

include the use of byproduct material in portable gauges. Each Agreement State issues licenses to persons who use radioactive material in portable gauges in that State. The NRC issues licenses to persons using radioactive material in portable gauges in non-Agreement States. Requirements that are specific to the safe use of portable gauges are included as license conditions.

NRC and Agreement States issue specific licenses and certain general licenses. General licenses do not include an individual license document, and usually authorize only small quantities of licensed material. The subject of this rulemaking is for portable gauges that are specifically licensed. There are approximately 1100 NRC portable gauge specific licensees and an additional 4000 Agreement State specific licensees. Portable gauge licensees often possess multiple portable gauges under the same license, and may conduct business outside of their home States under the reciprocity provisions of 10 CFR 150.20 or equivalent Agreement State regulations. There are an estimated 22,000 to 25,000 portable gauges in use in the United States.

#### *Current Regulatory Practices*

Specific licenses for portable gauges are governed by NRC regulations in 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material." However, other NRC requirements in 10 CFR parts 2, 19, 20, 21, 71, 150, 170, and 171 also apply to a portable gauge licensee. In addition, all such portable gauge licensees must also comply with other applicable Federal, State, and local regulations (e.g., Department of Transportation (DOT) regulations, local zoning requirements for a storage location, etc.). At present, NRC reviews a licensee's program as described in the license application, and incorporates certain requirements into the license as license conditions. Equivalent State regulations apply to Agreement State portable gauge licensees. Agreement States follow a similar approach. In addition, certain Agreement States, such as Florida, have specific additional requirements in their regulations for the possession and use of sealed sources in portable gauges. Other States, including Texas and Washington, have issued orders imposing specific additional requirements for their portable gauge licensees.

#### *Storage and Control of Licensed Material*

NRC regulations in 10 CFR part 20, "Standards for Protection Against

Radiation," contain requirements applicable to activities conducted under licenses issued by the NRC. Subpart I of Part 20 addresses storage and control of licensed material. Specifically, § 20.1801, "Security of stored material," requires licensees to secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas. Section 20.1802, "Control of material not in storage," requires licensees to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage. Despite these requirements, theft of portable gauges, as described below, continues.

#### *Theft of Portable Gauges*

Reports in the NRC's Nuclear Materials Events Database (NMED) reveal that there have been approximately 450 gauges stolen since 1990. More than two-thirds of these stolen gauges were taken from vehicles while parked at locations other than the licensees' storage facilities or temporary jobsites. In most of these incidents, the gauge was in a DOT "Type A" transportation case, which was then secured with a metal chain to the open bed of a pickup truck. Frequently, the chain was cut and the gauge was stolen along with its transportation case. The remaining one-third of the gauges were stolen from a licensed facility or a temporary jobsite, stolen along with a vehicle, or taken by a disgruntled employee.

It is true that the number of incidents reported per year is small when compared to the total number of gauges in use, that the amount of radioactive material used in a portable gauge is relatively small, and that the radioactive material is encapsulated in stainless steel. Nevertheless, the theft of portable gauges still poses a concern if the gauge is abandoned in the environment, is recycled in a steel mill, or is used inappropriately.

In light of these concerns, NRC has issued several "Information Notices" (IN-2001-11, IN-98-01, IN-93-18, IN-88-02, IN-87-55, and IN-86-67) to remind licensees of their responsibilities concerning the security of portable gauges. However, the yearly number of reported incidents has not significantly decreased in response to these notices and the potential still exists for public health and safety risks. In addition, given the heightened sensitivity following the events of September 11, 2001, it is necessary to enhance security for portable gauges by reducing the opportunity for theft. Therefore, NRC is proposing additional

security requirements for specifically licensed portable gauges in addition to the general requirements for security and control of licensed material in 10 CFR 20.1801 and 20.1802. A working group was formed in August 2002 to explore various options and requirements for the rulemaking. Personnel from the Agreement States of Florida and Arkansas represented the Organization of Agreement States and participated as members of the working group along with NRC staff in formulating this proposed rule. The proposed rule language was coordinated with DOT hazardous material transportation staff due to the intrinsic portability (i.e., transportation) of the portable gauge during the course of its utilization by licensees.

#### **Discussion of Proposed Amendment**

NRC is proposing to amend its regulations in § 30.34, Terms and conditions of licenses, to impose specific security requirements for portable gauges to reduce the opportunity for theft. Specifically, NRC proposes revising this section by adding § 30.34(i) to the list of terms and conditions of licenses issued pursuant to 10 CFR part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material." This paragraph would require persons 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.

This rule would apply 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 NRC staff expects that the physical controls would be designed and constructed of material suitable for securing the gauges from unauthorized removal. In addition, the NRC staff's expectation is that both of these 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.

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

Long term storage of a portable gauge is usually at a permanent facility listed in the license or license application. Routine storage of a portable gauge in a