

The seal of the State of Arizona is faintly visible in the background. It is a circular emblem with the text "GREAT SEAL OF THE STATE OF ARIZONA" around the perimeter. Inside the circle, there is a shield with a banner that reads "DITAT DEUS". Below the shield, the year "1912" is inscribed, flanked by two stars.

**ARIZONA RADIATION REGULATORY AGENCY  
REGULATORY GUIDE**

**PORTABLE GAUGE**

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**INSTRUCTIONS:** Complete all items in this application for new license or the renewal of an existing license. Use supplemental sheets where necessary. Item 29 must be completed on all applications. **Mail the original to: Arizona Radiation Regulatory Agency, 4814 South 40<sup>th</sup> Street, Phoenix, Arizona 85040.** Upon approval of this application, the applicant will receive an Arizona Radioactive Materials License.

1a. **NAME AND MAILING ADDRESS OF APPLICANT**  
(Institution, Firm, Individual Owner, etc.) **Include Zip Code**

1b. **STREET ADDRESS(S) AT WHICH RADIOACTIVE MATERIAL WILL BE USED** (If different than 1a.) **Include Zip Code**

2. **PERSON TO CONTACT REGARDING THIS APPLICATION:**

**TELEPHONE NO:**

3. **THIS IS AN APPLICATION FOR:** (Check appropriate item)

A.  NEW LICENSE\*      B.  AMENDMENT TO LICENSE NO. \_\_\_\_\_      C.  RENEWAL OF LICENSE NO. \_\_\_\_\_

4a. **INDIVIDUAL USERS** (Name and individuals who will use or directly supervise use of Radioactive Material).

4b. **A copy of a driver's license and social security card is required for all persons listed by name on the license.**

4c. **TRAINING AND EXPERIENCE** (Check one or more)

- Attachment "A" completed and attached for RSO and each user.  
 Training previously filed under License No. \_\_\_\_\_, or individuals will be trained using the training program described in this application.

5a. **RADIATION SAFETY OFFICER (RSO)** (Name of person designated as Radiation Safety Officer)

5b. **DUTIES OF RADIATION SAFETY OFFICER** (Check one)

- Duties attached  
 Equivalent Duties attached

6. **RADIOACTIVE MATERIAL** (Element and mass number of each)

A. \_\_\_\_\_  
\_\_\_\_\_  
B. \_\_\_\_\_  
\_\_\_\_\_  
C. \_\_\_\_\_  
\_\_\_\_\_

7. **SEALED SOURCE MANUFACTURER AND MODEL NUMBER OR REGISTRY NUMBER FROM REGISTRY OF SEALED SOURCES AND DEVICES**

A. \_\_\_\_\_  
\_\_\_\_\_  
B. \_\_\_\_\_  
\_\_\_\_\_  
C. \_\_\_\_\_  
\_\_\_\_\_

8. **ACTIVITY OF EACH SOURCE**

A. \_\_\_\_\_  
\_\_\_\_\_  
B. \_\_\_\_\_  
\_\_\_\_\_  
C. \_\_\_\_\_  
\_\_\_\_\_

9. **DEVICE AND USE DESCRIPTION** (Make lettering correspond to lettering in items 5, 6, and 7 above)

MANUFACTURER OR DEVICE	MODEL NO.	NO. OF DEVICES	USE
A. _____	_____	_____	_____
B. _____	_____	_____	_____
C. _____	_____	_____	_____

10. **TOTAL NUMBER OF DEVICES TO BE LICENSED:** \_\_\_\_\_

**\*FEE REQUIRED FOR NEW LICENSE ONLY (COMPLETE ITEM NO. 24)**



11. **MAINTENANCE WORK ON GAUGES** (Check one)

Applicant will contract with manufacturer or approved consultant for all gauge maintenance.

Applicant will do maintenance:  
(Radiation detection instruments and personnel monitoring required. Complete items 12, 13 & 14).  
Approved consultant for above:

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
License No: \_\_\_\_\_

12. **RADIATION DETECTION INSTRUMENTS**

List Radiation Detection instruments possessed in this space.

MANUFACTURER	MODEL NO.	RANGE
_____	_____	_____
_____	_____	_____
_____	_____	_____

13. **CALIBRATION OF SURVEY INSTRUMENTS**

(Mandatory for all survey instruments possessed)(Check one)

No radiation detection instruments possessed.  
 Calibration will be done at intervals not to exceed 12 months and after each repair.

(Check one)

Applicant will do own survey instrument calibrations  
 Calibration procedures attached; or  
 Calibration will be done by calibration service agency.

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
License No: \_\_\_\_\_

14. **PERSONNEL MONITORING** (Check one)

None (Routine use of fixed gauges only).  
 Direct Reading dosimeter.  
 Monthly Dosimetry exchange (Film Badges).  
 Quarterly Dosimetry exchange (TLD's).  
 Calibration will be done by calibration service agency.  
 Neutron gamma dosimetry (Required for gauge maintenance)

**Name and address of Dosimetry supplier.**

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

15. **FACILITIES**

Facilities and storage diagram attached.  
(Include an inventory of all gauges)

16. **RADIATION PROTECTION PROGRAM** (Check one)

Attachment "B" procedures attached; or  
 Equivalent procedures attached.

17. **LEAK TEST PROGRAM** (Check one)

Applicant will contract with approved outside consultant to do leak tests

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
License No: \_\_\_\_\_

Applicant will do leak tests using approved leak test kit, mailing kit to manufacturer for counting.

Manufacturer name: \_\_\_\_\_  
Manufacturer address: \_\_\_\_\_  
Kit number: \_\_\_\_\_

Applicant will do own leak test including counting. Detailed procedures attached.

18. **WASTE DISPOSAL** (Check one)

Nuclear Gauge(s) containing radioactive sealed sources will be returned to manufacturer upon disposal.  
 Nuclear Gauge(s) containing radioactive sealed sources will be transferred to another Licensee upon disposal.  
 Nuclear Gauge(s) containing radioactive sealed sources will be transferred to a Licensed waste broker upon disposal.

19. **LICENSE FEE REQUIRED**

(See AAC R12-1-Article 13)

a. **LICENSE FEE CATEGORY: Portable Gauge(C5)**  
b. **LICENSE FEE ENCLOSED: \$** \_\_\_\_\_  
(Fee not required for Renewal or Amendment)  
(An additional fee is assessed for each permanent storage location).

20.  **LETTER TO LOCAL GOVERNING AUTHORITY** (See AAC R12-1-309.5)

21. **ALARA PROGRAM**

ALARA program initiated in accordance with R12-1-407.

22. **GAUGE INVENTORY**

If a renewal, copy of RAM (gauge) inventory attached

23. **IDENTIFICATION**

Copy of driver's license and social security card provided as required. (See guide below for details)

24. **CERTIFICATION**

Completed form

**ITEM 24 – CERTIFICATION**  
(This item must be completed by applicant)

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH ARIZONA ADMINISTRATIVE CODE, TITLE 12, CHAPTER 1, AND THAT ALL INFORMATION INCLUDING ANY SUPPLEMENTS OR ATTACHMENTS, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

\_\_\_\_\_ By: \_\_\_\_\_  
(Type or Print name of Certifying Official) (Signature)

\_\_\_\_\_ Date: \_\_\_\_\_  
(Title of Certifying Official)

**ARIZONA RADIATION REGULATORY AGENCY****GUIDE FOR THE PREPARATION OF AN APPLICATION FOR LICENSES FOR INDUSTRIAL USE OF SMALL QUANTITIES OF RADIOACTIVE MATERIAL PORTABLE GAUGE/MEASURING DEVICE PROGRAMS****I. PURPOSE OF GUIDE**

This guide is designed to describe the type and extent of information needed by the Agency to evaluate an application for a portable gauge license. Attachments A through H to this guide are provided to describe model duties and procedures. Each applicant should carefully read the applicable rules and model duties and procedures and then decide if the model duties and procedures are appropriate for the specific radiation safety needs. In the application, applicants may certify that they will follow the model procedure or develop their own procedure and enclose it for review.

**II. FILING AN APPLICATION**

An application for a license is made by completing Form ARRA-PG. Most items may be completed on the form. If additional room is required, an additional sheet may be added. For any supplementary pages, identify and key each separate sheet or document submitted with the application to the item number on the application to which it refers.

All items should be completed in enough detail to allow the Agency to determine that the equipment, facilities, training and experience, and radiation safety program are adequate.

All license applications are available for review by the general public. For example, the training and experience of individuals should be submitted to demonstrate their ability to manage radiation safety programs or to work safely with radioactive material. Home addresses and home telephone numbers should be submitted only if they are part of an emergency response plan. **Dates of birth, driver's license, copies of social security cards, and radiation dose information should be submitted as requested by the Agency. Please request protection for this information, if so desired. This policy applies to proprietary information as well.**

The application should be filed to the address shown in Section III of this guide. The applicant should retain a copy as the applicant will be required to possess and use licensed material in accordance with the statements and representations made in the application and any supplements to it.

**III. CONTENTS OF AN APPLICATION**

This portion of the guide explains, item by item, the information requested on Form ARRA-PG. The attachments to this guide serve several different purposes, i.e., to provide additional information on certain subject areas, to provide a model procedure the licensee may adopt in response to an item on the application form, or to provide an outline the applicant may use to develop a procedure for review by the Agency staff.

**New to this application is the information requested concerning identification of individuals listed on the license. Any questions concerning the request for this information can be answered by calling the Agency.** If after careful review of this guide, applicants have specific questions, they should contact the Radioactive Materials Program at:

Arizona Radiation Regulatory Agency  
Radioactive Materials Program  
4814 South 40th Street  
Phoenix, Arizona 85040  
(602) 255-4845  
FAX (602) 437-0705  
[www.azrra.gov](http://www.azrra.gov)

**Item 1a: Name and Mailing Address of Applicant.**

Enter the name, mailing address and telephone number of the applicant. Specify the applicant, corporation or other legal entity by name. Individuals should be identified as the applicant only if acting in a private capacity and the use of radioactive material is not connected with their employment for a corporation or other legal entity.

**Item 1b: Street Address for Use of Radioactive Material.**

List the addresses and locations where radioactive material will be used, including home and work sites where gauges will be stored for periods of time greater than 6 months, which is the delineation time-frame for a temporary job-site defined in AAC R12-1-102. If multiple addresses are to be used, explain the extent of use at each address and the facilities and equipment located at each place of use. The actual locations of use should be listed, whether or not they are the same as the mailing address in Item 1.A; e.g., a P.O. Box may be most suitable for Item 1.A in some cases, but a P.O. Box does not adequately describe the location of use. Item 1.B must be an in-state address.

**Item 2: Person to Contact.**

Enter the name and telephone number (including area code) of the individual to be contacted. This individual shall be familiar with the proposed radioactive materials program and be able to answer questions about the application and act on behalf of the applicant or licensee. This individual will serve as the point of contact during the review of the application and during the duration of the license.

**Item 3: Type of Application.**

Indicate whether this is an application for a new license, an amendment, or a renewal. If this application is for a new license, the appropriate license fee must accompany the application in order for the review process to begin (complete Item 19).

**Item 4a: Individual Users. New Requirement:**

A trained user must be present and directly supervise usage of radioactive material. It is not necessary to list the names of all users on the application and radioactive material license, however, the radiation safety officer shall maintain a list of all users with their associated training documentation for Agency review. These records will be reviewed during routine Agency inspections.

**Item 4b: Anyone listed on the license will have to provide a copy of their driver's license and social security card. Providing only numbers from the license and cards is not adequate. If you have questions concerning this requirement, contact the licensing person at the Agency. Be sure to request this information be protected from public viewing. Remember, the Agency files are open to anyone.**

**Item 4c: Training and Experience.**

Check all items which apply. User minimum qualification is the completion of the device manufacturer's training course. If the applicant desires to provide in-house training for their personnel, a detailed equivalent training program must be submitted and approved by the Agency.

**Item 5a: Radiation Safety Officer (RSO).**

State the name and title of the person designated as the individual responsible for the coordination of the radiation safety program.

**Item 5b: Duties of RSO.**

Indicate by checking the appropriate box whether the model duties outlined in Attachment A are to be followed or whether an outline of equivalent duties is attached. If the model duties in Attachment A are to be followed, sign, date, and attach it to the application.

**In Items 6 through 9, key each source and gauge/device with the same letter throughout.**

**Item 6: Radioactive Material.**

List the element and mass number of each isotope in a given gauge or device, i.e., Cesium-137, Americium-241/Beryllium, etc.

**Item 7: Source Manufacturer and Model Number/Registry Number.**

List the manufacturer and either the model number of the source or the registry number of the device as contained in the Registry of Radioactive Sealed Sources and Devices for each source/device.

**Item 8: Activity.**

Give the activity of the source identified in Items 6 and 7 in either millicuries or microcuries as appropriate. (SI units are also acceptable)

**Item 9: Device and Use Description.**

Provide the manufacturer's name and model number of each gauge or device utilizing the sources listed in Items 6, 7, and 8 above. Also, give the purpose for which the gauge or device will be used by checking the appropriate boxes.

**Item 10: Number of Devices.**

Enter the total number of gauges/devices to be licensed.

**Item 11. Maintenance Work on Gauges.**

Check the appropriate box for the method in which maintenance for all gauges/devices will be handled. If the applicant will perform maintenance on their gauges which involves the dismantling of the device and access to the area in which the source is stored or actual removal of the source, the following information must also be provided: (1) names of the individuals who will perform the maintenance; (2) copies of training certificates from the device manufacturer for each individual performing the maintenance indicating which model devices he is trained on; and (3) step-by-step gauge maintenance procedures and radiation safety precautions to be followed while performing the maintenance.

**Item 12. Radiation Detection Instruments.**

Radiation detection instruments are not normally required if the applicant plans only to use the gauges/devices for their intended use and does not plan to perform maintenance on them. **If performing own maintenance as indicated in Item 11 above, then radiation detection instruments are required.** At least one low-range beta-gamma (0-20 or 0-50 mR/hr) survey meter shall be available at each maintenance area for monitoring during and following the maintenance procedures.

**Item 13: Calibration of Survey Instruments.**

If survey instruments are not possessed by the applicant, then check the appropriate box. If survey instruments are possessed, then calibration of the instruments is required. Check the appropriate box for either annual or semiannual calibration **and** who will perform the calibration.

If the applicant intends to contract out the calibration of instruments, the name, address and license number of the calibration firm should be specified in the appropriate space provided.

If the applicant intends to perform the survey instrument calibration, attach copies of procedures describing the methods and radiation safety program to be followed for each type of survey meter used. (An adequate calibration of survey instruments cannot be performed with built-in sources.) Electronic calibrations that do not involve a source of radiation are not adequate to determine the proper functioning and response of all components of an instrument. The calibration should include a two-point calibration on each scale of each instrument with the two points separated by at least 50 percent of the maximum scale divisions. Survey instruments may be considered properly calibrated when the instrument readings are within +/- 10% of the calibrated or known values for the points checked.

The description of the calibration procedures should include as a minimum:

- A. The manufacturer and model number of each radiation source to be used,
- B. The nuclide and quantity of radioactive material contained in the source,
- C. The accuracy of the source(s). (The traceability of the source to a primary standard should be provided.),
- D. The step-by-step procedures for calibration, including associated radiation safety procedures, and
- E. The name(s) and pertinent experience of person(s) performing calibrations.

**Item 14: Personnel Monitoring.**

Initially, personnel using portable moisture/density gauges are required to wear personnel monitoring devices such as film badges or thermoluminescent dosimeters (TLD). Users of devices exhibiting low radiation levels at the surface of the device, such as X-Ray Fluorescence Analyzer or lead paint analyzers, are not usually required to wear personnel monitoring devices. If you are a portable gauge (Troxler, CPN, etc.) user, specify the film badge, TLD, or other NVLAP approved personnel monitoring device that will be utilized, the frequency it will be exchanged for reading, and the name and address of the supplier of the dosimetry service. Personnel monitoring shall be utilized for at least 12 to 18 months, at which time the personnel monitoring may be discontinued following the determination that monitored employees have not been exposed to 10% of the allowable exposure limit in R12-1-408 during the review period. A record to file shall be made or a letter sent to the Agency documenting the evidence used to make the determination and that management authorizes the discontinuance of personnel monitoring, as authorized in R12-1-419.

If the applicant will perform maintenance work on gauges/devices containing Americium-241/Beryllium, then beta-gamma-neutron dosimetry is required. If no maintenance work will be performed on the devices, then only beta-gamma dosimetry is required.

**Item 15: Facilities and Equipment.**

The applicant should provide a description of the gauge/device storage area for all use addresses when the gauge/device is not actually in use by a user listed in Item 4. Gauges/devices must be stored in such a manner as to ensure against unauthorized removal or use as required by AAC R12-1-426. A simple annotated sketch or sketches of the storage area or areas, closet(s), etc., showing the relationship to occupied areas should be submitted. If necessary, storage areas should be posted with a "Caution Radioactive Material" sign.

**The double security measures with a facility sketch shall be submitted as required in Attachment G. On Attachment I, list your inventory of gauges that contain radioactive material; Be sure to include the model, make, and serial number of each device. Remember, double security must be addressed in your transportation procedures.**

If gauges/devices are to be stored at temporary job sites away from the normal storage facilities, describe the procedures that will be used to ensure that the gauges/devices are stored against unauthorized removal or use as required by AAC R12-1-426. (See Attachment C).

Additionally, if gauges/devices are to be stored at home locations overnight, procedures shall be described on Attachment C. As a minimum, Attachment C must be signed and dated that home storage will not be used.

**Remember: Because of terrorism, the NRC has asked the Agency to impose a minimum of two levels of security when storing and transporting a gauge. The locked transport case and locked gauge handle do not apply when establishing two levels of security for a moisture/density gauge. See Attachment C for more details.**

**Item 16: Radiation Protection Program.**

Each applicant shall establish procedures to ensure compliance with the provisions of Articles 4 and 10 of the Arizona Administrative Code. If the model procedures and emergency procedures listed in Attachment B and E will be used, sign, date them and return with the application. If equivalent procedures will be followed, a copy of these should be attached. In either case, mark the appropriate box under Item 16.

It is not acceptable to chain a gauge in a vehicle when storing it overnight. Therefore, describe your procedures for storage on Attachment C. The Agency has determined the use of a lockable 16 gauge steel box, large enough to hold the DOT approved gauge case, will provide adequate security. Boxes may be purchased commercially or manufactured by yourself to meet your needs. Note that no labeling is required on this box.

Attachment F contains an example transportation document. Fill out this form and sign. Return it with the Attachment F procedure form, with the application. Provide an example of an acceptable equivalent form if the example form will not be used. Remember this transportation document shall be carried in the front seat and be of easy access to the driver when transporting the gauge. Do not store this document with the gauge during transport.

**Item 17: Leak Test Program**

Indicate the frequency at which leak tests will be performed on devices. The frequency should be appropriate with the requirements set forth by the manufacturer.

Indicate the method by which the leak test program will be performed by checking the appropriate box under parts a.) and b.) of Item 17.

If the applicant will contract with an outside consultant to both perform and analyze the leak tests, give the name, address and license number of the outside consultants:

If the applicant will make use of an approved leak test kit and mail the kit back to the manufacturer for counting, list the kit manufacturer name, address and kit number on the application under Item 17. On Attachment D describe your leak test program as specified below.

- A. If the applicant uses survey instruments in their program, a signed statement indicating that leak test samples will be surveyed prior to mailing to ensure that radiation levels on the surface of the leak test package are less than 0.5 mR/hr and in compliance with postal regulations; or

- B. If the applicant has no survey instruments in their program, a signed statement indicating where the applicant will take leak test samples to survey them in order to be in compliance with the postal regulations listed in A above; or
- C. Hand delivered to appropriately licensed, leak test service for analysis.

If the applicant will perform both the leak test and analysis of the sample, provide a copy of detailed procedures to be followed in the performance of the tests. Included should be complete information on the instrument which will be used to count the sample, complete information on the radioactive source used to calibrate the instrument (to include accuracy), sample calculations indicating the method used to derive the final value for the leak test results, and the name(s) and pertinent experience of person(s) who will perform the analysis.

- D. Include a current inventory as requested in Attachment I.

**Item 18: Waste Disposal.**

In the event the sealed source will no longer be needed, the applicant should specify the means of disposal. Sealed sources containing radioactive material may be returned to the manufacturer, transferred to another licensee authorized to possess the specific quantity and form being transferred, or transferred to a licensed waste disposal firm.

**Item 19: License Fee.**

If this is an application for a new license, enter the appropriate fee amount as found from Article 13 of the Arizona Administrative Code and attach the check to the front of the application.

**Item 20: Letter to Local Governing Authority.**

Attach a copy of the letter to the Mayor's office of the city or town in which the radioactive material will be stored, or, if not within an incorporated community, to the County Board of Supervisors, providing the information required in AAC R12-1-309. This should describe: (1) the nature of the proposed activity involving radioactive material, and (2) the facility, including use and storage areas.

**Item 21: ALARA Program.**

ALARA is defined as "As Low As Reasonably Achievable". Checking the first box in Item 22 allows the applicant to develop a program "in-house" and maintain proof the Radiation Safety Program is reviewed annually. **Remember, all licensees are required to review the radiation safety program on an annual basis, as required in R12-1-407.** Checking the second box means the applicant is enclosing with the application for review by the Agency, a description of a proposed Radiation Safety Program that will be reviewed by the Radiation Safety Officer on an annual basis. The purpose of developing a program and reviewing it annually is to keep radiation exposure "as low as reasonably achievable".

**Item 22 Inventory**

If a license renewal is being processed to renew the license for an additional five years, the applicant (licensee) must provide a current inventory of the gauges possessed at the time of renewal. **If any gauges have been disposed of or transferred since the last inspection or renewal, records of the gauges disposition must also be provided.**

**Item 23 Identification**

A copy of a driver's license and social security card are required for all persons' listed by name on the license.

**Item 24. Certification.**

Provide the typed or printed name, title and signature of the certifying official authorized by the corporation or other legal entity's management to represent the applicant, along with the date of the signature.

#### IV. AMENDMENTS TO LICENSES

Licensees are required to conduct their programs according to statements, representations, and procedures contained in the license application and supporting documents. The license must therefore be amended if the licensee plans to make changes in the facilities, equipment, procedures, authorized users or radiation safety officer, or radioactive material to be used.

Applications for license amendments may be filed on the application form or in letter form. The application should identify the license by license number. References to previously submitted information and documents should be clear and specific, and should identify the pertinent information by date, page and paragraph. Amendment applications should be signed and dated by a representative of the licensee's administrative management. An original and one copy of the application for amendment should be prepared, and the original copy should be submitted, as in the case for new or renewal applications.

Retain one copy of the application, with all attachments, because the licensee require, as a license condition, to follow the statements and representations in the application and any amendment. Mail the original to:

Arizona Radiation Regulatory Agency  
Radioactive Materials Program  
4814 South 40th Street  
Phoenix, Arizona 85040  
(602) 255-4845  
FAX 437-0705  
[www.azrra.gov](http://www.azrra.gov)

**ATTACHMENT A**

**DUTIES OF THE RADIATION SAFETY OFFICER**

1. To assure that radioactive materials possessed under the license conform to the materials listed on the license.
2. To assure that use of the devices, particularly in the field, is only by individuals authorized by the license.
3. To assure that all users wear personnel monitoring equipment, such as film badges, TLDS, or equivalent, when required.
4. To review all personnel monitoring reports, to alert the radiation worker in the event of a high or unusual exposure, to notify Arizona Radiation Regulatory Agency personnel as required of the high or unusual exposure, and to investigate all such unusual exposures and take any necessary corrective action to prevent other such high exposures.
5. To assure that gauges are properly secured against unauthorized removal at all times.
6. To serve as a point of contact and give assistance in case of emergency (gauge damage in field, fire, theft, etc.), and to assure that proper authorities, for example local police and state personnel, are notified promptly in case of accident or damage to gauges.
7. To assure that the terms and conditions of the license, such as periodic leak tests, are met and that the required records, such as personnel exposure records, leak test records, etc., are periodically reviewed. The radiation safety program shall be reviewed at least annually according to R12-1-407.
8. **Provide a driver's license copy and social security card copy for each person listed by name on the radioactive materials license.**

\_\_\_\_\_  
**SIGNATURE**

\_\_\_\_\_  
**DATE**

**ATTACHMENT B****RADIATION PROTECTION PROCEDURES**

1. Only licensee authorized operators shall use, or supervise the use of nuclear gauges. All users (operators) shall have completed an Agency approved training course.
2. All unauthorized persons shall be kept out of the operating area. A suggested distance is five meters or fifteen feet.
3. The licensee shall not open a source containing radioactive material.
4. No one shall be permitted to touch or handle directly the unshielded source.
5. The operator shall never unnecessarily be exposed to the unshielded source.
6. The nuclear gauge/device source shall be locked in the safe off, closed, or stored position when not in use.
7. Security of the nuclear gauge/device shall be maintained at all times. The gauge/device shall be returned to the carrying case when not in use. Nuclear gauges/devices shall never be left unattended, except when in storage in the licensed storage area or in a locked vehicle out of sight so as to minimize the attractive nuisance value.
8. Only licensed operators shall have or carry keys to the nuclear gauge/device or to their locked storage areas. Key control shall be maintained by the Radiation Safety Officer.
9. If the operator detects any malfunction in the shutter or other part of the nuclear gauge/device, the Radiation Safety Officer shall be immediately notified.
10. The licensed operators shall keep the Radiation Safety Officer informed of the location of the radioactive sources at all times. A utilization log shall be maintained at the primary storage location including, but not limited to, the following information: device manufacturer and model number, user, date of use, and location of use.
11. A physical inventory to account for all sealed sources received and possessed under the license shall be performed at intervals, not to exceed six months. The records of the inventory shall be maintained for 3 years from the date of the inventory. The information recorded shall include the kind and quantity of radioactive material, the model and serial number of the source or the device in which it is mounted, the location of sealed source, the date of the inventory and the name or initials of the individual performing the inventory.  
  
If only one device is possessed, during periods of use, a utilization log may be maintained in lieu of the required six month inventory. During periods of non-use, the required inventory will be performed and documented.
12. If required by the license, each operator (user) of a nuclear gauge/device shall wear, when the gauge/device is being transported or used, personnel dosimeters, such as film badges or TLD's. Each user shall be assigned an individual dosimeter. On no occasion shall a user wear a dosimeter assigned to another individual.
13. When transporting the gauge/device to job sites, the gauge/device will be transported in the manufacturer's carrying case, fully secured and "blocked and braced," so as not to move more than 1 inch in any direction, within the transportation vehicle, and secured away from the passenger compartment so that. The gauge will be stored and transported according to the procedures described in the Attachments C and F to this application.

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\* **Secured means** - locked in gauge manufacturer's transportation container, stored and locked in a 16 gauge metal box permanently fastened in the back of a pickup truck. Alternate procedure may be approved by the Agency. The procedure must be described in an Attachment F to this application.

The above radiation protection program will be implemented at all times. A copy of these procedures shall be maintained in the licensee's radioactive materials license file, and another carried to the field when a nuclear gauge/device is in use.

---

**SIGNATURE**

---

**DATE**

ATTACHMENT C

DESCRIPTION OF GAUGE STORAGE  
HOMES AND MOTELS

(Primary storage is described in Attachment G)

(Check appropriate responses) **(A Double Security System is Now Required)**

YES NO

I.   **Home storage** will be used. (If no skip to II)

Gauges will be stored at home locations using the following suggested methodology.

- (Circle one)
1. Gauges will be locked in a metal box bolted to the bed of the vehicle. The box will be made of no less than 16 gauge steel. **The gauge in the steel box will be secured in a locked camper shell or capper over the bed of the pickup truck.**
  2. **If No. 1 above is not acceptable**, described below, or on an attached sheet, the method that will be used to secure gauges stored at home locations.

**NOTE:** If a gauge is located at a home storage site for periods greater than six months, the local governing body (Mayor) will be notified and Condition 10 of my license will be amended to include this permanent storage site. (See definition for temporary jobsite in Article 1)

II.   **Motels:** Gauge users traveling out-of-town with gauges will use the procedures described below. **Gauges stored in a motel room will be attended** at all times when the gauge is in the motel room. A “no” answer signifies users will have no occasion to store gauges away from the site authorized by the Agency.

III.   **Temporary job sites:** Gauges will be stored using the procedures described below.

Procedure description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NOTE:** The description must include at least two methods for security. Locked fences, locked garages or storage buildings, and alarm systems are acceptable in establishing a double security system.

\_\_\_\_\_  
**SIGNATURE**

\_\_\_\_\_  
**DATE**

**ATTACHMENT D**

**ADDENDUM TO LEAK TEST PROGRAM**

(Check One)

YES NO

- A.   The leak test samples will be surveyed prior to mailing to ensure that radiation levels on the surface of the leak test package are less than 0.5 mR/hr and in compliance with postal regulations.
  
- B.   If the applicant has no survey instruments in their program, the leak test samples will be taken to a facility possessing a calibrated survey instrument for survey to meet the postal regulation listed in A. above.
  
- C.   Hand delivered to a local, appropriately licensed, leak test service for analysis.

\_\_\_\_\_  
**SIGNATURE**

\_\_\_\_\_  
**DATE**

**ATTACHMENT E**

**EMERGENCY PROCEDURES**

- I. If an emergency occurs involving a loss or theft of a nuclear gauge or device, the operator should follow the procedures specified in Item II(C) below.
  
- II. If an emergency occurs involving a fire, explosion or vehicle accident, the operator shall follow the procedures specified in Items A through D below.
  - A. **SECURE THE AREA AROUND THE ACCIDENT. KEEP UNAUTHORIZED PERSONS AWAY. ALERT PEOPLE IN THE VICINITY OF THE PRESENCE OF RADIOACTIVITY AND A POSSIBLE HAZARD.**
  
  - B. **DO NOT LEAVE THE SITE.** Send a helper or onlooker to notify the following:
    - 1. Radiation Safety Officer: \_\_\_\_\_  
 Work: \_\_\_\_\_  
 Home: \_\_\_\_\_
    - 2. Local Police: \_\_\_\_\_
    - 3. Local Fire Department when applicable: \_\_\_\_\_
  
  - C. Notify the Radiation Safety Officer immediately. The Radiation Safety Officer must in turn immediately notify the Arizona Radiation Regulatory Agency at (602) 255-4845 or the Department of Public Safety at (602) 223-2212 after normal business hours and other local authorities as appropriate in accordance with R12-1-445.
  
  - D. The operator should inform emergency workers of the possible radiation hazard, and should help keep the area secure. In no case should the operator leave the site until qualified experts arrive, unless injured or incapacitated, and must be removed from the site for medical care.

\_\_\_\_\_  
**SIGNATURE**

\_\_\_\_\_  
**DATE**

**ATTACHMENT F**

**SHIPPING PAPER**

**SHIPPER:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**HAZARDOUS MATERIAL**

**PROPER SHIPPING NAME:** RQ,RADIOACTIVE MATERIAL, SPECIAL FORM, N.O.S.

**HAZARD CLASS:** RADIOACTIVE MATERIAL

**IDENTIFICATION NUMBER:** UN3332

**TRANSPORT LABEL:** \_\_\_\_\_

**TRANSPORT INDEX:** \_\_\_\_\_

DEVICE	MODEL	QUANTITY	ISOTOPE	ACTIVITY
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

THIS IS TO CERTIFY: THAT THE ABOVE-NAMED MATERIAL(S) ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE STATE OF ARIZONA AND U.S. D.O.T.

**SHIPPER SIGNATURE:** \_\_\_\_\_

(A Signature is not required)

**TITLE:** \_\_\_\_\_

**IN CASE OF AN EMERGENCY, CONTACT THE FOLLOWING:**

**Department of Public Safety Duty Officer at: (602) 223-2212**

ATTACHMENT F

TRANSPORTATION PROCEDURES

(Check appropriate responses)

YES NO

- A.   Gauges will be transported in the manufacturer’s transport case secured to the bed of a pickup truck using a lock and chain. **Gauges will be blocked and braced to prevent movement. The maximum allowable movement is 1 inch.**
- B.   Gauges will be transported in the trunk of an automobile
- C.   Gauges will be transported in the manufacturer’s transport case in a 16 gauge steel box bolted to the floor/bed of the transport vehicle.
- D.   Gauges will be transported using the procedure described below
- E.   The licensee agrees to use the transport document that is part of Attachment F. If no, a copy of the form used is attached.

NOTES:

- 1. A **Transportation Paper** shall be available in the cab of any vehicle transporting a nuclear gauge. In case of emergency wherein the driver is rendered unconscious or incapacitated.
- 2. An **Overpack**, if used by a single consignor, as defined in 49 CFR 171.8 must be marked and labeled as to its contents. An overpack is an enclosure used to provide protection for uncertified inner package or lower the exposure level at the surface of the inner package. When an overpack is used it must be marked with the proper shipping name, identification number, and a statement indicating that the inner packages comply with all DOT packaging requirements for transportation of hazardous material, and labeled for each hazardous material it contains, unless the information on each package is visible while in the overpack. **A 16 gauge box used for security purposes is not considered an overpack by the Agency.**

Procedure used (to include how it will be blocked and braced): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

**ATTACHMENT G**

**PRIMARY STORAGE DESCRIPTION**

- 1. Describe two security measures that will be in place when the gauge(s) are in storage at the primary storage site. If there are multiple storage sites, a double system shall be employed at each site and must be described below. An acceptable single security system includes: locked fence, garage, or building, an alarm system, inside of a locked vehicle (trunk, cab, camper shell or capper). Inside of a locked room that is inside of a locked building will count as a double system. Contact an Agency staff member for additional suggestions.**

(a separate sheet may be used if needed)

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- 2. Provide a annotated sketch of the facility show the location of the gauge(s) and the two security measures that will be used. (An attachment is acceptable)**



**ATTACHMENT I**  
**(Item 22 of the application)**

**GAUGE INVENTORY**  
**(Required for renewal licensees only)**

	<u>Gauge Manufacturer</u>	<u>Model #</u>	<u>Serial #</u>	<u>Location/Disposition</u>
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Attach a second inventory sheet if necessary and a copy of gauge disposition if the gauge is no longer possessed by you as a representative of the licensee.