



NRC NEWS

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NRC INCREASES SECURITY REQUIREMENTS FOR PORTABLE GAUGES CONTAINING RADIOACTIVE MATERIALS

The Nuclear Regulatory Commission is amending its regulations to require licensees for portable gauges containing radioactive material to use two independent physical controls to secure the gauges against theft.

In a final rule to be published shortly in the *Federal Register*, the NRC will require two independent physical controls for these gauges when they are not under the control and constant surveillance of the licensee. Examples of two controls include securing the device in a locked storage facility within a separate secured area in a warehouse, or inside a locked van and secured to the vehicle with a steel cable. Examples of acceptable storage in a pickup truck would include placing the gauge inside a locked, non-removable box and further securing the box with a steel cable or chain; and keeping it inside the locked cab of the pickup, secured independently to the vehicle.

The NRC believes that increasing physical controls will deter thieves by making it more difficult to steal portable gauges. At a minimum, two controls would delay a thief and draw attention from bystanders that may prevent the theft.

There are an estimated 22,000 to 25,000 portable gauges in use in the United States to determine physical properties such as density and moisture content of soil, concrete and other materials. The gauges typically contain two encapsulated sources of radioactive material, which vary in the radioisotope used and its quantity.

Current NRC regulations require licensees to secure portable gauges in storage or maintain control and constant surveillance of the gauges when not in storage. Generally, the gauges are stored in a permanent storage location within a licensed facility. Sometimes, portable gauges are stored at a job site, a temporary storage location or on a vehicle. When being transported in a vehicle, a gauge is often placed in a transportation case and then secured in or onto the vehicle.

Despite these precautions, about 50 such gauges are reported stolen each year, with the recovery rate less than 50 percent. More than two-thirds of the stolen gauges were taken from vehicles parked in the open; most of these were stored in a portable transportation case and secured with a metal chain to the open bed of a pickup truck.

The amount of radioactive material used in a portable gauge is small, and the material is encapsulated in stainless steel; nonetheless, the theft of portable gauges poses a concern to public health and safety. A stolen gauge poses a potential radiation hazard to individuals who may come into close contact with the source. It also poses an environmental concern if it is abandoned, inadvertently recycled or used inappropriately.

Due to the quantity and characteristics of the radioactive material used, the NRC does not believe portable gauges pose a substantial national security risk for malevolent use such as in a “dirty bomb.” There is no discernible pattern to suggest that gauges are being stolen for terrorist purposes. However, loss of control of radioactive material still poses a potential health and safety risk to the public. The NRC is increasing this security requirement based on health and safety considerations rather than common defense and security concerns.

The final rule contains the exact requirements of a proposed rule published in the *Federal Register* on August 1, 2003. The NRC received 11 comment letters on the proposed rule; comments and NRC responses are summarized in the forthcoming *Federal Register* notice. The final rule becomes effective 180 days after publication.

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