

<b>FORM NRC-313 I</b> (1-79) 10 CFR 30		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		<b>1. APPLICATION FOR:</b> <i>(Check and/or complete as appropriate)</i>	
<b>APPLICATION FOR BYPRODUCT MATERIAL LICENSE</b> <b>INDUSTRIAL</b>				<input type="checkbox"/> a. NEW LICENSE	
<i>See attached instructions for details.</i>  Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.				<input checked="" type="checkbox"/> b. AMENDMENT TO: LICENSE NUMBER 34-16429-02	
				<input type="checkbox"/> c. RENEWAL OF: LICENSE NUMBER	
<b>2. APPLICANT'S NAME</b> <i>(Institution, firm, person, etc.)</i> RCA Corporation 419-423-0321 TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION			<b>3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION</b> Wayne L. Mertz 419-423-0321-4431 TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION		
<b>4. APPLICANT'S MAILING ADDRESS</b> <i>(Include Zip Code)</i> Route 12, Fostoria Road Findlay, Ohio 45840-6287			<b>5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED</b> <i>(Include Zip Code)</i> Route 12, Fostoria Road Findlay, Ohio 45840-6287		
(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)					
<b>6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL</b> <i>(See Items 16 and 17 for required training and experience of each individual named below)</i>					
		FULL NAME			TITLE
a.	Ray Lau	Log Remitter	<div style="font-size: 2em; transform: rotate(-15deg); opacity: 0.5;">           00018137            6120            and            6/14/86         </div>		Radiation Safety Officer
b.	Joseph Fidishun	Check No.			Mfg. Supervisor
	Jim Buchanan	Amount			Mfg. Supervisor
c.	Wayne Mertz	Fee Category			Safety Administrator
		Type of Fee			
<b>7. RADIATION PROTECTION OFFICER</b> <i>(Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.)</i>					
		Date Check Rec'd			
Ray Lau		By: <i>[Signature]</i>	See Attached Appendix A		
<b>8. LICENSED MATERIAL</b>					
L I N E  NO.	ELEMENT AND MATERIAL NUMBER  A	CHEMICAL AND/OR PHYSICAL FORM  B	NAME OF MANUFACTURER AND MODEL NUMBER <i>(If Sealed Source)</i>  C	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME  D	
(1)	Cobalt 60	Sealed Sources	AECL Model C-166 or 167	13,200 curies	
(2)	Cobalt 60	Sealed Sources	AECL Model C-166 or 167	13,200 curies	
(3)					
(4)					
<b>DESCRIBE USE OF LICENSED MATERIAL</b> <b>E</b>					
(1)	For use in two AECL Gammacell 220 Irradiators for the irradiation of				
(2)	microminiature electronic devices for radiation hardness.				
(3)					
(4)					
		B609090089 B60701 REG3 LIC30 34-16429-02 PDR		<b>CONTROL NO. 81483</b>  <b>REGION III</b>	

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### 9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)	Gammacell 220 Irradiator	AECL	C-166 or 167
(2)	Gammacell 220 Irradiator	AECL	C-166 or 167
(3)			
(4)			

### 10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT A	MANUFACTURER'S NAME B	MODEL NUMBER C	NUMBER AVAILABLE D	RADIATION DETECTED (alpha, beta, gamma, neutron) E	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F
(1)	Survey Meter	Victoreen	493	1	Beta & Gamma	0-100 mr/hr.
(2)	Survey Meter	Victoreen	440 RF/C	1	Beta & Gamma	0-100 mr/hr.
(3)	Survey Meter	Victoreen	490 Thyac III	1	Alpha, Beta & Gamma	0-100 mr/hr.
(4)						

### 11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

<input checked="" type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY Annually NAME, ADDRESS, AND FREQUENCY Health Physics Associates 3304 Commercial Ave., Northbrook, ILL 60062	<input type="checkbox"/> b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments. <div style="text-align: right;">N/A</div>
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### 12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
<input checked="" type="checkbox"/> (1) FILM BADGE  <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD)  <input type="checkbox"/> (3) OTHER (Specify): _____ _____ _____	Landauer	<input checked="" type="checkbox"/> MONTHLY  <input type="checkbox"/> QUARTERLY  <input type="checkbox"/> OTHER (Specify): _____ _____ _____

### 13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)

- ☒ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.  
☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.  
☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.  
☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

### 14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED  
N/A

b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE.

Will be returned to AECL

# INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

15. RADIATION PROTECTION PROGRAM. Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures (if needed), day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.

SEE ATTACHED APPENDIX C

16. FORMAL TRAINING IN RADIATION SAFETY. Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.

SEE ATTACHED APPENDIX A

- a. Principles and practices of radiation protection.
- b. Radioactivity measurement standardization and monitoring techniques and instruments.
- c. Mathematics and calculations basic to the use and measurement of radioactivity.
- d. Biological effects of radiation.

17. EXPERIENCE. Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

SEE ATTACHED APPENDIX B

## 18. CERTIFICATE

(This item must be completed by applicant)

*The applicant and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 30, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.*

**WARNING.**—18 U.S.C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

<p>a. LICENSE FEE REQUIRED (See Section 170.31, 10 CFR 170)</p> <p style="text-align: center;">\$120.00</p>	<p>b. CERTIFYING OFFICIAL (Signature) <i>Wayne L. Mertz</i></p>
<p>(1) LICENSE FEE CATEGORY: 3L</p>	<p>c. NAME (Type or print) Wayne L. Mertz</p>
<p>(2) LICENSE FEE ENCLOSED: \$ 120.00</p>	<p>d. TITLE Safety Administrator</p> <p>e. DATE 6/6/86</p>

APPENDIX "A"

ITEM #16

Training:

R. Lau

J. Fidishun

J. Buchanan

W. Mertz

16a. Principals and practices of radiation protection.

IsoVac formal training-Findlay  
State of Ohio, Adjutant General's  
Dept. Disaster Services Agency-Findlay

22 hrs.

22 hrs.

22 hrs.

12 hrs.

16b. Radioactivity measurement standardization and monitoring techniques and instruments

IsoVac formal training-Findlay  
State of Ohio, Adjutant General's  
Dept. Disaster Services Agency-Findlay

22 hrs.

22 hrs.

22 hrs.

12 hrs.

16c. Mathematics and calculations basic to the use and measurement of radioactivity

IsoVac formal training-Findlay  
State of Ohio, Adjutant General's  
Dept. Disaster Services Agency-Findlay

22 hrs.

22 hrs.

22 hrs.

12 hrs.

16d. Biological effects of radiation

IsoVac formal training-Findlay  
State of Ohio, Adjutant General's  
Dept. Disaster Services Agency-Findlay

22 hrs.

22 hrs.

22 hrs.

12 hrs.

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APPENDIX "B"

ITEM #17

EXPERIENCE:

W. Mertz, J. Fidishun, J. Buchanan

Ten (10) years experience with AECL Gammacell Model C-166 or 167 and eleven (11) years experience with IsoVac Engineering Minirad Leak Detectors.

R. Lau

Two (2) years experience with AECL Gammacell Model C-166 or 167 and two (2) years experience with IsoVac Engineering Minirad Leak Detectors.

APPENDIX "C"ITEM #15

The Radiation Safety Officer, Ray Lau, will have the overall safety responsibility of the Gammacells and to follow NRC regulations. He shall perform leakage and/or contamination testing every 6 months by utilizing wipe/leak test kits, model #HP-B21, provided by Health Physics Associates as we have in the past 10 years.

APPENDIX "C"ITEM #15EMERGENCY PROCEDURE FOR ABNORMAL RELEASE OF  
COBALT-60 RADIATION FROM THE GAMMACELL 220

1. Whenever the room radiation survey monitor signals its alert buzzer:
  - a. If present in the Gammacell Room when the alert buzzer sounds and the sample drawer is in the raised position, actuate the switch which lowers the sample drawer.
  - b. Evacuate the Gammacell Room immediately and lock the door. DO NOT RE-ENTER the Gammacell Room without a properly operating Radiation Survey Meter.
  - c. Evacuate all personnel working in the immediate surrounding areas of the Gammacell Room.
2. The Plant Radiation Safety Officer (Ray Lau, Ext. 1389 or 424-5741) or his alternate the Plant Safety Administrator (Wayne Mertz, Ext. 4431 or 422-6546) should be notified immediately, if he is not already present.
3. Make a radiation survey with a properly operating Radiation Survey Meter of all areas surrounding the Gammacell Room, evacuating personnel from all areas registering a radiation level of two (2) millirems per hour or greater, as read on the Victoreen 440 RF/C or Victoreen 490 Thyac III Meters. Note: Normal background for the Gammacell Room and immediate adjacent areas is from 0.2 to 0.4 millirem per hour.
4. An evaluation of the release shall be made by the Plant Radiation Safety Officer and notification of the Nuclear Regulatory Commission shall be made.
5. Do not attempt to operate the Gammacell 220 Unit after a release of activity. Repairs, as needed, to the Gammacell 220 will be under the leasing agreement between RCA and the Atomic Energy of Canada, Limited.
6. Current telephone numbers and contacts are:

<u>Personnel</u>	<u>Plant Telephone</u>	<u>Home Telephone</u>
Ray Lau	1389	424-3551
Satish Nerur	1333	-
Joe Fidishun	1384	422-5516
Jim Buchanan	1259	423-0603
Wayne Mertz	4431	422-6546
L. A. Lambe	Atomic Energy of Canada Limited	613-592-2790

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