030-

Applicant... 15574 $120/30
Check No... Application
Amount, Fee Category... 5/31/85
Type of Fee... Byproduct
Date...

NRC Form 313 I
(12-81)
10 CFR 30

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
INDUSTRIAL

1. APPLICATION FOR *(Check and/or complete as appropriate)*

X a. NEW LICENSE

b. AMENDMENT TO: LICENSE NUMBER

c. RENEWAL OF: LICENSE NUMBER LEL 23532

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.

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

THE CARTER MINING COMPANY

TELEPHONE NUMBER: AREA CODE – NUMBER EXTENSION
307-682-8881

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

Pamela A. Sharp 307-682-8881

TELEPHONE NUMBER: AREA CODE – NUMBER EXTENSION

4. APPLICANT'S MAILING ADDRESS *(Include Zip Code)*
(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)

P.O. Box 3007
Gillette, Wyo. 82716

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

Rawhide Mine
10 miles north of Gillette, Wyo. 82716

(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.	William C. Dodge	Plant General Supervisor
b.	Joe W. Schlautman	Electrical Supervisor
c.	Joe C. Hoeh	Plant Maintenence Supervisor

RECEIVED BY LFMB
Date... 5/3/85
Log... App 5 IV
By... Braun
Orig. To...
Acknl. Compl... 6/3/85

7. RADIATION PROTECTION OFFICER
John A. Fitch

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

8. LICENSED MATERIAL

LINE NO.	A ELEMENT AND MASS NUMBER	B CHEMICAL AND/OR PHYSICAL FORM	C NAME OF MANUFACTURER AND MODEL NUMBER *(If Sealed Source)*	D MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME
(1)	Cs 137	sealed source	Kay-Ray Inc. 7700-200	500 millicuries
(2)	Cs 137	sealed source	Kay-Ray Inc. 7700-200	500 millicurries
(3)	Cs 137	sealed source	Kay-Ray Inc. 7700-200	500 millicurries
(4)	Cs 137	sealed source	Kay-Ray Inc. 7700-200	500 millicurries

	E DESCRIBE USE OF LICENSED MATERIAL
(1)	The radioactive material will be used in a Kay-Ray Inc. model 4800x level system.
(2)	The system will be used to detect both high and low levels of coal in the
(3)	receiving hoppers at the Rawhide Mine.
(4)	

Applicant...
Check No. 15409 $110+
Amount, Fee Category... Application
Type of Fee... 5/31/85
Date...

18936

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#49-23532-01

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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)	lead filled steel housing with actuated shutter.	Kay-Ray Inc.	7063P
(2)	lead filled steel housing with actuated shutter	Kay-Ray Inc.	7063P
(3)	lead filled steel housing with actuated shutter	Kay-Ray Inc.	7063P
(4)	lead filled steel housing with actuated shutter	Kay-Ray Inc.	7063P

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)	G.M. tube survey	Eberline	E-130	1	gamma	0.5,5,50 mR/hr
(2)	G. M. tube survey	Eberline	E-130	1	gamma	0.5,5,50 mR/hr
(3)	G.M. tube survey	Eberline	E-130	1	gamma	0.5,5,50 mR/hr
(4)	G.M. tube survey	Eberline	E-130	1	gamma	0.5,5,50 mR/hr

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☒ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

The Archibald Co. NRC# 25-16166-01(10-87)
Box 1314, Bozeman, Mt. 59771

☐ b. CALIBRATED BY APPLICANT

Attach a separate sheet describing method, frequency and standards used for calibrating instruments.

12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
☐ (1) FILM BADGE		☐ MONTHLY
☐ (2) THERMOLUMINESCENCE DOSIMETER (TLD)		☐ QUARTERLY
☒ (3) OTHER (Specify): personal monitoring devices are not necessary. For support documentation see description of radiation protection program.		☐ OTHER (Specify):

13. FACILITIES AND EQUIPMENT (Check were 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
Sealed sources and devices will be returned to the manufacturer for disposal.

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.

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)

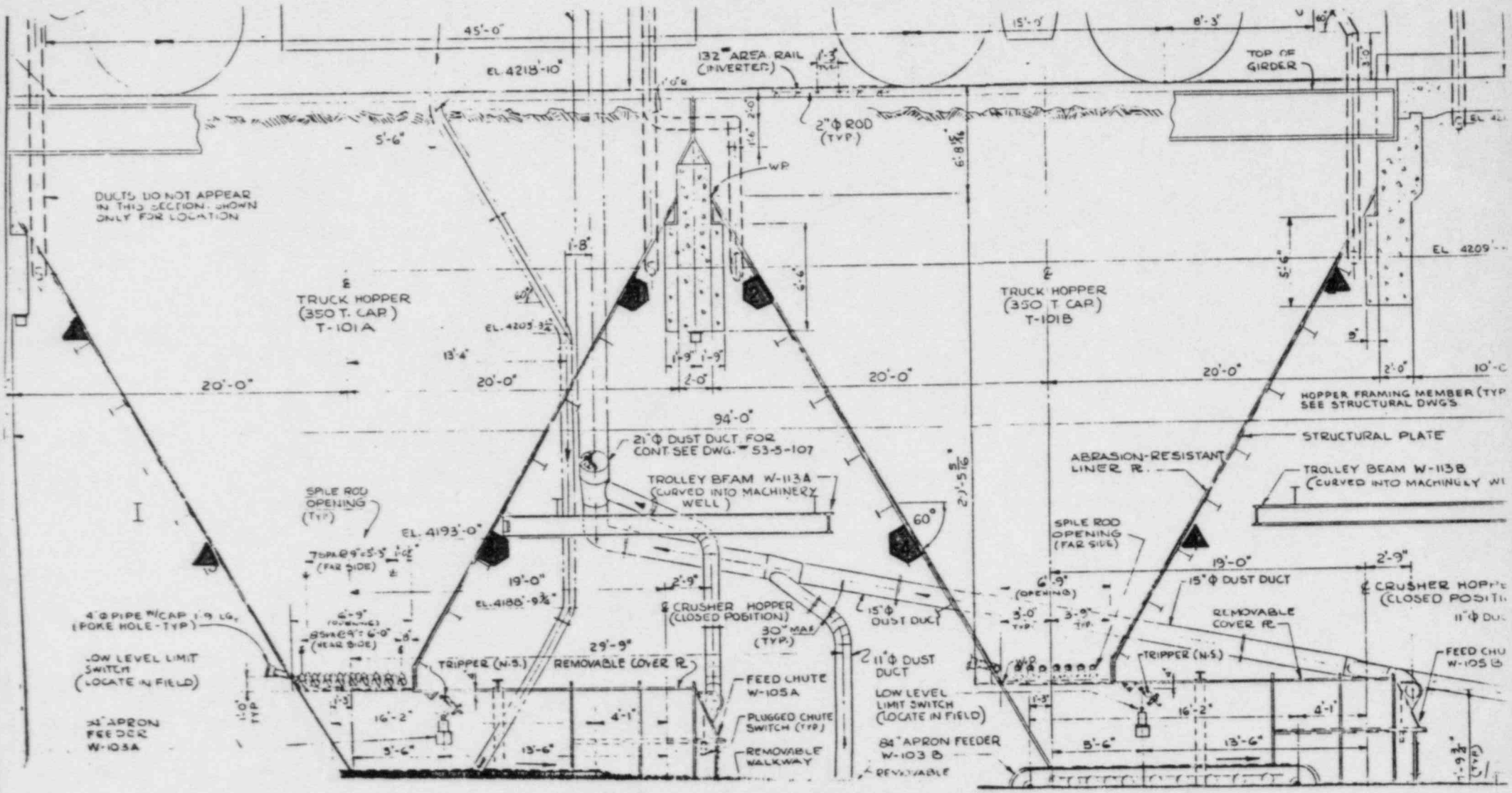
The applicant and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 30, and that all information contained herein, including any supplements attached hereto, is true 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)* $110.00	b. CERTIFYING OFFICIAL *(Signature)* Thomas D. Goddard
	c. NAME *(Type or print)* Thomas D. Goddard
(1) LICENSE FEE CATEGORY: 3.L	d. TITLE Rawhide Mine Manager
(2) LICENSE FEE ENCLOSED: $ $110.00	e. DATE

SYSTEM SOURCE

DETECTOR



SECTION 15

RADIATION PROTECTION PROGRAM

- Attached is a sketch showing the proposed locations of the sources in relation to other plant areas.
- The Archibald Company will provide documentation and perform all surveying, wipe tests, and start-up rocedures. Wipe tests will be conducted on a routine basis which will not exceed three years between tests.
- The 4800X system will be controlled with a manual shutter.
- If the source housing becomes damaged the manufactured will be contacted. The manufacturer will gives us detailed instructions on the course of action to be taken at that time.

SECTION 16

FORMAL TRAINING IN RADIATION SAFETY

At the time of start-up a representative of the manufacturer will provide any specific training necessary for the safe operation of the system. Radiation protection procedures have previously been devised and submitted. As the scope of this license application does not include handling of the device containing radioactive material, further formal training is not indicated.

SECTION 17

EXPERIENCE

None of the individuals named as users or as radiation protection officer have had prior experience with radioactive material.