| N/10 | C Form 313 I U.S. NUCLEAR REGULATORY COMMISSION (12-81) 0 CFR 30 | | | 1. APPLICATION FOR: (Check and/or complete as appropriate) | | |
|--|--|---|--|---|--|--|
| APPLICATION FOR BYPRODUCT MATERIAL LICEN | | | IAL LICENSE | - | a. NEW LICENSE | |
| See a | ittached instructions for details. leted applications are filed in dupl | cate with the Division of F | uni Ovela and Materiai Safaty | x | b. AMENDMENT TO LICENSE NUMBER 08-01297-06 | |
| Office Washi 1717 | r of Nuclear Material Safety, and S ngton, DC 20555 or applications n H Street, NW, Washington, D. C. o | afeguards, U.S. Nuclear Rej say be filed in person at th ir 7915 Eastern Avenue, Sil | gulatory Commission, e Commission's office at iver Spring, Maryland. | | C. RENEWAL OF LICENSE NUMBER | |
| 2. APPLICANT'S NAME (Institution, firm, person, etc.) Federal Emergency Management Agency | | | 3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION George C. Meyer | | | |
| TELI (20 | EPHONE NUMBER: AREA CODE 12) 287-3839 | NUMBER EXTENSION | (202) 287-3839 | REA | CODE - NUMBER EXTENSION | |
| 4. API (Ad sho Fed 500 Att | PLICANT'S MAILING ADDRESS () dress to which NRC correspondence, uid be sent.) leral Emergency Manager C Street, SW; Wash. n: George C. Meyer () | nclude Zip Codel natices, bulletins, etc., ment Agency DC 20472 DL = EM-SD-PD-) | 5. STREET ADDRESS WHER (Include Zip Code) No Change | IE LI | CENSED MATERIAL WILL DE USEC | |
| 6. IN | (IF MORE SPACE IS N DIVIDUAL(S) WHO WILL USE are Items 16 and 17 for required train | OR DIRECTLY SUPER ing and experience of each in | USE ADDITIONAL PROPE VISE THE USE OF LICENSE dividual named below) | EDN | KEYED PAGES.) MATERIAL | |
| _ | FULL NAM | | TITLE | | | |
| а. | | | | | | |
| b. | No Change | | | | | |
| c. 7. RA | DIATION PROTECTION OFFICER | | Attach a resume of person's tr 16 and 17 and describe his resp | aining kansit | g and experience as outlined in Items milities under Item 15. | |
| | na na sina kana si kacamatan na sina si kacamatan si kacamatan si kacamatan si kacamatan si kacamatan si kacama | 8. LICENSE | DMATERIAL | | | |
| | ELEMENT AND MASS NUMBER | CHEMICAL AND/OR PHYSICAL FORM | NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source) C MODEL NUMBER SOURCES AND MA VITY PER SOURCE BE POSSESSED AT | | MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME D | |
| (1) | <u>^</u> | | | | | |
| (2) | SEE ATTACHMENT 1 | | 1.1.1 | | | |
| (3) | | | | | | |
| (4) | | | 1 | | 1.16.144 | |
| | | DESCRIBE USE OF | LICENSED MATERIAL | | | |
| (1) | SEE ATTACHMENT 2 | | | | | |
| (2) | 8602140167 860 REG1 LIC30 08-01297-06 | PDR | | | | |
| (3) | 00 012 | "OF | FICIAL RECORD CO | pγ | 19 | |
| (4) | | | | | al and a second second second | |

| | | 9. | STORAGE OF | SEALED SOURCE | ES | |
|------------------|--|--|---|--|---|---|
| L-ZWO. | CONTAINER AND/C SOURCE WILL BE S | DR DEVICE IN WHICH EA TORED OR USED. A. | ACH SEALED | NAME OF MANUFACTURER B. | | MODEL NUMBER |
| (1) | | SE | E ATTACHM | IENT 3 | | |
| (2) | | | | | | |
| (3) | | | | | | |
| (4) | | | | | | |
| - | | 10. RAL | DIATION DETE | CTION INSTRUM | ENTS | |
| 1-26 | TYPE OF INSTRUMENT | MANUFACTURER'S NAME | MODEL NUMBER | NUMBER | RADIATION DETECTED (alpha, beta, | SENSITIVITY RANGE Imilliroentgens/hour |
| NO. | A | В | C | D | gamma, neutron) E | or counts/minute) F |
| (1) | NO CHANG | 8 | | | | |
| 2) | | | | | | 1201 2.11 |
| 31 | 1.1 | | | | | |
| 4) | | | | | | |
| | | 11. CALIBRA | TION OF INST | RUMENTS LISTER | D IN ITEM 10 | |
| | NO CHANGE | 12. PER | SONNEL MON | NO CHANC | S | EXCHANGE EBEQUENC |
| | A | an appropriate, r | | (Service Company) B | | C |
|](1) | FILM BADGE | | NO CH | ANGE | | CI MONTHLY |
|) (2) | THERMOLUMINESCE DOSIMETER (TLD) | INCE | | | | D QUARTERLY |
|) (3) | (3) OTHER (Specify). | | | | | OTHER (Specify): |
| | | | | | | |
| | 13. FACILITIES A | ND EQUIPMENT (Che | eck were approp | riate and attach an | notated sketch(es) ar | d description(s). |
| | LABORATORY FACI STORAGE FACILITIE REMOTE HANDLING | LITIES, PLANT FACILIT ES, CONTAINERS, SPEC TOOLS OR EQUIPMEN | TIES, FUME HOC IAL SHIELDING T, ETC | DS (Include filtratio (fixed and/or tempora | n, if any), ETC. ny), ETC. | |
| 3 0. | RESPIRATORY PROT | ECTIVE EQUIPMENT, E | 14 WASTE | NO CHANG | E | |
| NA | ME OF COMMERCIAL | WASTE DISPOSAL SER | VICE EMPLOYED |) | | |
| IF (BE TH | COMMERCIAL WASTE USED FOR DISPOSIN E APPLICATION IS FO | DISPOSAL SERVICE IS G OF RADIOACTIVE WA DR SEALED SOURCES A | NO CHANGE NOT EMPLOYED INTES AND ESTIT ND DEVICES AN |) SUBMIT A DETAIL MATES OF THE TYP D THEY WILL BE RI | ED DESCRIPTION OF E AND AMOUNT OF ETURNED TO THE MA | METHODS WHICH WILL ACTIVITY INVOLVED. IF INUFACTURER, SO STAT |
| | | | | | | |
| | | | | | | |

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.
 - 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 depertment or agency of the United States as to any matter within its jurisdiction.

| s. LICENSE FEE REQUIRED <i>(See Section 170.31, 10 CFR 170)</i> Exempt Section 170.11(a)(5) | b. CERTIFYING OFFICIAL (Signature) Learge C Meger c. NAME (Type or print) George C. Meyer | | | |
|---|--|--|--|--|
| (1) LICENSE FEE CATEGORY 8 (civil defense) | d. TITLE Chairman Radiation Control Committee | | | |
| (2) LICENSE FEE ENCLOSED: \$ Exempt 170.11(a)(5) | e. DATE 10/20/83 | | | |

Attachment 1

Maximum Amount

| It am 0 | T. | CEN | CED | MATI | CDT | Ai - |
|---------|------------------------|-------|-----|-------|------|------|
| Item o. | 6.11 | 00.04 | SEU | PIMII | 1712 | ML. |

8a. Element & Mass Number.

8b. Chemical and/or Physical Form.
 8c. Name of Manufacturer and Model Number.

8d. Maximum Amount in Possession at any one Time.

| ITEM | Element and Mass No. | Chemical/Physical Form . Manufacturer & Model No. | | in Possession at Any One Time |
|------|-------------------------|---|----|---|
| A | Cobalt 60 | Federal Emergency Management Agency Model CD V-786 or CD V-784 Sealed Source Sets manufactured by Reed-Curtis, TracerLab & Baird-Atomic | 21 | 52.2 curies contained in 1750 sets of 30 millicuries per set |
| В | Cobalt 60 | Sealed Source Gamma Industries Model No. VDHØ | | 1 source of 15 curies |
| с | Cesium 137 | FEMA-S-113 Sealed Source manufactured by 3M as 4F6Y, Certificate of Registration NR-459-S-101-S | | 192.5 curies con- tained in 8,750 sources of 22 millicuries each |
| D | Cesium 137 | Oak Ridge National Laboratory Sealed Source | | 360 curies contained in 3 sources of 120 curies each |
| E | Cesium 137 | Oak Ridge National Laboratory Sealed Source | | 650 curies contained 5 sources of 130 curies each |
| F | Cesium 137 | U.S. Radium Corporation Model LAB-713 Sealed Source | | 416 millicuries con- tained in 13 sources of 32 millicuries each |
| G | Cesium 137 | U.S. Radium Corporation Model LAB~713-W-C Sealed Source | | 165 millicuries con- tained in 11 sources Of 15 millicuries |

"OFFICIAL RECORD COPY"

| ITEM | Element and Mass No. | Chemical/Physical/Form Manufacturer & Model No. | Maximum Amount in Possession at Any One Time |
|------|--|--|---|
| н | Cesium 137 | Nuclear-Chicago Corpor- ation Model RS-137 Sealed Source | 1 source of 28.5 microcuries |
| I | Cesium 137 | Minnesota Mining and Manu- facturing Company Model 4D6E Sealed Source | 60 millicuries con- tained in 60 sources of 1 millicurie each |
| J | Cesium 137 | Oak Ridge National Laboratory Sealed Source Model ORNL-2339A or ORNL DSK-2384, Certificate of Registration NR-283-D-105-S | 10,010 curies con- tained in 70 sources of 143 curies each |
| К | Cesium 137 | Federal Emergency Management Agency Model OCD-S-104 Sealed Source, manufactured by Nuclear-Chicago as Model 83800, Certificate of Registration NR-283-D-111-S | 2.2 curies contained in 110 sources of 20 millicuries each |
| L | Cesium 137 | Sealed Source J L Shepherd Model-333 | i source of 1,250 curies |
| м | Strontium 90 | Nuclear-Chicago Corporation Model RG-3108 Sealed Source | l source of 30 millicuries |
| N | Strontium 90/ Cesium 137 (June Bagget) | Minnesota Mining and Manu- facturing Company Dwg. A-1920-17 Sealed Source | 2.44 millicuries contaired in 8 sources of 0.305 millicuries each |
| 0 | Strontium 90 | Nuclear-Chicago Corporation Model 312 Sealed Source | l source of 10 millicuries |
| P | Strontium 90 | Nuclear-Chicago Corporation Model 320 Sealed Source | l source of 10 millicuries |
| Q | Phosphorous 32 | Any | 25 millicuries |
| R | Iodine 131 | Any | 15 millicuries |
| S | Atomic Number 3 through 83 | Commercially Available Sealed Source | Total of 10 curies, maximum of 150 millicuries any one sealed source |

N 1. 2 3

Item 8E: USES OF LICENSED MATERIALS

The FEMA Radiation Control Committee approves the procurement, use, handling, storing and disposal of all sources of ionizing radiation within FEMA.

Item designation is the same as Attachment 1.

A. For use in civil defense training and demonstrations, calibration of instruments, testing and evaluation of instruments.

B. For use in a gamma Radiation Calibration System at the FEMA Radiological Instrument Test Facility, Building 22, U. S. Navy Yard, Washington, D.C.

C. Federal Emergency Management Agency Model CD V-782 sealed source sets, civil defense training and demonstrations, calibration, testing, and evaluation of instruments.

D. For use in Federal Emergency Management Agency Model CD V-793 Calibrator Unit.

E. For use in Lionel Research Prototype CD V-794X Calibrator Unit.

F. For use in Federal Emergency Management Agency Model CD V-798 Model 1 Calibrators.

G. For use in Federal Emergency Management Agency Model CD V-797 Model 1 Calibrators.

H. Calibration of laboratory detection systems and evaluation of instruments.

 For use in Federal Emergency Management Agency Model CD V-757 Barrier Shielding Demonstrator Sets.

J. For use in Federal Emergency Management Agency Model CD V-794 Model 2 Radiological Instrument Calibrators.

K. For use in civil defense training and demonstrations, calibration of instruments, testing and evaluation of instruments and Federal Emergency Management Agency Model CDV-790 calibrator.

Attachment 2 (cont'd)

1. 4

L. For use in a gamma Radiation Calibration System at the FEMA Radiological Instrument Test Facility, Building 22, U. S. Navy Yard, Washington, D.C.

M. For use in U. S. Army Model TS-784/PD Radiac Calibrator.

N. For use in testing and evaluation, and demonstration of principles of radiation detection and attenuation.

0. & P. For use in calibration, testing and evaluation of instruments.

Q. & R. For use in demonstrations of principles of radioactivity and methods of decontamination.

S. For use in calibration, testing and evaluation of instruments, and civil defense training and demonstrations.

"OFFICIAL RECORD COPY"

......

| Item 9: STORAGE OF SEALED SOURCES |
|--|
| Item designation is the same as Attachments 1 and 2. |
| Items A, C, H, K, N, O, P, Q & R: are stored in CD V-791, CD V-792 Containers. |
| Items B, L,: are an integral part of Gamma Calibrators. |
| Item C: Each source is stored and is contained in a CD V-793 Calibrator Unit (AN/UDM-IA). |
| Item E: Each source is contained in a Lionel Research Prototype CD V-794X Calibrator Unit. |
| Item F: Each source is contained in a CD V-798, Model 1 Calibrator Unit. |
| Item G: Each source is contained in a CD V-797, Model 1 Calibrator Unit. |
| Item I: Each source is contained in a CD V-757, Model 1 Barrier Shielding Demonstrator. |
| Item J: Each source is contained in a CD V-794, Model 2 Calibrator Unit. |
| Item M: Each source is contained in a U.S. Army Model TS-734/PD Radiac Calibrator. |
| Item S: Sources will be stored in appropriate storage containers to minimize |

radiation as low as reasonably achievable. Where appropriate, sources will be shielded during use to minimize exposure.

25 August 1983

John:

I spoke with George Meyer, FEMA RSO, today re the manual referenced in our Standard conditions 29 & 30. He said that the manual which is in the FEMA license file is the correct reference and replaces the 1967 version we cite.

MANUAL OF PROCEDURES FOR THE USE & CONTROL OF THE CD V-778 RADIATION TRAINING SOURCE SET, dated August 1975.

He also mentioned that within the next 6 months or so they plan to update the manual and will issue it probably as a FEMA document. At that time he will send a copy to us to be placed in the FEMA license, 08-01297-06. I have placed a copy of this in the FEMA license so that we can update the Standard Conditions when the new version is received.

Do you want me to have the Standard Conditions 29 & 30 changed?

"OFFICIAL RECORD COPY"