

(8-1999)
10 CFR 30, 32, 33
34, 35, 36, 39 and 40

APPLICATION FOR MATERIAL LICENSE

Estimated burden per response to comply with this mandatory information collection request: 7.4 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 Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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, 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.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
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:

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

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

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

SAM NUNN ATLANTA FEDERAL CENTER
U. S. NUCLEAR REGULATORY COMMISSION, REGION II
61 FORSYTH STREET, S.W., SUITE 23T85
ATLANTA, GEORGIA 30303-8931

IF YOU ARE LOCATED IN:

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

MATERIALS LICENSING SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION III
801 WARRENVILLE RD.
LISLE, IL 60532-4351

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS,
LOUISIANA, 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 SECTION
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-8064

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 _____

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

CHARLES C. TOWNES & ASSOCIATED, P.C.
9850 LORI ROAD, SUITE 201
CHESTERFIELD, VA. 23832

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED
GAUGE TO BE STORED AT APPLICANT ADDRESS

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

MR. THOMAS A. HOUSTON

TELEPHONE NUMBER
(804) 748-9011

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.

<p>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.</p>	<p>6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.</p>
<p>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE. MR. THOMAS A. HOUSTON</p>	<p>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.</p>
<p>9. FACILITIES AND EQUIPMENT.</p>	<p>10. RADIATION SAFETY PROGRAM.</p>
<p>11. WASTE MANAGEMENT.</p>	<p>12. LICENSEE FEES (See 10 CFR 170 and Section 170.31) FEE CATEGORY BY PRODUCT 3.P AMOUNT ENCLOSED \$1300.00</p>

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, 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	SIGNATURE	DATE
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FOR NRC USE ONLY

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

CHARLES C. TOWNES & ASSOCIATES, P.C.

CONSULTING ENGINEERS, PLANNERS, LAND SURVEYORS

9850 Lori Road, Suite 201, Chesterfield, Virginia 23832

(804) 748-9011 FAX (804) 748-2590

E-mail Townes@cctownes.com

5. Radioactive Material.

a. Element and Mass Number	b. Chemical and/or physical form	c. Maximum amount that will be possessed at one time
A. Cesium-137	Sealed source Troxler Dwg.102112	No single source exceed 9 mCi
B. Americium-241	Sealed source Troxler Dwg.102451	No single source exceed 44 mCi

6. Purposes for which licensed material will be used

To be used in Troxler model 3400 series gauges for measurement of physical properties of materials.

7. Individual responsible for radiation safety program and their training experience.

Thomas A. Houston III is proposed for the Radiation Safety Officer (RSO). Mr. Houston has completed Troxler's Nuclear Gauge Safety Training Class (Certificate #065848, dated 12/1/94).

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

Before using licensed materials, all gauge users will have successfully completed the Troxler Nuclear Gauge Safety Training Class.

9. Facilities and equipment

Storage area is within unoccupied area of building with security and key control. A Caution – Radioactive Material sign will be posted above the door. Adjacent area include a bathroom and unfinished portion of office space. Storage room is approximately 22 feet by 16 feet. Only one gauge is proposed for storage.

10. Radiation Safety Program

10.1. Personal Monitoring

All personnel will wear a personnel monitoring device, such as a TLD badge, to measure radiation exposure when using or transporting gauges. The badges shall be exchanged at intervals not to exceed 3 months. Dosimetry badges shall be provided by a vendor accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), such as Troxler Electronic Laboratories, Inc.

Troxler Radiation Monitoring Services
3008 Cornwallis Road
Research Triangle Park, NC 27709

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E-mail Townes@cctownes.com

10.2. Radiation Detection Instruments

Charles C. Townes & Associates will maintain a survey meter for use in the event of an incident involving the gauge. The survey meter will be calibrated annually by the manufacture and checked for functionality before use (e.g., with the gauge source or a check source).

Manufacture:	Troxler Electronic Laboratories, Inc.
Model:	TroxAlert
Type:	G-M survey meter
Radiation Detected:	alpha, beta, gamma and x-ray
Sensitivity range:	0-100 mrem/hr
Window thickness	1.4 mg/cm ²

Troxler Radiation Monitoring Services
3008 Cornwallis Road
Research Triangle Park, NC 27709
North Carolina License No. 032-0182-1

10.3. Sealed Source Leak Testing

Leak tests will be performed at intervals not to exceed 6 months or other intervals specified in the license using an approved kit, such as Troxler Leak Test Kit 3880, in accordance with the kit supplier's instructions. Leak test samples will be analyzed by an organization authorized by the NRC or Agreement State to provide leak test services, such as Troxler Electronic Laboratories, Inc. (North Carolina license no. 031-0182-1).

10.4. Material Receipt and Accountability

Records of receipt, transfer, and disposal of gauges will be maintained for at least 3 years. Physical inventories of sealed sources will be conducted at intervals not to exceed 6 months. Charles C. Townes & Associates, P.C. will also implement the use of Gauge Utilization Logs and Physical Inventory Logs as shown on Figures E & F included with this application.

10.5. Public Dose

Charles C. Townes & Associates, P.C., will ensure that gauges are used, transported, and stored in such a way that no member of the public receives a dose of more than 100 mrem in one year. We also will ensure that the dose in unrestricted areas does not exceed 2 mrem in any one hour. Charles C. Townes will also control and maintain constant surveillance over gauges that are not in storage and secure gauges from unauthorized use or removal.

CHARLES C. TOWNES & ASSOCIATES, P.C.

CONSULTING ENGINEERS, PLANNERS, LAND SURVEYORS

9850 Lori Road, Suite 201, Chesterfield, Virginia 23832

(804) 748-9011 FAX (804) 748-2590

E-mail Townes@cctownes.com

10.6. Operating and Emergency Procedures

Charles C. Townes & Associates, P.C. will implement and maintain operating and emergency procedures. Please see Appendix H which outlines these procedures. A copy of this appendix will be distributed to all gauge users and maintained at all job sites.

10.7. Maintenance

Charles C. Townes & Associates, P.C. will implement and maintain procedures for routine maintenance (cleaning and lubrication) of our gauges according to the manufacturers recommendations and instructions. We will also send our gauge to the manufacture to perform non-routine maintenance or repair operations that require removal of the source or source rod from the gauge.

10.8. Transportation

Charles C. Townes & Associates, P.C. will implement and maintain safety programs that ensure gauges are transported in compliance with Department of Transportation regulations.

10.9. Audit Program

An audit of the radiation safety program content and implementation will be performed and documented annually. Records of audits will be maintained for at least 3 years. Corrective actions will be taken to prevent recurrence of deficiencies.

11. **Waste Management**

Licensed materials will be disposed of by transfer to an authorized recipient such as Troxler Electronic Laboratories.

12. **License Fees**

Application fee in the amount of **\$1300.00** for byproduct material: (P) all other specified byproduct material licenses, except those in Categories 4A through 4D.

13. **Certification**

Thomas A. Houston, III, Manager of Environmental Services for Charles C. Townes & Associates is authorized to sign the application.

APPENDIX H

OPERATING AND EMERGENCY PROCEDURES

OPERATING PROCEDURES

1. Always wear assigned personnel dosimetry devices (e.g., TLD badge) when using or transporting the gauge.
2. Never wear another person's dosimeter.
3. Never store a dosimeter near the gauge or other radiation source.
4. Before removing the gauge from its place of storage, ensure that in gauges with movable source rods, the rod is locked in the shielded position, and the transport case is locked.
5. Sign out the gauge in a log book, stating the date(s) of use, name(s) of authorized user(s) who will be responsible for the gauge, and the temporary job site(s) where the gauge will be used.
6. Block and brace the gauge to prevent movement during transport and lock the gauge in or to the vehicle. Follow all Department of Transportation requirements when transporting the gauge.
7. Use the gauge according to the manufacturer's instructions and recommendations.
8. Do not touch the end of the source rod with your fingers, hands, or any part of your body or place any part of the body in the radiation field of the unshielded source.
9. Unless absolutely necessary, do not look under the gauge when the source rod is being lowered into the ground. If you must look under the gauge to align the source rod with hole, keep all body parts as far from the unshielded source as possible to minimize radiation exposure.
10. After completing each measurement in which the source is unshielded, immediately return the source to the shielded position.
11. Always maintain constant surveillance and immediate control of the gauge when it is not in storage or secured in the transport vehicle. Never leave the gauge unattended. Protect the gauge and yourself from danger of moving heavy equipment.
12. Always keep unauthorized persons away from the area where the gauge is being used.
13. Perform routine cleaning and maintenance according to the manufacturer's instructions and recommendations.
14. 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).
15. Prior to transporting the gauge, ensure that each gauge source is in the fully shielded position. Ensure that the source rod is locked in the shielded position and that the gauge is placed into the case and lock the case. Block and brace the gauge to prevent movement during transportation. Lock the case in or to the vehicle.
16. Return the gauge to its proper storage location at the end of the work shift.
17. Log the gauge into the daily use log when it is returned to storage.

18. If gauges are used for measurements with the unshielded source extended more than 3 feet below the surface, use piping, tubing or other casing material to line the hole from the lowest depth to 12 inches above the surface. If the piping, tubing, or other casing material cannot extend 12 inches above the surface, cap the hole liner or take other steps to ensure that the hole is free of debris (and it is unlikely that debris will enter the cased hole), so that the unshielded source can move freely (e.g., use a dummy probe to verify that the hole is free of obstructions).
19. After making changes affecting the gauge storage area (e.g., changing the location of gauges within the area, removing shielding, adding gauges, changing the occupancy of adjacent areas, moving the storage area to a new location), reevaluate compliance with public dose limits and ensure proper security of gauges.

EMERGENCY PROCEDURES

The following procedures apply when the source fails to return to the shielded position (e.g., as a result of being damaged, source becomes stuck below the surface) or if any other emergency or unusual situation arises (e.g., the gauge is struck by a moving vehicle or is in an accident involving a vehicle):

1. Immediately secure the area and keep people at least 15 feet away from the gauge until the situation is assessed and radiation levels are known. However, perform first aid for injured individuals and remove them from the area only when medically safe to do so.
2. If any heavy equipment is involved, detain the equipment and operator until it is determined there is no contamination present.
3. Gauge users and other potentially contaminated individuals should not leave the scene until emergency assistance arrives.
4. Visually inspect the gauge to determine the position of the source rod (exposed or shielded), and the position of the source shutter (open or closed), and the extent of damage, if any, to the source housing and/or shielding.
5. Notify the persons in the order listed below:

Name	Work Phone Number	Home Phone Number

Fill in the names and telephone numbers of appropriate personnel (e.g., the Radiation Safety Officer or other knowledgeable staff, licensee's consultant, gauge manufacturer, or regulatory agency) to be contacted in an emergency. Update list as needed.

6. Follow the directions provided by the person contacted above.
7. RSO and Licensee management must:
 - a. Arrange for a radiation survey to be conducted as soon as possible by a knowledgeable person using appropriate radiation detection instrumentation. This person could be a licensee employee or a consultant. The person must be competent in use of the survey meter.
 - b. Make necessary notifications to local authorities as well as the NRC or Agreement State licensing agency as appropriate.
 - c. Reports to the NRC or Agreement States must be made within the reporting timeframes specified in regulations. Reporting requirements are found in 10 CFR 20.2201-2203 and 10 CFR 30.50 or corresponding Agreement State regulations.

NOTE

Before shipping a damaged gauge to Troxler, you must do the following:

- ◆ **Send close-up photographs of the damaged gauge to Troxler.**
- ◆ **Send a leak test sample to Troxler for analysis or send leak test results.**
- ◆ **Obtain a Returned Goods Authorization (RGA) number from Troxler.**

Estimated burden per response to comply with this mandatory collection request: 5 minutes. This information is required by NRC to process payments to contractors. Forward comments regarding burden estimate to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0188), Office of Management and Budget, Washington, DC 20503. If 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.

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 (NRC) on NRC Form 531. This information is maintained in a system of records designated as NRC-32 and described at 61 Federal Register 16811 (April 17, 1996), or the most recent Federal Register publication of the Nuclear Regulatory Commission's "Republication of Systems of Records Notices" that is available at the NRC Public Document Room, Gelman Building, 2120 L Street NW, Washington, DC.

- 1. **AUTHORITY:** 5 U.S.C. 552a(b)(12); 5 U.S.C. 5514; 15 U.S.C. 1681(a)(f); 26 U.S.C. 6103(m)(2); 31 U.S.C. 37, subchapters I and II; 31 U.S.C. 3711, 3716, 3717, 3718, 3720A; 42 U.S.C. 2201, 5841; Cash Management Improvement Act Amendments of 1992 (Public Law 102-589); 10 CFR Parts 15, 16, 170, and 171 (1988). Executive Order 9397, dated November 22, 1943, and the Debt Collection Act of 1966 (Public Law 104-134).
- 2. **PRINCIPAL PURPOSE(S):** To obtain taxpayer identification number/ social security number/individual taxpayer identification number to enable the NRC to collect delinquent debts.
- 3. **ROUTINE USES:** Information from this form may be transmitted to debt collection contractors and/or Federal agencies for collecting delinquent debts. The taxpayer identification numbers and/or social security numbers will also allow the NRC to report delinquent debtors to consumer reporting agencies. Information from this form may also be transmitted to any Federal, State, or local agencies to conduct authorized computer matching programs and to credit reporting agencies. The information may also be disclosed to an appropriate Federal, State, local, or Foreign agency in the event 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, local, and Foreign agency to the extent relevant and necessary for an NRC decision about you or to the extent relevant and necessary for that agency's decision about you. Information from this form may also be disclosed, in the course of discovery under a protective order issued by a court of competent jurisdiction, and in present evidence, to a Congressional office to respond to their inquiry made at your request, or to NRC-paid experts, consultants, and others under contract with the NRC, on a need-to-know basis.

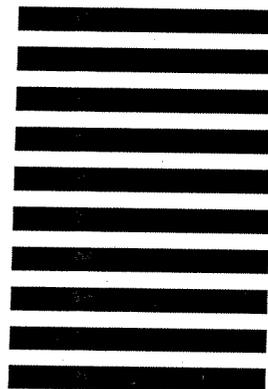
- 4. **WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY AND EFFECT ON INDIVIDUAL OF NOT PROVIDING INFORMATION:** It is mandatory that you furnish the requested information pursuant to the Debt Collection Improvement Act of 1996 (Public Law 104-134). If you do not provide the requested information, we may no longer be able to conduct business with you, and if you are due a refund, you may give up your rights to your refund.
- 5. **SYSTEM MANAGER AND ADDRESS:**
Director, Division of Accounting and Finance
Office of the Controller
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON DC 20555-0001

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PENALTY FOR PRIVATE USE \$300



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WASHINGTON DC 20277-2904



REQUEST FOR TAXPAYER IDENTIFICATION NUMBER

In accordance with the Debt Collection Improvement Act of 1996, you are required to provide your taxpayer identification number. This number may be used to make payments (refunds) or for purposes of collecting and reporting on any delinquent amounts arising out of your relationship with the Federal Government.

Please complete the applicable blocks and fold the card so that this section is inside and the NRC address appears on the outside. Seal it with tape and return it to the NRC. Thank you for your assistance and cooperation. If you have any questions, please contact us. Our telephone number is (301) 415-7347.

Indicate the status of your business:

<input checked="" type="checkbox"/>	CORPORATION
<input type="checkbox"/>	PARTNERSHIP

<input type="checkbox"/>	CITY/STATE GOVERNMENT
<input type="checkbox"/>	FEDERAL GOVERNMENT

<input type="checkbox"/>	INDIVIDUAL
<input type="checkbox"/>	OTHER (Specify)

TAXPAYER IDENTIFICATION NUMBER,
SOCIAL SECURITY NUMBER, OR
INDIVIDUAL TAXPAYER IDENTIFICATION
NUMBER

5	4	-	1	1	4	1	6	5	0
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LICENSE NUMBER(S)

SIGNATURE -- TAXPAYER REPRESENTATIVE

Debra P. Holzner, Admin.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON DC 20555-0001

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300