

<b>NRC Form 313 I</b> (12-81) 10 CFR 30		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		<b>1. APPLICATION FOR:</b> <i>(Check and/or complete as appropriate)</i> <div style="font-size: 1.5em; margin-top: 10px;">030-22308</div>	
<b>APPLICATION FOR BYPRODUCT MATERIAL LICENSE</b> <b>INDUSTRIAL</b>				<div style="border: 1px solid black; padding: 2px;"> <b>X</b> a. NEW LICENSE         </div>	
See attached instructions for details.  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.				<div style="border: 1px solid black; padding: 2px;">         b. AMENDMENT TO          LICENSE NUMBER  <div style="font-size: 1.5em; margin-top: 5px;">LTL 23194</div> </div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">         c. RENEWAL OF:          LICENSE NUMBER       </div>	
<b>2. APPLICANT'S NAME</b> <i>(Institution, firm, person, etc.)</i> <b>Xerox Corporation</b> <b>Craig W. Benjamin</b> TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION <b>405-324-1921 ext. 2351</b>			<b>3. NAME AND TITLE OF PERSON TO BE CONTACTED</b> <b>REGARDING THIS APPLICATION</b> <b>Craig W. Benjamin - Safety Consultant</b> TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION <b>405-324-1921 ext. 2351</b>		
<b>4. APPLICANT'S MAILING ADDRESS</b> <i>(Include Zip Code)</i> <i>(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)</i> <b>Xerox Corporation</b> <b>P.O. Box 26588</b> <b>Oklahoma City, OK 73126</b>			<b>5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED</b> <i>(Include Zip Code)</i> <b>Xerox Corporation</b> <b>100 North Mustang Road</b> <b>Oklahoma City, OK 73126</b>		
(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. <b>Warren R. Smith</b>			<b>Sr. Project Engineer</b>		
b.					
c.					
<b>7. RADIATION PROTECTION OFFICER</b>  <b>Craig W. Benjamin</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>		
<b>8. LICENSED MATERIAL</b>					
LINE NO.	ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER <i>(If Sealed Source)</i>	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME	
(1)	Pu - 238	Plutonium-	Texas Nuclear Model 570-57242B	30mCi	
(2)	Am - 241 -to be used for internal stabilization of electronics	Americium-	A Mersham Model AMM .4	0.5µCi	
(3)					
(4)					
DESCRIBE USE OF LICENSED MATERIAL E					
(1)	Two sources are in Texas Model 9254 X-ray Analyzer. They are				
(2)	sealed. The device will be used to perform quality control				
(3)	checks on the thickness coatings on substrates.				
(4)	460738				

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 REQ4 LIC30  
 35-23194-01 PDR

### 9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED.	NAME OF MANUFACTURER	MODEL NUMBER
	A.	B.	C.
(1)	1 Source Housing	Texas Nuclear	9254
(2)			
(3)			
(4)			

### 10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT	MANUFACTURER'S NAME	MODEL NUMBER	NUMBER AVAILABLE	RADIATION DETECTED (alpha, beta, gamma, neutron)	SENSITIVITY RANGE (milliroentgens/hour or counts/minute)
	A	B	C	D	E	F
(1)	* No additional monitoring instruments are required to possess or					
(2)	use this analyzer.					
(3)						
(4)						

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

<input type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY  <b>None Required</b>	<input type="checkbox"/> b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments. <b>None Required</b>
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### 12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
<input type="checkbox"/> (1) FILM BADGE  <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD)  <input type="checkbox"/> (3) OTHER (Specify): _____   	<b>None Required -</b>  <b>See Attached Sheet</b>	<input 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.
- Not Applicable**

### 14. WASTE DISPOSAL

- a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED
- See Attached Sheet**
- 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.

# 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:

**"SEE ATTACHED SHEET"**

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.
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.
  - 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.

*Aug-4-IV*

Applicant	3881	38
Choc	1230	15
App	8/22/85	
Date		
Received	Jacques	

## 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.

a. LICENSE FEE REQUIRED (See Section 170.31, 10 CFR 170)	b. CERTIFYING OFFICIAL (Signature) <i>Craig W. Benjamin</i>
	c. NAME (Type or print) <b>Craig W. Benjamin</b>
(1) LICENSE FEE CATEGORY:	d. TITLE <b>Safety Consultant</b>
(2) LICENSE FEE ENCLOSED: \$230.00	e. DATE <b>08/07/85</b> <i>460738</i>

ATTACHED SHEET

ITEM 10

Adequate protection is provided by the design shielding of the instrument and the source holder. The shutter will move automatically into the "Closed" position anytime the actuator is not forceably pressed against the measurement surface or depressed by a lab stand holder. The instrument will be secured when not in use by storage in a locked cabinet stored in a locked lab. In the event of accidental damage or loss of the device, the Radiation Safety Officer and Texas Nuclear will be notified for advice and instructions as well as the appropriate regulatory authority.

ITEM 12:

No additional personnel monitoring devices are required due to the presence of this instrument. These source housing is designed such that it is unlikely that any person, during normal usage can receive in excess of 0.125 rem per year, and the surface radiation levels are all less than 1mR/hr.

ITEM 14:

No waste disposal is involved. In the event that the instrument or source use is discontinued, the device will be returned to Texas Nuclear for removal of the radioactive material.

ITEM 15

The radioactive sources used in the Model 9200 series will be periodically leak tested at intervals not exceeding six months in accordance with Texas Nuclear Procedure QT/29. The Am - 241 stabilizer source will not be leak tested. Maintenance and repair will be done by Texas Nuclear and we will follow procedures as furnished by the instrument manual.

ITEMS 16,17

Training/Experience:

Warren R. Smith, Sr. Project Engineer -- Attended 1 week course taught by Xerox Corporate Safety group. Course name was " Ionizing Radiation Training Course". Warren has worked with other sealed sources in instruments and gauges to include Kr-85 (1200mCi) and Po-210 (96mCi).

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Craig W. Benjamin, Safety Consultant-- Site Radiation Officer since 4/78. Completed 1 week Environmental Radiation Surveillance Course, Harvard School of Public Health 6/78. Worked with other sealed sources to include Kr-85 (1200mCi), Po-210 in 3M anti static bars (96mCi), Fe-55 (50  $\mu$  Ci) and Co-57 (50  $\mu$  Ci) used for instrument calibration. Also worked with a Kevex 0700, Watkins and Johnson Type WJ-2347-8 generator, type WJ-2309 X-ray tube fixed X-ray Rhodium Fluorescence Anode for fixed material analysis. Have been on a film badge program since 1978.

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