

## APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

### FEDERAL AGENCIES FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION  
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS  
WASHINGTON, DC 20555

### ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
NUCLEAR MATERIAL SECTION B  
631 PARK AVENUE  
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION II  
MATERIAL RADIATION PROTECTION SECTION  
101 MARIETTA STREET, SUITE 2900  
ATLANTA, GA 30323

### IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
MATERIALS LICENSING SECTION  
799 ROOSEVELT ROAD  
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
MATERIAL RADIATION PROTECTION SECTION  
611 RYAN PLAZA DRIVE, SUITE 1000  
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V  
MATERIAL RADIATION PROTECTION SECTION  
1450 MARIA LANE, SUITE 210  
WALNUT CREEK, CA 94596

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION.

### 1. THIS IS AN APPLICATION FOR (Check appropriate item):

- ☒ A. NEW LICENSE  
☐ B. AMENDMENT TO LICENSE NUMBER \_\_\_\_\_  
☐ C. RENEWAL OF LICENSE NUMBER \_\_\_\_\_

### 2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip Code)

Shirley Contracting Corporation  
8435 Backlick Road  
Lorton, Virginia 22079-1498

### 3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED.

At address listed in item 2 and at temporary jobsites throughout the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction over the use of by-product material.

### 4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

R. E. Post

### TELEPHONE NUMBER

(703) 550-8100

SUBMIT ITEMS 5 THROUGH 11 ON 8 1/2 x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

### 5. RADIOACTIVE MATERIAL

a. Element and mass number, b. chemical and/or physical form, and c. maximum amount which will be possessed at any one time.

### 6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

### 7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.

### 8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

### 9. FACILITIES AND EQUIPMENT

8508130068 850703  
REG2 LIC30  
45-23089-01 PDR

### 10. RADIATION SAFETY PROGRAM.

### 11. WASTE MA

### 12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY 3P AMOUNT ENCLOSED \$ 230.00

### 13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, IS TRUE AND CORRECT TO THE BEST OF THEIR 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.

### SIGNATURE—CERTIFYING OFFICER

### TYPED/PRINTED NAME

### TITLE

### DATE

R. E. Post

President

3 July 1985

### 14. VOLUNTARY ECONOMIC DATA

#### a. ANNUAL RECEIPTS

<\$250K	\$1M-3.5M
\$250K-500K	\$3.5M-7M
\$500K-750K	\$7M-10M
\$750K-1M	>\$10M

#### b. NUMBER OF EMPLOYEES (Total for entire facility excluding outside contractors)

100

#### c. NUMBER OF BEDS

#### d. WOULD YOU BE WILLING TO FURNISH COST INFORMATION (Dollar and/or staff hours) ON THE ECONOMIC IMPACT OF CURRENT NRC REGULATIONS OR ANY FUTURE PROPOSED NRC REGULATIONS THAT MAY AFFECT YOU? (NRC regulations permit it to protect confidential commercial or financial—proprietary—information furnished to the agency in confidence)

☒ YES

☐ NO

### FOR NRC USE ONLY

#### TYPE OF FEE

#### FEE LOG

#### FEE CATEGORY

#### COMMENTS

#### APPROVED BY

#### AMOUNT RECEIVED

#### CHECK NUMBER

#### DATE

## PRIVACY ACT STATEMENT

Pursuant to 5 U.S.C. 552a(e)(3), enacted into law by section 3 of the Privacy Act of 1974 (Public Law 93-579), the following statement is furnished to individuals who supply information to the Nuclear Regulatory Commission on NRC Form 313. This information is maintained in a system of records designated as NRC-3 and described at 40 Federal Register 45334 (October 1, 1975).

1. **AUTHORITY:** Sections 81 and 161(b) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2111 and 2201(b)).
2. **PRINCIPAL PURPOSE(S):** The information is evaluated by the NRC staff pursuant to the criteria set forth in 10 CFR Parts 30, 32, 33, 34, 35 and 40 to determine whether the application meets the requirements of the Atomic Energy Act of 1954, as amended, and the Commission's regulations, for the issuance of a radioactive material license or amendment thereof.
3. **ROUTINE USES:** The information may be (a) provided to State health departments for their information and use; and (b) provided to Federal, State, and local health officials and other persons in the event of incident or exposure, for their information, investigation, and protection of the public health and safety. The information may also be disclosed to appropriate Federal, State, and local agencies in the event that the information indicates a violation or potential violation of law and in the course of an administrative or judicial proceeding. In addition, this information may be transferred to an appropriate Federal, State, or local agency to the extent relevant and necessary for an NRC decision or to an appropriate Federal agency to the extent relevant and necessary for that agency's decision about you.
4. **WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL OF NOT PROVIDING INFORMATION:** Disclosure of the requested information is voluntary. If the requested information is not furnished, however, the application for radioactive material license, or amendment thereof, will not be processed. A request that information be held from public inspection must be in accordance with the provisions of 10 CFR 2.790. Withholding from public inspection shall not affect the right, if any, of persons properly and directly concerned need to inspect the document.
5. **SYSTEM MANAGER(S) AND ADDRESS:** U.S. Nuclear Regulatory Commission  
Director, Division of Fuel Cycle and Material Safety  
Office of Nuclear Material Safety and Safeguards  
Washington, D.C. 20555

5. Radioactive Material

a. Element and mass number

1. CS-137
2. AM-241:Be

b. Chemical and/or physical form

1. Special Form - Sealed Source - Troxler Drawing A-102112
2. Special Form - Sealed Source - Troxler Drawing A-102451

c. Maximum amount which will be possessed at any one time

1. Not to exceed 9 mCi per source
2. Not to exceed 44 mCi per source

6. Purpose(s) for which licensed material will be used.

For use in Troxler Models 3400 Series Surface Moisture Density Gauges to measure properties of construction material.

7. Individual(s) responsible for Radiation Safety Program and their training and experience.

Resume - Brent Du Bose  
(Attached)

8. Training for individuals working in or frequenting restricted areas.

Brent Du Bose or any individual who works with this density machine will complete the manufacturer's training course and will be instructed in our operating and emergency procedures. Copies of the certificate of training for each user will be maintained in our files.

9. Facilities and Equipment

See Sketch

10. Radiation Safety Program

See Attached

11. Waste Management

Source of gauges will be returned to the manufacturer or another authorized license when use is discontinued.

(7)

Resume

Radiation Protection Officer

Robert Brent Du Bose

As the Radiation Safety Officer I have the responsibility of scheduling, coordination and supervising all testing. I am also called upon to perform field testing on construction material through the use of a nuclear density gauge. I have successfully passed the course offered by Troxler Electronics Laboratory. I have also previously served as a quality control officer under the Corps of Engineers program and supervised the use of a similar unit.

All testing equipment bought by the company is supervised by me. Therefore, it is my responsibility to assure that the by-product materials that are received by this office conform to the materials listed on the license.

I will be able to assign only licensed personnel to projects requiring nuclear density devices. All soils field technicians working out of this office will be certified by completion of the Troxler Electronics Nuclear Training Course, to operate the nuclear density devices.

As far as our radiation monitoring program is concerned, this office plans on employing the services of the Eberline Instrument Corporation, Post Office Box 2108, Santa Fe, New Mexico, 87501. I will be responsible for the proper usage and storage of the TLDs for this office.

While not in use at our various project sites, the nuclear gauges will be stored and locked in cabinets in a laboratory storage room having a locked door which can only be opened by certain of our professional-administrative staff. It will be an office policy that the gauges will not be removed from the storage area for any reason without approval from me.

As Radiation Protection Officer, I have been informed through the Radiation Safety Course that I should serve as a contact point and give assistance in case of an emergency involving nuclear devices operated by one of my employees.

It will further be my responsibility in general that all terms and conditions of the license including maintenance, testing, record-keeping are in compliance with Nuclear Regulatory Commission regulations, requirements, and license conditions.

**SHIRLEY  
CONTRACTING CORPORATION**

8435 Backlick Road  
LORTON, VIRGINIA 22079  
(703) 550-8100

(9)

JOB \_\_\_\_\_

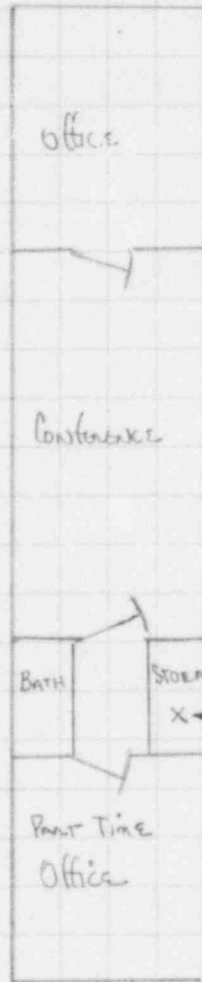
SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_

Office Layout  
Nuclear Storage



50x10 Office Trailer  
GROUND Secured

NUCLEAR DEVICE  
STORAGE - LOCKED AREA  
Secured By  
Bolt through  
floor with lock.  
Door Lock

Note: Distance to nearest occupied space  
from nuclear device is approximately  
30 feet.

Scale: 1" = 50'

## Radiation Safety Program

### 1. Radiation Protection Officer

A. Robert Brent Du Bose has been designated as the branch Radiation Protection Officer and will assume the duties and responsibilities that include:

1. To assure that all terms and conditions of the license are being met; and, that the information contained in the license is up-to-date.
2. To ensure that the equipment has been leak tested in the required timely manner; and, that the leak test is performed in the manner prescribed by the equipment manufacturer.
3. To assure that the use of the equipment is only by individuals that have been authorized by the Radiation Protection Officer; and, that all users wear personnel monitoring equipment when utilizing the equipment.
4. To maintain the records as required by the license and the regulations. These records shall include personnel exposure records, leak test records and training certificates for all users.
5. To assure that the equipment is properly secured against unauthorized removal at all times when they are not in use.
6. To serve as a point of contact and give assistance in case of emergency such as equipment damaged in the field or theft; and, to notify the proper authorities in case of emergency.
7. To assure that all users have read and understand the Radiation Safety operating and emergency procedures.

### 2. Operating Procedures

#### A. Transportation of Equipment

1. All possible means shall be provided to ensure that the equipment is fully secured in the transporting vehicle; and, the equipment is away from the passenger compartment. When transporting in an enclosed vehicle (car or van) the vehicle will be locked. When transporting in an open bed vehicle, the gauge should be securely fastened and locked up to the truck bed.
2. The gauge will be transported in the Troxler transportation case. The US Department of Transportation requires that the gauge be transported in a properly labeled carrying case.

### B. Utilization Procedures

1. When the gauge is in the field, you as the authorized users must maintain control over the gauge at all time. The gauge must never be left unattended.
2. When not making measurements, the gauge should be placed in the transportation case, and returned to its permanent storage area as soon as possible. The gauge is to be used for its intended use only, by doing so you will maintain any radiation exposure to as low as reasonably attainable.
3. When using the equipment, you will wear the personnel monitoring device that has been assigned to you. When you are not using the equipment, your monitoring device is to be stored in the radiation free area that has been designated in the office.

### C. Maintenance and Leak Procedures

1. Periodic maintenance will include cleaning the gauge. During any maintenance, you must wear your personnel monitoring device.
2. No maintenance will be performed in which the radioactive source is removed from the gauge. For this type of maintenance, the gauge will be returned to the manufacturer.
3. The leak test will be performed using the Gamma Industries Leak Test Kit. The leak test will be performed under the manufacturer's instructions. Again, the personnel monitoring device will be worn and all means to limit radiation exposure will be employed. Gauges will be leak tested at intervals not to exceed six (6) months.

### 3. Emergency Procedures

- A. In the event of physical damage to a gauge, the following will be performed.
  1. Immediately cordon off an area around the gauge. An area radius of 15 feet will be sufficient.
  2. If a vehicle is involved, it must be stopped until the extent of contamination, if any, can be established.
  3. A visual inspection of the gauge is to be made to determine if the source housing and/or shielding has been damaged.
  4. At the earliest possible time, when the situation is under control, you must contact Robert Brent Du Bose at 703-550-8100. Describe the present conditions and follow the instructions of the Radiation Safety Officer.
- B. In the event the gauge is lost or stolen, immediately notify the Radiation Safety Officer as listed above in Item 3.A.4.