FORM NRC-313 I (3-80) 10 CFR 30

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
INDUSTRIAL

RECEIVED REGION 5 AUG 02 1985 U.S. NUCLEAR REGULATORY COMMISSION

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.

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

a. NEW LICENSE

b. AMENDMENT TO: LICENSE NUMBER

c. RENEWAL OF: LICENSE NUMBER — X — 25-15247-01

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

City of Great Falls

TELEPHONE NUMBER: AREA CODE – NUMBER EXTENSION

406-727-5881, ext. 431

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

Dale Clark, Inspector

TELEPHONE NUMBER: AREA CODE – NUMBER EXTENSION

406-727-5881, ext. 431

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

Public Works Department
Great Falls, MT 59403

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

The entire City limits

(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.	Dale Clark	Engineering Tech III
b.	Ken Jorgensen	Street Division Supervisor
c.	Mike Murray	Engineer II

7. RADIATION PROTECTION OFFICER

Dale Clark

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.	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)	Cesium 137	Cesium 137	See Below	10 Millicuries
(2)	Americium 241	Americium 241	See Below	50 Millicuries
(3)	combined sealed source			
(4)	(Campbell Pacific	Nuclear Model CPN	- 131 - 1	

	E DESCRIBE USE OF LICENSED MATERIAL
(1)	To be used in a Campbell Pacific Nuclear Portaprobe Model A and/or B(R)
(2)	for determining moisture and density of soils.
(3)	
(4)	

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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)		Campbell Pacific Corp.	#A & B(R)
(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)		NO RADIATION INSTRUMENTS				
(2)						
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☐ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

NONE

☐ b. CALIBRATED BY APPLICANT

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

NONE

12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
☒ (1) FILM BADGE ☐ (2) THERMOLUMINESCENCE DOSIMETER (TLD) ☐ (3) OTHER (Specify): _____	Eberline Instrument Corp. Box 2108 Sante Fe, NM	☒ MONTHLY ☐ QUARTERLY ☐ 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

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.

15. Everyone has film badges to use. Dale Clark does leakage tests and they are then sent to Eberline Instrument Corporation. Personnel are checked out by State and Instruction manuals for reference. Machine is sent to factory for repairs if we find problems with source.

16. Dale Clark - Radiation Protection Officer

16a. Northern Testing Lab - Northern Materials and City of Great Falls have supplied Dale with some formal and informational training. (14 years)

16b. City of Great Falls - on the job training. (6 years)

16c. None

16d. Same as 16a.

Ken Jorgensen

16a. State Highway Department on interstate highways and City of Great Falls. Has received on the job training. (13 years)

16b. City of Great Falls - on the job training. (6 years)

16c. None

16d. Same as 16a. On the job training. (13 years)

Mike Murray

16a. City of Great Falls, Professional Consultants, Inc.
Has received on the job training and formal training. (4 years)
16b. City of Great Falls - on the job training. (1 year)

16c. None

16d. Same as 16a. On the job training. (4 years)

17. Dale Clark - Isotope - 10 years of experience on machine.
Cesium 137 - 10 millicuries; Americium 241 - 50 millicuries.
With this particular machine experience gained by useing it with different projects in the City. Attended a 1-day school - Campbell Pacific Nuclear Corp.

Ken Jorgensen - 9 years of experience on machine. Isotope and maximum amount same as above. Use of machine - same as above.

Mike Murray - 1 year of experience on Campbell Pacific. Mr. Murray has used the Troxler Nuclear 3411B for 3 years around the Missoula, MT area and has attended a 1-day school on the Troxler in Missoula.

No. 6 (d) John Almon - Inspector

15. (a) Thomas, Dean and Hoskins, Consulting Engineers

4 years of on-the-job training

(b) City of Great Falls

4 months on-the-job training

(c) None

(d) Same as 16(a). On-the-job training

4 years on-the-job training

17. John Almon - Four years of experience on Troxler Nuclear 3411B, and four months of experience on Campbell Pacific Nuclear. Isotope and maximum is: Cesium 137-10 millicuries; Americium 241-50 millicuries.

No formal training.

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)* Lyle Meeks
	c. NAME *(Type or print)* Lyle Meeks
(1) LICENSE FEE CATEGORY:	d. TITLE Supervisor, Utilities Division
(2) LICENSE FEE ENCLOSED: $	e. DATE July 26, 1982

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