

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
INDUSTRIAL

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.

a. NEW LICENSE

b. AMENDMENT TO:
LICENSE NUMBER

c. RENEWAL OF:
LICENSE NUMBER

36-01142-02 FOR STORAGE ONLY

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

U.S. Department of the Interior
Bureau of Mines, Washington D.C. 20240
TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION

3. NAME AND TITLE OF PERSON TO BE CONTACTED
REGARDING THIS APPLICATION

Boyd D Nash, Safety Manager
TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION
503-967-5883 FTS 420-5883

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

(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)

Bureau of Mines, Albany Research Center
P.O. Box 70, Albany, Oregon 97321

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

Bureau of Mines
1450 SW Queen Avenue
Albany, Oregon 97321

(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. Boyd D Nash

Safety Manager

b. Arne Landsberg

Group Supervisor

c.

7. RADIATION PROTECTION OFFICER

Arne Landsberg

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

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 ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME
(1)	See Attachment 1			
(2)				
(3)				
(4)				

DESCRIBE USE OF LICENSED MATERIAL

E

- (1) All licensed materials were used for research and development in the field of metallurgy. No work has been done in this area for the past four years. We do not have any plans to reactivate this program and it is our intention to dispose of our existing licensed materials at our first opportunity. All materials have been packaged in DOT-approved steel drums and are in storage awaiting a permit for shipment to a burial site.
- (2)
- (3)

(4) 8512030727 051029
REG5 LIC30
36-01142-02 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)			
(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)	Scaler/Ratemeter	Nucleonic Corp. of America	RCR 2	1	alpha, beta, gamma	0-50,000 cpm
(2)	Survey	Eberline	E 530	1	alpha, beta, gamma	0-200 mR/hr
(3)	Survey	Eberline	PAC 4G3	1	alpha	0-100,000 cpm
(4)	Survey	Eberline	PRM 7	1	gamma	0-50,000 uR/hr

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

<input checked="" type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY Oregon State University Radiation Laboratory Corvallis, Oregon 97330 semi-annual	<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 checked="" type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD) <input type="checkbox"/> (3) OTHER (Specify): _____	Radiation Detection Company Sunnyvale, California	<input type="checkbox"/> MONTHLY <input checked="" type="checkbox"/> QUARTERLY <input type="checkbox"/> OTHER (Specify): _____

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

<input type="checkbox"/> a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC. <input type="checkbox"/> b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC. <input type="checkbox"/> c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC. <input type="checkbox"/> d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.	No changes from current license.
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14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED
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. Disposal of licensed materials will be on a bid contract basis. Until the contract is let we will store these materials in a locked facility.

Item 15 Radiation Protection Program

The radiation protection program at the Albany Research Center is based on compliance with 10 CFR part 19 and 10 CFR part 20, and with the Bureau of Mines Manual "Ionizing Radiation Safety Program" 486 EBM 1.

Other portions of the program are the same as described in our current license. (See Amendment No. 14, page 1.)

Items 16 and 17

Mr. Nash completed a course in Radiochemistry at Idaho State University in 1958 and the Radiation Safety Specialist training program given by Oklahoma State University in 1980. He has both a B.S. and M.S. degree in Chemistry. He is currently the Safety Manager and the Nuclear Materials Representative at the Albany Research Center, and has served in this capacity for the past three years.

Dr. Landsberg completed Radiochemistry courses at both the University of Colorado and Oregon State University. He was a licensed operator for 17 years of the 100,000 curie radiation facility at the Albany Research Center. During part of this period he served as supervisor of the facility. He is currently the Radiation Protection Officer at the Albany Research Center.

Attachment 1 Item 8 Licensed Material

[illegible]

* Use supplement sheet, if necessary.

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.

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
(See Section 170.31, 10 CFR 170)

b. CERTIFYING OFFICIAL *(Signature)*

c. NAME *(Type or print)*

(1) LICENSE FEE CATEGORY:

d. TITLE

(2) LICENSE FEE ENCLOSED: \$

e. DATE

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