



Radiometric License Overview

Radiometric measurement technology provides reliable, repeatable performance where other technologies may not meet application requirements. Because radiometric measurement is non-intrusive, it can be easily retrofitted to existing processes and operates without mechanical wear components.

However, using this technology requires the purchase and possession of radioactive material. As a result, end users must comply with applicable licensing requirements for the ownership and use of radioactive sources.

When considering a radiometric solution, one of the most important decisions is selecting the license type that best fits your operation. This document outlines the available options for purchasing and possessing radioactive sources for process control applications, such as those supported by VEGA Americas.

	Required for Ownership	Application to NRC/Agreement State	Annual maintenance, inventory, and receipt/disposal record keeping	RSO	Radiation Safety Program	Training for plant personnel	Limited maintenance & service independence
General License	■		■				■
Specific License	■	■	■	■	■	■	

High level overview of license type requirements

License Types

General License

A general license offers a streamlined path to acquiring a radiometric device. The process typically involves less paperwork, fewer training requirements, and no formal radiation safety program. In many cases, there are no application fees.

However, a general license limits the activities the possessor can perform. Tasks such as start-up, removal from service, relocation, and repair usually require a third-party provider who holds the appropriate authorization. VEGA's licensed service technicians can perform these services on behalf of the customer.

Each generally licensed gauge includes a tag that clearly identifies which tasks the possessor may perform independently.

Specific License

Some applications or internal company policies require a specific license. In these cases, the user must apply through the U.S. Nuclear Regulatory Commission (NRC) or the appropriate Agreement State agency.



A specific license defines three primary areas of authorization:

- Possession and use of radioactive material
- Installation
- Service and repair

Licensees may only perform tasks explicitly listed in their license. If a task is not authorized, the company must contract with a properly licensed provider.

The advantage of a specific license is increased flexibility. The licensee can perform more work internally, which may reduce long-term service costs, particularly for facilities with multiple devices. However, this expanded authority also requires more comprehensive training and the establishment of a formal radiation safety program.

Radiation Safety Program

General License

General license holders are not required to maintain a formal radiation safety program. Even so, it is best practice to implement procedures for safe handling and to maintain an emergency response plan, just as you would for any other hazardous material in your facility.

Specific License

Specific license holders must establish and maintain a formal Radiation Safety Program. The Radiation Safety Officer (RSO) is responsible for developing, implementing, and maintaining this program to ensure regulatory compliance.

The program typically defines:

- Roles and responsibilities
- Approved tasks and limitations
- Emergency procedures
- Authorized users
- Training requirements
- Operating procedures

The Radiation Safety Program must be audited annually. This audit may be conducted by qualified plant personnel or by an external provider such as VEGA. The purpose is to verify continued compliance and ensure the safety of all personnel.

Training

General License

The holder of a generally licensed device must designate a responsible individual who is knowledgeable about the source holder and its safe operation. While formal training is not required, maintaining a well-informed team supports safe and confident operation.

Specific License

Specific license holders must appoint a Radiation Safety Officer with the authority and responsibility to ensure compliance with applicable regulations. Most states require the RSO to complete formal radiation safety training or demonstrate equivalent experience. This training is typically a 40-hour course.

The RSO also oversees training for plant personnel. Authorized gauge users must receive instruction on proper use, security, and routine maintenance. Depending on job responsibilities, training may consist of a 4-hour or 8-hour course.

VEGA Training

VEGA offers Radiation Safety Officer certification and refresher courses that meet NRC and Agreement State requirements. We also provide 8- and 16-hour training programs to help plant personnel operate radiometric equipment safely and confidently.



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Recordkeeping Requirements

Recordkeeping responsibilities are generally consistent regardless of license type. Each facility should designate an individual responsible for maintaining required documentation, including the following records:



Wipe Test

A wipe test is performed at specified intervals, typically every three years, to confirm that the source capsule remains intact and that no contamination or leakage has occurred.

Shutter Check

The shutter mechanism must be tested periodically to ensure it operates freely and fully closes. This check is commonly required every six months but may vary based on manufacturer specifications.

Inventory Records

Facilities must maintain accurate inventory records for all radioactive sources. A physical verification of each source and its location is typically required every six months or as specified by the license.

Receipt and Disposal

Original packing lists, leak test results, and survey documentation must be retained for both incoming and returned sources. These records must be maintained until the license is formally terminated.

Choosing the right license is an important step in implementing a radiometric measurement solution safely and efficiently. Understanding your responsibilities for compliance, training, and recordkeeping helps ensure smooth operation and long-term reliability. VEGA provides practical support along the way – from licensed service technicians to certified training and ongoing guidance – so you can navigate requirements and operate with confidence.