

APPLICATION FOR BYPRODUCT MATERIAL LICENSE  
INDUSTRIAL

a. NEW LICENSE

See attached instructions for details.

X

b. AMENDMENT TO:  
LICENSE NUMBER  
47-15726-01

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.

c. RENEWAL OF:  
LICENSE NUMBER

2. APPLICANT'S NAME (Institution, firm, person, etc.)

Union Carbide Corporation

TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION  
(304) 747-7001

3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION

John Susla

TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION  
(304) 747-7001

4. APPLICANT'S MAILING ADDRESS (Include Zip Code)

Route 2, Box 224-B  
Clendenin, WV 25045

5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED (Include Zip Code)

32 Sanderson Road  
Clendenin, WV 25045

(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)

6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL

(See Items 16 and 17 for required training and experience of each individual named below)

FULL NAME

TITLE

a. Mr. U. K. Bachhawat

Chief Engineer

b.

c.

7. RADIATION PROTECTION OFFICER

Mr. U. K. Bachhawat

Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.

See Attachment One

8. LICENSED MATERIAL

LINE NO.	ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source)	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME
(1)	This information is on file with the Agency.			
(2)				
(3)				
(4)				

DESCRIBE USE OF LICENSED MATERIAL  
E

(1) This information is on file with the Agency.

(3) 8210010269 820921  
NMS LIC30  
47-15726-01 PDR

**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)	This information is on file with the Agency.		
(2)			
(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)	This information is on file with the Agency.					
(2)						
(3)						
(4)						

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

<input type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY  This information is on file with the Agency.	<input type="checkbox"/> b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments.
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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): _____ _____ _____		<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.

**14. WASTE DISPOSAL**

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED  
**Chem Nuclear Services**

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:

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.  

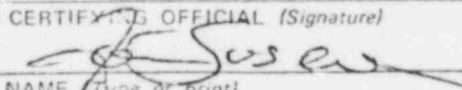
on file with original license
16. **FORMAL TRAINING IN RADIATION SAFETY.** Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, 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.

**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 <i>(See Section 170.31, 10 CFR 170)</i>  \$40.00	b. CERTIFYING OFFICIAL <i>(Signature)</i> 
	c. NAME <i>(Type or print)</i> John Susla
(1) LICENSE FEE CATEGORY: 170.31 3.L.	d. TITLE Mining Manager
(2) LICENSE FEE ENCLOSED: \$ 40.00	e. DATE September 9, 1982

Items 16 and 17

Mr. U. K. Bachhawat has a BS degree in Mining Engineering from the Indian Institute of Technology, Kharagpur, India. During his studies, he had a one-semester course in Atomic Physics. He has no experience with radioisotopes.

Mr. Bachhawat is scheduled to receive an intensive 8-hour training course in the subjects referenced in Item 16 of this application. This training will be supplied by radiation safety personnel at Union Carbide Corporation's Technical Center, South Charleston, West Virginia. Their training and experience are listed with USNRC License 47-260-02. This group also regularly surveys and leak wipes the sources at our location, and provide an on-going consultation service to our location.