

## APPENDIX G

### SECURITY OF PORTABLE GAUGES

#### **I. Storage and Control of Licensed Radioactive Material**

The Rules and Regulations for Control of Sources of Ionizing Radiation, Paragraph RH-1306, “Storage of Sources of Radiation” requires **licensees to secure sources of radiation from unauthorized removal or access**. Further, Paragraph RH-1308, “Control of Material Not in Storage” states that the **licensee shall control and maintain constant surveillance of radioactive material that is in a controlled or unrestricted area and that is not in storage**.

Despite these requirements, thefts of portable gauges do occur which can pose a potential risk to public health and safety.

#### **II. Security Requirements**

The Department is providing licensing guidance to applicants to assist them in improving their gauge security program. **Improved security programs for portable gauges that comply with the provisions of this Appendix will be required in order to obtain or renew an Arkansas Radioactive Material License**. This Appendix requires individuals using portable gauges under specific licenses to use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee. The proposed physical controls may also reduce accidental losses such as gauges falling out of a vehicle while in transit.

This Appendix applies to a licensee with a portable gauge regardless of the location, situation, and activities involving the portable gauge. At all times, the licensee would be required to either maintain control and constant surveillance of the portable gauge or use a minimum of two independent physical controls to secure the portable gauge. The Department expects that the physical controls would be designed and constructed of material suitable for securing the gauges from unauthorized removal and that the physical controls could not be easily defeated by the use of small hand tools. In addition, the Department expects that both of the controls must be defeated for the portable gauge to be removed to deter a theft by requiring a more determined effort to remove the gauge.

#### **III. Securing a Portable Gauge at a Licensed Facility**

Long term storage of portable gauges is usually at a permanent facility listed in the license or license application. When a portable gauge is stored at a licensed facility, the licensee is required to use a minimum of two independent physical controls to secure the gauge. Examples of two independent physical controls to secure a portable gauge when stored at a licensed facility are as follows:

- a. The portable gauge or transportation case containing the portable gauge is stored inside a locked storage shed within a secured outdoor area, such as a fenced parking area with a locked gate.
- b. The portable gauge or transportation case containing the portable gauge is stored in a room with a locked door within a secured building for which the licensee controls access by lock and key or by a security guard.
- c. The portable gauge or transportation case containing the portable gauge is stored inside a locked, non-portable cabinet inside a room with a locked door if the building is not secured.
- d. The portable gauge or transportation case containing the portable gauge is stored in a separate secured area inside a secured mini-warehouse or storage facility.
- e. The portable gauge or transportation case containing the portable gauge is physically secured to the inside structure of a secured mini-warehouse or storage facility.

#### **IV. Securing a Portable Gauge in a Vehicle**

Licensees commonly use a chain and a padlock to secure a portable gauge in its transportation case to the open bed of a pickup truck while using the vehicle for storage. Because the transportation case is portable, a theft could occur if the chain is cut and the transportation case with the portable gauge in it is taken. If the licensee simply loops the chain through the handles of the transportation case, a thief could open the transportation case and take the portable gauge without removing the chain or the case. Because the transportation case is also portable, it must be protected by two independent physical controls if the portable gauge is inside. A lock on the transportation case or a lock on the portable gauge source rod handle would not be sufficient because the case and the gauge are portable.

A vehicle should be used for storage only for a short period of time when a gauge is in transit. Portable gauges should only be kept in a vehicle overnight if it is not practicable to provide temporary storage in a permanent structure. When a portable gauge is being stored in a vehicle, the licensee would be specifically required to use a minimum of two independent physical controls to secure the gauge. Examples of two such independent physical controls to secure portable gauges in these situations are--

- a. The locked transportation case containing the portable gauge is physically secured to a vehicle with brackets, and a chain or steel cable (attached to the vehicle) is wrapped around the transportation case such that the case can not be opened unless the chain or cable is removed. In this example, the transportation case would count as one control since the brackets would prevent easy removal of the case. The chain or cable looped only through the transportation case handle is not acceptable.
- b. The portable gauge or transportation case containing the portable gauge is stored in a box physically attached to a vehicle, and the box is secured with (1) two independent locks, or (2) two separate chains or steel cables attached independently to the vehicle in such a manner that the box cannot be opened without the removal of the chains or cables, or (3) one lock and one chain or steel cable is attached to the vehicle in such a manner that the box cannot be opened without the removal of the chain or cable.

- c. The portable gauge or transportation case containing the portable gauge is stored in a locked trunk, camper shell, van, or other similar enclosure and is physically secured to the vehicle by a chain or steel cable in such a manner that one would not be able to open the case or remove the portable gauge without removal of the chain or cable. In this example, the transportation case would not count as one control because it could be easily removed.

#### **V. Securing a Portable Gauge at a Temporary Job Site or at Locations other than a Licensed Facility**

When a job requires storage of a portable gauge at temporary job sites or at locations other than a licensed facility, the licensee must use a permanent structure for storage if practicable to do so. **Storage of radioactive material in a private residence or motel/hotel room overnight on a temporary basis is not authorized or approved.** When a portable gauge is stored at a temporary job site or at locations other than an authorized facility, the licensee is required to use a minimum of two independent physical controls to secure the gauge. Examples of two independent physical controls to secure portable gauges at such locations are--

- a. At a temporary job site, the portable gauge or transportation case containing the portable gauge is stored in a locked non-portable structure (e.g., construction trailer, sea container, etc.), and is physically secured by a chain or steel cable to the structure in such a manner that an individual would not be able to open the transportation case or remove the portable gauge without removing the chain or cable. A lock on the transportation case or a lock on the portable gauge source rod handle would not be sufficient because the case and the gauge are portable.
- b. The portable gauge or transportation case containing the portable gauge is stored inside a locked room within a temporary facility, and is physically secured by a chain or steel cable to a permanent or non-portable structure (e.g., large metal drain pipe, support column, etc.) such that an individual would not be able to open the transportation case or remove the portable gauge without removing the chain or cable.
- c. The portable gauge or transportation case containing the portable gauge is stored in a locked garage, and is within a locked vehicle or is physically secured by a chain or steel cable to the vehicle in such a manner that an individual would not be able to open the transportation case or remove the portable gauge without removing the chain or cable.
- d. The portable gauge or transportation case containing the portable gauge is stored in a locked garage, and is within a locked enclosure or is physically secured by a chain or steel cable to a permanent or non-portable structure in such a manner that an individual would not be able to open the transportation case or remove the portable gauge without removing the chain or cable.

#### **VI. Controlling and Maintaining Constant Surveillance of a Portable Gauge**

When a portable gauge is not secured with a minimum of two independent physical controls, the licensee is required to control and maintain constant surveillance of the gauge. This is consistent with Paragraph RH-1308, which states that the licensee shall control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage. Control and constant surveillance is required when the

gauge is not in storage, e.g., is in use or undergoing maintenance. The Department interprets “control and maintain constant surveillance” of portable gauges to mean being immediately present or remaining in close proximity to the portable gauge so as to be able to prevent unauthorized removal of the gauge.

