



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 internet e-mail to Infocollects.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 APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW. *AMENDMENTS/RENEWALS THAT INCREASE THE SCOPE OF THE EXISTING LICENSE TO A NEW OR HIGHER FEE CATEGORY WILL REQUIRE A FEE.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

OFFICE OF FEDERAL & STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS
DIVISION OF MATERIALS SAFETY AND STATE AGREEMENTS
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

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

03037035

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

19-30304-02

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 19-30304-02

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

Hillis-Carnes Engineering Associates, Inc.
10975 Guilford Road, Suite A
Annapolis Junction, MD 20701

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

1277 McD Drive
Dover, DE 19901

Temporary Job Sites in NRC States and on Federal Property

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

David A. Adkins

BUSINESS TELEPHONE NUMBER (410) 880-4788	BUSINESS CELLULAR TELEPHONE NUMBER (410) 365-9122
BUSINESS EMAIL ADDRESS dadkins@hcea.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.

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

10. RADIATION SAFETY PROGRAM.

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

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

9. FACILITIES AND EQUIPMENT.

11. WASTE MANAGEMENT.

12. LICENSE FEES (Fees required only for new applications, with few exceptions*) (See 10 CFR 170 and Section 170.31)

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

David A. Adkins - Project Manager

SIGNATURE

DATE

5-6-14

FOR NRC USE ONLY

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

REC'D IN LAT 5-8-14

583634

Item 5 - Radioactive Material

<u>Radionuclide</u>	<u>Sealed Source</u>	<u>Max. Activity/Source</u>
A. Cesium 137	Troxler Drawing A-102112	9 millicuries
B. Americium 241	Troxler Drawing A-102451	44 millicuries

Authorized Use

A. For use in Troxler Model 3411, 3430, 3440 series moisture/density gauges to measure properties of construction materials.

B. For use in Troxler Model 4600 series moisture/density gauges to measure properties of construction materials.

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(d).

Data on Registration Certificates

<u>Manufacturer/Distributor</u>	<u>Registry Number</u>	<u>Model Number</u>
Troxler Electronic Laboratories	USANC-0646-D-130-S	3400 & 3411 Series (20 gauges)
Troxler Electronic Laboratories	USANC-0646-D-131-S	4600 Series (3 gauges)

Item 6 - Purpose(s) For Which Licensed Material Will Be Used

For use in Troxler Model 3411, 3430, 3440 and 4640 series moisture/density gauges to measure properties of construction materials. The sealed source will be lowered into the ground a maximum of 12 inches.

Item 7 - Individual(s) Responsible For Radiation Safety and their Training and Experience

A. RSO - David A. Adkins

B. Training of RSO

1. Radiation Safety Officer Training for Nuclear Gauges in accordance with NRC and US DOT Regulations on December 19, 2007.
2. Radiation Safety Officer 40 hour course provided by CSI-Radiation Safety Training and Radiation Safety Organization from June 12-16, 1995.
3. See Appendix A for copies of certificates

C. Duties and Responsibilities of the RSO

1. David A. Adkins has been designated as the company Radiation Safety Officer (RSO) and will assume the duties and responsibilities that include the following:
 - a. To ensure that all terms and conditions of the license are being met and that the information contained in the license is up to date.
 - b. To ensure that the equipment has been leak tested in at intervals not to exceed six months and that the leak test is performed by or in the manner prescribed by the equipment manufacturer. Maintenance requiring removal of the source or placing it in an unshielded position will only be performed by the manufacturer or an authorized repair center.
 - c. To ensure that the use of the equipment is only by individuals that have been authorized by the RSO and that all users wear personnel monitoring equipment when utilizing the equipment. Monitoring equipment will be film badges supplied by RSO, Inc. of MD or a supplier accredited by the National Voluntary Laboratory Accreditation Program and exchanged quarterly.
 - d. The leak test will be performed in accordance with Item 10.7. Gauges will be leak tested at intervals not to exceed six (6) months. The leak test will also be used as an inventory of the sealed sources.

- e. To maintain the records as required by the license and the regulations. These records shall include personnel exposure records and training certificates for all users.
- f. To ensure that the equipment is properly secured against unauthorized removal at all times when it is not in use.
- g. To serve as a point of contact and give assistance in case of emergency such as equipment damaged in the field, fire or theft and to notify the proper authorities in case of emergency.
- h. To ensure that all users have read and understand the radiation safety operating and emergency procedures.
- i. To designate employees as authorized users subsequent to completion of approved training course and operating and emergency procedures.
- j. To develop and implement procedures for complying with applicable DOT regulations. HCEA has and will maintain current copies of these DOT regulations.
- k. To restrict the possession of licensed materials to quantities below the minimum level specified in 10 CFR 30.35(d) and to maintain records of any events involving spills, leaking sources, or spread of contamination should they occur.
- l. To ensure that all transfers or disposals of radioactive material are to authorized recipients as specified in 10 CFR 20.2001(a).

Item 8 - Training of Authorized Users

A. Authorized User

- 1. Before using licensed materials, authorized users will have successfully completed one of the training courses described in the "Criteria" part of the section titled "Training for Individuals Working in or Frequenting Restricted Areas" in NUREG-1556, Vol. 1, Rev. 2.
- 2. Certificate must be provided and filed as authorized user at office of employment and with the RSO.
- 3. Female employees must review Pregnancy Policy, sign and return back page. Employee is to keep remainder for her records and future response to company.

4. Employee must receive a personal monitoring device.
5. Employee must review operating and emergency procedures.
6. Upon satisfying applicable Items 1 thru 5, employee is authorized for gauge use.

Item 9 - Facilities and Equipment

A. The proposed permanent facility currently exists.

1. Dover Office location

- a. Located in a one-story warehouse building.
- b. Nuclear gauge storage area is within general storage area in rear of building a minimum of 15 feet for office space.
- c. Storage area has a locking door. The warehouse is locked after hours and has an alarm.

Item 10 - Radiation Safety Program

A. Transportation of Equipment

1. All possible means shall be provided to ensure that the equipment is not transported in the passenger compartment and is secured physically as well as locked in or to the vehicle.
2. The gauge will be transported in a properly labeled locked case. Additionally, the source rod shall be keyed lock in the "safe" position.
3. At all times during transport the driver will have a properly completed "Bill of Lading" for each gauge within the reach of the driver.
4. Transport Checklist
 - Film badge in operator's possession
 - Log out gauge
 - Gauge secured in/to the vehicle, physically as well as key locked.
 - Bill of Lading packet containing the Nature and Quality of Content: Proper Shipping Name, Radionuclides, Group, Form, and Activity;

Package: Category, Transport Index, and Type; and Origin and Destination of the Shipment. Additionally, the package shall contain the emergency procedures to be followed in case of an accident where exposure to the public is possible.

B. Utilization Procedures

1. When the gauge is in the field, you as the authorized user must maintain control of the gauge at all times. If it is necessary to leave the gauge unattended momentarily, the gauge must be secured in or to the transport vehicle.
2. When not taking 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 purpose only. By doing so, you will maintain any radiation exposure to levels 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

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 a manufacturer's service center.

D. Emergency Procedures in the event of an accident.

1. Do not touch the gauge if it is damaged in any way.
2. Cordon off or secure an area a minimum of a 15 foot radius.
3. Call David Adkins, Tom Schick, and/or Tim Hill and inform them of the situation.
4. Call RSO Inc. RSO has been retained by HCEA to provide emergency radiological surveys to determine the extent of any contamination. Phone at (866) 764-4010.

Item 10.2 - Radiation Safety Program - Survey Instruments

We will either possess and use, or have access to and use, a radiation survey meter that meets the criteria in the section titled "Radiation Safety Program—Instruments" in NUREG-1556, Vol. 1, Rev. 2, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Portable Gauge Licenses," in the event of an incident.

Item 10.3 - Radiation Safety Program – Material Receipt and Responsibility

Physical inventories will be conducted at intervals not to exceed 6 months to account for all sealed sources and devices received and possessed under the license.

Item 10.4 - Radiation Safety Program – Occupational Dosimetry

We will provide dosimetry processed and evaluated by an NVLAP-approved processor that is exchanged at a frequency recommended by the processor.

Item 10.6 - Radiation Safety Program – Operating, Emergency, and Security Procedures

Operating, emergency, and security procedures will be developed, implemented, and maintained and consistent with the criteria in the section titled "Radiation Safety Program—Operating, Emergency, and Security Procedures" in NUREG-1556, Vol. 1, Rev. 2, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Portable Gauge Licenses."

Item 10.7 - Radiation Safety Program – Leak Test

Leak tests will be performed at intervals approved by the NRC or an Agreement State and specified in the SSD registration certificate. Leak tests will be performed by an organization licensed by the NRC or an Agreement State to provide leak testing services to other licensees or using a leak test kit supplied by an organization licensed by the NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions.

Item 10.8 - Radiation Safety Program – Maintenance

A. Routine Cleaning and Lubrication

We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's recommendations and instructions.

B. Non-routine Maintenance

We will send the gauge to the manufacturer or other person authorized by the NRC or an Agreement State to perform non-routine maintenance or repair operations that require detaching the source or source rod from the gauge.