



Engineers and Environmental Consultants

7012 MacCorkle Avenue, SE, Charleston, WV 25304 - (304) 342-1400 • FAX (304) 343-9031; www.potesta.com

May 9, 2017

Licensing Assistance Team
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region 1
2100 Renaissance Boulevard, Suite 100
King of Prussia, Pennsylvania 19406-2713

Br. 2
03034428

REC RG 1 0515 17 AM 0702

RE: Application of Materials License Renewal
Potesta & Associates, Inc. (License No. 47-25389-01)
Charleston, West Virginia

Dear Sir/Madam:

The attached Application for Material License Renewal (NRC Form 313) has been prepared along with the required attachments to request the approval of a renewal to our current Material License - Amendment No. 03, which expires on June 30, 2017. This renewal application submittal includes NRC Form 313 authorized by a certifying officer of the company, written responses to application items 5 thru 11, and a copy of Potesta & Associates, Inc.'s written Radiation Safety Program (revised May 5, 2017).

Should you require any additional correspondence or information, please do not hesitate to contact me.

Sincerely,

POTESTA & ASSOCIATES, INC.

Chris Grose, RSO
Senior Engineering Associate I

CAG/mh

Enclosures

594741

NMSS/RGN1 MATERIALS-002

POTESTA & ASSOCIATES, INC.

Charleston, West Virginia • Morgantown, West Virginia • Winchester, Virginia • Cambridge, Ohio



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-S 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-m/doc-collections/nuregs/staff/rs1556/>. 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

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

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

47-25389-01

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

Potesta & Associates, Inc.
7012 MacCorkle Avenue, SE
Charleston, West Virginia 25304-1099

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Potesta & Associates, Inc.
7012 MacCorkle Avenue, SE
Charleston, West Virginia 25304-1099

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Chris Grose

BUSINESS TELEPHONE NUMBER

(304) 342-1400

BUSINESS CELLULAR TELEPHONE NUMBER

BUSINESS EMAIL ADDRESS

cagrose@potesta.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, 38, 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

Ronald R. Potesta, President

SIGNATURE

DATE

May 9, 2017

FOR NRC USE ONLY

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

ITEM 5: RATIOACTIVE MATERIAL

a. Element and Mass Number

Gauge No. 1

Device Model No.: 3430
Device Manufacturer: Troxler
Device Serial No.: 27565
Cesium-137 Source Serial No.: 750-1364
Americium-241 Source Serial No.: 47-24098

Gauge No. 2

Device Model No.: 3430
Device Manufacturer: Troxler
Device Serial No.: 30315
Cesium-137 Source Serial No.: 750-4782
Americium-241 Source Serial No.: 47-27364

Gauge No. 3

Device Model No.: 3430
Device Manufacturer: Troxler
Device Serial No.: 33675
Cesium-137 Source Serial No.: 750-9347
Americium-241 Source Serial No.: 47-4593

b. Chemical and/or Physical Form

Cesium-137 Sealed Sources (AEA Technology/QSA, Inc. Model CDCW556, and Isotope Product Laboratories Modes HEG-137)

Americium-241 Sealed Neutron Sources (AEA Technology QSA, Inc. Model AMNV.997, and Isotope Product Laboratories Model 3021, 3027, or AM1.N02)

c. Maximum Amount which will be Possessed at any One Time

Cesium-137 Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration (SSDR) Certificate.

Americium-241 Not to exceed either the maximum activity per source or maximum activity per device as specified in SSDR Certificate.

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

Sealed, regulated sources (i.e. Cesium-137 & Americium-241) in Troxler Electronic Laboratories, Inc. Model No. 3400 Series portable gauging devices for measuring physical properties of materials.

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

Responsible Person: Mr. Chris Grose
Radiation Safety Officer
Potesta & Associates, Inc.
7012 MacCorkle Avenue, SE
Charleston, West Virginia 25304-1099
Phone: (304) 342-1400
Email: cagroser@potesta.com

Education: BS - Civil Engineering, [REDACTED]
West Virginia Institute of Technology
Montgomery, West Virginia

MS – Geological Engineering, [REDACTED]
University of Missouri-Rolla
Rolla, Missouri

Training: 8-hour Radiation Safety/Regulations & Gauge Theory/Operation
- 8/20/1991, by Troxler Electronic Laboratories, Inc.

4-hour HAZMAT Refresher Training
- 4/29/2016, by Nuclear Gauge Training Online

8-hour Radiation Safety Officer Training
- 3/28/2000, by Humboldt Scientific, Inc.

ITEM 8: TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

All employees required to handle, transport, and operate the portable gauges covered by this license as part of their work activities at Potesta & Associates, Inc. have successfully completed the following training:

8-hour Class Instruction for Radiation Safety/Regulation & Gauge Theory/Operation

4-hour HAZMAT Refresher Training

PERSONAL INFORMATION WAS REMOVED
BY NRC. NO COPY OF THIS INFORMATION
WAS RETAINED BY THE NRC.

ITEM 9: FACILITIES AND EQUIPMENT

Not required to be submitted with the application.

ITEM 10: RADIATION SAFETY PROGRAM

A copy of Potesta & Associates, Inc.'s written Radiation Safety Program is attached to this renewal application.

ITEM 11: WASTE MANAGEMENT

Not required to be submitted with the application.

RADIATION SAFETY PROGRAM

*Potesta & Associates, Inc.
Charleston, West Virginia*

General

This Radiation Safety Plan covers the procedures for the safe and proper use and possession of radioactive material as contained in portable moisture/density gauges used to measure the in-place density and moisture content of soil and other materials. When handled in accordance with this plan, the radioactive materials present no hazard to the licensee's employees, customers, or the general public.

Radiation Safety Officer

All use and possession is under the direction and supervision of the Radiation Safety Officer (RSO). The RSO is a single point of accountability and responsibility between the Regulatory Agency and the Licensee. The RSO is responsible for all aspects for the Radiation Safety Plan, including the following specific duties.

1. Licensed material possessed by the licensee is limited to the kinds and quantities of byproduct material listed on the license.
2. Individuals using gauges: are properly trained; have read and understand the Radiation Safety Program, receive refresher training at least annually to include participation in a "dry run" of emergency procedures and review of operating and emergency procedures (per 10 CFR Part 20), Department of Transportation (DOT) requirements, all changes in regulatory requirements, and deficiencies identified during annual audits; and are designated by the RSO.
3. Personnel monitoring devices are used as required and reports of personnel exposure are reviewed in a timely manner.
4. Gauges are properly secured against unauthorized removal at all times when gauges are not in use.
5. Proper authorities are notified in case of accident, damage to gauges, fire or theft.
6. Audits are performed at least annually to ensure that (a) the licensee is abiding by Nuclear Regulatory Commission (NRC) and DOT regulations and the terms and conditions of the license (e.g., periodic leak tests, inventories, use limited to trained, approved user's), (b) the licensee's radiation protection program content and implementation achieve occupational doses and doses to members of the public that are As Low As Reasonably Achievable (ALARA) (see 10 CFR 20.1101), and (c) the licensee maintains required records with all required information (e.g. records of personnel

- exposure; receipt, transfer, and disposal of licensed material; gauge user training) sufficient to comply with NRC requirements.
7. Results of audits, identification of deficiencies, and recommendations for change are documented (and maintained for at least 3 years), provided to management for review, and prompt action is taken to correct deficiencies.
 8. Audit results and corrective actions are communicated to all personnel who use licensed material (regardless of their location or the license under which they normally work.)
 9. To serve as a point of contact and give assistance in case of emergency. All incidents, accidents, and personnel exposure to radiation in excess of ALARA or Part 20 limits are investigated and reported to NRC and other authorities, as appropriate, within required time limits.
 10. Licensed material is transported in accordance with all applicable DOT requirements.
 11. The RSO has up-to-date copies of NRC's regulations, reviews new or amended NRC regulations, and revises licensee procedures, as needed, to comply with NRC regulations.
 12. Licensed material is disposed of properly.
 13. To ensure that the equipment is leak tested at the required intervals.
 14. The license is amended whenever there are changes in: licensed activities, responsible individuals, or information or commitments provided to NRC in the licensing process.
 15. To post all required signs and notices at gauge storage location(s).
 - **Post** document RH-2364, "*Notice to Employees*".
 - **Label** storage cabinet with "*Caution, Radioactive Material*" and international symbol.
 - **Post** notice of where a copy of the organization's license, safety plan, and a copy of the regulations are located.

Operation

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 the transport case is locked.
2. Sign the gauge out on the sign out sheet including the date(s) of use, name(s) of the authorized users who will be responsible for the gauge, and the temporary jobsite(s) where the gauge will be used.
3. Follow all applicable DOT requirements when transporting the gauge.

unauthorized person. Always keep unauthorized persons away from the area where the gauge is to be used.

5. To assist operators of heavy equipment in seeing gauges at construction sites, always “stake and flag” each gauge, being sure that the flags are tall enough to be seen by heavy equipment operators (e.g. orange bicycle flag).
6. Never look under the gauge when the source rod is being lowered into the ground.
7. Do not touch the source rod with your fingers, hands, or any part of your body and always make sure the source rod is in the shielded position after each measurement is made.
8. After each measurement, always return the source to the shielded position and lock it there.
9. When not being used for field measurements, the gauge will be locked and returned to its storage/transportation case in a secured storage location.
10. When testing is complete, the gauge will be returned to its permanent place of storage as soon as possible and logged back in on the sign out sheet.
11. When using the equipment, the operator will wear the personnel monitoring device assigned. The badge should be clipped near the torso of the operator’s body and should not be shielded by loose fitting clothing. Never wear another person’s film badge. Never store your film badge near the gauge. When the operator is not using the equipment, the monitoring device will be kept in a radiation free, low heat area and out of direct sunlight (e.g. never place the badge on the dash of a car).
12. At all times operators will observe ALARA principles to minimize any dose received: **As Low As Reasonably Achievable**
13. While the equipment is in the operators possession, the operator will have:
 - Copy of the **License**
 - Copy of this **Radiation Safety Plan** with Emergency Procedures and Telephone/Call - Down List
 - Copy of **Letter/Card of Authorization** from the RSO
 - Copy of the **Gauge Operating Manual**
 - Copy of the **Current Leak Test Certificate**

Transportation

1. During transportation, the equipment shall be fully secured in the transporting vehicle and located away from personnel. When transported in a closed vehicle (car, van or SUV), the case will be locked and the vehicle will be locked when the operator is not with the vehicle. When transported in an open bed vehicle (pick-up truck), the case will be locked and the case securely fastened and locked to the truck bed when the operator is not with the vehicle.
2. The equipment will only be transported in an approved DOT shipping container with all the required labels and markings.
3. During transportation the operator will have Shipping Papers on the seat adjacent to the driver or in a holder which is mounted to the inside of the door on the driver's side of the vehicle describing the radioactive material with the proper nomenclature. The gauge will be properly blocked and braded in the vehicle so as not to allow it to move around in the moving vehicle.
4. When shipping by common carrier, the package shall be in compliance with 49 CFR 170-179.

Maintenance

1. Periodic maintenance will include cleaning of the gauge. The operator will have received proper instruction on how to clean the gauge and will wear his/her assigned monitoring device.
2. No maintenance will be performed in which the radioactive source is removed from the gauge. The gauge will be returned to the manufacture or an approved service center for this type of service.
3. A leak test will be performed every six months as stated on the license, using an approved leak test kit provided by CPN, and in accordance with the gauge manufacturer's instructions. The operator will have received proper instruction on how to lead test the gauge and will wear his/her assigned monitoring device.
4. The shipping case will be periodically checked for integrity, and to verify that all labels, hasps and locks are present, functional and legible.

Records

Records will consist of the following:

- Personal Monitoring, Leak Test, Training and Gauge Inventory:
(A check-out log will be attached to the storage cabinet/closet. Information on the log will include serial number of the gauge(s), operator checking out the

gauge, date checked out, destination, estimated return date, and actual date of return.)

Training

All operators will complete a manufacture's Operator's Training Course. Operators will be given special training as required for their individual work assignments.

Physical Damage

1. If any moving equipment is involved, stop its movement, until the extent of contamination, if any, can be determined.
2. Cordon off the area around the incident. An area with a radius of 15 feet will be sufficient. In some incidents it may be necessary to cordon off a larger area depending on the existing circumstances.
3. The RSO or approved facility will visually inspect the gauge to determine the extent of the damage to the source(s), source housing(s), and shielding.
4. At the earliest possible time, when the situation is under control, contact the RSO. In the event that the RSO is not available, contact one of the other company personnel or agencies listed below. Describe the conditions and follow the instruction of the individual contacted. The RSO or other appropriate individual will immediately notify the appropriate regulatory agency.

Emergency Telephone Numbers

- RSO *Mr. Chris Grose*
Work: (304) 342-1400 ext. 1130
Home: [REDACTED]
- President *Mr. Ron Potesta*
Work: (304) 342-1400 ext. 1118
Home: [REDACTED]
- Vice President *Mr. Dana Burns*
Work: (304) 342-1400
Home: [REDACTED]
- Police/Fire: 911
- NRC Region III: (708) 829-9500

- National Response Center (800) 424-8802
 - West Virginia Emergency Spill Notification (800) 642-3074
5. In the event that there is damage to a source or a gauge, an authorized cleanup facility will remove the damaged equipment after verifying that the source is not leaking and safe to remove.
6. REMINDER TO LICENSEE MANAGEMENT
- a. Arrange for 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 or a consultant.)
 - b. Make necessary notifications to local authorities as well as the NRC as required. (Even if not required to do so, you may report ANY incident to NRC by calling NRC's Emergency Operations Center at (301) 816-5100, which is staffed 24 hours a day and accepts collect calls. NRC notification is required when gauges containing licensed material are lost and/or stolen, when gauges are damaged or involved in incidents that result in doses in excess of 10 CFR 20.2203 limits.
 - c. Timeliness of reports to the NRC needs to be considered.
 - d. Reporting requirements are found in 10 CFR 20.2201-2203 and 10 CFR 30.50.

Theft or Loss

1. Immediately notify the RSO. The RSO will immediately notify the appropriate regulatory agency and the local police.

Fire

1. Call the Local Fire Department.
2. Take action appropriate with a fire to protect site personnel.
3. Notify the RSO.
4. Stand by to advise the fire fighters as to the nature, locations, and potential hazards of the radioactive materials. Supply them with an information packet consisting of the facility layout and a data sheet of the equipment including a photograph. Be sure to include any other important information (e.g. explosives, guard dogs, etc.).

<u>Melting Points</u>	<u>⁰F</u>	<u>⁰C</u>
Stainless Steel	2550 ⁰	1400 ⁰
Carbide	2000 ⁰	1090 ⁰
Aluminum	1005 ⁰	240 ⁰
Lead	620 ⁰	327 ⁰
Polyethylene	257 ⁰	1250

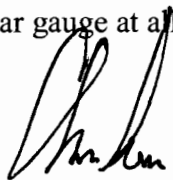
Temperatures in an industrial fire will normally range from 500⁰F at floor level to a high at the ceiling of 1400⁰F to 1800⁰F. The polyethylene and lead would melt in most fires, the aluminum only in a sever fire. The stainless steel capsule would not reach its melting point, leaving the source intact and sealed.

Disposal/Decommissioning

1. Disposal will only be performed by transferring to a properly licensed organization.
2. The regulatory agency will be notified 30 or more days in advance of any relocation of the storage area. Formal decommissioning will not be required, provided leak tests are current.

RADIATION SAFETY PLAN

This radiation safety plan will be implemented at all times. A copy of these procedures shall be maintained in the licensee's radioactive materials license file, and another copy in the shipping case of the nuclear gauge at all times.

Signed: 

Radiation Safety Officer

Date: 5/5/17