co	1 "	" "	" "	" "
<sup>111</sup> In	10 "	" "	" "	" "
<sup>99m</sup> Tc	1,300 "	" "	" "	" "
<sup>201</sup> Tl	8.8 "	" "	" "	" "
<sup>133</sup> Xe	80 "	" "	" "	" "
<sup>67</sup> Ga	6 "	" "	" "	" "
<sup>123</sup> I	1 "	" "	" "	" "
<sup>192</sup> Ir	150 "	" "	" "	" "
<sup>90Y/90Sr</sup>	2 "	" "	" "	" "
<sup>98</sup> Au	20 "	" "	" "	" "
<sup>61</sup> Ni	1 "	" "	" "	" "
<sup>59</sup> Fe	5 "	" "	" "	" "
<sup>22</sup> Na	1 "	" "	" "	" "
<sup>45</sup> Ca	1 "	" "	" "	" "
<sup>153</sup> Gd	1 Ci	" "	" "	" "

\*SFC = St. Francis College/University of New England, Biddeford, ME.

\*WSC = Worcester State College, Worcester, MA.

\*NECHPS = New England Chapter of the Health Physics Society

\*NECAAPM = New England Chapter of the American Association of Physicists in  
 Medicine

109906

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM  
AND  
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)  
INFORMATION FROM LTS

PROGRAM CODE: 03510  
STATUS CODE: 2  
FEE CATEGORY: EX 3F  
EXP. DATE: 19881231  
FEE COMMENTS:

*Cost included: 170.11(9)*

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: MASSACHUSETTS MEDICAL CTR., UNIVERS  
RECEIVED DATE: 881123  
DOCKET NO: 3014517  
CONTROL NO.: 109906  
LICENSE NO.: 20-13758-02  
ACTION TYPE: RENEWAL

2. FEE ATTACHED

AMOUNT:                       
CHECK NO.:                     

3. COMMENTS

SIGNED *SMW*  
DATE NOV 29, 1988

8. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1.45)

1. FEE CATEGORY AND AMOUNT: EX 3F **FEE EXEMPT**

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:  
AMENDMENT                       
RENEWAL                       
LICENSE                     

170.11(9)

3. OTHER                       
                    

SIGNED *S. Kimberley*  
DATE 12/6/88