



Department of Health
and Environment

Environmental Health

Guide for the Preparation of
Radioactive Material License
Applications for Portable and Fixed
Gauging Devices

3/29/2018

Kansas Department of Health and Environment

Radiation Control Program

1000 SW Jackson, Suite 330

Topeka, Kansas 66612-1365

Introduction

A. Licensing Process

The Nuclear Energy Development and Radiation Control Act of 1963 charges the Kansas State Department of Health and Environment with, among other things, responsibility for regulating the receipt, possession, and use of radioactive materials. The Department authorizes the possession and use of radioactive material as it may deem necessary or desirable to protect health or to minimize danger to life or property. The Department issues such authorization as a license. A license indicates what type, quantity, form, and use of radioactive material is authorized and any special conditions under which the radioactive material shall be used.

B. Purpose

This guide describes the process for application for a license and for the amendment, renewal, and termination of the license.

C. Contact

Kansas Radiation Control Program can be contacted via telephone, email, mail, fax or in person. In addition most information can be found on the Department's website:

Phone: (785) 296-1560

Email: kdhe.ram@ks.gov

Fax: (785) 296-0984

Address: 1000 SW Jackson St., Suite 330; Topeka KS, 66612

APPLICABLE REGULATIONS

General requirements for issuance of a specific license are contained in 28-35-180a of Part 3. Also use the following sections as they apply

Part 1, "Definitions"

Part 3, "Licensing of Sources of Radiation."

Part 4, "Standards for Protection Against Radiation."

Part 7, "Special Requirements for Industrial Radiographic Operations."

Part 10, "Notices, Instructions and Reports to Workers: Inspections."

Part 11 "Wireline and Subsurface Tracer Studies."

All regulations can be found at the Department's website:

<http://kdheks.gov/radiation/regs.html>

FILING AN APPLICATION

A. General

The regulations, this guide, application forms and other guidance are available at the Department website: www.kdhe.gov/radiation. Each applicant must submit the following when filing an application for a Radioactive Materials license:

1. Form RH-1 Application for Radioactive Materials License
2. Supporting documents as required
3. Appropriate license fee

B. Submission

Completed applications should be submitted to the Department. License fees may be submitted separately but the license application will not be processed until the fee is received. State licensees are required to comply with all rules, regulations, license conditions and the content of their submitted applications. Licensees should retain a copy of all information submitted to the Department with the license application, as well as with any amendment, renewal or termination request.

CONTENTS OF AN APPLICATION

The following comments apply to the indicated items of Kansas Form RH- 1:

Item 1a. - Name and Street Address Of Applicant

You the applicant, should be the corporation or other legal entity applying for the license. If you are an individual, you should be designated as the applicant only if you are acting in a private capacity and the use of the radioactive material is not connected with your employment with a corporation or other legal entity.

The address specified here should be your mailing address for correspondence. This may or may not be the same as the address at which the material will be used, as specified in Item 1b.

Item 1b. - Locations of Use

Provide the actual sites of use in 1(b). Permanent facilities such as field office storage areas for the gauges or devices are identified in 1(b) by street address, city, and state. In addition, field locations of use should be specified as "temporary job sites of applicant throughout the state of Kansas".

Item 2. - Department to Use Radioactive Material

State the department requested, if applicable.

Item 3. - Previous License Number(s)

State according to directions on application form.

Item 4. - Individual Users

Each person who will use radioactive material should be named and their qualifications provided. If users are not named on the license then the training records shall be retained by the licensee for review by the department. An authorized individual user shall be present and directly supervise use at any temporary job site. User qualifications include, at a minimum, the completion of a device manufacturer's or other approved training course or program.

Item 5. – Radiation Protection (safety) Officer

Provide the name of the radiation protection officer in Item #5. Provide a statement with the application outlining the named individual's duties and responsibilities. The radiation protection officer is expected to coordinate the safe use of the nuclear gauging devices and ensure compliance with the requirements of the Kansas Radiation Protection Regulations, and applicable U.S. Department of Transportation regulations.

Item 6a. - Radioactive Material

List the radioisotopes you wish to possess.

Item 6b. - Chemical and/or Physical Form and Maximum Quantity of Each Chemical and/or Physical Form That You Wish to Possess at Any One Time

Identify each sealed source by isotope, manufacturer, and model number. Also include the activity (quantity) of radioactive materials to be possessed at any one time for each isotope. Either a total possession limit may be used or a total limit per source may be used.

Item 7. - Describe Purpose for Which Radioactive Material Will Be Used

Provide the purpose for which the gauges or devices will be used.

Item 8. - Type of Training - Training and Experience of Individuals Named In Item 4.

Provide the documented training of each person who will directly supervise the use of the gauges or devices or who will have radiological safety responsibilities indicated in Item 4 above. Provide copies of all training certificates. The qualifications of users and radiation safety personnel should be commensurate with the proposed use. Hazardous material (HAZMAT) training is required to be completed every three (3) years for persons who transport radioactive material.

Item 9. - Experience with Radiation (Actual Use Of Radioisotopes Or Equivalent Experience)

This section should be filled out to indicate the experience of all personnel directly using or supervising the use of radioactive materials. Information supplied should include when material was used, for what time periods, types of isotopes used, strength of isotopes, etc.

Item 10. - Radiation Detection Instruments

Describe the manufacturer, model number, quantity, radiation detected, range and use of radiation survey instruments. Radiation survey instruments may not normally be required if the applicant plans only to use the gauges and devices for their intended use and does not plan to perform non-routine maintenance on the gauges and/or devices involving access to the sources and source holders. If the applicant will not possess radiation survey instruments, the applicant is required to have access to radiation survey instruments in the event the radioactive material or device is damaged. Please provide documented justification and describe how radiation survey instruments will be obtained when needed

Item 11. – Method, Frequency, and Standards Used In Calibrating Instruments

Describe the survey meter calibration procedure. If the applicant intends to contract out the calibration of survey instruments, the name, address and license number of the calibration firm should be specified together with the frequency of the calibration not to exceed annual.

Item 12. - Film Badges. Dosimeters and Bioassay Procedures Used

Normally, personnel using portable moisture-density gauges are required to wear personnel monitoring devices such as film badges or thermoluminescence dosimeters (TLD). Users of devices exhibiting low radiation levels at the surface of the device, such as X-ray fluorescence (XRF) analyzers, etc., are not usually required to wear personnel monitoring devices, if justification is supplied. If personnel monitoring devices will be utilized, specify the type of device, that is, film badges, thermoluminescence dosimeters (TLD), Optically Stimulated dosimeter (OSL and that is exchanged at a frequency recommended by the processor (monthly, quarterly etc.).

The name and address of the service provider. The service provider must be accredited by NVLAP (National Voluntary Laboratory Accreditation Program) for the device, radiation type and exposure expected to be encountered.

Item 13. - Facilities and Equipment

Provide a description of the security and storage of gauges or devices at each address listed in 1b when gauges or devices are not in actual use. Gauges and devices must be stored in such a manner as to ensure against unauthorized removal or unauthorized use as required by K.A.R.28-35-222a. Provide a simple annotated sketch of the storage area, closet, etc., at each address listed in 1b showing the relationship to actively occupied areas.

Item 14. - Radiation Protection Program

Provide procedures to ensure compliance with the provisions of Part 10, "Notices, Instructions and Reports to Workers, Inspections," and Part 4 "Standards for Protection against Radiation", of the KRPR's. Radiation safety and emergency procedures should be in the form of written instructions to users and cover the following items:

1. RH-3 form "Notice to Employees" must be posted.

2. Safety measures to be used in transporting the devices in the applicants' vehicle (for example, fully secured within transportation vehicle and away from the passenger compartment). Transportation activities must be carried out in accordance with the requirements of K.A.R. 28-35-195a and K.A.R. 28-35-196a and the U.S. Department of Transportation regulations.
3. State that individual users are never to leave gauges unattended or unsecured. Describe the means of preventing unauthorized use or removal of gauges or devices from the designated place(s) of storage at the locations listed in 1b and at temporary job sites.
4. The procedure for conducting a documented physical inventory every six months. This inventory should include the quantities and kinds of radioactive materials, location of sources, the date and who conducted the inventory.
5. Emergency procedures to be followed in case of accidents involving damage or loss of the gauges or devices, including names and telephone numbers of the individual(s) with the applicant's organization who should be notified and who would, in turn, notify the local police, Radiation Control Program and the NRC (if applicable). The expected time frame for decommissioning should be included.
6. Specific instructions prohibiting any maintenance on the gauges involving dismantling, removal of source holder(s) etc., except by the manufacturer of the device, unless the applicant has specifically requested authority for performing maintenance in the application. Describe any routine maintenance such as cleaning and lubrication of the gauge or device such as "routine maintenance of the gauge will be in accordance with the manufacturer instructions".
7. If the applicant wishes to be authorized to perform maintenance and repair on gauges and devices involving access to the source holders, and/or dismantling of the shielding or shutter devices, specific information on the step-by-step procedures to be followed including radiation safety precautions must be supplied. In addition, the names of personnel and the specific pertinent training of the personnel who will be performing such maintenance and repair must be given.
8. Describe the procedure for leak testing the sealed sources requested in the application. Provide the name of the manufacturer of the leak test kit and service performing the analysis. If the applicant desires to perform his own leak tests and not use a leak test kit, the following information should be submitted.
 - a. The name(s) and qualifications of personnel who will perform the leak test.
 - b. The safety procedures to be followed during the testing to minimize exposure to personnel.
 - c. The test procedures and materials to be used.
 - d. The instrument type, manufacturer's name and model number used to assay the sample. The sampling and analysis methods must be capable of detecting the presence of 0.005 microcurie (185 Bq) of contamination.
9. All licensees need to perform routine cleaning and lubrication to ensure proper

operation of the gauge. For nonroutine maintenance, most licensees rely on the gauge manufacturer or other service companies.

Item 15. - Waste Management

Provide 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.

Licensed materials must be disposed of in accordance with KRPR requirements by transfer to an authorized recipient. Appropriate records must be maintained.

Note: When disposing of portable gauges, licensees must transfer them to an authorized recipient. Authorized recipients are the original manufacturer of the device, a commercial firm licensed by the NRC or an Agreement State to accept radioactive waste from other persons, or another specific licensee authorized to possess the licensed material (i.e., their license specifically authorizes the type, form, and quantity of the byproduct material).

Before transferring radioactive material, the licensee must verify that the recipient is properly authorized to receive the licensed material and that the gauge(s) have a current leak test certificate.

Item 16. - Certificate

Your application should be dated and signed by a representative of the corporation or legal entity who is authorized to sign official documents and to certify that the application contains information that is true and correct to the best of your knowledge and belief. Unsigned applications will be returned for proper signature.

AMENDMENTS TO A LICENSE

After you are issued a license, you must conduct your program in accordance with

1. The statements, representations, and procedures contained in your application
2. The terms and conditions of the license.
3. The Kansas Radiation Protection Regulations.

It is your obligation to keep your license current. You should anticipate the need for a license amendment insofar as possible. If any of the information provided in your application is to be modified or changed, submit an application for license amendment. In the meantime, you must comply with the terms and conditions of the license until it is actually amended; you may not implement changes on the basis of a submission requesting an amendment to your license.

Examples of the more common amendments to licenses include:

1. Addition of a new source/exposure device/source changer combination.

2. Change in your organizational structure, e.g., persons responsible for the conduct of the radiography program.
3. Addition of a new location of use or storage.

Similarly, in your application for a license amendment, you should consider the impact that the change will have on other documents. Any necessary modification of documents or procedures should be submitted so that additional correspondence will not be necessary.

An application for a license amendment may be submitted either on the application form (RH- 1) or in letter form and sent to the address specified on the front of this guide. Your application or letter should identify your license by number and should clearly describe the exact nature of the changes, additions, or deletions. You should make clear and specific references to previously submitted information and documents, and you should identify the pertinent information by date, page, and paragraph. For example, if you wish to make a change in the individual responsible for your radiation safety program, your application for a license amendment should include his or her training and experience.

RENEWAL OF A LICENSE

Licenses are issued for a period of up to 5 years. You should send an application for renewal to the address specified in this guide. The renewal will be an entirely new application as if it were an application for a new license without referring to previously submitted information.