

NRC FORM 313  
(06-2016)  
10 CFR 30, 32, 33, 34  
35, 36, 37, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 06/30/2019



# APPLICATION FOR MATERIALS LICENSE

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollections.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE CURRENT VOLUMES OF THE NUREG-1556 TECHNICAL REPORT SERIES ("CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES") FOR DETAILED INSTRUCTIONS FOR COMPLETING THIS FORM: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/>. SEND TWO COPIES OF THE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

MATERIALS SAFETY LICENSING BRANCH  
DIVISION OF MATERIAL SAFETY, STATE, TRIBAL AND RULEMAKING PROGRAMS  
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS  
U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,

SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM  
DIVISION OF NUCLEAR MATERIALS SAFETY  
U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PA 19406-2713

03034591

IF YOU ARE LOCATED IN:

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

MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

Br. 2

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING,

SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
1600 E. LAMAR BOULEVARD  
ARLINGTON, TX 76011-4511

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 JURISDICTIONS.

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

- A. NEW LICENSE
- B. AMENDMENT TO LICENSE NUMBER
- C. RENEWAL OF LICENSE NUMBER

45-25416-01

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

EnCo Consulting Services, Inc.  
14210 Springfield Circle, Ste D.  
Charlottesville, VA 20151

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

3601 Stonecroft Blvd, Lot 11  
Charlottesville, VA 20151

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Sand Dorgham

BUSINESS TELEPHONE NUMBER

703 766 5215

BUSINESS CELLULAR TELEPHONE NUMBER

BUSINESS EMAIL ADDRESS

SDORGHAM@ENCONCS.COM

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.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (Fees required only for new applications, with few exceptions\*)  
(See 10 CFR 170 and Section 170.31)  
\*Amendments/Renewals that increase the scope of the existing license to a new or higher fee category will require a fee.

FEE CATEGORY

AMOUNT ENCLOSED \$

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, 36, 37, 39, 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.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

SAAD DORGHAM, EXECUTIVE MANAGER

SIGNATURE

DATE

11/27/17

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
APPROVED BY				DATE	

REC'D IN LAT 12-4-17

601929  
NMSS/RGN1 MATERIALS-002

Item 5-- RADIOACTIVE MATERIAL

<u>Radionuclide</u>	<u>Sealed Source</u>	<u>Max. Activity/Source</u>
Cs-137	Troxler A-102112	9 mCi
Am-241:Be	Troxler A-102451	44 mCi
Cf-252	Troxler A-106510	66 :Ci

Data on Registration Certification:

<u>Manufacturer/Distributor</u>	<u>Registry No.</u>	<u>Model No.</u>
Troxler Electronics Labs	NC-646-D-130-S	3400 Series
Troxler Electronics Labs	NC-646-D-131-S	4600 Series

Possession Limit Commitment:

We will confine our possession of licensed material to quantities such that we will not exceed the applicable limits in 10 CFR 30.35.

Item 6 --PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED

- a. For use in Troxler Model 3400 and 4600 series gauges to measure the density of soils, aggregates and construction materials.
- b. For use in Troxler Model 3400 and 4600 series gauges measuring hydrogen with relation to moisture content of construction/building materials.

Item 7 -- INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE

- a. Saad F. Dorgham is the designated RSO
- b. Mr. Dorgham is a professional engineer with a Master of Science degree in Geotechnical/Structural Engineering. He has over nineteen years of hands-on experience including training personnel for the use and safety of nuclear testing equipments. Mr. Dorgham is certified by the Health Physics Services, Inc. and ATEC Associates, Inc. and CTL Engineering, Inc. for Nuclear Safety and Gauge Usage, including two eight-hour courses and written tests.
- c. The management of EnCon Consulting Services, Inc. authorizes the RSO to stop unsafe operation and committed to ensure that the RSO has sufficient time to perform duties and responsibilities as required by the NRC.

Item 8 --TRAINING PROVIDED TO OTHER USERS

Each individual operates the nuclear gauge will complete the nuclear gauge training



## 10.2 Radiation Detection Instruments

1. There will be a survey instrument available capable of measuring between 0-100 mrem/hr (0-1000  $\mu$ Sv/hr).
2. Calibration Frequency: Annually by manufacturer
3. 

<u>Type of Instrument</u>	<u>Radiation Detected</u>	<u>Sensitivity Range</u>	<u>Window Thick.</u>
GM Survey Instrument	alpha, beta, gamma and X-Ray	0 - 100 mR/hr	1.4 mg/cm <sup>2</sup>
4. Prior to operation of the gauge the response of the survey meter will be checked using the gauge sources.

## 10.3 Leak Tests

1. Leak tests will be performed at intervals not to exceed 6 months.
2. A Troxler Leak Test Kit 3880 or equivalent will be used and the suppliers instructions will be followed when collecting the sample.  
Troxler Electronic Labs. Inc.  
PO Box 12057  
Research Triangle Park, NC 27709

## 10.4 Inventories

An inventory of all sealed sources and devices possessed under this license will be conducted at intervals not to exceed 6 months, and the record of inventory maintained for 3 years from date of the inventory. Inventory records should include the radionuclide, amount or activity, and the manufacturer's name, model number, and serial number.

## 10.5 Maintenance

1. All maintenance will be performed with the radioactive source in the safe shielded position in accordance with the manufacturer's directions included in the operator manual.
2. Extensive maintenance which source rod removal will be performed by the gauge manufacturer.

## 10.6 Transportation of Devices to Field Locations

1. EnCon will maintain current DOT (49CFR) regulations and will develop and implement procedures for complying with applicable DOT regulations.
2. Current applicable regulations will be ordered and/or updated from the Government printing office order desk at (202) 512-1800.

## 10.7 Operating and Emergency Procedures

1. Organization will implement the Operating and Emergency Procedures as stated in this correspondence
2. A copy of these procedures will be distributed to gauge users before initial use of

- equipment.
3. A copy of these procedures will be on file separate from the gauge.
  4. These procedures will be appended if equipment is to be used at depths greater than 3 feet.

## **STANDARD OPERATING AND EMERGENCY PROCEDURES**

### Operating Procedures

1. Before removing the gauge from its place of storage, check to make sure that the gauge source rod is in the shielded, locked position, and lock the transport case,
2. Sign the gauge out in a log book stating the dates of use, names of the authorized users who will be responsible for the gauge, and the temporary job sites where the gauge will be used.
3. Equipment outside the transport vehicle or storage site should ever be left unattended.
4. Follow all applicable Department of Transportation (DOT) requirements when transporting the gauge.
5. Do not touch the end of the source rod below the base of the gauge with your fingers, hands, or any part of your body, and always make sure the source is in the shielded position after each measurement is made.
6. Always wear your assigned thermoluminescent dosimeter (TLD) or film badge when using the gauge.
7. Never wear another person's TLD or film badge.
8. Never store your TLD or film badge near the gauge.
9. Always keep unauthorized persons away from the area where the gauge is to be used.
10. Always maintain constant surveillance and immediate control of the gauge when it is not in storage or secured in the transport vehicle.
11. Ensure gauge and operator are visible to heavy equipment operators.
12. Never look under the gauge when the source rod is being lowered into the ground.
13. When the gauge is not in use at a temporary job site, place the gauge in a secured storage location (e.g., locked in the trunk of a car or locked in a storage shed).
14. Return the gauge to a proper storage location at the end of the work shift.
15. When returning the gauge to the permanent storage facility, so indicate in the source log.
16. When using the equipment at a temporary jobsite with no storage facility, and the operator is living in temporary lodging (Hotel or motel), the gauge should be stored inside the transport vehicle in an inconspicuous manner that would deter theft and limit the exposure to the general public.
17. Pregnant Equipment Operators may declare their pregnancy to the RSO in writing.

### Emergency Procedures

If the source fails to return to the shielded position (e.g., as a result of being damaged) or if any other emergency or unusual situation arises (e.g., the gauge is struck by a moving vehicle, or is in a vehicle involved in an accident):

1. Immediately secure the area around the gauge. (An area 15 feet in diameter should limit exposure to general public.) If the source has been separated from the unit secure the area around the source as above.
2. Prevent unauthorized personnel from entering the secured area.
3. If a vehicle or heavy equipment is involved, detain the equipment until it is determined there is no contamination present.
4. Notify licensee management of the situation, calling company personnel in the order listed below.

<u>Name</u>	<u>Work Phone Number</u>	<u>24-hour Phone Number</u>
Saad F. Dorgham	(703) 766-5215	(703) 898-2928

5. Follow the directions provided by the person contacted in step 4.
6. LICENSEE MANAGEMENT MUST:
  - 6.1 Arrange for a survey to be conducted as soon as possible by a knowledgeable person using appropriate radiation detection instrumentation. (This person could be a licensee employee using a survey meter located at the jobsite or consultant.)
  - 6.2 Make necessary notifications to local authorities; notify the NRC or Agreement as appropriate.
  - 6.3 Consider the timeliness of reports to the NRC.
  - 6.4 Review the reporting requirements, which are found in 10 CFR 20.2201-2203 and 10 CFR 30.50.

#### 10.8 Annual Audit

1. Mr. Dorgham (EnCon's RSO) will conduct audit (include list of qualifications)
2. Scope: Meet the minimum criteria detailed in Appendix I of NRC Draft Regulatory Guide DG-0008.
3. Audit will be conducted at intervals not to exceed 12 months, and the records of the audit will be maintained for 3 years.

#### 10.9 Financial Assurance and Record keeping for Decommissioning

1. Financial Assurance

EnCon will continue its possession of licensed material to quantities such that we will not exceed the applicable limits in 10 CFR 30.35(d).
2. Recordkeeping
  - a. Records will be maintained detailing any instance related to leaking sources, spills or contamination important to decommissioning.

b. Record location will be:  
3601 Stonecroft Blvd. Lot 11  
Chantilly, VA 20151

Item 11 -- WASTE MANAGEMENT

Disposal will be by transfer of the radioactive material to a person who is specifically licensed to receive and possess it.