

RULEMAKING ISSUE NOTATION VOTE

June 5, 2003

SECY-03-0092

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations /RA/

SUBJECT: PROPOSED RULE - ENHANCED SECURITY REQUIREMENTS
FOR PORTABLE GAUGES CONTAINING BYPRODUCT
MATERIAL

PURPOSE:

To request Commission approval to publish a proposed rule in the Federal Register that would amend 10 CFR 30.34, "Terms and conditions of licenses." This proposed rule is intended to enhance security requirements for portable gauges to reduce their opportunity for theft, by requiring licensees 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.

SUMMARY:

The number of incidents of stolen gauges reported per year (approximately 50) is small when compared with the total number of gauges in use (more than 22,000), and the amount of radioactive material used in a portable gauge is also relatively small. However, the theft of portable gauges is still a concern if the gauge is abandoned in the environment, is recycled in a steel mill, or is used inappropriately. In addition, given the public's increased interest in and sensitivity to such matters, as well as governmental concerns, after the events of September 11, 2001, the staff believes that it is prudent to further improve the security of portable gauges. A working group was formed in August 2002 to explore various options and

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requirements for the rulemaking. Personnel from the Agreement States of Florida and Arkansas represented the Organization of Agreement States (OAS) and participated as members of the working group along with NRC staff in formulating this proposed rule. In addition, the staff provided a copy of the proposed rule to the U.S. Department of Transportation (DOT) hazardous material transportation staff for consultation. The staff is requesting Commission approval to publish a proposed rule in the Federal Register that would amend 10 CFR 30.34, "Terms and conditions of licenses," to enhance security requirements for portable gauges.

BACKGROUND:

On January 25, 2002, the staff provided the Commission with proposed interim compensatory measures for various categories of NRC licensees, including materials licensees, to increase security in response to the September 11, 2001, terrorist attacks. A supplement to the interim compensatory measures was developed proposing that the Commission issue Orders under its retained authority to provide for common defense and security to four categories of material licensees. These include large irradiators, large unsealed sources, self-shielded irradiators, and industrial radiography and well logging. The supplement also proposed to undertake a rulemaking for portable gauges on a health and safety basis. The Commission approved the staff's proposal to initiate discussions with the Agreement States in a Staff Requirements Memorandum dated July 2, 2002.

Information in the NRC's Nuclear Materials Events Database reveals that more than two-thirds of the approximately 450 gauges reported stolen since 1990 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 stored 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 stolen gauges (approximately one-third) were taken from a licensed facility or a temporary jobsite.

There are about 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. Currently, there are an estimated 22,000 to 25,000 portable gauges in use in the United States. The staff recognizes that the number of incidents reported per year is small when compared with the total number of gauges in use. A relatively small amount of radioactive material is used in a portable gauge, and the radioactive material is encapsulated in stainless steel. Nevertheless, the theft of a portable gauge may still pose a potential risk to public health and safety if the gauge is abandoned in the environment, is recycled in a steel mill (gauges have been found in scrap yards), or if the gauge is used inappropriately.

DISCUSSION:

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 OAS and participated as members of the working group along with NRC staff in formulating this proposed rule. The working group developed a proposed rule that would amend 10 CFR 30.34, "Terms and conditions of [byproduct material] licenses," to specify security requirements for a

portable gauge while in storage, in transport, or in storage incidental to transportation. However, during the concurrence process, NRC offices and DOT staff raised concerns regarding the use of terms such as “transport” and “incidental to transportation” in the regulatory text. Based on the DOT/NRC Memorandum of Understanding (MOU) dated July 2, 1979 (44 FR 38690), DOT has jurisdiction over Type A packages. Based on discussions with DOT staff, the working group revised the draft proposed rule by replacing “whenever portable gauges are in storage, in transport, or in storage incidental to transportation” with “whenever portable gauges are not under the control and constant surveillance of the licensee.” The staff sent the revised proposed rule to DOT hazardous material transportation staff for review on February 13, 2003, and received additional comments on March 24, 2003, providing editorial suggestions and proposals for minor modifications to the discussion of the physical controls included in the Federal Register notice.

The draft proposed amendment of 10 CFR 30.34 would require licensees to use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal whenever the gauges are not under the control and constant surveillance of the licensee. This requirement would apply regardless of location of the portable gauge or type of activity involved. The staff expects the physical controls to be constructed of material suitable for securing the gauges from unauthorized removal. In addition, the staff’s expectation is that both of these controls would have to be defeated separately for the portable gauge to be removed. The staff believes that the additional barriers would require a more determined effort to remove the gauge, and thereby deter a thief from stealing it.

The proposed rule is both more specific and has broader application than the 10 CFR 20.1801 provisions, requiring security of stored material, because it specifies the number and type of physical controls and because it applies to situations where the portable gauge is not under the control and constant surveillance of the licensee. In addition, the proposed rule is consistent with 10 CFR 20.1802 regarding control of material not in storage because a licensee must either control and maintain constant surveillance of the portable gauge or secure the portable gauge by a minimum of two independent physical controls. The staff interprets “control and maintain constant surveillance” of portable gauges to connote a licensee’s immediate presence or remaining in such close proximity to the portable gauge as to prevent unauthorized removal of the gauge. This proposed rule is specific to NRC licensees who act as a private carrier transporting portable gauges as part of their normal course of operation. This rule would not apply to common or contract carriers, who will continue to be covered under the exemption in 10 CFR 30.13.

The NRC has issued several "Information Notices (IN)" to remind licensees of their responsibilities concerning the security of portable gauges. These INs were issued in response to numerous incidents in which portable gauges were taken from vehicles. However, the yearly number of reported incidents has not significantly decreased in response to these INs and the potential still exists for public health and safety risks. The proposed amendment is expected to reduce the opportunity for theft.

The proposed rule would be consistent with the NRC goal of a performance-based regulatory approach because each licensee would have the flexibility of selecting the two controls that are most suitable for its current practices. If necessary, a licensee could use different controls that are more appropriate for its specific job operations.

In addition, the proposed rule would further the NRC performance goal of “Maintaining safety, protection of the environment, and common defense and security,” by enhancing the security of portable gauges. It would also further the goal of “Increasing public confidence” by means intended to reduce the number of stolen gauges. As for the performance goal of “Reducing unnecessary regulatory burden on stakeholders,” although the proposed rule would increase regulatory burden (because of additional security control requirements), the staff believes that this minor increase in the regulatory burden is acceptable. It is expected that the proposed rule would promote the performance goal of “Making NRC activities and decisions more effective, efficient, and realistic,” because more stringent requirements would be more effective in controlling licensed material.

Options Considered

In addition to the proposed rule, the working group has discussed and evaluated other options, such as prohibiting unattended storage of portable gauges in or on vehicles, prohibiting unattended storage at locations other than licensed facilities, or requiring use of a metal enclosure and a lock with a shielded/protected shackle. Detailed analyses of these options are included in the draft Regulatory Analysis. Several Agreement States provided comments to NRC suggesting other regulatory options such as prohibiting unattended vehicular storage (New York), prohibiting storage other than licensed facility (Ohio), and installing a “lojack” on gauges (California). The working group had already considered these suggested requirements when forming regulatory options and during the development of the draft proposed rule. Options evaluated are summarized below with their associated advantages and disadvantages.

Option 1. No Action. Under this alternative, NRC would take no new action, but instead rely on the current regulations for domestic licensing of byproduct materials, specific guidance on portable gauges, and individual portable gauge licenses. The rationale for no action is based on the fact that the number of stolen gauges reported per year is small (about 50 gauges per year) when compared to the total number of gauges in use (about 22,000 to 25,000 gauges).

Pros

- Stops the expenditure of resources associated with a rulemaking and allows the resources to be applied to other high-priority activities.
- Rulemaking may not be an effective use of resources since the amount of radioactive material used in portable gauges is relatively small [about 0.30 to 0.37 gigabecquerels (8 to 10 millicuries) of cesium-137 and about 1.48 to 1.85 gigabecquerels (40 to 50 millicuries) of americium-241/beryllium] and the radioactive material is encapsulated in stainless steel, minimizing the risk of contamination.
- Imposes no new burdens on licensees and no changes in their current practices and procedures.
- A theft rate of less than a quarter of one percent may be too insignificant to justify rulemaking; especially since many of the stolen gauges are recovered (about 40 percent).

Cons

- Portable gauges would continue to be stolen at the rate of about 50 per year.
- Does not address public concerns nor attempt to improve public confidence.

Option 2. Promulgate a Rule Requiring Physical Controls for Portable Gauges. Under this alternative, NRC would amend its regulations in 10 CFR 30.34, and revise current guidance for portable gauges during its next revision, to require a licensee to use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal whenever gauges are not under the control and constant surveillance of the licensee. Since the number of gauges reported stolen has not decreased through other NRC efforts, and given the heightened sensitivity after the events of September 11, 2001, the staff believes that a rulemaking is necessary to ensure adequate, legally binding, additional physical controls for portable gauges.

Pros

- Reduces the opportunity for theft of portable gauges by increasing the physical controls, thus making it more difficult for a thief to steal the gauge.
- Provides flexibility for licensees in selecting the specific controls used to secure the portable gauges.
- Sets a minimum requirement and allows Agreement States flexibility to determine if other requirements would be more suitable for their individual needs.
- Addresses governmental and public concerns about the security of radioactive devices, and thus improves public confidence.
- Increased control would reduce potential risk to the public health and safety resulting from a stolen gauge abandoned in the environment, recycled in a steel mill, or used inappropriately.

Cons

- Cost burden to licensees for installing additional physical controls to secure a portable gauge--an estimated one-time cost of \$200 per gauge, on average.
- Additional controls would not necessarily stop a determined thief from stealing a portable gauge, and portable gauges would still be stolen.
- Additional controls may not further reduce the current theft rate of less than one quarter of one percent.

Option 3. Promulgate a Rule Prohibiting Unattended Vehicular Storage. Under this alternative, NRC would amend its regulations to prohibit unattended storage of portable gauges in vehicles. The State of Washington has issued an order requiring its licensees to return portable gauges to a licensed storage location each day. Both New York's and Ohio's comments on the draft proposed rule package suggested that NRC should consider prohibiting vehicular storage and requiring the licensees to store portable gauges at the licensed facility or at temporary jobsites.

Pros

- May be the most effective method to reduce the number of thefts of portable gauges.
- Storage prohibition would be uniformly applied in all States.
- Addresses governmental and public concerns about lost sources, and improves public confidence.

Cons

- Portable gauges could still be stolen from licensed facilities or temporary jobsites.

- Major impact on licensees' operation. It is a common practice for licensees to store portable gauges in vehicles. Licensees would no longer be able to continue with their current practice. Regions and certain Agreement States may need to amend licenses that authorize such storage.
 - Cost burden to licensees because of time spent in transporting portable gauges to a licensed facility and/or resources needed in obtaining an alternate location, closer to temporary jobsites, for storing portable gauges. An estimated annual cost burden per licensee could range from \$360 for leasing a self-storage unit to as much as \$10,000 for transporting the gauge from and back to the licensed facility each day.
 - May limit the licensee's ability to conduct business at distant locations.
 - No flexibility for the licensees or the Agreement States to institute alternative control methods, based on their needs.
 - At least one Agreement State would strongly object to such a prohibition.
 - The proposed rule would be a major rulemaking, because of its potential cost impact (an annual effect on the economy of \$100,000,000 or more), and because its impact on small entities would require additional time to conduct a detailed analysis on the impact on small entities under the Regulatory Flexibility Act and to complete a "Compliance Guide."
 - Could result in extensive scrutiny of the rule by the Office of Management and Budget, the Small Business Administration, and Congress because it would qualify as a major rule that would have a significant economic impact on small entities.
 - Effective Date will be no earlier than 60 days after the date Congress receives required material, or 60 days after publication of final rule in the Federal Register, whichever is later.
- Option 4. No Rulemaking. NRC would not undertake any rulemaking for portable gauges, but instead would revise guidance for licensees, Agreement States, and NRC Regions, regarding portable gauge security. "Consolidated Guidance About Materials Licenses," NUREG-1556, Vol. 1, for "Program-Specific Guidance about Portable Gauge Licenses" would be revised to discuss NRC's expectation for security and control of portable gauges in meeting requirements under 10 CFR 20.1801 and 20.1802. Existing guidance could be revised to clarify NRC's expectation, and existing enforcement tools could be strengthened making it more desirable for licensees to act to prevent theft.

Pros

- May require fewer resources and less time revising the existing guidance than conducting rulemaking.

Cons

- Would not be as effective as Options 2 and 3, since guidance and policy directives are not legal requirements, and Agreement States are not required to adopt NRC guidance or policy directives in their regulatory programs.
- Lower rates of theft are not expected.
- May not be applied consistently among Agreement States or Regions.
- Potentially less public involvement than in rulemaking.
- May not improve public perception or confidence because of the lesser degree of effectiveness.

Recommended Option

Based on the evaluation of each option, the staff recommends Option 2--Promulgate a Rule Requiring Physical Controls for Portable Gauges. The recommended option is intended to enhance the current level of security and control (e.g., the requirements in 10 CFR 20.1801 and 20.1802) for portable gauges while providing sufficient flexibility for licensees to implement these requirements without an unreasonable burden. NRC regulations in 10 CFR 30.34 would be amended to require each licensee 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 draft proposed rule has been developed and is attached for the Commission's approval.

AGREEMENT STATE ISSUES:

NRC staff has analyzed the proposed rule in accordance with the procedures established within Part III of Handbook 5.9 to Management Directive 5.9, "Categorization Process for NRC Program Elements." Staff has determined that the proposed 10 CFR 30.34(i) should be classified as Compatibility Category "C." An Agreement State should adopt the essential objectives of the Compatibility Category "C" program elements to avoid conflict, duplication, gaps, or the conditions that would jeopardize an orderly pattern in the regulation of Agreement material on a nationwide basis. The staff has determined that the essential objective of the proposed 10 CFR 30.34(i) is to reduce the opportunity for theft by requiring a licensee to provide 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 working group crafted and distributed a survey to the Agreement States at an annual OAS meeting in order to gather information related to security requirements for portable gauges in each of the Agreement States. A majority of the Agreement States have security requirements for portable gauges. Several of these States impose restrictions by rule, license condition, or order that are more stringent than existing NRC requirements and this proposed rule. For example, Rhode Island does not permit its licensees to store a gauge overnight away from a licensed facility. Since September 11, 2001, the State of Arizona issued an advisory, and the States of Texas and Washington issued orders, all imposing additional security requirements. Other States have indicated to NRC staff that they are considering similar actions.

In the order to its licensees, the State of Washington requires three levels of controls, rather than the two levels that the draft proposed rule would require. Staff does not believe that this difference presents a conflict regarding the proposed rule. First, as noted above, the rule falls into Compatibility Category "C," under the Commission's policy on Adequacy and Compatibility; therefore, an Agreement State may impose more stringent requirements. Second, the Washington order allows the licensee to consider a lock on the transportation case as a control; the draft proposed rule would not. Thus, the two additional controls the Washington order requires are equivalent to the two controls the draft proposed rule would require.

COORDINATION:

This proposed rule was coordinated with DOT hazardous material transportation staff to ensure that the regulatory text is not in conflict with DOT regulations and the existing DOT/NRC MOU. The Office of the General Counsel has no legal objection to the proposed rulemaking. The Office of the Chief Financial Officer has reviewed this Commission Paper for resource implications and has no objections. The proposed rule would make no changes to information collection requirements in 10 CFR Part 30.

RECOMMENDATIONS:

That the Commission:

1. Approve for publication, in the Federal Register, the proposed amendment to 10 CFR 30.34 (Attachment 1).
2. Certify that, based on the information currently available, the proposed rule, if adopted, is not likely to have a significant economic impact on a substantial number of small entities.
3. Note:
 - a. That the proposed amendment will be published in the Federal Register, allowing 75 days for public comment.
 - b. That the Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification and the reasons for it, as required by the Regulatory Flexibility Act, 5 U.S.C. 605(b).
 - c. That an Environmental Assessment has been prepared for this rulemaking (Attachment 2).
 - d. That a draft Regulatory Analysis has been prepared for this rulemaking (Attachment 3).
 - e. That appropriate Congressional committees will be informed of this action.
 - f. That the Office of Public Affairs will issue a press release when the proposed rulemaking is filed with the Office of the Federal Register.

- g. That the 0.8 full-time equivalent needed to complete this action is included in the current budget for fiscal year 2004.

/RA by William F. Kane Acting For/

William D. Travers
Executive Director
for Operations

Attachments:

1. Federal Register Notice
2. Environmental Assessment
3. Draft Regulatory Analysis

- g. That the 0.8 full-time equivalent needed to complete this action is included in the current budget for fiscal year 2004.

**/RA by William F. Kane Acting For/
William D. Travers
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Attachments:

1. Federal Register Notice
2. Environmental Assessment
3. Draft Regulatory Analysis

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ATTACHMENT 1

Federal Register Notice

ATTACHMENT 2

Environmental Assessment

ATTACHMENT 3

Draft Regulatory Analysis